EXPLORING THE EXTREMIST MINDSET AND THE ROLE OF EXPOSURE TO MEDIA REPORTS OF TERRORISM

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Thesis submitted to the University of Nottingham for the degree of Doctor in Forensic Psychology

Submitted for Examination:

September 2022

Abstract of the thesis

Background: Extremist mindset can lead to violent extremist acts such as terrorism and domestic hate crimes; thus, it is essential to identify contributory factors and where intervention may be appropriate to reduce the extremist mindset when there is a risk of associated violent behaviours.

Aims: The thesis investigated potential contributory factors to the extremist mindset and its possible consequences. The contributory factors of interest are personality traits, media reporting of terrorist attacks, and conspiracist ideation. The key consequence explored is pro-attitudes for domestic hate crimes.

Methods: A systematic review on the consequences of indirect exposure to terrorist attacks was conducted. Due to the heterogeneity of the studies, data was synthesised narratively. A cross-sectional study was conducted to examine the factors influencing the extremist mindset and the impact of media on pro-hate crime attitudes. 186 participants were recruited online via social media platforms. Data were analysed quantitively using SPSS and a brief thematic analysis was also conducted to review generic comments.

Results: Conspiracy belief and paranoia were found to significantly influence the extremist mindset. Sadism and honesty-humility were also found to be of predictive value of extremism. Strong

associations between extremism and the dark tetrad were also identified. Furthermore, significant increase in pro-attitudes towards hate crimes following exposure to a news article about a terrorist threat was found. Additionally, several negative psychological effects were observed following indirect exposure to terrorism via the media.

Discussion: Policy makers should focus on reducing the traits and factors associated with extremist mindsets to reduce the risk of radicalisation amongst vulnerable individuals. For instance, future preventive policies should focus on addressing conspiracy theories and paranoid thinking as an attempt to reduce extremism; and intervention to reduce sadistic traits, e.g., focusing on empathy, should be used within extremism prevention programmes. It is also recommended for media to review how they broadcast information about terrorism to the wider public to attempt to minimise effects of indirect victimisation. Further research should explore the link between media coverage of other threatening situations e.g., Brexit, Coronavirus and increases in extremist views and behaviours. Ethical considerations are also discussed.

Key words: Extremism, Extremist Mind-set, Conspiracy belief, Media, Hate crimes, Terrorism

Authorship declaration

The contents of this thesis have been reviewed by my academic supervisors: Associate Professors Dr Vincent Egan, Dr Shihning Chou, and Dr Boliang Guo. There are no other authors in the contents of this thesis.

Acknowledgements

I would like to thank my supervisors for helping with this thesis and without whom I would not have been able to complete this research: Dr Vincent Egan, retired Associate Professor of Forensic Psychology Practice, Dr Shihning Chou, Associated Professor of Forensic Psychology, and Dr Boliang Guo, Associate Professor in Medical Statistics. I am hugely grateful for their time and dedication given to support this project.

I would like to thank Alison Ashmore, Senior Research Librarian who has helped with my systematic review searches. Thank you to Oliver Johnson for being my second reviewer for my systematic review quality assessment. Thank you to Charlene Devismes Hughes for her help with the poster designs (recruitment and Chapter 4 presentation). Also, thank you to Catherine Murphy for proofreading the chapters of this thesis.

I would also like to thank the former Division of Psychiatry and Applied Psychology at University of Nottingham for trusting in my research abilities and accepting me onto the Forensic Psychology doctoral programme.

I am extremely grateful for my parents Philippe Devismes and Sophie Camus who have supported me unconditionally throughout this journey. Thank you to the rest of my family and my friends who have offered me encouragement and support throughout my doctoral journey.

Finally, thank you to my previous and current employers Kate Law and Carl Hellawell who have given me flexibility in my full-time employment to complete this research.

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Chapter 1: Introduction

The thesis investigated potential contributory factors to the extremist mindset and its possible consequences. The contributory factors of interest are personality traits, media reporting of terrorist attacks instigated by foreign interests, and conspiracist ideation. The key consequence explored is pro-attitudes for domestic hate crimes. Extremist mindset can lead to violent extremist acts such as terrorism and domestic hate crimes; thus, it is essential to identify contributory factors and where intervention may be appropriate to reduce the extremist mindset when there is a risk of associated violent behaviours. This first chapter outlines the key concepts of the thesis, the conceptual framework, its research aims and the thesis structure.

1.1. Background

1.1.1. Definition of extremism

Extremism is defined as:

> *"a verbal or active opposition to basic values in a society such as democracy, equality, liberty, rule of law, and tolerance for the faiths and beliefs of others"* (Lösel et al., 2018)

Extremist views are often seen as unreasonable and unacceptable. Typical extremist views are extreme political or religious views such as Islamist extremist groups and far-right groups. Extremist groups hold extreme views but do not all lead to violent acts. Extremist views can lead to active opposition without violence; for example, the climate change protesters blocking motorways in the UK during the extinction rebellion protest. On the other hand, some extremist groups, such as the animal right extremists prone any kind of violence which would lead to animal liberation. Extremist groups can also lead to a different kind of threats for example online threats.

1.1.1.1. Terrorism and extremism

There is no widely agreed definition of terrorism; however, there is always an element of fear such as intimidation or provoking a state of terror when defining terrorism (United Nations Security Council, 2004). Terrorism can be defined as:

> *"The calculated use of unlawful violence or threat of unlawful violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological"* (USA Department of Defense, 2001, p.480).

The United Nation states that: acts of terrorism are "*motivated by intolerance and extremism*" and are the "*one of the most serious threats to peace and security*" (United Nations Security Council, 2004, p.1-2). Extremism encompasses both views and acts. Individuals or groups with extremist views do not necessarily carry out acts of violence. Before committing a terrorist act, terrorists would have developed extremist views through radicalisation. Henceforward, understanding how extremist views, beliefs and attitudes are born is of the upmost importance when one wishes to tackle terrorism.

Some extremists may resort to violence when they feel a grudge towards someone who they have identified as threatening or part of a group seen as threatening to them. Those extremists believe that using violence in such circumstances is justified or excused by higher authority and noble principles e.g., religious, or utopic (Stankov et al., 2018). Nevertheless, although all extremists hold radical views, not all extremists will carry our radical behaviours; described as "inert" extremists (McCauley & Moskalenko, 2017; Neumann, 2013).

1.1.1.2. Western views of terrorism

In the West, a terrorist is associated with violence and extremist groups such as ISIS, Al Qaeda or Irish Republican Army (IRA). The challenge in defining terrorism lies in perspective taking as someone viewed as a terrorist can be seen as a freedom fighter by others (Schmid, 2007). For example, a person from the Middle East who commits terrorist attacks in the West will be defined as a terrorist by its victim from the West and as a freedom fighter by individuals from the same group with the same extremist beliefs. There are also terrorists called homegrown terrorist who refers to terrorists belonging in the West who convert to extremist beliefs from a terrorist group abroad (Crone & Harrow, 2011). Terrorism is a form of violence directed at innocent civilians motivated by extremist views. This thesis will focus on attacks directed at Western societies due to large disparities in what is referred to as terrorism in various countries including countries considered as war zones, where there may be no clear distinction between victims and perpetuators.

1.1.1.3. Hate crimes vs terrorism

The Crown Prosecution Service (2017) described any crime as a hate crime if the offender "has demonstrated" or "been motivated" by "hostility based on race, religion, disability, sexual orientation or transgender identity".

Terrorism are serious acts of violence directed at civilians because of extremist views attached to a foreign extremist group. Hate crimes are motivated by actual or perceived ethnicity, religion, disability, national origin, or sexual orientation and are justify by the perpetuator by using different group memberships or blaming the victim (Sun, 2009). Both terrorism and hate crimes are motivated by extremist mindset. For examples, violent acts committed by white supremacists to defend their ideology can be described as hate crimes; whereas violent acts committed by ISIS to defend their ideology are more likely to be described as terrorism. Nevertheless, challenges remain in defining these terms and there has been controversies in the news (i.e., CNN article; Criss, 2017). For example, there were debates about whether only darker skin and Muslim individuals qualifies as 'terrorist' even when similar crimes are committed by white supremacists (Criss, 2017).

