

CREST Centre for Research and Evidence on Security Threats



The Relationship Between Mental Health Problems and Terrorism

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This report is one of a series exploring *Knowledge Management Across the Four Counter-Terrorism 'Ps'*. The project looks at areas of policy and practice that fall within the four pillars of CONTEST. For more information visit:

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KEY POINTS

The link between mental health disorders and terrorism has long been a focus of academic research. Attention has focused most heavily on understanding the prevalence of mental disorders among those involved in terrorism. Evidence about the rates of mental health disorders among different categories of terrorists, including jihadist, right-wing and lone actors, is growing in strength. However, the causal relationship between mental health and engagement in terrorism remains unclear.

This report surveys research on the prevalence of mental health problems in the general offending population in prisons and probation. It describes what is known about rates of mental disorder among terrorism offenders and different kinds of ideologically motivated extremist. It also considers the effects of mental health problems on terrorism, their influence on radicalisation processes and propensity for violence, and the limited evidence on recidivism.

PREVALENCE OF MENTAL HEALTH PROBLEMS

- Current research challenges reductive, either-or approaches to the role and significance of mental health disorders in terrorism. Instead, it is important to understand when, why and for whom mental health problems might be relevant to violent extremism and to examine them in context with other factors.
- Elevated rates of mental health disorders are found across the general prison and probation populations in the UK and internationally; the prevalence of psychosis is significantly higher than in the general population.
- Comparatively little research exists on the mental health needs of those convicted of terrorism offences in the UK.
- Former paramilitary prisoners in Northern Ireland have been found to suffer extensively with mental health problems.

- Jihadists and foreign fighters suffer from above average rates of severe mental health disorders. These commonly include schizophrenia, autism spectrum disorder, and PTSD.
- Members of white supremacist movements have disproportionately high rates of mental health problems.
- Some research suggests white supremacist groups may accept those with mental disorders because of their capacity for violence. More research is needed to understand how recruitment processes operate in relation to those with mental health problems.
- Lone actors display higher rates of mental health disorders than group-based terrorists. Such problems appear to be particularly prevalent among single-issue attackers when compared with those motivated by right-wing or Islamist ideologies.

EFFECTS OF MENTAL HEALTH PROBLEMS ON TERRORISM

- The complex processes by which mental health problems combine or interact with other factors during radicalisation are poorly understood.
- Those with mental health disorders are thought to be at increased risk of interpreting the actions of others negatively; becoming fixated by extremist ideologies; or angered by alleged acts of oppression or mistreatment. However, these assumptions require empirical testing.
- Mental health disorders are thought to make individuals more vulnerable to stress and the influence of radicalisers or extremist ideology. Precisely how this informs the move towards violence has not been properly explored.
- The relationship between support for violent extremism and mental health problems is complex; mild depression may correspond with elevated support for radical views but holding these beliefs may also protect individuals from more severe depression.

- Short-term stressors may be important in motivating lone actors with mental health problems to plan and engage in attacks.
- Although some studies have found a small but significant link between having a mental health disorder and violence in the general offending population, the relationship remains contested. Psychosis-related disorders and depression appear to elevate the likelihood of violence.
- Mental health disorders have been shown to strongly correlate with increased criminal recidivism in non-terrorism related offending. Very little is known about the impact of these issues on terrorist recidivism.

This report takes a broad definition of mental health, which includes neuro-developmental conditions such as Autism Spectrum Disorder (ASD) and learning difficulties. Within the literature on terrorism, mental health problems are not always clearly defined and generally include both common and serious psychiatric disorders. Due to the difficulty in observing mental disorders accurately, some studies choose to identify 'mental disturbance' or 'psychological distress', which indicate the presence of some kind of mental health problem. Examples include suicidal ideation and suicide attempts, self-harm behaviours, and descriptions of symptoms or disorders.

INTRODUCTION

*Contemporary research downplays the role of mental disorders in terrorism, in part as a response to previous efforts which sought to pathologise terrorists. Although difficult, research is needed to develop a nuanced understanding of where and why mental health problems might be relevant to involvement in violent extremism.*¹

The relationship between mental health problems and terrorism has been the subject of research for decades. Early studies emphasised pathological explanations for terrorism. Research in the late 1990s and early 2000s largely dismissed these approaches on methodological and empirical grounds. Over the space of 40 years, research moved from the position that mental disorder was a significant cause of terrorism, to the opposite – that terrorists were rational actors and that mental health problems were not an important factor.

Contemporary research is focused on developing a more nuanced understanding of when and why mental health problems might be relevant to political violence. Importantly, the presence of mental health problems does not mean that terrorists cannot act in a rational manner.

Mental health problems can be difficult to recognise. Even where contact with healthcare professionals has been established, there are barriers to accurately diagnosing mental disorders. Terrorists are difficult subjects to evaluate; relatively few have engaged with clinicians or health systems for support or treatment, and accurate diagnostic data is hard to come by. Researchers often have to work with limited information, while the mental health of offenders who die during their attacks cannot be assessed by psychiatrists. As a result, research is often limited and confirmed diagnoses of mental health disorders by professionals are relatively uncommon.

