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Abstract | Acts of extreme or mass violence perpetrated by lone offenders have become increasingly common in liberal democracies over the past 20 years. Some describe these acts as politically motivated, while others attribute them to mental disorder or criminal intent. However, there is an increasingly common view that the distinction between political ideology, criminal intent and personal motivation is blurred, and that the violence carried out by these individuals is better understood using the broader concept of grievance-fuelled violence. This work employs a multifaceted analytical approach to develop a holistic model of the processes of grievance development.

Modelling drivers of grievance-fuelled violence

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Since the rise of Islamic State, over 2,000 extremist incidents have been recorded across Western liberal democracies, 39 of which occurred in Australia. Despite the enduring focus on radical Islamist extremism, the perpetrators of these incidents show no consistent demographic, ideological or psychological profiles (LaFree & Dugan 2007; LaFree, Dugan & Miller 2014). This is reflected in recent changes to the terminology used by national security agencies to describe the evolving extremist threat environment. In 2021, the Australian Security Intelligence Organisation (2021: 5) moved away from discrete labels, stating that existing terms are 'no longer fit for purpose'.

The COVID-19 pandemic shifted the security environment again. The widespread and extended disruption to daily lives has had a range of negative psychosocial consequences for individuals across the world (Pfefferbaum & North 2020), and countries have seen rises in anti-government movements (Silke 2020). Although Australia experienced an initial increase in trust in government during 2020 (Goldfinch, Taplin & Gauld 2021), this was eroded during 2021 (Murphy 2021). Despite this complex evolving threat, our understanding of the processes of violent extremism continues to rely on exhaustive lists of antecedents developed from primarily static research endeavours, analysing data from one point in time.

Despite the wide range of empirical studies investigating antecedents of violent extremism, there is still no consensus on the causes of this phenomenon. As noted by Horgan (2016), despite significant empirical investment, there have been few attempts to develop theoretically robust support for these empirical insights. This means that the existing research is descriptive and exploratory. Without theoretical justification, the empirical findings offer inadequate explanation of the causal relationships between antecedents.

This practice has resulted in a taxonomy of known behavioural antecedents, which offers little to no insight into which are important in the process of radicalisation to violent extremism, or the specific circumstances they are important in. Further to this, and pertinent to the emerging threat environment, the list of known antecedents may well be out of date, as the specific historical and political conditions that gave rise to the forms of violent extremism studied were temporally bound and transient. The currently known antecedents may actually have minimal to no usefulness in predicting when, in what form, and how the next security threat may arise and how best to respond to it when it does. The field is now at a point where developing theory is the only way to move forward.

Developing theory

The wide range of studies investigating the nature and antecedents of violent extremism have influenced policy and practice. Many authors have also used this evidence base to develop conceptual models to capture the various mechanisms through which an individual becomes a violent extremist. The first research that developed a conceptual model of involvement in violent extremism was published by Shaw in 1986, and since then a plethora of models have been developed in an attempt to capture the multiplicity of antecedents and the various mechanisms through which an individual moves towards violent extremism (see, for example, Atran 2016; Borum 2014; Dawson 2017; Hogg & Adelman 2013; Hutson, Long & Page 2009; McCauley & Moskalenko 2017; McGregor, Hayes & Prentice 2015; Moghaddam 2005; Sinai 2014; Torok 2013; Veldhuis & Staun 2009; Webber & Kruglanski 2018). The models offer descriptive narratives of transformative processes regarding how grievances develop and how they impact decision-making.

Currently, the strongest research models draw from the theoretically robust discipline of criminology, and embrace the complexity of what violent extremist involvement, much like involvement in other crimes, means (Crowson 2009; Jensen, Atwell Seate & James 2020). Yet, despite this movement towards identifying more coherent and accurate explanations for violent extremism, multiple authors, including Borum (2011), Horgan (2016), and Gøtzsche-Astrup (2018) argue that most published models are vague, lack theoretical and empirical grounding and rest on untested assumptions, and systematic research of their validity remains fragmented and sparse (Bartlett, Birdwell & King 2010; De Coensel 2018). Consequently, there is little agreement regarding the scope and factor inclusion across models, and these differences cause confusion for readers and practitioners (Bartlett, Birdwell & King 2010).

The threat environment

A further limitation of existing models is that their applicability is limited to the time frame in which they were developed. This is a particular issue for models built from specific population samples (for example, Borum 2003; Klausen et al. 2016; Silber & Bhatt 2007; Wiktorowicz 2004). Typically, authors focus on the form of violent extremism most applicable to the security climate at a given time. However, the threat environment has evolved, and in most Western democracies, since 2014, acts of violent extremism have predominately been perpetrated by lone offenders who are inspired by but not part of a larger extremist group (Europol 2021). While many of these offenders have claimed inspiration from Islamist ideologies (Winter & Spaaij 2018), this phenomenon is not isolated to one ideology, with the threat from lone offenders espousing far-right ideologies also of great concern to security officials (Koehler 2019; US Department of Homeland Security 2022).

Given the evolving threat environment, security agencies are now moving towards employing umbrella terms such as 'ideologically motivated violent extremism' or 'religiously motivated violent extremism' (Australian Security Intelligence Organisation 2021), rather than defining specific ideological categorisations of grievance. Indeed, despite current political categorisations and espoused political allegiances of these violent lone offenders, some argue that the distinction between political ideology, criminal intent and personal motivations is often blurred, and violence carried out by these actors is better understood using the broader concept of grievance-fuelled violence (GFV).