When defining hate crimes, there is no mention of national borders; except when the victim is targeted because of their origin. Most of the time the direction of violence differs, where one its directed beyond national borders (terrorism) and the other directed at individuals from a different ethnic/social group usually within the same territory (hate crimes). This may help differentiating these terms: hate crimes as domestic hate crimes, indicating hate crimes towards a group within the country and terrorism reserved for acts based on foreign interests or ideology. However, these remain challenging terms to define as they may at times overlap; for example, hate crimes committed towards an ethnic group may be directed at this ethnic group from the same community but also directed at foreigners in other countries.

Another important distinction is the type of violence; terrorism is often described as catastrophic violent acts directed at civilians regardless of their social group or personal characteristics but mainly focusing on the location of the attack often directed at a nation, whereas in hate crimes, victims are usually targeted because of their social group or specific characteristics. Again, this distinction could be blurred for example in recent attacks in Oslo where a LGBTQ+ club was targeted, and victims were large group of innocent civilians. The similarity between

hate crimes and terrorism is that they are both motivated by extremist views and can be described as extremist violent acts.

Hate crimes can also be observed when the violence is directed at communities who have been stereotyped or prejudiced. For instance, individuals who are exposed to threatening images about terrorism can respond by blaming the whole group associated with the terrorists e.g., Arab community (Rubaltelli & Pittarello, 2018). This is also consistent with the increase in hate crimes directed at Asian communities during the Covid-19 pandemic (Gover et al., 2020). Keenan (2020) explained that during a period of rapid societal change, hate crimes are likely to occur as the group seen as others may threatened established norms and values.

1.1.2. The making of an extremist

Radicalisation is the process by which one becomes extreme in their views, attitudes and beliefs which can lead to extreme behaviours (Wolfowicz et al., 2019). Radical behaviourism stipulates that thoughts and behaviours are the result of experiences and the environment. This thesis will focus on radicalisation processes that leads to extremist mindsets influencing violent acts such as terrorism and hate crimes.

The cognitive explanation for extremist violent behaviours is a quest for significance and behaviours being rationalised as devotion to a nationalist, ethnic, religious, or social cause (Kruglanski et al., 2019). Extremist behaviours are characterised by a motivational imbalance where a stronger need may lead to extremist behaviours, even if incompatible with other individual needs e.g., safety (Kruglanski et al., 2019). Therefore, fulfilling an individuals' need is an essential criterion to identify views and behaviours as extremists. As most individuals strive for balance, extremists only constitute a small part of the general population; thus, making them harder to identify if not committing violent acts.

Radicalisation is rarely investigated at its early stages (Rahimullah et al., 2013). Stankov et al. (2018) emphasised that extremist mindset cannot be explained without an understanding of the psychology of the individual. An MI5 study looking at extremist in Britain concluded that they were not able to identify a uniform radicalisation pattern and a type of individual susceptible to radicalisation (Travis, 2008). This is consistent with findings from a New York sample who could not identify individuals at risk of being radicalised (Silber & Bhatt, 2007). These findings highlight the importance of understanding individuals who are at risk of developing extremist views in the general population.

Christmann (2012) reported a lack of understanding of individual factors and recommended for future research to focus on the extremist mindset before acts of violence are committed. Other scholars have highlighted the need for future research on the extremist mindset to focus on psychological and personality traits (Stern, 2016; Victoroff, 2005; Wolfowicz et al., 2019). In turn, this could inform prevention programmes and policies aiming at tackling extremist violence.

1.1.3. Media and extremism

In March 2021, the Home Office (2021) reported a 9% increase of hate crimes from the previous year, with a total of 124,091 new hate crimes recorded in England and Wales. Hate crimes are motivated by intolerance, discrimination, and extremist beliefs. Some studies have examined the relationship between the increase in hate crimes and the economic cycles, population flows, and changes in political environment (Green et al., 2001), but there is a dearth of research investigating the impact of media coverage on hate crimes.

Hanes and Machin (2014) found a significant link between the increase of racially motivated hate crimes against Asians and Arabs in England following the 9/11 and 7/7 terrorist attacks targeting civilian

population in the USA and England respectively and committed by Islamists terrorist groups (Al-Qaeda). They hypothesised that media coverage and media framing could influence this link.

Additionally, it is likely that exposure to threats via the media can lead to someone adopting more extremist views directly associated with the threat. Psychological warfare used propaganda through social persuasion and information distortion to magnify a threat, increase its personal relevance and identification with the victims (Jowett & O'Donnell, 2012; Whittaker, 1997). Media exposure to terrorist events impacts on beliefs, attitudes, and enemy perception, and can encourage extremist views (Shoshani & Slone, 2008). Rubaltelli and Pittarello (2018) also stated that threats reported in the media can lead to negative judgments about social group sharing characteristics with the terrorists e.g., ethnicity, religion. Thus, exposure to terrorism threats via the media is likely to have other adverse psychological outcomes.

Terrorism and media have a symbiotic relationship, in which they both feed each other's interest. Terrorism uses the media to meet their primary goal of instilling fear and intimidation (Galily et al., 2016; Nacos et al., 2008; Slone & Shoshani, 2010). Mass media coverage of terrorism has been found to have negative consequences for individuals beyond

direct victims of attacks by making personal association with the reported attack (Schleifer, 2006; Slone & Shoshani, 2010). In this era of global extremism, it is paramount to understand the psychological and emotional impacts vicarious exposure to terrorism may generate.

1.1.4. Conspiracy beliefs and extremism

A conspiracy belief is when an event is explained by a theory where one is deemed to be acting in secret for their own benefit at the expense of others (Uscinski & Parent, 2014). A conspiracy theory refers to a claim with weak evidence which is less plausible than other explanations and contradict the most widely agreed and accepted theories (Brotherton et al., 2013). Conspiracist ideation refer to an intentional plot for a malevolent purpose (Swami & Furnham, 2014). Some of the most widely known conspiracy theories are: the CIA involvement in JFK's assassination, the mood landing being an hoax, the role of the US government in the 9/11 attacks, the death of princess Diana not being an accident, and more recently theories about the covid-19 pandemic and 5G. Tendencies to engage in conspiracy theories to explain events have been described by Swami et al. (2011) as conspiracist ideation.

Major traumatic world events increase stress level and feeling of existential threat (Goenjian et al., 2000; van Prooijen & Jostmann, 2013). Psychological stress has been found to be positively associated with conspiracy beliefs (Swami et al., 2016). When one is experiencing anxiety, uncertainty, or threats, they are likely to turn to conspiracy theories to help with unmet psychological needs (Douglas et al., 2017). For instance, when exposed to conspiracy theories the effect of threats to the legitimacy of our social system reduces (Jolley et al., 2018). Thus, conspiracy theories are used to make sense, with simplistic explanations, of these major world events which are often inadequately explained by mainstream media (Brotherton & Eser, 2015; Douglas et al., 2017; Swami & Furnham, 2014).

Conspiracy theories have driven violence throughout history, but social media and the Internet have enabled conspiracy theories to be spread to a wider audience (Christmann, 2012). Conspiracist ideation has been reported to exacerbate extremist views, to motivate domestic extremism and to increase support of violent actions (Federal Bureau of Investigation, 2019). Consequently, individuals at risk of developing extremist views are easily exposed to conspiracies with greater risk of committing violent acts as a result. Conspiracy theories can also foster political extremism (Bartlett & Miller, 2010).