Research often relies on distance diagnosis, which draws on second-hand information from the media or reports from family and friends. These can be unreliable or vague, for example, suggesting that the individual was unstable, heard voices, or 'may' have been diagnosed with a disorder. The public also often associate mental health disorders with violence and may overemphasise the risk an individual might pose if they believe they have a problem. In some cases, questionable sources or reporting might artificially

¹ Important studies that disproved the notion that terrorists were mentally disordered include [Borum \(2004\)](#); [Horgan \(2005\)](#); and [Victoroff \(2005\)](#). For more on how rates of mental health among terrorists might be inflated by media or bystander reporting, see [Corner and Gill \(2017\)](#). Discussion of the difficulty accessing accurate information about the mental health of violent offenders is found in [Stone \(2015\)](#), and for terrorism offenders in [Corner and Gill \(2017\)](#).

THE PREVALENCE OF MENTAL HEALTH PROBLEMS

The Relationship Between Mental Health Problems and Terrorism

inflate the true prevalence rates of mental health problems.

Importantly, the presence of mental health problems should not be treated as a dichotomy, or as something that an individual either does or does not have. Mental disorders are varied, range in severity, and are

experienced differently over time. Similarly, mental health problems do not exist in a vacuum; psychological problems might be present but unrelated to involvement in extremism, and having a mental disorder is likely to be only one factor relevant to an individual's movement towards violence.

THE PREVALENCE OF MENTAL HEALTH PROBLEMS

THE GENERAL POPULATION

*Approximately one in four people will experience a diagnosable mental health problem over the course of a year.*²

The prevalence of mental health problems in the general population is difficult to conclusively determine. However, it is helpful to understand wider prevalence rates in order to compare them to those involved in terrorism. The World Health Organisation estimates that 27 per cent of the global adult population (18–65 years of age) experienced at least one mental disorder in the past year, including depression, anxiety, psychosis, eating disorders, or issues associated with substance abuse. Approximately two-thirds of those who suffer a mental health problem will never seek help.

In the UK, one in four adults experience at least one diagnosable mental health problem at some point during a year. One in six report having symptoms of a common mental disorder such as depression, anxiety, panic disorder, phobias, and obsessive compulsive disorder (OCD) in any given week. These disorders are more common among women than men in every age category.

Mental health problems generally begin at a young age. Figures from England suggest that by the age of 14, as many as half of mental health problems have become established. This increases to three quarters by the age of 24. Depression and anxiety disorders are thought to be the most common mental health problems. Over 4.5 million adults were diagnosed with depression in 2017/18, while almost a quarter of women and 13 per cent of men in England are diagnosed with depression in their lifetime.

For other mental health problems, 3.7 per cent of men and 5.1 per cent of women in England are estimated to have post-traumatic stress disorder (PTSD), and around 2 per cent of adults have bipolar disorder. Survey research finds that 0.7 per cent of the population experienced a psychotic disorder; mainly schizophrenia and affective psychosis. The same percentage of respondents reported attempting suicide in the past year.

PRISON POPULATIONS

*Elevated rates of mental health disorders are found across prison populations and offenders on probation. The prevalence of psychosis, in particular, is significantly higher than within the general population.*³

² Figures for the prevalence of mental health disorders are taken from global and UK health bodies, charities, and government reports ([WHO, 2015](#); [NHS, 2015, 2016](#); [Baker, 2020](#); [NICE, 2019](#)).

³ General rates of mental health problems in prisons both internationally ([Fazel et al., 2016](#)) and in the UK ([Tyler et al., 2019](#); [Glorney et al., 2020](#)) have been shown to significantly exceed average prevalence rates in the rest of the population. Prisoners often have pre-existing mental health problems before entering prison ([Bebbington et al., 2017](#)) as well as above average experiences of PTSD ([Baranyi et al., 2018](#)), learning difficulties ([Bowler et al., 2018](#)), and childhood

THE PREVALENCE OF MENTAL HEALTH PROBLEMS

Knowledge Management Across the Four Counter-Terrorism 'Ps'

Although definitive rates of mental health disorders are difficult to establish, research consistently shows higher rates of mental health problems among prison populations both internationally and in the UK. A sample of 469 male and female prisoners from 13 prisons in one region of the UK found that 199 (42.4%) had previously received a formal diagnosis of a mental disorder. There is no straightforward explanation for this. A significant proportion arrive in prison with pre-existing problems. However, the experience and stresses of imprisonment can trigger or exacerbate mental health problems among those who have an existing vulnerability.

The excessive rates of mental health problems in the prison population co-occur with high rates of PTSD, learning difficulties, and experiences of childhood sexual abuse. Among male prisoners these factors have been shown to impact the development of persecutory symptoms of psychosis that might mediate the risk of violence.

One notable finding is that the prevalence of psychosis is over 10 times higher in the prison population (9.9%) than within the general population (0.7%). This is supported by research that reveals 52 prisoners per thousand are estimated to have a psychotic disorder compared to 4.5 per thousand of those outside prison.

In addition, seven per cent of male prisoners are thought to have experienced a psychotic disorder in the previous year.