Grievance-fuelled violence

Media reporting on lone offender violent extremist incidents often follows a common pattern, implying there is little evidence that an offender was a member of a wider organisation or held extremist values before the attack. It is also regularly reported that an offender presents with one specific antecedent: a history of mental health problems. This causality attribution is not limited to media reports. In the wake of the attack in Nice, France, Australia's inaugural Commonwealth Counter-Terrorism Coordinator, Greg Moriarty, stated that similar offences in Australia show a pattern of individuals 'not necessarily deeply committed to and engaged with... ideology but are nonetheless, due to a range of reasons, including mental health issues, susceptible to being motivated' (Nicholson 2016: np). This growing interest in offenders who appear to be motivated by some form of complex grievance has led to a re-evaluation among researchers examining lone offender violent extremists, focusing predominately on how such offenders can, and should, be categorised.

Characterisations of offenders

Traditionally, both in research and in practice, individuals who either threaten or conduct large-scale acts of violence without help and support from a wider group have been categorised based on their espoused grievance. This has led to the development of distinct research areas—and historically these offenders have also been subject to investigation from different areas of policing. Given the proliferation of lone offender violent extremist acts across the world, the academic inquiry of violent extremism has become more disaggregated. This shift was welcome, and research has offered significant insights into violent extremism, highlighting important differences between lone offenders and other violent extremists and greatly expanding knowledge of ideologies, roles and social settings (Clemmow et al. 2022; Corner, Taylor & Clemmow 2022; Gill et al. 2016; Gruenewald, Chermak & Freilich 2013; van der Vegt, Kleinberg & Gill 2022; Weenink 2015).

Research examining lone offender violent extremism has uncovered similarities between types of violent acts that were previously believed to be distinct. Academics and practitioners are starting to question whether these individuals are in fact dissimilar (Böckler et al. 2018; Pathé et al. 2018). This re-examination is important. In a world where traditional political ideologies lack appeal, some turn to violence to express their own personal grievance (Van Buuren & de Graaf 2014). Therefore, the blurring of distinctions between lone offender violent extremism, mass murder, fixation, hate crime, involuntary celibate (incel)-related violence, and domestic violence should not be surprising. Despite the evolving threat environment, research is yet to develop theory or to model the antecedents of acts of violence either threatened or carried out alone. This tendency is affecting the reliability, validity and applicability of research outcomes for effective practice.

Changes in practice

Australia is not immune from the threat posed by lone offenders whose ideology does not fit into a single motivational category. The Centre for Counter-Terrorism Coordination was established following recommendations from the NSW State Coroner's inquest into the Lindt Café siege carried out by Man Haron Monis. Further recommendations from the Inquest included the establishment of multiagency centres across Australia tasked with countering GFV. These centres work as liaison-diversion and monitoring services for a wide range of referrals (Clemmow et al. 2022). This rationale and framework have also been replicated in New Zealand and the United Kingdom. However, despite rapid advances in practice, currently there is scant empirical discussion and no theoretical or empirical development or model that holistically explains the motivations, intentions and behaviours of lone offenders.

Modelling grievance

This research therefore tested whether any existing models purporting to explain the antecedents of different forms of GFV, and the elements within them, are still fit for purpose. It systematically analysed both the existing academic evidence base and the knowledge of practitioners involved in mitigating and preventing such violent acts. This evidence informed the formulation of a dataset of individuals who either planned or carried out an act of GFV since 2013. This dataset was then analysed to identify the most appropriate explanatory antecedents. The results informed the development of a new theoretical model of the drivers of GFV.

Methods

Systematic review

The search strategy for the systematic review was based on the Campbell Collaboration method. Protocols and standards were drawn directly from <https://campbellcollaboration.org> and guided the method. A keyword search of multiple electronic databases (ProQuest CRIM, ProQuest IBSS, ProQuest SOCIAL SCIENCE, Scopus, APA PsychInfo, Sociological Abstracts) was performed and full-text versions of identified studies were collected. The review considered published and unpublished (grey) studies. No date restrictions were applied. Studies had to be available in English.

Search terms

To identify the relevant studies for the review, search terms were used in the above databases. To help refine the review aim and search terms, the researchers employed the Delphi technique, contacting a panel of experts across several organisations working to prevent various forms of GFV. Using responses from the panel, an initial search string was deployed. Given the number of returned hits from this initial search string (1,129,629), the string was then refined. The final search string returned 74,717 hits. Following this, 24,504 duplicates were removed, leaving 50,213 studies taken forward for title and abstract review.

Table 1: Initial search terms

	Type of threat		Model
Terroris*	Mass	Risk	Determinant
Radicalisation	Murder*	Model	Pyramid
Radical	Homicide	Framework	Stairway
Extremis*	Kill*	Pathway	Hierarch*
Grievance*	Stalk*	Process	Indicator*
Fixat*	Active	Predictor*	Factor
Violen*	Shoot*	Mechanism	
Threat	Spree	Caus*	

Selection criteria

The selection of appropriate studies was conducted in stages. The first stage involved the research team screening all identified studies based on their title and abstract. Studies were screened against the following criteria:

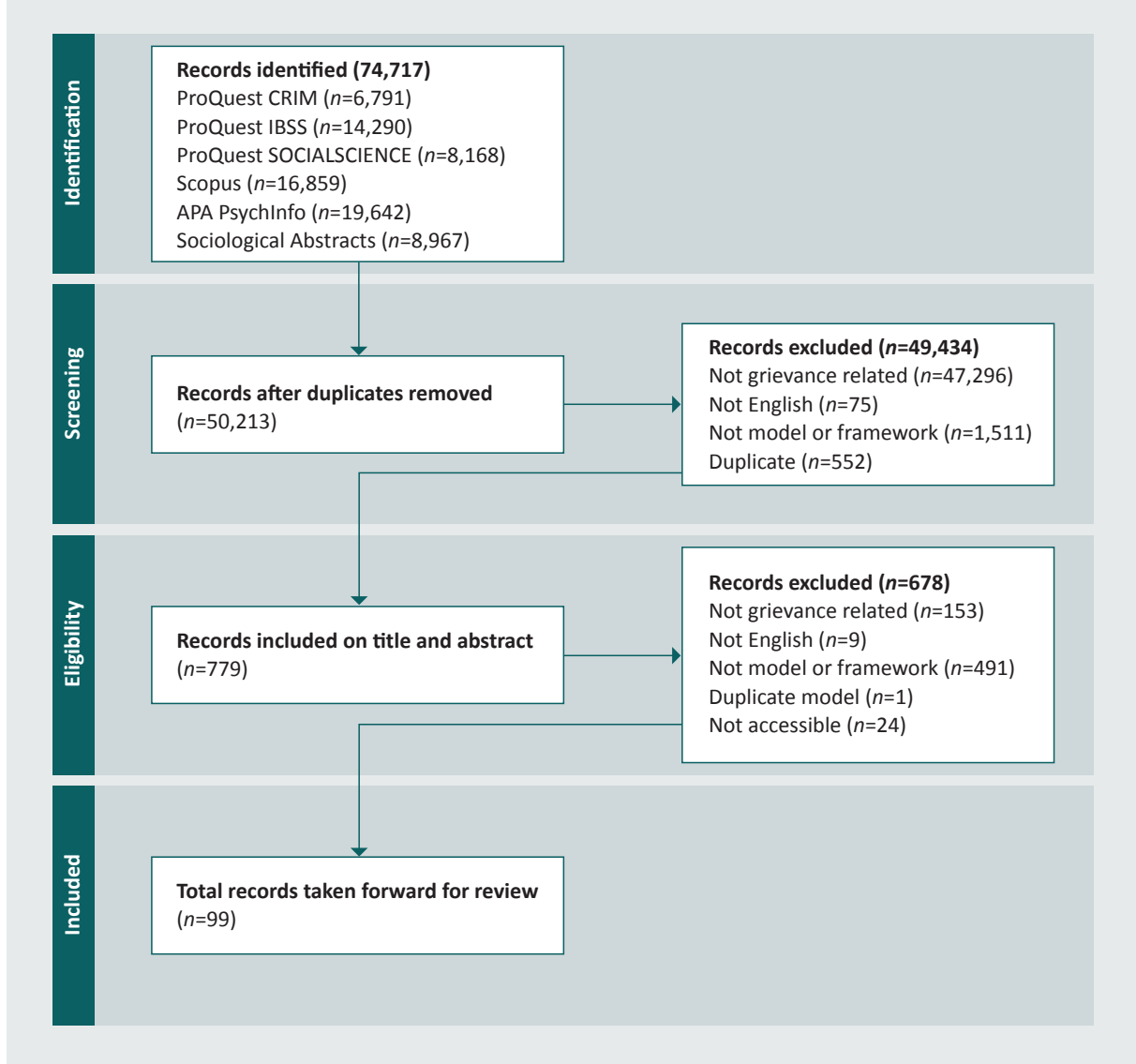
- a theoretical, conceptual or empirical model with the explicit goal of seeking to understand the drivers of GFV, terrorism, mass violence and fixation; or
- an explicit goal of seeking to apply, synthesise, analyse or validate existing theoretical or conceptual models of such violence.

Studies failing to meet the inclusion criteria for the full review were excluded, with the reasons for exclusion and rates of attrition noted. At this stage, 49,434 studies were deemed inappropriate for inclusion based on title and abstract.

Screening stage

During screening, all 779 studies carried forward were read in their entirety to determine their eligibility using the same inclusion and exclusion criteria as above. A further 678 studies were excluded from the final analysis. As depicted in Figure 1, 99 studies were brought forward for final review.

Figure 1: Systematic review process



Eligibility stage

The coding protocol required an in-depth critical examination of each of the 99 studies. Two independent coders read each of the included studies in their totality, extracting information on the source of the data, the name of the model, and the variables of interest. Variables of interest included those indicated by authors of the studies as directly related to the proposed model. During this, all variables that were identified by both coders were carried forward for analysis. Where there were inconsistencies in variable identification, the primary coder interrogated each study to reconcile differences in variable inclusion. Figure 1 illustrates the entire review process.

Interviews and focus groups

The 99 included studies yielded 786 variables from the models (once duplicates were removed). To sort the variables, we applied the thematic framework employed by Wolfowicz et al. (2021) in their systematic review and meta-analysis of risk and protective factors for radicalisation. All identified variables were thematically sorted by the research team. As this study focused on the development of grievance, all variables related to attitudes, intentions and behaviours were removed. This left 671 variables under the sociodemographic, attitudinal, psychological, experiential and criminological themes. The panel of experts was approached again to help determine which variables were most critical in their roles and experience. A total of 14 interviews and focus groups with 18 participants were completed. Following this consultative process, a codebook was developed with 78 questions across the five themes.

Data collection

To develop the cases for data collection, the research team interrogated existing open-source datasets, including:

- terrorism-specific databases (Global Terrorism Database, Profiles of Individual Radicalization in the United States, and Terrorism and Extremist Violence in the United States);
- legal and non-legal databases (Australasian Legal Information Institute, Lexis Advance and Westlaw);
- NGO and charity websites regarding victimisation; and
- online news sources.

These searches yielded 120 individuals who planned or committed an act of violence in Australia, New Zealand, the United Kingdom, Europe, the United States or Canada between January 2013 and March 2022, and were motivated by either a distinct ideology or a more personal grievance. The individuals either died in the commission of their offence or were prosecuted for their acts. The types of crimes committed by these individuals included violent extremist offences, hate crimes, school violence, mass violence, stalking, familicide, intimate partner homicide and targeted violence.