1.2. Conceptual framework

1.2.1. Personality traits of an extremist

Extremist attitudes best predict violent extremist behaviours (Wolfowicz et al., 2019). Henceforward, understanding the mindset of individuals who hold extremist views could help prevent terrorism and other violent acts associated with extremist views. Antagonistic interpersonal behaviours can be predicted by personality traits (Campbell et al., 2011; Kessler et al., 2010). Extremes of personality increase risk in other areas, so one might consider personality traits as a risk-increasing factor for being more sympathetic to extreme views.

Additionally, the dark tetrad personality constructs were associated with violence (Pailing et al., 2014), unethical and antisocial outcomes (Kish-Gephart et al., 2010; Tang et al., 2008), and risky and sensation-seeking activities (Crysel et al., 2013). The dark tetrad personality traits are psychopathy, narcissism, machiavellianism and sadism. Psychopathy refers to callousness and impulsivity (Jones & Paulhus, 2014). Machiavellianism refers to manipulativeness, callous affect, and a strategic-calculating orientation (Jones & Paulhus, 2014). Narcissism also refers to manipulation and callousness but is also defined

by grandiose identity and underlying insecurity (Jones & Paulhus, 2014). Finally, sadism also refers to callousness but with intrinsic pleasure in hurting others (Nell, 2006). It is hypothesised that personality traits including the dark tetrad are positively associated with the extremist mindset. Kay (2021) also found association between the dark tetrad traits and conspiracist ideation.

1.2.2. Vicious circle of extremism

Interaction with the environment influences personality development and social affiliation. For instance, aggression is learnt from the environment by observation and imitation, this is also known as the social learning theory (Bandura, 1977). In this thesis, it was aimed for the relationship between personality traits and extremist mindsets to be explored.

According to cognitive-behavioural theory (Beck, 1979), behaviours are triggered by thoughts. For example, parents with attitudes accepting of spanking were more likely to use physical punishments (Chavis et al., 2013). Thus, belief systems and thinking patterns are likely to motivates extremist violent acts. Extremist views can result in violent acts such as terrorism or hate crimes.

This thesis examined the psychological and emotional outcomes of exposure to terrorism related media. This type of exposure can lead to increase in belief in conspiracy theories and paranoia as well as increase in threat appraisal. Threat appraisal is associated with increased extremist views and possibly violent acts towards out-groups (Keenan, 2020). This thesis examined the impact of exposure to terrorism related media on extremist views and the relationship between extremist mindset, paranoia and conspiracist ideation.

It is important to understand the psychological impact terrorism related media can have on the general population. Nowadays, exposure to terrorism related media has increased with the development of new technology. Exposure can be immediate for example via news feeds on smart phones or on social media platforms. Viewers can be exposed to terrorist related media without seeking such information. Media exposure can occur via various means such as written account, photo, audio, or video exposure. The type of media exposure may influence the impact it has on individuals. For instance, video may give a more accurate representation of the events and may heightened any emotional, social, behavioural, and cognitive reactions to the exposure. Additionally, different types of individuals are likely to be exposed to different types of media. For instance, younger viewers are more likely

to be exposed to terrorism via social media platforms. This is relevant as social media can vector conspiracy theories; thus, can increase risk perception and appraisal and can also increase discrimination and prejudices. Overall, indirect victims of terrorism could become more extremist in their views because of media exposure of terrorist related threats or attacks. Although extremist views may not always result in violent acts, it can be reflected by discriminatory actions for example attitudes towards racially or religiously motivated hate crimes.

When condemning hate crimes, the public promotes tolerance and diversity, which are paramount elements to tackle extremist views (Stankov et al., 2018). If extremist views are not only permitted but commended, there is a risk for violent escalation. Furthermore, as hypothesised in this thesis such terrorist acts when reported by the media, can, on their own, trigger more extremist views, reinforcing the vicious circle of extremism.

It would be easier for preventive programmes and policies to address extremist views before acts of violence are committed. Early identification of personality traits associated with the extremist mindset could help identify individuals at risk of becoming extremist. Interventions to tackle extremist mindset are more likely to be

recommended when targeting thinking patterns and external influences as these are more malleable and prone to changes. Nevertheless, early identification of personality traits poses ethical concerns. Indeed, this could lead to the stigmatisation of certain individuals, thus, increasing risk of discrimination and possibly leading to an increase of extremist views. Therefore, being counterproductive in reducing extremism.

1.2.3. Social theories of outgroup violence

Terrorism and hate crimes are acts committed towards social outgroups: violence towards out-group, seen as others, can be explained by the identity theory of symbolic interaction (the importance of the interaction with the environment) and the conflict theory of interest-group (Hall, 2016; Keenan, 2020). The identity theory suggests that social roles give meaning to people, resulting in world divide of in and out groups (Tajfel & Turner, 1982).

The interest-group theory (Sellin, 1938) explains possible conflicts between in and out groups seen as others. It explains that violence directed at groups seen with differing norms is motivated by an attempt to assert power over the other group and to maintain their own norms. This theory explains hate crimes in period of social and cultural change

where a group may see their value threatened, they may see violence as the last option for their norms and values to be protected (Keenan, 2020). Keenan (2020) gave an example to demonstrate this theory: when members of the Ku Klux Klan (KKK) felt that the Civil Rights Movement contradicted their views, they response was to attack black members of the community, especially leaders of the Civil Rights Movement.

1.2.4. Consequences of exposure to terrorism related media

In a period of crisis, the general population consumes a higher volume of media (Slone & Shoshani, 2006). This can be explained by the dependency theory, whereby during crisis, individuals will use the media to meet their needs of collective emotions, obtain information and feel in control (Ball-Rokeach & Defleur, 1976). This can be applied to terrorist attacks, where the media is used by the public to better understand the event and its significance (Nacos et al., 2008).

Slone and Shoshani (2006) highlighted a gap in what is known about the impact of terrorism related media exposure on individual's decisions and perceptions. Threat perception is influenced by individual differences

and affect heuristic (relying on emotions to make decisions) (Slovic, 2013; Velias & Corr, 2017). Such exposure to a terrorist threat can lead to negative emotions. When experiencing negative emotions, individuals are more likely to fear future attacks and to support interventions to reduce this risk (Lerner et al., 2003).

Threats reported in the media can generate fear (Hase et al., 2020). Media covers news about catastrophes and traumatic events i.e.: natural disasters, terroristic attacks, and infectious diseases. Despite the media aiming to reports on events in a factual and objective manner, news reports can emotionally affect their audiences (Miller & Leshner, 2007; Unz et al., 2008; Wirth & Schramm, 2005). Exposure to coverage of violent news (i.e., torture, airplane crash) was found to elicit fear, anger, sadness, and disgust (Unz et al., 2008). Exposure to coverage of the 9/11 attack generated fear and post-traumatic stress disorder (PTSD) symptoms (Marshall et al., 2007).

The literature has shown that fear can lead to behaviours associated with increased risk perception e.g., avoiding flying in an airplane (Keller et al., 2006). The social amplification of risk theory explains the processes by which these behaviours are a repercussion of perceived risk (Kasperson et al., 1988). The social amplification of risk is "*the social*

structures and processes of risk experience, the resulting repercussions on individual and group perceptions, and the effects of these responses on community, society, and economy" (Kasperson et al., 1988, p. 179). Thus, extremist views and attitudes could be the consequences of an increased risk perception following media exposure.

1.2.5. Media and hate crimes

The media tends to use terrorist attacks to make shocking headlines often with graphic images. Following recent terrorist attacks, the Home Office reported an increase of hate crimes (Home Office, 2018). There is a dearth of research investigating the impact media coverage may have on hate crime patterns.

However, there are research on the impact of general media violence on real life violence. The General Aggression Model (Anderson & Bushman, 2003) explains how exposure to aggression-related stimulus such as violence in the media leads to aggressive behavioural responses. Anderson and Bushman (2018) reported that exposure to violent media can increase hostile appraisals; thus, increase the sense of threats. It is also important to think about learning theories when examining the

impact of exposure to terrorism related media. The General Learning Model (GLM; (Buckley & Anderson, 2006; Gentile et al., 2009; Swing & Anderson, 2008) theorises the formation of long-term attitudes following prolonged exposure to media (Barlett & Anderson, 2013).