Including undiagnosed mental health problems, around two per cent of the prison population are believed to have acute and serious mental health problems, a further 15 per cent have specialist mental health needs, and over half have some form of common mental disorder such as anxiety, depression, or PTSD. A little over three quarters are diagnosed with two or more disorders. Research consistently finds an over-representation of prisoners thought to have intellectual disabilities across countries; in some settings this is as high as 69.9 per cent of the offending population.

Mental health problems are more prevalent among female and youth offenders than adult males. Female prisoners are more likely to be diagnosed with personality disorders, mood disorders, OCD, and eating disorders; this reflects the prevalence of these disorders in the general population. However, women's mental health needs are generally better met than men's; more women with identified mental health needs report contact with prison mental health services.

Diagnoses	% Total sample (n=199)	% Men (n=117)	% Women (n=82)
Personality disorder	26.5	20.0	35.4
Anxiety disorder	27.1	26.3	28.0
Mood disorder	58.8	51.8	73.2
PTSD	19.8	20.9	18.3
Psychotic disorder	9.9	13.6	4.9
Brain injury	0.5	0.9	0.0
ASD	3.7	5.4	1.2
Learning disability	1.0	1.8	0.0
ADHD	14.6	20.0	7.3
OCD	5.7	1.8	11.0
Dementia	1.0	0.9	1.2
Eating disorder	3.6	0.0	8.5

Formal diagnoses recorded over offenders' lifetimes in Tyler et al.'s (2019) sample of UK prisoners

sexual abuse ([Bodkin et al., 2019](#)). Studies suggest these factors inform the development of psychosis in men ([Goddard & Pooley, 2019](#); [Green et al., 2019](#)), which may help explain the high prevalence rates in prisons ([Brugha et al., 2005](#); [London Assembly Health Committee, 2017](#)). Estimates of the prevalence of mental health disorders, including those that have not been formally diagnosed, are drawn from a number of sources ([Singleton et al., 1998](#); [Parliament, 2019](#); [Muñoz García-Largo, 2020](#)), including those that focus on female prisoners ([Chitsabesan & Hughes, 2016](#); [Hollin & Palmer, 2006](#); [Underwood & Washington, 2016](#)).

THE PREVALENCE OF MENTAL HEALTH PROBLEMS

The Relationship Between Mental Health Problems and Terrorism

PROBATION POPULATIONS

Offenders on probation display signs of mental health problems well above rates within the general population. These issues have been shown to strongly correlate with criminal recidivism. ⁴

The number of offenders supervised by probation services with mental health problems greatly exceeds the national average. An epidemiological survey found that 39 per cent of those on probation had a current mental health disorder, while one in four had anxiety disorders and one in six had a mood disorder. Similar to prisoners, 11 per cent were diagnosed with a psychotic illness and as many as half displayed symptoms of a personality disorder. Substance abuse was commonly found alongside mental health problems; nearly three quarters (72%) of those with a diagnosable mental disorder also had a drug or alcohol problem.

TERRORISM ACT (TACT) OFFENDERS IN PRISON

There is limited evidence on the prevalence of mental health problems among TACT offenders in prison, although former paramilitary prisoners have been shown to suffer extensive mental health problems. ⁵

Rates of mental health problems within TACT or TACT-related offenders are difficult to determine. A survey of prison staff found that they felt they were seeing increasing numbers of TACT offenders with mental health problems. Dedicated mental health support for TACT offenders is not commonplace in the UK. TACT suites do not currently routinely include mental health practitioners, although when needed staff in custody suites are able to call on mental health support. In response to the use of separation centres for TACT offenders, staff have raised concerns about the potential impact of separation on the mental health of the prisoners, particularly if they are separated from the wider prison population for extended periods.

A survey of 190 former political prisoners in Northern Ireland found that 39.9 per cent met the criteria for clinically significant mental health disorders, while 18.7 per cent of former republicans and 18.3 per cent of former loyalists were likely to have a serious psychiatric problem. Over half reported symptoms of PTSD, and around half of loyalists (53.5%) and republicans (55.5%) reported experiencing serious depression since leaving prison. Just under a third (31.5%) described suicidal ideation; this was more common among loyalists (38.4%) than republicans (27.4%). High rates of suicide and mental health problems have been found among former paramilitary prisoners elsewhere; in one sample of ex-republicans at least 75 per cent of respondents showed symptoms of PTSD.

While mental health problems are higher in the general population in Northern Ireland than elsewhere (mental health problems account for 40% of disability allowances; three times higher than the rest of the UK), former political prisoners are significantly more likely to experience some form of psychological ill health. Former paramilitary prisoners are considered less likely to receive mental health diagnoses because of the difficulties seeking support for psychological problems related to their own violence.

Former paramilitary prisoners vary in their capacity to cope with the mental health problems linked to traumatic experiences. Some display considerable resilience in dealing with these issues, others are less able to cope – something that is reflected in self-medication through high levels of reported alcohol abuse. Of the 190 former political prisoners surveyed in Northern Ireland, 68.8 per cent engaged in hazardous levels of drinking while 53.3 per cent were dependent on alcohol – behaviour likely to have damaging effects on other aspects of their lives and mental health.