Following identification of offenders, the research team interrogated archives and resources to identify information regarding the offenders, including: Lexis Advance, WestLaw, the Australasian Legal Information Institute, Factiva, the Dow Jones news archive, online public record depositories, court transcript depositories, biographies, manifestos, and all available scholarly articles.

The sourcing of case information employed a structured and systematic protocol and involved rating the reliability of sources to determine the strength of the information drawn, using a source reliability rating scale developed and employed by members of the research team in previous projects (Corner, Bouhana & Gill 2019; Gill et al. 2017; Horgan et al. 2016). All coding decisions factored in the comparative reliability and quality of the sources and the sources cited in the gathered information. Gill et al. (2022) noted that following these procedures has the potential to produce results that are comparable to those produced using closed-source data.

During coding, the research team were guided by the items in the codebook to gather and examine all relevant information on each offender. Each case was coded by two members of the research team. Following this, the lead researcher cross-checked all cases and looked for disagreement. Any discrepancies were resolved by cross-checking the original source documents.

Data analysis

All variables in the codebook were organised by the classification set out in Wolfowicz et al. (2021): sociodemographic, attitudinal, psychological, experiential and criminogenic. In this research, all analytical procedures used combined 'no' and 'unknown' variables and examined the presence (confirmed in sources) or absence (unconfirmed in sources) of variables. 'Unconfirmed' combined both 'unknown' and 'no' as one variable, except in the cases of the following variables: childhood family environment, childhood family socio-economic status, overall relationship with family, educational achievement, self-control, emotion regulation, identification with a belief system, and social integration. This process was followed as it was extremely uncommon for a report to mention if an offender had not participated in certain behaviours.

To determine the process of grievance development, it was necessary to operationalise the concept of grievance to formulate a dependent variable from the dataset. During data collection, cases were identified based on the offence that was perpetrated, not the motivation of the offender. To determine which offenders were motivated by grievance, the research team used Pathé et al.'s (2018: 38–39) definition:

Lone-actors engage in hostile acts against others in pursuit of aims that have a particular meaning for them. Their violence is underpinned by a sense of injustice, loss, injury or victimisation.

The research team ordered the data based on whether the individual ever expressed a sense of unfairness about their circumstances or the circumstances of their community and whether the individual expressed any perceived victimisation. Actors who were coded as confirmed for both variables were classified as grievance-fuelled. In total, 103 offenders were classified as grievance-fuelled. In the following analyses and resulting statistics, unless specified otherwise, the offenders are organised based on the presence of a grievance fuelling their offence.

Probability modelling

Inferential statistics typically focus on the relationship between immediate events, yet human behaviour is more complex than simple mono-causal interactions imply. Often immediate behaviours or experiences within a sequence are related, but only after one or more behaviours earlier in the sequence. It is therefore imperative to capture the more indirect behaviours and experiences, as these may be critical to how a sequence develops (Taylor & Donald 2007). To model interactions over time, it is necessary to identify common global sequences, while also retaining the visualisation of the individual sequences. Proximity coefficients achieve this by measuring the average immediacy with which behaviours follow one another across samples of sequences (Beune, Giebels & Taylor 2010).

Proximity coefficients offer a more complex understanding of sequences than lag-one analyses (Ellis, Clarke & Keatley 2017) and are therefore more suitable for our approach. Lag-one analyses take an antecedent behaviour ('a') and a sequitur behaviour ('b') and test whether the latter occurs directly after the former more frequently than expected by chance. This is carried out repeatedly across each possible behaviour pair. Whereas lag-one analyses only examine the interdependence between relationship pairs (eg $A \rightarrow B$, $B \rightarrow C$ and $C \rightarrow D$), proximity coefficients examine interconnectedness across a full chain (eg $A \rightarrow B \rightarrow C \rightarrow D$) (Taylor 2006). The proximity coefficient value is 0.00 if the behaviours always occur at opposite ends of a sequence. However, if one behaviour immediately precedes another, the coefficient is 1.00 regardless of where this occurred in any given sequence. Values between 0.00 and 1.00 reflect the different levels of proximity between two behaviours being examined across multiple sequences. They are independent of sequence length (weightings reflect absolute distances across sequences) and node occurrence frequency.

Results

Associations

Table 2 outlines the resulting significant associations between variables and the concept of grievance. The results highlight a series of variables with a significant association with grievance, as defined by Pathé et al. (2018). Offenders who experienced instability (Fisher's exact test, $p=0.016$, OR=4.562, 95% CI [1.409, 14.771]) and a deterioration ($\chi^2(1)=7.488$, $p=0.006$, OR=4.720, 95% CI [1.440, 15.748]) in their living conditions were more likely to be driven by grievance. Offenders who expressed prejudices or negative attitudes towards others (Fisher's exact test, $p=0.004$, OR=4.974, 95% CI [1.698, 14.568]) and those who expressed a desire to commit revenge against others ($\chi^2(1)=12.628$, $p<0.001$, OR=10.465, 95% CI [2.274, 48.161]) were more likely to be driven by a grievance.

Regarding psychological factors, offenders who displayed emotional problems ($\chi^2(1)=6.255$, $p=0.012$, OR=3.721, 95% CI [1.268, 10.914]), expressed anger (Fisher's exact test, $p=0.002$, OR=5.691, 95% CI [1.923, 16.846]), conveyed specific needs ($\chi^2(1)=3.882$, $p=0.049$, OR=4.205, 95% CI [0.911, 19.404]), and appeared to be preoccupied or ruminate on specific thoughts and/or beliefs (Fisher's exact test, $p=0.012$, OR=4.393, 95% CI [1.513, 12.758]) were more likely to be driven by a grievance. Finally, offenders who experienced social rejection were more likely to be driven by a grievance ($\chi^2(1)=8.292$, $p=0.004$, OR=5.783, 95% CI [1.566, 21.347]).