Törnberg (2018) explained that the digital world is a source of fake news resulting in conspiracy theories, mistrust and paranoia in turn influencing individual's opinion and behaviour. Furthermore, Johnson (2018) highlights in their study that being suspicious of the media is associated with increased belief in conspiracy theories and paranoia. They have explained how this resulted in the radicalisation of white men in the United States. It is possible that ordinary people may become more paranoid and prejudiced in their assumptions following exposure to media reports leading to an increase in extremist views. This may lead to a shift in the attitudes of some persons, and therefore an increase in acceptance of hate crime behaviours.

1.2.6. Conspiracy beliefs and paranoia

Following previous terrorist attacks such as 9/11 attacks and the 7/7 bombing, conspiracy theories were endorsed by many people, mainly about the government involvement in these attacks (Brotherton

et al., 2013; Stempel et al., 2007; Swami et al., 2010). Conspiracy theories grow in times of societal crisis as they help to make sense of a chaotic world (Franks et al., 2017; van Prooijen & Douglas, 2017). Generic conspiracy beliefs can predict endorsement of specific conspiracy theories (Goertzel, 1994; Wood et al., 2012); thus, in this thesis generic conspiracist ideation are being examined rather than beliefs in specific conspiracy theories.

Conspiracy theory beliefs can lead to negative attitudes and risky behaviours. For example, it can impact on health-related behaviours. Fears surrounding theories about vaccinations have led to a decline in vaccination rates and intention to vaccinate (Jolley & Douglas, 2014b; Kata, 2010; Salmon et al., 2005). Theories about AIDS/HIV have impacted attitudes about preventive measures and treatment programmes (Bogart et al., 2010). Beliefs in conspiracy theories about covid-19 have led to a decrease in intention to engage with preventive behaviours to stop the spread of the virus (Biddlestone et al., 2020). Beliefs in conspiracy theories increase disengagement in social issues such as climate change and politics (Jolley, Mari, et al., 2020; Jolley & Douglas, 2014a), and the likelihood of engaging in everyday crimes (Jolley et al., 2019). Thus, a link has been established in the literature

between beliefs in conspiracy theories and consequential risky behaviours.

Bartlett & Miller (2010) found that conspiracy theory beliefs can help fostering political extremist views. Another recent article stipulated that conspiracy theories exacerbate and magnify extremist attitudes (Douglas et al., 2019). Reading about conspiracy theories about a specific social group was found to increase discrimination and prejudice towards this group i.e., Jewish community (Bilewicz et al., 2013; Jolley, Meleady, et al., 2020). Furthermore, beliefs in conspiracy theories have also been associated with low-level crime (Jolley et al., 2019), support for violence toward conspirators (Jolley & Paterson, 2020), out-group hostility (Biddlestone et al., 2020; Marchlewska et al., 2019), and intergroup conflict and prejudice (Kofta et al., 2020).

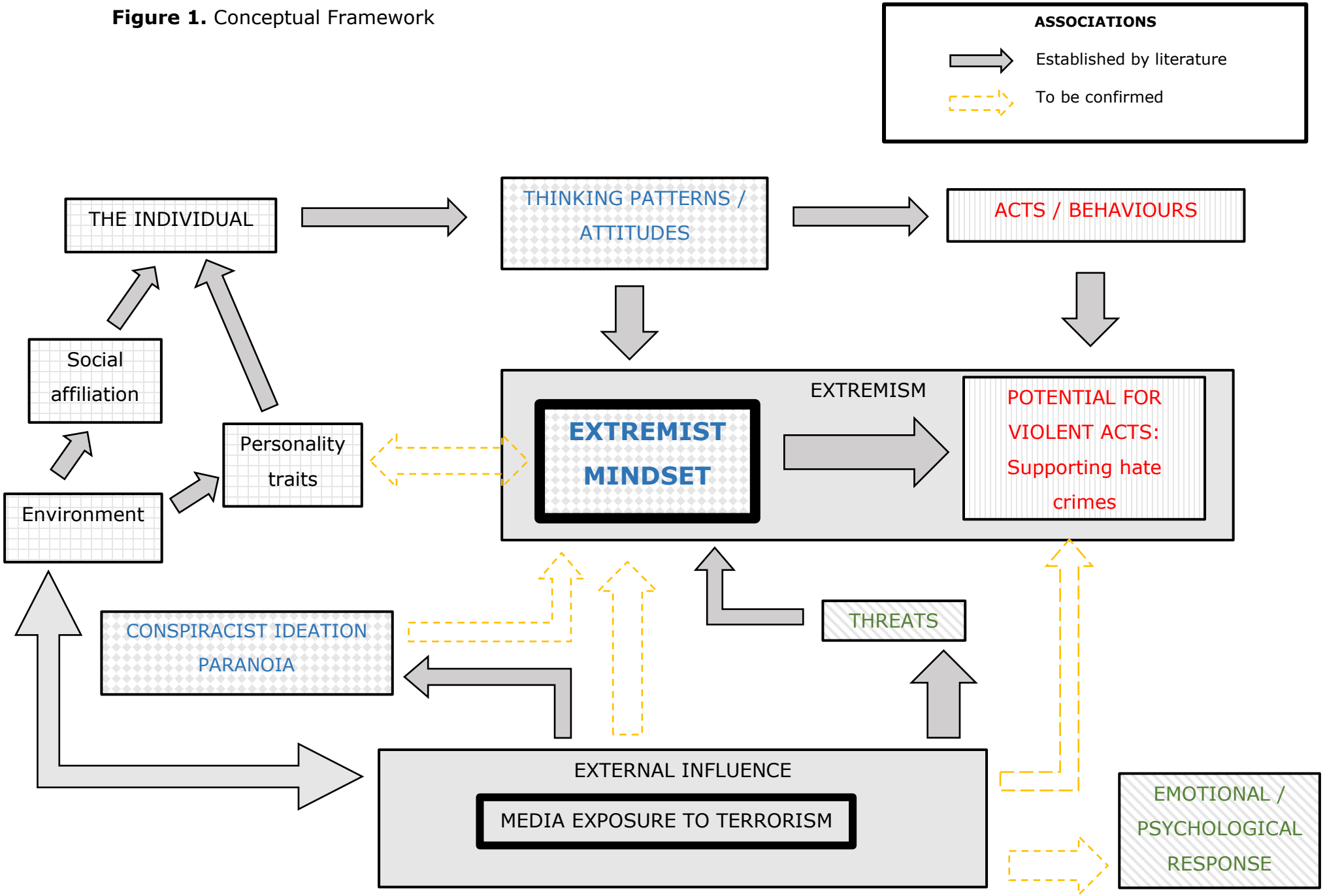
Due to the paranoid nature of conspiracy theories, paranoia is also likely to be associated with extremist views. Delusional thinking or paranoid thinking are beliefs held to be true despite clear contradictory evidence (Freeman & Garety, 2004). Paranoid thinking contributes to misinterpretation of stimuli and increased perception of risk (Jack & Egan, 2016). Individuals who are more prone to paranoid thinking tends to accept hypotheses as correct despite little evidence (Fine et al.,

2007). Conspiracy theory beliefs have been associated with delusional ideation (Dagnall et al., 2016), paranoia and mistrust (Jolley et al., 2021) and paranormal beliefs and reality testing deficits (Drinkwater et al., 2012). Individuals who believe in conspiracy theories are prone to suspiciousness of mainstream sources of information and may dismiss official material (Barron et al., 2014; Dagnall et al., 2015; Swami et al., 2016). Thus, conspiracy theories could influence the extremist mindset.