⁴ There is significantly less research on the mental health of offenders on probation than in prison. The research that has been carried out reveals high rates of mental disorders in these settings ([Brooker et al., 2012](#); [CFMH, 2018](#)). Studies highlight that offenders with mental health problems pose a greater risk of recidivism ([Louden & Skeem, 2011](#); [Hirschrift & Binder, 2017](#); [Cloyes et al., 2010](#)), including violent crimes ([Chang et al., 2015](#)).

⁵ There is comparatively little academic research on rates of mental health problems among TACT offenders in the UK. These conclusions are drawn from government-commissioned reports ([HMIP, 2019](#); [Powis et al., 2019](#)). The most comprehensive study was carried out by [Jamieson et al., \(2010\)](#). High rates of suicide and mental health problems are also found in other studies of former paramilitary prisoners in Northern Ireland ([McEvoy et al., 2004](#); [Shirlow, 2014](#); [Ferguson et al., 2010](#); [Fergusson and McAuley, 2020](#)).

THE PREVALENCE OF MENTAL HEALTH PROBLEMS AMONG DIFFERENT TYPES OF VIOLENT EXTREMIST

A recent systematic review identified 25 studies which examined the relationship between mental health problems and violent extremists based on 28 samples. Across these studies, there was a significant disparity in reported prevalence rates which ranged from 0 to 57 per cent. Differences in prevalence rates were influenced by methodological differences, including whether there was a formal diagnosis; the means by which data were collected; and sample size.

Assessments based on clinical assessments found diagnoses in 33.47 per cent of cases. Those relating to confirmed diagnoses indicated a prevalence rate of 14.4 per cent. Studies that drew on police or court-related data found rates of 16.96 per cent, while those which relied on open sources reached a figure of 9.82 per cent. The types of reported mental health disorder were heterogeneous and there was no common diagnosis profile across the samples.

This study demonstrates that understanding the sample, data selection processes, and the means by which a judgement is reached are vital in assessing the strength of the evidence about claims over the relationship between mental health problems and terrorism.

JIHADISTS

*Studies find differing levels of mental health problems among jihadists, although most suggest there are higher rates of psychiatric problems than in the general population.*⁶

A number of European studies, some of which include data on the UK, have found higher levels of mental

disorders among jihadists. Comparing the police and medical records of 300 known or suspected jihadi extremists, Dutch healthcare providers estimated that at least 60 per cent had a history of mental health problems, of which 25 per cent were considered severe. This is far higher than rates in the general population.

The Dutch sample represents a broad range of mental health problems, including personality disorders and behavioural, emotional and developmental disorders, such as autism. Those with the most significant mental health problems were more active in leadership roles, including the recruitment of foreign fighters. Of the women in the Dutch sample with mental health problems, 80 per cent had experienced sexual or domestic abuse, which may help explain the prevalence of PTSD and personality disorders.

Of a sample of 76 individuals who carried out attacks in the West relating to the Islamic State, just over 25 per cent had a history of mental health problems, which is a very similar rate to the population average. However, the rate of psychological instability among those inspired, rather than directed by, the Islamic States is almost 10 per cent higher (34.4%).

RIGHT-WING TERRORISTS

*A high proportion of white supremacists have mental health problems. Although more research is needed, these organisations may accept members with mental health disorders because of their capacity for violence.*⁷

Life-history interviews with 38 male and 6 female

⁶ For the systematic review of the relationship between mental health problems and violent extremism, see [Gill et al. \(2020\)](#). Mental disorders were overrepresented in a sample of European jihadists ([Bakker, 2006](#)), and 40 per cent of a sample of French jihadists had depression ([Bouzar, et al., 2014](#)). The sample of Dutch jihadists is recorded in [Paulussen et al. \(2017\)](#), while [Corner and Gill \(2017\)](#) analysed Islamic State-related attackers in the West.

⁷ Analysis of a sample of 144 former members of violent white supremacist groups in the US support the high prevalence of psychiatric issues (41%), suicidal ideation (57%), and family histories of mental health problems (48%) ([Simi et al., 2016](#)). In-depth interviews with former members of white supremacist movements providing evidence on rates of mental health problems and the organisation's response to them were carried out by [Bubolz & Simi \(2019\)](#). Vetting undertaken by extremist groups to weed out individuals with mental health problems has been suggested in [Post & Gold, 2002](#).

DIFFERENT TYPES OF VIOLENT EXTREMIST

The Relationship Between Mental Health Problems and Terrorism

former members of violent white supremacist groups in the US found that over half (57%) had experienced mental health problems before or during their involvement; 62 per cent had attempted or seriously considered suicide; and 59 per cent had a family history of mental health problems.

'Yeah there were a lot of 'em that had mental issues ... I think it had a lot to do with the kind of people these groups attract. You know people who are already on edge with not much stability in their lives. And the groups will pretty much take anyone who comes along. They don't really care much you know they're not very selective. They need bodies is really what it's all about.'

John, a former member of a White supremacist organisation. Interviewed in Bubolz and Simi, 2019.