Table 2: Bivariate outcomes comparing grievance-fuelled and non-grievance-fuelled offenders

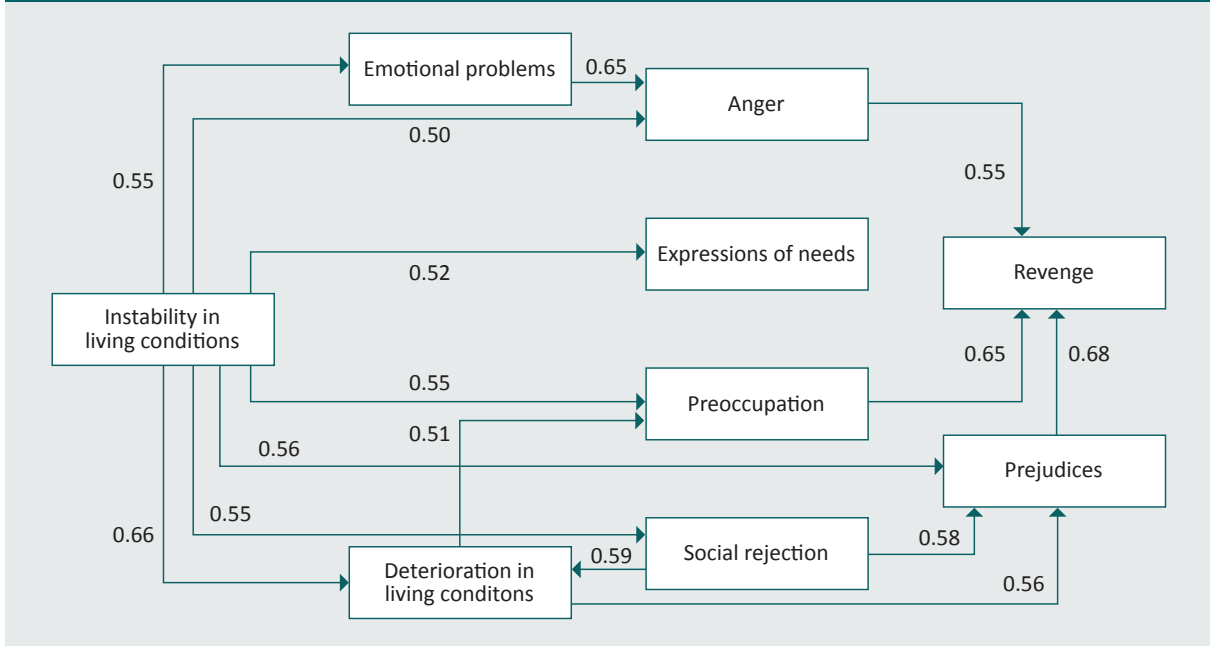
Variable	Grievance-fuelled (%) <i>n</i> =103	Non-grievance-fuelled (%) <i>n</i> =17
Sociodemographic		
Experience of instability in living conditions	89.3**	64.7
Identifiable deterioration in the offender's living conditions	59.2**	23.5
Attitudinal		
Expression of prejudice or negative attitudes towards others	91.3***	47.1
Expression of a desire to commit revenge on another	58.3***	11.8
Psychological		
Display of emotional problems	67*	35.3
Expression of anger	83.5***	47.1
Expression of needs	35.9*	11.8
Individual ruminated/was preoccupied by specific thoughts/beliefs	79.6*	47.1
Experiential		
Experience of social rejection	55.3***	17.6

***statistically significant at $p < 0.005$, **statistically significant at $p < 0.01$, *statistically significant at $p < 0.05$

Coefficient diagram

The bivariate results appear to imply a distinct set of experiences may equally impact on the formation of grievance. However, experiences, processes, and actions are likely not consistent across offenders. Figure 2 displays the coefficient diagram for individuals whose offences were motivated by a grievance. This diagram indicates that instability in living conditions is the start of the sequence, with no variables preceding it. The diagram also shows that the expression of revenge appears to be the endpoint in the sequence. However, the coefficients in the diagram also highlight the heterogeneity of sequences, with no coefficient exceeding 0.68.

Figure 2: Proximity coefficient graph



Note: Coefficients of 0.00 indicate behaviours occur at opposite ends of the sequence; coefficients of 1.00 indicate a behaviour immediately precedes another in each instance. Coefficients between 0.00 and 1.00 reflect the different levels of proximity between two behaviours under examination. Coefficients are independent of length of sequence and frequency of behaviour occurrence. Only coefficients of 0.5 or greater are depicted for clarity

Discussion

This research focused on untangling the concept of GFV. To date, research has typically treated lone offender categories (lone actor violent extremism, mass murder, incels, familial violence) as distinct. While this tendency is important for identification and prevention of a range of violent criminal behaviours, given the shifts in both research and practice, some of the previously distinct lines demarcating these offenders are starting to blur. The increase in violence by lone offender violent extremists, coupled with the political shifts and global destabilisation that have occurred over the last decade, has led to a need to re-evaluate whether there is a distinct group of offenders who present with similar precursor characteristics but have different behavioural outcomes.