Please refer to Figure 1 for the conceptual framework of this thesis. This is based on the General Aggression Model (Anderson & Bushman, 2003) whereby a person and a situation influence internal states (cognition, affect, arousal) possibly leading to impulsive actions which can then be reinforced by social encounter.

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Figure 1. Conceptual Framework



1.3. Thesis aims

The main research aims of this thesis are:

- To review the psychological and emotional impact of indirect victims of terrorism (Systematic review, Chapter 2)
- To test if media framing of a terrorist threats can influence attitudes towards hate crimes and its association with extremist mindset (Empirical study, Chapter 3)
- To examine the association between extremist mindset with personality traits, paranoia, and belief in conspiracy (Empirical Study, Chapter 4)
- To critically evaluate the General Conspiracist Belief scale (GCB; Brotherton et al., 2013) (Critique, Chapter 5)

1.4. Thesis structure

The existing literature has established that negative psychological outcomes are experienced by direct victims of terrorism (Allsopp et al., 2019; DiMaggio & Galea, 2006). Some studies have also examined the impact of indirect exposure especially when exposed to terrorist attacks and threats via the media (Stickley et al., 2020; Thompson et al., 2020). The second chapter of this thesis aimed to systematically review the

literature to understand the psychological and emotional impact of indirect exposure to terrorism. Indirect exposure is examined as any reports via the media of the terrorist threats or attacks e.g., live tv, news articles, images, videos, radio broadcast. Thus, if indirect exposure to terrorism can lead to adverse emotional and psychological outcomes such as fear and PTSD symptoms for members of the public, it is possible that it can influence an individual's attitudes and their belief system.

It is possible that the general population may become more paranoid and prejudiced in their assumptions following ambiguous media exposure about terrorist threats (Johnson, 2018). Although media aims to report in an objective manner, sensational reports are encouraged and therefore, may be less factual and more ambiguous leading to misinformation and fake news (Bronstein et al., 2018; Törnberg, 2018). Furthermore, depending on the source of information, media can have a political agenda and may use media framing to encourage certain views, resulting in propaganda (Johann & Oswald, 2019). The third chapter examined hate crimes attitudes and the likelihood of developing extremist views when exposed to indirect terrorist threats via a news article. This study also examined media framing of terrorist threats and its influence on extremist attitudes within the general population.

If indirect exposure to terrorist events via media reports can increase extremist views; it is important to understand predispositions of such inclination in the general population. The fourth chapter analysed the relationships between extremist mindset, personality traits, paranoia, and belief in conspiracy in a general population sample, with the aim to understand personal disposition underlying extremist views.

The fifth chapter of this thesis aimed at critically evaluating the general conspiracist belief scale (Brotherton et al., 2013). This scale was used in the empirical study. As conspiracy beliefs are likely to predict extremism in the general population; it is of paramount importance that a reliable and valid tool exists to measure conspiracy beliefs. In turn, this could help to predict and to identify individuals within the general population at risk of becoming extremist; thus, possibly preventing violent and criminal behaviours motivated by extremist views.

Finally, the sixth chapter of this thesis summarised the findings of the thesis, recommended future direction for research and commented on practical and ethical implication.

Chapter 2: Psychological impact following indirect exposure to terrorism: A systematic review

Abstract

Background: Terrorism has been described as disasters caused by human intent. Terrorism and media have a symbiotic relationship, in which they both feed each other's interests. Vivid representation of attacks reported live and accessible to a wider audience has consequences for the public as it influences emotions and attitudes. The audience can become "victims-by-proxy" of terrorism and experience adverse psychological consequences as a result e.g., trauma, anxiety, anger, depression.

Objective: To examine the psychological and emotional consequences of indirect exposure to terrorist attacks.

Methods: A systematic search was carried out across 9 relevant databases. Studies were screened by using pre-defined inclusion criteria. Data was extracted from eligible studies and each study was quality assessed against areas of bias using the National Institutes of Health (NIH) quality assessment tool for observational cohort and cross-sectional studies. Due to the heterogeneity of the studies, data was synthesised narratively.

Results: 2631 records were initially identified, and 8 studies were included. Several psychological effects were observed following indirect exposure to terrorism: greater distress, lower wellbeing, acute stress, trauma symptoms, functional impairment, depression, anxiety, and psychotic experiences. None of these are attitudinal changes; however,

the next study of this thesis explores changes in attitudes after seeing media reports.

Discussion: Findings confirm that viewing media coverage of mass violence such as terrorism is associated with vicarious trauma. It is recommended for media to review how they broadcast information about terrorism to the wider public to attempt to minimise effects of indirect victimisation. Options to support potential victims of indirect victimisation of terrorism should be developed whilst considering risk and protective factors such as childhood adversities, prior victimisation, and resilience. Recommendation for future research is also suggested.

2.1. Background

2.1.1. Introduction

Indirect exposure to terrorism through mass media increases apprehension regarding future attacks (Rubaltelli et al., 2018) and generates fear and uncertainty (Ahern et al., 2002; Torabi & Seo, 2004) within the general population. With the development of communication technologies, media coverage has evolved e.g., live television and social media, making terrorism more visible. Recent terrorist attacks, especially in Western countries, have received a great level of media coverage with information being shared globally within minutes after an attack has happened (Kampf, 2014). Ultimately, these developments have increased the discussion around terrorist threats globally, especially in North America and Europe. As a result, academic studies exploring the consequences of terrorism have emerged. Psychologists have focussed on the social and individual impact of terrorism. Some studies have explored mental health needs of direct victims of terrorist attacks, leading to an increased focus on research of Post-Traumatic Stress Disorder (PTSD) (Allsopp et al., 2019; DiMaggio & Galea, 2006). However, indirect victimisation of terrorism can also lead to adverse psychological consequences, including both diagnosable mental health disorders and other sub-clinical mental health symptoms.

2.1.2. Media and Terrorism

Following terrorist attacks, the public relies on the news to understand what has happened, why and its consequences (Nacos et al., 2008). Terrorism and media have a symbiotic relationship, as they feed each other's interests; terrorists need media to spread their messages widely, and the media benefits from events requiring extensive news coverage (e.g., Galily et al., 2016; Iqbal, 2015). The media has been heavily criticised by academics for the way attacks are reported; either due to government restriction on terrorism coverage or due to extensive coverage to attract more viewers (Kampf, 2014). Media exposure to terrorism has increased as technology advances media distribution; potentially this increases the severity of symptoms developed by indirect victims of terrorism (Golan & Shai, 2004). Mass media coverage of terrorism has psychological consequences for individuals beyond direct victims of attacks, including instilling fear (Pfeiffer, 2012).

Terrorism uses the media to meet their primary goal of instilling fear and intimidation on a broader population, targeting a larger group than the victims of a single attack alone (Galily et al., 2016; Nacos et al., 2008; Slone & Shoshani, 2010). Increased awareness of future terrorist threats reinforces the sense of terror within communities and strengthens any previous psychological impact of terrorist attacks (Sederer et al., 2003). Terrorism has been described by DiMaggio and

Galea (2006) as disasters caused by human intent. The adverse psychological consequences caused by terrorism within the general population is likely to mirror mental health consequences of mass natural disasters. Hence, reviews on high-risk psychiatric disorders and behaviours following disasters are useful and relevant when investigating psychological consequences of terrorism (Galea et al., 2005; Norris, Friedman, & Watson, 2002; Norris, Friedman, Watson, et al., 2002).

Although media coverage of terrorism related content can lead to an increased number of victim-by-proxy and other adverse outcomes it can also be associated with positive outcomes. Terrorist related media can help obtain humanitarian support, help foster policy changes, help the audience gain information and make sense of a crisis, and help viewers gain more control of a situation and feel emotions as a collective. Media is also a tool for democracy and supporting freedom of speech. These benefits should be considered when examining media broadcast of terrorist related information.