Interviewees made clear that white supremacist groups often had a large number of members who had been diagnosed with mental health problems, or who exhibited symptoms, including bipolar disorder, psychosis, and depression. The marginalisation experienced by those with mental health problems may resonate with these movements' feeling of estrangement from society.

Interviews with people who have been involved in white supremacist movements suggest they may be less likely to filter out those with mental health problems. This may be because such groups find that people prone to acting out impulsive tendencies have the capacity to meet organisational goals, for example by engaging in violence without considering the personal consequences. In this case, the potential downsides of recruiting members with mental health problems may be outweighed by the need for manpower.

Anecdotally, it has been suggested that organisations may try to filter out individuals with mental health

problems, for example because they may pose a security risk, however the evidence around this is not extensive. The relationship between organisational goals and the incentives to accept members with mental health problems is complex and more research is needed to understand these dynamics.

LONE ACTORS

*Compared with group-based terrorists, lone actors display higher rates of mental health problems which appear to be particularly prevalent in single-issue attackers.*⁸

The link between mental health and lone actors has received more attention than other forms of terrorism. A study examining European lone actors with varying ideological beliefs, active between 2000 and 2015, found that 35 per cent had mental health problems compared with 27 per cent of the general adult population. A similar sample of 153 lone actor terrorists found a broad range of disorders that were significantly more prevalent than among the general population, including schizophrenia (8.5%), delusional disorders (2.0%) and autism spectrum disorder (3.3%).

Empirical studies demonstrate higher rates of mental disorders among lone actors over group-based terrorists. Across ideologies, 22 per cent of lone actors in one study had a mental disorder compared with 8.1 per cent of those in groups. Of 109 lone actors, a little under a third (31.9%) had a history of mental health problems or personality disorder. By contrast, this figure was 3.4 per cent for the control sample of 428 group-based actors. A sample of lone and group-based right-wing terrorists also found that mental disorder was much higher in those acting alone (40%) than with others (7.6%).

Knowledge about how mental health problems intersect with different forms of ideology in lone actors is limited. Of a sample of 119 lone actors, single-issue inspired attackers (animal rights, anti-abortion, environmentalism) displayed a significantly higher rate of mental disorders (52.4%) than those motivated by right-wing (30%) or al-

⁸ Studies of lone actors find higher than average rates of mental health problems ([van Zuijdewijn & Bakker, 2016](#); [Corner et al., 2016](#); [Hewitt, 2003](#); [Gill et al., 2014](#); [Corner & Gill, 2015](#)). These rates are also higher than group-based terrorists ([Corner & Gill, 2015](#); [Gruenewald et al., 2013](#)). The prevalence of mental health problems across different ideological beliefs was identified by [Gill et al. \(2014\)](#), and pre-attack behaviours by [Corner and Gill \(2015\)](#).

Qaeda related (25%) ideologies. Further research is needed to understand how single-issue ideologies interact with mental health problems and how these dynamics inform pathways into extremism.

Compared with school shooters, lone actors appear less likely to show signs of depression, suicidal ideas, despair, or have a history of violence. Lone

actors with mental health problems are more likely to engage in pre-attack behaviours including expressing violent intentions, stockpiling weapons, training, and seeking legitimisation for their planned actions. These individuals also carried out successful attacks, killed and injured, and claimed responsibility more often than those without psychological problems.

FOREIGN FIGHTERS

Police records of 140 individuals (117 men and 23 women) who travelled, or were suspected of preparing to travel, from the Netherlands to Syria found that almost six per cent had a diagnosed mental health problem, including narcissistic personality disorder, ADD, ADHD, schizophrenia, ASD and PTSD. An additional 20 per cent displayed indicators of other undiagnosed mental health problems.

These findings indicate that mental health problems are more common in jihadists than in the general public. The prevalence of schizophrenia and psychosis (2.3%) in particular, is significantly higher than that of the general population which is estimated at 0.87-1 per cent.

Another study of 26 people from the Netherlands suspected of, or prosecuted for, terrorism-related offenses connected to Syria found that four people had been formally diagnosed with a serious mental disorder (psychotic disorder, borderline personality disorder, ADHD or PTSD). A further three individuals displayed signs of such disorders.

Significantly, the mental health practitioners interviewed for the study reported that psychopathological issues appear to be increasing in contemporary terrorist and extremist clients and are more prevalent in these populations than they were in the past.

RETURNING FOREIGN FIGHTERS

Having witnessed or taken part in the extreme violence carried out by the Islamic State, many returning foreign fighters may have developed mental health problems as a byproduct of their involvement. Returnees have been found to suffer from symptoms of PTSD, including stress, emotional instability or disillusionment.

For some, these symptoms emerged soon after returning home, while for others they can take longer to appear. Individuals returning from Syria and Iraq suffering from PTSD or other disorders may be vulnerable to further radicalisation, increasing the risk they pose in their home countries.

Studies of foreign fighters highlight above average levels of mental disorders and describe the issues this might pose for people on their return
(Weenik, 2015; van Levenhorst & Andreas, 2017; Mehra, 2016).