The first stage of this research was a systematic review that identified and analysed all currently known models of acts classified as GFV. This review highlighted how many conceptual models exist. The identified models were predominately conceptual, with very little empirical evidence considered during their development, and most related to radicalisation or violent extremism (Borum 2011). This research supports the assertions of Borum (2011), Horgan (2016) and Gøtzsche-Astrup (2018), concluding that, overwhelmingly, the models were based on anecdotes, lacked theoretical or empirical foundations, were primarily driven by the opinions of authors, and were not developed in a systematic way. Further, the models taken forward had very few similarities in terms of the variables included, with 786 unique variables identified across 99 models. This was unsurprising given how most models were developed. The finding that so many variables are purported to be precursors to violent extremism demonstrates that the current taxonomy is not fit for purpose. Human behaviour is extremely heterogeneous, with multiple potential pathways leading towards violence, and any one antecedent experience having multiple potential outcomes (Cicchetti & Rogosch 1996).

While bivariate statistics can offer insight into associations between variables, they are unable to help discern how variables interact during grievance formation. Proximity coefficients identified several patterns. Firstly, the experience of the variables was consistent across offenders. That no combination of variables exhibited a coefficient of 0 indicates that the sequence of variables was different for each offender. These variables were also not static but occurred multiple times across sequences, highlighting the difficulty of identifying which variables may have most explanatory power. In the coefficient diagram, only sequences with a coefficient of 0.5 or higher were depicted due to this complexity. Secondly, across the sample, instability in living conditions appeared to precede the experience of all other variables. Thirdly, interestingly, social rejection exacerbated the deterioration of living conditions after the experience of instability. Fourthly, the expression of prejudices against others, anger, and a preoccupation with or rumination on thoughts or beliefs all preceded the final variable prior to grievance development: the expression of a desire to take revenge on others. Finally, following the findings of the interaction analyses, expressing needs was identified as less related to the development of grievance. This is further highlighted in the coefficient matrix, with the coefficients for needs and all other variables showing distant relationships (coefficients closer to 0 indicate that behaviours occur early in the behavioural sequence), and that those relationships have less impact on the outcome.

The results suggest that grievance development, although highly heterogeneous, presents with some key indicators. These indicators influence each other in very different ways. Although the expression of a desire to commit revenge was shown to be a consistent indicator of grievance development, it appears to be most consistent due to its proximity in time prior to an offence. For practitioners working to prevent GFV, revenge may be thought of as high risk, or a red flag. However, this indicator may not be as much use as instability in living conditions, which was consistent across offenders and appeared to be the start of the sequence towards grievance development. Emotional problems and deterioration of living conditions were also identified as occurring early in the sequence. These indicators may be of more use for prevention. For example, providing ongoing adequate mental health and social care for those with unstable living conditions and emotional vulnerability may be of more practical value and be more likely to prevent an act of violence than attempting to engage an individual who is vowing revenge on another in a short time frame.

This research was fundamentally affected by the data. The project relied on open-source information regarding offences that occurred between 2013 and 2022, in which the offender had been convicted or died in the commission of their offence. To ensure that the data were as reliable as possible, we employed a reliability continuum, ensuring all cases were developed from legal material and, for acts where the offender died, only those where an official inquest had been completed were taken forward for analysis. This meant that several recent high-profile cases (for example, Rowan Baxter) could not be included. Excluding such cases meant that the sample size was constrained, and that affected the statistical outcomes. Also, when using open-source data, even when heavily relying on legal documents, some information may not be available. This is problematic when using quantitative methods for data gathering. Further research could seek to use more qualitative techniques, such as grounded theory, to form holistic summaries of the life experiences of those who committed an act of GFV.

A second issue pertains to the offender types examined in this research. Although, as discussed, studies question whether there are true distinctions between the offender types under scrutiny here, there may still be problems grouping all offender types together. Typically, research now accepts the range of similarities across lone actor terrorists and mass killers, but to date there is little empirical evidence supporting the inclusion of familial and domestic homicides with these offenders. These offenders also require different prevention mechanisms. However, this research identified that, despite these ongoing distinctions, there are key indicators across offenders that can offer insight to a range of practitioners involved in preventing these offences. It is also important to note that within the case studies, when examining the histories of violence, qualitative case information demonstrated that domestic violence was common across all offender types. Further research should seek to critically examine the similarities and differences across these offence types.

Conclusions

This research offers new empirical and theoretical insights into GFV. Currently the field of GFV is led by practitioners, who use their existing knowledge of previously disparate academic disciplines to help perform their roles. Typically, in research, theory is developed before empirical outputs. These theoretical and empirical contributions then inform practice. However, in GFV, practitioners lack such support. This project identified key antecedents that, in combination, interact with each other over time, resulting in the development of a grievance that fuels an act of violence. These results offer insight for practitioners and assist in the development of risk planning and mitigation procedures. Multiple antecedents affect an individual as they pass through life. The results have confirmed that GFV may be a valid definition for a range of offence types, that the interaction between variables may be of more predictive value than the presence or absence of the variables, and that the interactions between variables over time can produce different pathways for people as they develop a grievance and move towards committing an act of violence.