Media has become a mean for the intentional mass distribution of scenes of terror and violence (Slone & Shoshani, 2010). Vivid representation of attacks reported live and accessible to a wider audience has consequences for the public as it influences emotions and attitudes (Schleifer, 2006). Viewers can become "victims-by-proxy" of terrorism and suffer from negative psychological effects by identifying with the

media content and making personal association with the reported attack (Schleifer, 2006; Slone & Shoshani, 2010).

Indeed, some studies have found an association between media coverage of terrorist attacks and adverse psychological consequences: Post-Traumatic Stress Disorder (PTSD) symptoms (e.g.: Gil-Rivas et al., 2004; Marshall & Galea, 2004), anxiety and anger (e.g., Cho et al., 2003; Slone et al., 2008), and depression (Cho et al., 2003; Knudsen et al., 2005). However, indirect victimisation was not always evident in some of these studies e.g., living near the attack, living in war zone countries e.g., Israel/Palestine. This thesis aims to develop in-depth understanding of the psychological impacts of vicarious exposure to terrorism on the general adult population. Such findings can help develop prevention and post-incident responses.

2.1.3. Objectives

This review aimed to synthesise research on how individuals may be emotionally and psychologically impacted by indirect exposure to terrorism. The aim of this research was to systematically review the literature to answer the following causal question: What psychological and emotional effects (dependent variables) can be observed within the general population following indirect exposure to terrorism (independent variable)?

2.2. Methodology

2.2.1. Search strategy

A scoping search was carried out in July 2020 for early identification of the type of studies and the volume of literature available on the topic. This review protocol was submitted and approved by PROSPERO in September 2020. Systematic searching was carried out from February 2021 until April 2021. The following electronic databases were searched: PsycINFO via Ovid SP, MEDLINE via Ovid SP, Embase via Ovid SP, the Cochrane Library, Web of Science; ASSIA, National Criminal Justice Reference Service and Scopus. ProQuest Dissertation Database was also searched to identify any relevant unpublished papers. References used in identified studies were hand-searched for any unidentified relevant papers via a backward search.

A librarian was contacted to review the databases chosen and the search syntax for each database. The following terms were searched on Scopus:

TITLE-ABS-KEY (((terroris* OR extremism) W/5 (indirect* OR "in direct*" OR fear OR "perceived threat*")))

Similar search syntaxes were used for the other databases. The search terms were modified with appropriate field tags in different databases as appropriate.

2.2.2. Inclusion and exclusion criteria

The inclusion and exclusion criteria are described in Table 1 using the PICO - S model (Population, Intervention/Exposure, Comparator, Outcomes - Study Type).

This study was limited to research conducted on Western European and North American population to take geographical differences into account and minimise bias or variations caused by cultural and political differences, which could impact on how terrorism is perceived (DiMaggio & Galea, 2006). This is referred to as Western countries.

Studies exploring social cohesion as an outcome of indirect exposure were excluded as systematic review protocol was registered on PROSPERO specifically focusing on this outcome. Behavioural outcomes such as substance misuse were excluded; however, if a psychological outcome is also examined in the same study and data can be look at separately, the study was included. Fear in relation to the attack as the main study outcome was excluded. The reason for this is that the main aim of terrorism is to convey fear in the general population. This review examined vicarious psychological and emotional outcomes because of this fear.

Indirect exposure encompasses any clear vicarious exposure, where participants do not have close relative who were victims of the attack, do not live in proximity of attack, and were not first responder to the attack. It is predicted that the only type of indirect exposure that will meet these criteria is media exposure e.g., news articles, television, radio, news via social media.

Table 1. Inclusion and exclusions criteria

	Inclusion	**Exclusion**
Population	• General population • Living in a Western country (Europe or North America) • 18-year-old +	• Not living in the west • Conflict /War zones countries • Under 18 years old
Intervention/ **E**xposure	• Indirect exposure to terrorism attack / incident / threat via the media • Individuals without any form of direct exposure (i.e., no geographical proximity to an attack). • Terrorism as physical violence or threats of it by extremist groups	• Direct victim of terrorism e.g., being an emergency responder, being closed to someone who was injured in an attack • Other specific forms of terrorism e.g., bioterrorism, agroterrorism, piracy
Comparator	• Not directly or indirectly exposed to terrorism	
Outcomes	• Emotions, Psychological symptoms, attitudes and beliefs, personality traits	• Qualitative data • Outcomes on social cohesion, and political, social, and economical impacts

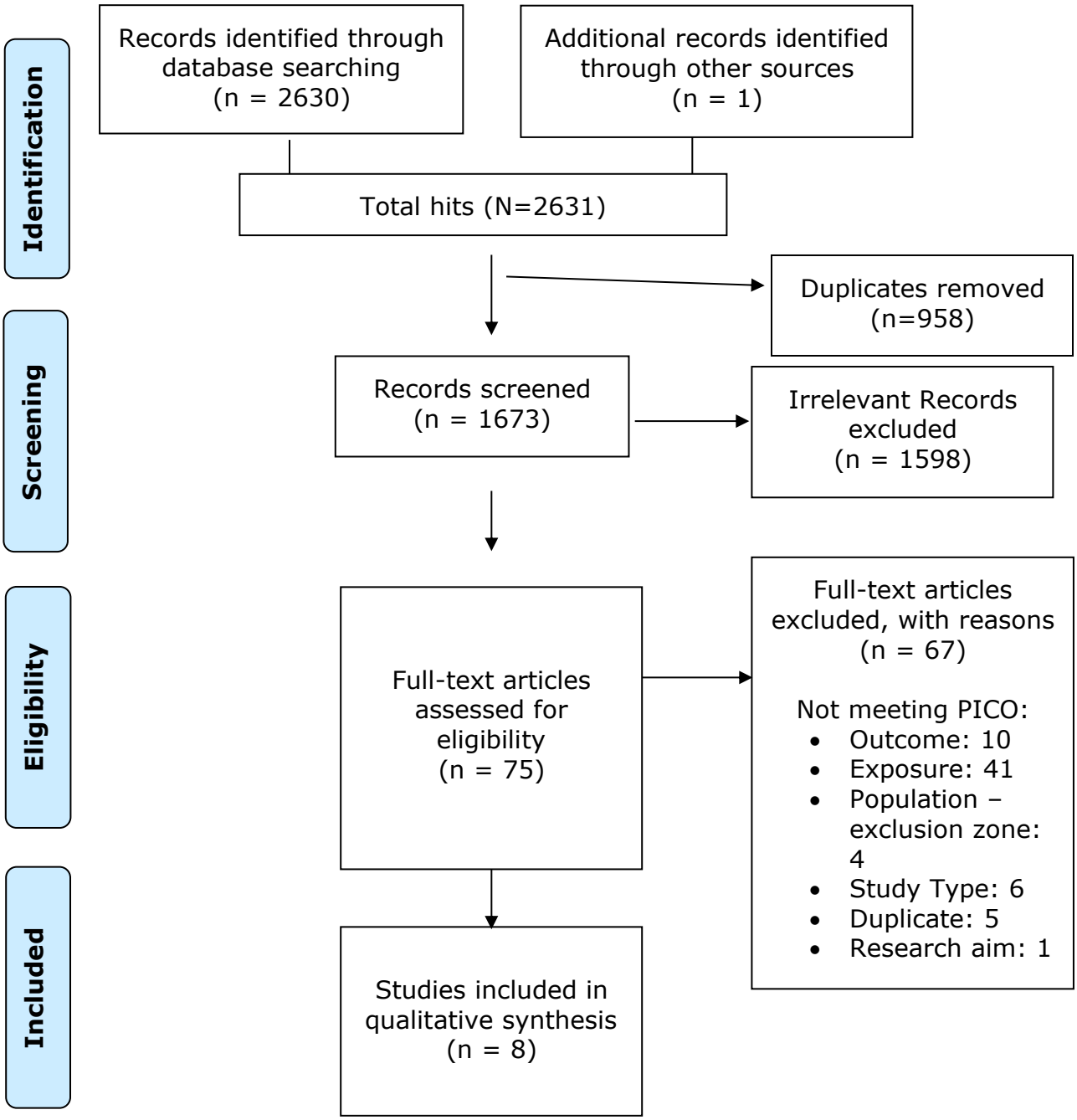
	• Measured quantitatively • Valid tool(s) used to measure outcome(s) • Psychological symptoms, mental health disorders	• Behavioural outcomes (substance misuse) • No valid tool(s) used to measure outcome(s) • Fear of terrorism as main or sole outcome
Study Type	• All study designs e.g., cohort, cross-sectional, case-control, randomised	• Reviews, narratives, opinion papers, non-empirical study
Publication types	• Published • Grey literature • No limitation in time of publication • All languages	