MENTAL HEALTH PROBLEMS AND THE POTENTIAL FOR RADICALISATION

There is little understanding about the complex processes by which mental health problems interact with other factors during radicalisation.⁹

Radicalisation is a highly individualised process. Mental health problems coexist, influence and interact with other factors in an individual's life, including personal experiences, life stresses or vulnerabilities, and protective factors that might mitigate the risk of involvement in extremism. While the presence of mental health disorders has been linked to various forms of terrorism, causal explanations as to how these problems shape and impact upon engagement in violence have yet to be established.

Gathering accurate and detailed qualitative data that provides sufficient information to understand how individuals' views and behaviours change over time is one of the key challenges in both mental health and terrorism research. Increasingly, researchers are being granted access to primary data from police, intelligence agencies and mental health professionals working with radicalised individuals, which is helping to address this problem. However, the accuracy of the diagnoses, the prevalence of non-clinical data to inform research, and the difficulties associated with capturing how offenders themselves believe their mental health impacted their offence remain challenges.

Research has suggested that mental health problems have the capacity to both facilitate and mitigate radicalisation. Studies on lone actors with different ideological beliefs highlight that mental disorders may contribute to an individual's vulnerabilities leading to a move towards violence, especially when drugs or alcohol are used to self-medicate. Conversely, treatment for mental health problems may lead an individual to

change their social setting, including moving away from those that might be pulling them towards extremism, and to secure other forms of support that may help to mitigate the risk of involvement in violence.

VULNERABILITY TO RECRUITERS OR EXTREMIST IDEOLOGIES

Mental health disorders are thought to make individuals more vulnerable to the influence of radicalisers or extremist ideology, however, more evidence is needed to support this idea.¹⁰

In general, the empirical research as to whether mental health problems increase an individual's vulnerability to radicalisation is limited. Most studies offer hypotheses that may help explain the relationship between mental health and vulnerability to extremism, rather than providing evidence-based analyses.

Studies that have examined the role of mental health problems in the radicalisation process theorise that vulnerability might be greater in this population because it hinders people's capacity to resist radical discourses, influences or manipulation from extremist recruiters or leaders. Those with mental health disorders can find it difficult to maintain jobs and positive social relationships and may have been rejected by conventional social networks. The feelings of marginalisation these experiences can engender may make extremist organisations more attractive.

Depressed individuals may be susceptible to recruiters that appear to offer friendship and support. For example, female Dutch jihadists with

⁹ The difficulties attributing causality in this area are discussed in depth by [Corner et al. \(2018\)](#). The role mental health problems may play in both vulnerability and resilience towards radicalisation are identified in [Corner & Gill \(2019\)](#). For an overview of the small number of studies that have sought to understand the mechanisms by which mental health problems inform involvement in violence, see [Gill et al. \(2020\)](#).

¹⁰ Those with mental health disorders may find relationships difficult and may therefore be susceptible to those who show interest in them ([Bubolz & Simi 2019](#); [Paulussen et al., 2017](#); [Burke et al., 2010](#); [Corner et al., 2016](#)). Individuals with mental health problems have been shown to associate with others with similar problems in the context of terrorism ([Bubolz & Simi, 2019](#)) and other settings ([Nordsletten et al., 2016](#)). The relationship between depression and radical ideas is identified in a number of studies ([Campelo et al., 2018](#); [Bhui et al., 2014](#); [Coid et al., 2016](#)).

mental health problems, such as mood disorders and histories of suicide attempts, were often found to be highly impressionable. Individuals with ASD are prone to forming intense online relationships, a trait that is also noted in lone actors with ASD.

Those with mental health problems can be attracted to opportunities to associate with individuals with similar experiences. Studies have found that individuals with mental health disorders are more likely to marry and start families with others who also have a psychiatric disorder. Quantitative research suggests that many of those who join white supremacist groups do so, in part, because they find others with similar mental health experiences.

Youth radicalised into Islamist extremist groups are often reported to suffer from depressive episodes, and a commitment to radical ideas and actions may be a way to respond to this experience. A survey of 608 people of Pakistani or Bangladeshi heritage in the UK found that mild depressive symptoms were associated with sympathy for violent protest and terrorism. A cross-sectional study of 3,679 men aged 18 to 34 years old in the UK, found that anti-British extremist views may protect against depression, something especially prevalent among men of Pakistani heritage. These findings correspond with the notion that a lack of identity, meaning, and a need to belong may increase psychological vulnerability both to extremism and mental health problems such as anxiety and depression. However, much more research is needed to understand these dynamics.

THE RELATIONSHIP BETWEEN MENTAL HEALTH DISORDERS AND NON-TERRORISM-RELATED VIOLENCE

*The relationship between mental health disorders and non-terrorism-related violence remains contested, although some studies have found a small but significant link between the two.*¹¹

Research on the relationship between symptoms of serious mental disorder and non-terrorism-related violence report conflicting findings. Studies highlight that it is rarely possible to demonstrate that active symptoms of severe mental disorders are a causal factor in violent behaviour. Rather than searching for causality, more nuanced research examines for whom and under what circumstances mental disorders and personality traits might have a greater influence on violence.