References

URLs correct as at October 2022

Atran S 2016. The devoted actor: Unconditional commitment and intractable conflict across cultures. *Current Anthropology* 57(S13): 192–203. <https://doi.org/10.1086/685495>

Australian Security Intelligence Organisation 2021. *Annual report 2020–21*. Canberra: ASIO. <https://www.asio.gov.au/resources/asio-report-parliament>

Bartlett J, Birdwell J & King M 2010. *The edge of violence: A radical approach to extremism*. London: Demos

Beune K, Giebels E & Taylor PJ 2010. Patterns of interaction in police interviews: The role of cultural dependency. *Criminal Justice and Behavior* 37(8): 904–925. <https://doi.org/10.1177/0093854810369623>

- Böckler N, Leuschner V, Roth V, Zick A & Scheithauer H 2018. Blurred boundaries of lone-actor targeted violence: Similarities in the genesis and performance of terrorist attacks and school shootings. *Violence and Gender* 5(2): 70–80. <https://doi.org/10.1089/vio.2018.0002>
- Borum R 2014. Psychological vulnerabilities and propensities for involvement in violent extremism. *Behavioral Sciences & the Law* 32(3): 286–305. <https://doi.org/10.1002/bsl.2110>
- Borum R 2011. Radicalization into violent extremism II: A review of conceptual models of empirical research. *Journal of Strategic Security* 4(4): 37–62. <https://doi.org/10.5038/1944-0472.4.4.2>
- Borum R 2003. Understanding the terrorist mindset. *FBI Law Enforcement Bulletin* 72(7): 7–10. <https://doi.org/10.1037/e318402004-002>
- Cicchetti D & Rogosch FA 1996. Equifinality and multifinality in developmental psychopathology. *Development & Psychopathology* 8: 597–600. <https://doi.org/10.1017/S0954579400007318>
- Clemmow C, Gill P, Bouhana N, Silver J & Horgan J 2022. Disaggregating lone-actor grievance-fueled violence: Comparing lone-actor terrorists and mass murderers. *Terrorism and Political Violence* 34(3): 558–584. <https://doi.org/10.1080/09546553.2020.1718661>
- Corner E, Bouhana N & Gill P 2019. The multifinality of vulnerability indicators in lone-actor terrorism. *Psychology, Crime & Law* 25(2): 111–132. <https://doi.org/10.1080/1068316X.2018.1503664>
- Corner E, Taylor H & Clemmow C 2022. Assessing the behavioural trajectories of terrorists: The role of psychological resilience. *Dynamics of Asymmetric Conflict* 15(2): 96–122. <https://doi.org/10.1080/17467586.2021.1955289>
- Crowson HM 2009. Right-wing authoritarianism and social dominance orientation as mediators of worldview beliefs on attitudes related to the war on terror. *Social Psychology* 40(2): 93–103. <https://doi.org/10.1027/1864-9335.40.2.93>
- Dawson L 2017. *Sketch of a social ecology model for explaining homegrown terrorist radicalisation*. The Hague: International Centre for Counter-Terrorism. <https://doi.org/10.19165/2017.1.01>
- De Coensel S 2018. Processual models of radicalization into terrorism: A best fit framework synthesis. *Journal for Deradicalization* 17: 89–127
- Ellis HE, Clarke DD & Keatley DA 2017. Perceptions of behaviours in stranger rape cases: A sequence analysis approach. *Journal of Sexual Aggression* 23(3): 328–337. <https://doi.org/10.1080/13552600.2017.1361618>
- Europol 2021. *European Union terrorism situation and trend report*. Luxembourg: Publications Office of the European Union. <https://www.europol.europa.eu/publications-events/main-reports/tesat-report>
- Gill P, Corner E, Conway M, Thornton A, Bloom M & Horgan J 2017. Terrorist use of the internet by the numbers: Quantifying behaviors, patterns, and processes. *Criminology & Public Policy* 16(1): 99–117. <https://doi.org/10.1111/1745-9133.12249>
- Gill P, Corner E, McKee A, Hitchen P & Betley P 2022. What do closed source data tell us about lone actor terrorist behavior? A research note. *Terrorism and Political Violence* 34(1): 113–130. <https://doi.org/10.1080/09546553.2019.1668781>

- Gill P, Horgan J, Corner E & Silver J 2016. Indicators of lone actor violent events: The problems of low base rates and long observational periods. *Journal of Threat Assessment & Management* 3(3–4): 165–173. <https://doi.org/10.1037/tam0000066>
- Goldfinch S, Taplin R & Gauld R 2021. Trust in government increased during the Covid-19 pandemic in Australia and New Zealand. *Australian Journal of Public Administration* 80(1): 3–11. <https://doi.org/10.1111/1467-8500.12459>
- Gøtzsche-Astrup O 2018. The time for causal designs: Review and evaluation of empirical support for mechanisms of political radicalisation. *Aggression and Violent Behavior* 39: 90–99. <https://doi.org/10.1016/j.avb.2018.02.003>
- Gruenewald J, Chermak S & Freilich JD 2013. Distinguishing “loner” attacks from other domestic extremist violence: A comparison of far-right homicide intent and offender characteristics. *Criminology & Public Policy* 12(1): 65–91. <https://doi.org/10.1111/1745-9133.12008>
- Hogg MA & Adelman J 2013. Uncertainty-identity theory: Extreme groups, radical behavior, and authoritarian leadership. *Journal of Social Issues* 69(3): 436–454. <https://doi.org/10.1111/josi.12023>
- Horgan JG 2016. A call to arms: The need for more psychological research on terrorism. *Social Psychological Review* 18(1): 25–29
- Horgan JG, Gill P, Bouhana N, Silver J & Corner E 2016. *Across the universe? A comparative analysis of violent behavior and radicalization across three offender types with implications for criminal justice training and education*. <https://www.ojp.gov/ncjrs/virtual-library/abstracts/across-universe-comparative-analysis-violent-radicalization-across>
- Hutson R, Long T & Page M 2009. Pathways to violent radicalisation in the Middle East: A model for future studies of transnational Jihad. *The RUSI Journal* 154(2): 18–26. <https://doi.org/10.1080/03071840902965570>
- Jensen MA, Atwell Seate A & James PA 2020. Radicalization to violence: A pathway approach to studying extremism. *Terrorism and Political Violence* 32(5): 1067–1090. <https://doi.org/10.1080/09546553.2018.1442330>
- Klausen J, Champion S, Needle N, Nguyen G & Libretti R 2016. Toward a behavioral model of “homegrown” radicalization trajectories. *Studies in Conflict & Terrorism* 39(1): 67–83. <https://doi.org/10.1080/1057610X.2015.1099995>
- Koehler D 2019. *A threat from within? Exploring the link between the extreme right and the military*. ICCT Policy Brief. The Hague: International Centre for Counter-Terrorism. <https://icct.nl/publication/a-threat-from-within-exploring-the-link-between-the-extreme-right-and-the-military/>
- LaFree G & Dugan L 2007. Introducing the Global Terrorism Database. *Terrorism and Political Violence* 19(2): 181–204. <https://doi.org/10.1080/09546550701246817>
- LaFree G, Dugan L & Miller E 2014. *Putting terrorism in context: Lessons from the Global Terrorism Database*. Routledge. <https://doi.org/10.4324/9781315881720>
- McCauley CR & Moskalenko S 2017. Understanding political radicalization: The two-pyramids model. *American Psychologist* 72(3): 205–216. <https://doi.org/10.1037/amp0000062>