2.2.3 Screening and selection

References of the identified studies were managed using a citation management programme (EndNote) and any duplicates were excluded. All titles were initially screened to exclude irrelevant references. Titles and abstracts of the remaining studies were reviewed to determine their eligibility based on the PICO criteria described in Table 1, using the inclusion checklist (Appendix A). Selected papers were obtained, and full text papers were used to identify eligible studies. The selection process is shown in Figure 2 using a PRISMA flow diagram.

Two identified studies included participants aged 17-year-old and both studies were included in this review. It was decided that studies with less than 20% of participants under 18 would be included. Saylor et al. (2006)'s study was included as 87% of the participants were over 18. Choma et al (2015) were contacted for further information on their participants. However, they did not reply thus, it is unsure if the 80% of the participants are over 18. It was decided to include this study as the participants were British university students, thus it is likely that most participants were over 18 (M = 24.92; SD = 11.74). Finally, both Thompson et al. (2020) and Updegraff et al. (2008) used the same baseline sample; however, outcome variables and research aims were different

Figure 2. PRISMA Flow Diagram



2.2.4. Quality assessment

Quality assessment was conducted to assess different areas of bias for each of the studies included in this review. The National Institutes of Health (NIH) quality assessment tool for observational cohort and cross-sectional studies was chosen as a validated tool to assess risk of bias in cross-sectional and cohort studies (Appendix B). This tool was chosen as these two designs were the most appropriate to answer the review question; therefore, likely to be appropriate to use for the eligible studies. A second reviewer crossed-check quality assessment for 20% of the studies. Any disagreement was resolved through discussion. The overall risk for each area of bias is reported in Figures 3 and 4.

Figure 3. Quality Assessment results

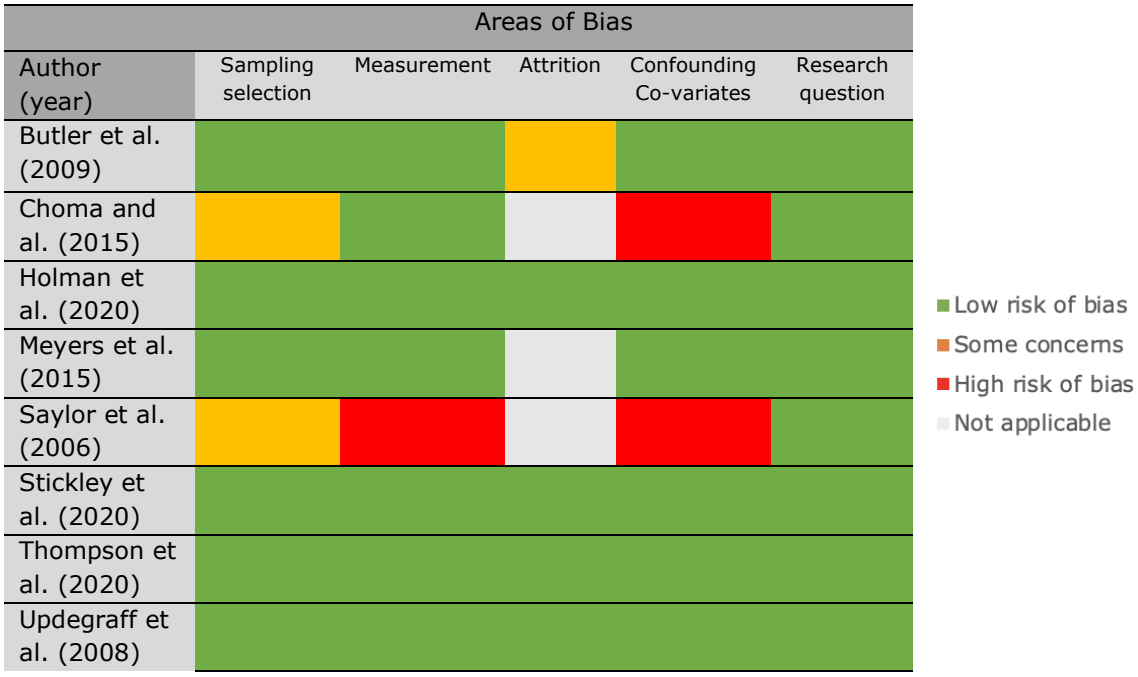
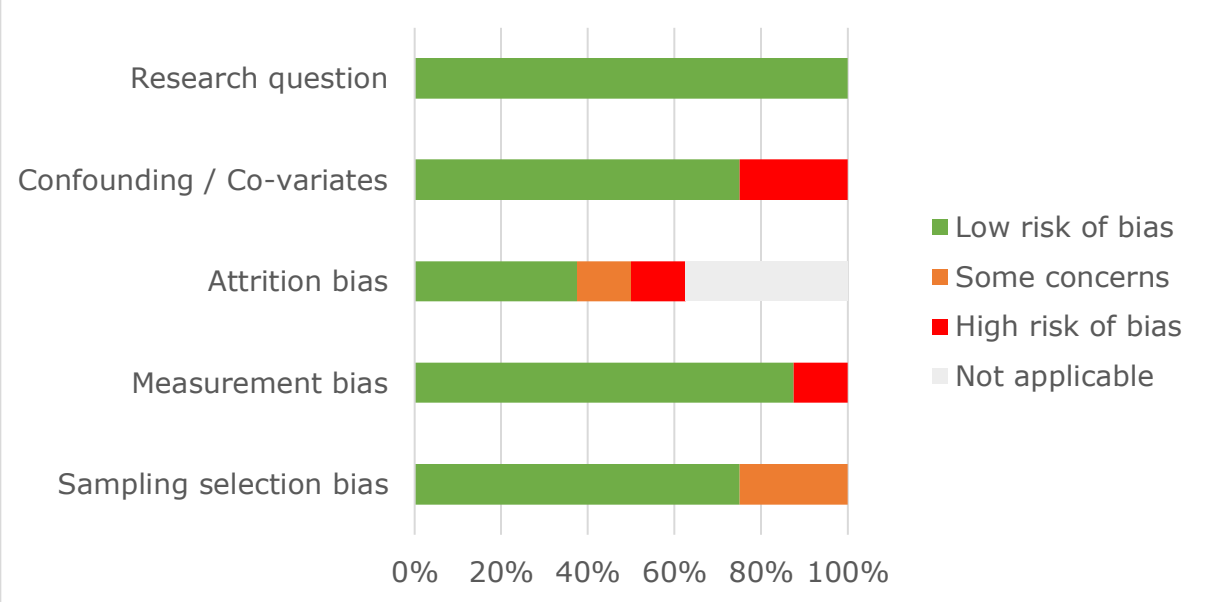


Figure 4. Risk of bias' proportional summary



With regards to the sampling bias, study population was clearly specified and defined for all included studies. Participants were recruited from the same population at the same time, and inclusion and exclusion criteria were prespecified and applied uniformly to all participants for all eligible studies. However, sample size justification and power description were not provided for any of the studies. Six of them were representative of the general population in their country and had large samples (see Table 2). Two studies were carried out on university students (Choma et al., 2015; Saylor et al., 2006). University samples were found to be as heterogenous as the public but generalising from students to the general population is problematic in psychological research (Hanel & Vione, 2016). Furthermore, their sample size was smaller than the other studies. Thus, there were some sampling bias concerns for these two studies.