Studies have found a small but significant relationship between serious mental disorders, particularly

psychotic disorders, and the risk of an individual engaging in violence. However, this prevalence remains low; only four per cent of violent acts committed in the United States are carried out by people with psychiatric disorders. Another study found that out of 429 investigated crimes, four per cent were directly related to psychosis and 10 per cent were directly associated with bipolar disorder. Across various crimes, studies have found that offenders experience psychiatric symptoms as they are carrying out an offence between four and 18 per cent of the time. In 12 per cent of violent incidents, the perpetrator reported experiencing psychosis-related symptoms at the time of their crime.

Depression may be associated with impulsivity and suicidal behaviour, which may correlate with an increased risk of violence. A study of over 47,000 outpatients in Sweden diagnosed with depressive

¹¹ The minor but not insignificant relationship between mental disorder and the propensity for non-terrorism-related violence is identified in a number of studies ([Douglas et al., 2009](#); [Taylor, 2008](#); [Swanson et al., 2006](#)). The low rates of individuals reporting that psychosis influenced their offence is recorded in a number of different contexts ([Metzl & MacLeish, 2015](#); [Peterson et al., 2014](#); [Monahan et al., 2012](#)). Research on depression finds a small link to criminal offending and violence ([Apter et al., 1993](#); [Fazel et al., 2015](#); [Peterson et al., 2014](#)); no link has been established between either ASD ([Im, 2016](#); [Allely et al., 2017](#)) or developmental disabilities ([Sobsey et al., 1995](#)).

disorders found that 3.7 per cent of men and 0.5 per cent of women went on to commit a violent crime. Those with depression were three times more likely to engage in violence than the age and sex-matched control groups (1.2% of men and 0.2% of women). Other studies have also found that around three per cent of crimes were directly associated with depression.

There is currently no evidence that people with ASD are more likely to engage in violence. Those with ASD are typically at greater risk of being a victim rather than perpetrator of violence. Similarly, individuals with developmental disabilities are at four to ten times greater risk of being the victim of crime than the general population.

INTERACTIONS BETWEEN MENTAL HEALTH PROBLEMS, EXTREMISM AND VIOLENCE

*Empirical evidence about how mental health problems inform involvement in terrorism is weak. They may influence how people interpret the actions of others in ways which influence pathways to violence.*¹²

Although research in the area is limited, there are a number of factors that may mediate the relationship between radicalisation, involvement in terrorism and mental health disorders. Problems with someone's mental health may increase the likelihood they become:

1. Fixated on extremist ideologies
2. Paranoid about enemy conspiracies
3. Angered by alleged acts of oppression or mistreatment.

Studies find that obsessive compulsive habits are not uncommon among young Islamic radicals in France. Some may be attracted to the 'purification' regimes, which are enacted in the context of radical ideologies or the strict practice of religion. Similarly, radical ideologies and groups may help to mediate pre-existing anxieties by offering followers a strict and reassuring framework by which to live. Research on mass shooters suggests that the perceptions of individuals with mental health

disorders, such as depression, psychopathy and paranoia, can easily become distorted. These problems can result in paranoia, where the individual develops irrational and inflated views that they have been victimised. Their anger may then be projected towards targets perceived to symbolise their persecutors.

Lone actor terrorists with mental health problems also tend to externalise blame and hold others responsible for their personal misfortunes, which has the potential to propel them towards attack planning and execution. Over half of lone actors can be characterised as angry; 37.6 per cent had problems controlling their anger, and 35.2 per cent exhibited increasing levels of anger.

¹² The link between obsessive compulsive habits and purification regimes is proposed in a number of studies ([Bouzar et al., 2014](#); [Campelo et al., 2018](#)). Research on mass shooters ([Lankford, 2016](#); [Langman, 2009](#); [Newman & Fox, 2009](#); [Newman et al., 2004](#)) and lone actors ([McCauley et al., 2013](#); [Spaaij, 2010](#); [Corner et al., 2019](#)) with mental health problems highlight how their views can quickly become distorted towards their eventual targets.

PSYCHOSIS

*There is little empirical research as to how psychosis might impact upon terrorists' actions. Key risk factors for psychosis may overlap with those for radicalisation.*¹³

No empirical studies of terrorists' experiences of psychosis during or prior to their attacks could be found. Some researchers have suggested that the special relationships, conversations or tasks that some jihadists believe have come from Allah might be indicative of psychotic experiences. Similarly, Islamist extremists' experiences with *jinn*, or invisible spirits, during their radicalisation may be comparable to psychotic symptoms, such as hearing voices. However, these theories have not been empirically tested.

Some of the risk factors for psychotic disorder or psychotic experiences are linked to the socioeconomic status of populations where radicalisation is known to occur, for example, within sections of Moroccan-Dutch populations in Dutch cities. These include ethnic minority status; urban upbringing; low IQ; childhood trauma; and substance abuse. In these settings, psychosis and radicalisation may occur concurrently and influence one another, however the research in this area is very limited, and any conclusions provisional.