- McGregor I, Hayes J & Prentice M 2015. Motivation for aggressive religious radicalization: Goal regulation theory and a personality × threat × affordance hypothesis. *Frontiers in Psychology* 6(1325). <https://doi.org/10.3389/fpsyg.2015.01325>
- Moghaddam FM 2005. The staircase to terrorism: A psychological exploration. *American Psychologist* 60(2): 161–169. <https://doi.org/10.1037/0003-066X.60.2.161>
- Murphy K 2021. Guardian essential poll: Scott Morrison approval drops six points during latest Covid lockdowns. *The Guardian* (Australia edition), 6 July. <https://www.theguardian.com/australia-news/2021/jul/06/guardian-essential-poll-scott-morrison-approval-drops-six-points-during-latest-covid-lockdowns>
- Nicholson B 2016. Counter-terrorism tsar to seek out “lone wolves”. *The Australian*, 22 July
- Pathé MT et al. 2018. Establishing a joint agency response to the threat of lone-actor grievance-fuelled violence. *Journal of Forensic Psychiatry & Psychology* 29(1): 37–52. <https://doi.org/10.1080/14789949.2017.1335762>
- Pfefferbaum B & North CS 2020. Mental health and the Covid-19 pandemic. *New England Journal of Medicine* 383: 510–512. <https://doi.org/10.1056/NEJMp2008017>
- Shaw ED 1986. Political terrorists: Dangers of diagnosis and an alternative to the psychopathological model. *International Journal of Law and Psychiatry* 8(3): 359–368. [https://doi.org/10.1016/0160-2527\(86\)90066-X](https://doi.org/10.1016/0160-2527(86)90066-X)
- Silber MD & Bhatt A 2007. *Radicalization in the West: The homegrown threat*. New York, NY: New York City Police Department. <https://www.ojp.gov/ncjrs/virtual-library/abstracts/radicalization-west-homegrown-threat>
- Silke A 2020. *COVID-19 and terrorism: Assessing the short- and long-term impacts*. Pool Re and Cranfield University
- Sinai J 2014. Developing a model of prison radicalisation. In A Silke (ed), *Prisons, terrorism and extremism: Critical issues in management, radicalisation and reform*. Abingdon, Oxon: Routledge: 35–46. <https://doi.org/10.4324/9780203584323-3>
- Taylor PJ & Donald I 2007. Testing the relationship between local cue-response patterns and the global structure of communication behaviour. *British Journal of Social Psychology* 46(2): 273–298. <https://doi.org/10.1348/014466606X112454>
- Torok R 2013. Developing an explanatory model for the process of online radicalisation and terrorism. *Security Informatics* 2(6): 1–10. <https://doi.org/10.1186/2190-8532-2-6>
- US Department of Homeland Security 2022. *National terrorism advisory system bulletin – June 7, 2022*. <https://www.dhs.gov/ntas/advisory/national-terrorism-advisory-system-bulletin-june-7-2022>
- Van Buuren J & De Graaf B 2014. Hatred of the system: Menacing loners and autonomous cells in the Netherlands. *Terrorism and Political Violence* 26(1): 156–184. <https://doi.org/10.1080/09546553.2014.849932>

- Van der Vegt I, Kleinberg B & Gill P 2022. Understanding lone-actor violence through linguistic analysis. In JC Holzer, AJ Dew, PR Recupero & P Gill (eds), *Lone-actor terrorism: An integrated framework*. New York: Oxford University Press: 96–108. <https://doi.org/10.1093/med/9780190929794.003.0008>
- Veldhuis T & Staun J 2009. *Islamist radicalisation: A root cause model*. The Hague: Netherlands Institute of International Relations Clingendael
- Webber D & Kruglanski AW 2018. The social psychological makings of a terrorist. *Current Opinion in Psychology* 19: 131–134. <https://doi.org/10.1016/j.copsyc.2017.03.024>
- Weenink AW 2015. Behavioral problems and disorders among radicals in police files. *Perspectives on Terrorism* 9(2): 17–33
- Wiktorowicz Q 2004. *Joining the Cause: Al-Muhajiroun and radical Islam*. Paper presented at the Roots of Islamic Radicalism Conference, Yale University
- Winter C & Spaaij R 2018. The evolving threat of lone-actor terrorism. *Inside Story*, 15 November. <https://insidestory.org.au/the-evolving-threat-of-lone-actor-terrorism/>
- Wolfowicz M, Litmanovitz Y, Weisburd D & Hasisi B 2021. Cognitive and behavioral radicalization: A systematic review of the putative risk and protective factors. *Campbell Systematic Reviews* 17(e1174). <https://doi.org/10.1002/cl2.1174>

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