VULNERABILITY TO STRESS

*Mental health problems may make people more vulnerable to stress, something that may influence the move towards attack-planning and execution.*¹⁴

A body of research highlights the impact mental disorders can have on an individual's ability to cope with negative emotions or social-economic stressors, such as the loss of a relationship or job. In turn, these issues may be influential in pushing individuals towards terrorism. Mental health problems may lead to an increased risk of anger, frustration, and disappointment

when individuals experience adverse life events. Lacking the ability to cope, such individuals may find themselves in a cycle of isolation, maladjustment, and frustration. The addition of further stressors or negative events can bring about triggering incidents which may serve as a catalyst for violence.

In a study of 125 lone actors, over half (53%) suffered some form of mental health crisis before becoming radicalised. Of these, it was possible to identify a 'tipping point' that the individual struggled to deal with which seems to have pushed them towards carrying out an attack, in 59.2 per cent of cases. Research has also found that ASD was likely in eight per cent of a sample of 75 mass shooters; a rate approximately eight times higher than international rates of ASD. ASD may exacerbate other problems, making it harder to cope with stress, especially as problems often occur alongside mood disorders such as depression and anxiety.

COVID-19 STRESSORS

*Stressors appear to play a role in both bringing about mental disorders and influencing those with such problems to plan and engage in violence.*¹⁵

There is no research on the effect of COVID-19, however, wider literature on the impact of stress may be relevant to interpreting the possible impact of COVID-19 on those vulnerable to extremism. In criminological research, those with mental health problems are more likely to respond negatively to stress. Relatedly, stress appears to give rise to psychiatric issues; those who experience stress are 2.17 times more likely to be diagnosed with a mental disorder. The timing of stress events can also be relevant for terrorist actors. Studies of lone actors highlight that short-term risk factors appear to be significant in the run up to attacks. Of those who were impacted by significant stressors, this occurred in the 12 months preceding their attack in 74.3 per cent of cases.

¹³ The idea that experiences with jinn or Allah could potentially constitute symptoms of psychosis has been suggested in regards to extremism and in broader studies of religion (Paulussen et al., 2017; Lim et al., 2015). A number of studies highlight the crossover of issues that may inform both psychosis and radicalisation in Dutch-Moroccan populations within Dutch cities (te Nijenhuis et al., 2004; Lahlah et al., 2013; Veling et al., 2006).

¹⁴ The diminished capacity of individuals with mental health disorders to cope with stress has been identified in studies of mass shooters and lone actor terrorists (McCauley & Moskalenko, 2008). Stressful events have been highlighted as important in the study of lone actors (Corner et al., 2019) and mass shooters with ASD (Allely et al., 2017).

¹⁵ The significance of the timing of stressors for lone actors was identified in Gill et al. (2014) and the relationship between the experience of stress and being diagnosed with a mental disorder is from Corner and Gill (2015).

RECIDIVISM

Within the criminological literature there is a strong association between prisoners with mental disorders and criminal recidivism. Globally, research has found that those exiting prison with psychiatric problems are more likely to return to custody than those who do not suffer from such issues.

A study of 47,326 prisoners (43,840 male and 3,486 female) in Sweden found that offenders diagnosed with any form of psychiatric disorder had a significantly higher rate of violent reoffending than those without. In the 10-year follow-up, 25 per cent of men and 11 per cent of women with such diagnoses were involved in violent reoffending.

Research has also found that offenders with mental health problems return to prison sooner; on average they are incarcerated after 385 days versus 743 days for other prisoners.

Research on the relationship between mental health problems and terrorism-related reoffending is limited. There is little evidence about how the mental health problems suffered by those who have committed terrorism-related offences might impact the risk of reoffending. However, it appears that mental health disorders can contribute to people experiencing more precarious personal circumstances post-release. This does little to mitigate the risk that they might engage in further criminal or terrorist offences.

ASSESSING THE EVIDENCE BASE

While there has been considerable research on the relationship between mental health problems and terrorism, significant gaps in the evidence base remain. Prevalence rates of mental disorders within different terrorist populations are reasonably well established, however the degree to which these are relevant to understanding pathways towards violence has yet to be determined.

Similarly, the ways in which mental health problems intersect with different ideologies remains poorly understood, as there has been virtually no empirical investigation of these dynamics. The types of roles that people with mental health disorders might have within militant organisations, and the ways in which terrorist groups assess potential recruits with mental health problems, need further attention.

There has been little research on how psychiatric problems are likely to influence recidivism among terrorism-related offenders who have completed their sentences. The type of protective factors that might mitigate risk in relation to radicalisation and mental health remain largely unaddressed in the literature.

This includes the means by which being diagnosed with a mental health problem might represent an opportunity to intervene and divert someone away from extremism. The impact of involvement in terrorism on mental health disorders such as PTSD needs further work in order to inform reintegration and intervention strategies.

Addressing the gaps in the literature is hampered by the difficulty of accessing accurate and relevant data. Researchers often have to rely on open-source data, or the interpretations of non-clinicians. This may not capture the experience of the offender, and the way they understand or are influenced by their mental health disorder.

There can also be challenges with respect to the diagnostic reliability of the assessments that researchers use and their timeliness. For example, assessments made once someone has been convicted may differ from the information used by researchers gathered before this point.

READ MORE

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