With regards to attrition, participation rate of eligible persons was assessed using the NIH quality assessment tool's cut off point of 50%. Participation rates of eligible participants were not reported for Stickley et al. (2020) and for Updegraff et al. (2008) but both studies had large sample size; and Updegraff et al. (2008) had 79.9% follow-up attrition; hence, they were both rated as good for attrition. Participation rate was also not reported for Choma et al. (2015) and Saylor et al. (2006);

however, this was rated as not applicable due to their study designs, using volunteers as participants. Follow up attrition was 50% for Butler et al. (2009); however, they had 70% participation rate; hence, this paper was rated as fair for attrition. Thompson et al. (2020) participation rate was 75% and although the follow-up attrition was under 80%, it remains high at 74.6%; hence, the overall attrition for this paper was rated as good.

With regards to measurement bias, Saylor et al. (2006) did not have a clear definition of the exposure outcome, whether it was the criminal victimisation or the 9/11 exposure. For both exposure outcomes, there was no valid tool used to measure the exposure. There was also no direct way of associating the trauma scores (outcome measure) with the attack in this study. Furthermore, blinding was not reported or carried out for any of the studies except for the experimental study of Choma et al. (2015) stating that participants were randomly assigned to conditions on computers.

The four cohort studies and two cross-sectional study adjusted their analysis with co-variates (i.e., variables related to the outcome of interest) and accounted for confounders (i.e., covariates related to both the exposure and the outcome). Due to the occurrence of a terrorist

attack being largely unpredictable; confounders are rarer than the presence of co-variates. Hence, the consideration given to covariates when assessing bias. Two of the cross-sectional studies included in this review, Choma et al. (2015) and Saylor et al. (2006) did not assess confounders or co-variates. All the other studies collected demographic information as co-variates. These demographics included information about income, education, ethnicity, marital status, age, and gender. Half of the studies also included information about exposure in relation to the attack. Other variables were also examined in the included papers. Holman et al. (2020) and Updegraff et al. (2008) included variables about previous mental health diagnosis. Holman et al. (2020) also included information regarding media consumption. Meyers et al. (2015) looked at previous childhood maltreatment and parental history. Butler et al. (2009) added variables relating to social network and social constraints as well as self-blame and negative world views. Finally, Stickley et al. (2020) also included discrimination as a co-variate.

2.2.5. Data extraction

Descriptive and analytical data were extracted from each of the selected studies and inputted in a data extraction table. The data

extraction form included information about study characteristics, participant characteristics, and study results. See form in Appendix C.

2.2.6. Data analysis

A narrative synthesis was undertaken as pooling of results was inappropriate due to the diversity of outcome measured.

2.3. Results

The synthesis below summarises the key characteristics of the included studies, key findings, and the main associations and patterns identified. Included studies are described in Table 2.

2.3.1. Studies' key characteristics

The total hits of records found was 2361, from these, 8 studies were identified as eligible and included in this synthesis. Out of these 8 studies, 4 were cohort studies and 4 were cross-sectional studies. The overall number of participants across all the studies was 36831 participants, with an age range of 17 to 65+ years old.

9/11 was the main terrorist event examined in the included papers except for one (Holman et al., 2020) who looked at the Boston Marathon Bombings (BMB). One study was conducted in Great Britain whereas all the other studies were from the United State of America (USA). Furthermore, both terrorist events included in the review occurred in the USA. Other studies examining terrorist events that occurred in Europe were identified but they did not meet inclusion criteria.

2.3.2 Main findings

Several psychological effects were observed following indirect exposure to terrorism: greater distress, lower wellbeing, acute stress, trauma symptoms, functional impairment (physical and emotional health interference with social- and work-related functioning), depression, anxiety, and psychotic experiences. Other psychological and emotional impacts were also identified by the included studies: impact on searching and finding meaning, distress about future attacks and identifying the exposure event as their worse life event. Other relevant outcomes were found in these studies i.e., substance misuse and fear of future attacks; however, they were not meeting the PICO criteria. Additionally, indirect exposure for all the eligible studies was defined as media coverage of a terrorist attack.

2.3.3. Indirect exposure

Choma et al. (2015) studied the effect of 9/11 footage on British students. Interestingly, they found similar significant results when looking at distress than in an US sample. Participants in the other included studies were all from the US. Saylor et al. (2006) examined the effect of 9/11 indirect exposure on students from South Carolina, a state

from the East Coast of the US. Despite this state being over 700 miles from New York City (NYC), statistically significant results were found for crime victims, showing higher trauma symptoms post exposure. Caution should be taken when interpreting this study due to high measurement bias and unclear exposure variable. Stickley et al. (2020) also examined 9/11 media exposure for Hispanic, Spanish, Latino and Asian US population and found significant results. Finally, the other studies defined the participants as US general population. This suggests that adverse consequences were found following indirect exposure to an event. It can be hypothesised that participants could identify and relate to the victims of the attacks due to living in the same country or from a country with a similar Western culture (UK in this case).

Studies included in this review used media coverage related to the attack as the indirect exposure to terrorism. The media coverage included for example TV footage, live TV exposure, images, and video clips. In Holman et al. (2020), graphic/bloody versus non-graphic/chaotic images related to BMB were examined and graphic/bloody images found to have a significant impact on outcomes. Quantity of exposure (measured in hours) and frequency of exposure were also found to have a significant impact on measured outcomes (Holman et al., 2020; Stickley et al., 2020; Thompson et al., 2020). Live

TV exposure was also examined in Updegraff et al. (2008) but results were not significant. This could be explained by the nature of the exposure and the difficulty in controlling for other variables and the timescale used to measure the effect of the exposure on outcome when looking at live event.

2.3.4. Review of the results and bias

All the cross-sectional studies included in this study reported significant results. However, the selected cross-sectional studies were more likely to have higher risk bias than cohort studies. Cohort studies were more likely to reveal causal relationships between exposure and psychological outcomes. Thus, given the present findings, strong causal evidence between media exposure and psychological consequences cannot be fully demonstrated.

Both Choma et al. (2015) and Saylor et al. (2006) did not report on confounding variables. Moreover, Saylor et al. (2006) also had high risk measurement bias due to lack of clear inference between exposure and outcome and lack of clarity regarding the exposure variable (exposure to attack vs victimisation history).

Lower wellbeing (Butler et al., 2009) and searching for and finding meaning (Updegraff et al., 2008) were not found statistically significant following media coverage of 9/11. Both studies are cohort studies. The quality assessment results show that the Butler et al. (2009) study had poor follow up attrition and that the initial participation rate was not reported for Updegraff et al. (2008); although large samples were reported for both studies. Both these outcomes are positive psychological constructs in comparison to the other outcomes measured which relate to negative psychological consequences. Negative outcomes were all found to be significant following indirect exposure.

In Butler et al. (2009), besides wellbeing, they also examined higher distress following media coverage exposure but did not find a significant result. There was loss of follow up data for this study; thus, attrition bias may explain the lack of significant results for both lower wellbeing and higher distress. Furthermore, measuring unspecified distress in a cohort study may have contributed to non-significant results. In Choma et al. (2015) and Thompson et al. (2020), distress was found to be associated with indirect exposure of attacks. In Choma et al. (2015), distress was measured in relation to fear of future terrorism and compared with a neutral and fear condition. However, there was a lack of examining confounders in this study and due to measuring exposure and outcome

at the same time, there was no data for possible causality. In the Thompson et al. (2020) study, distress was measured as the most distressing life event in one's life. Stress was also found to be significant in the Holman et al. (2020) study following media related exposure.

Trauma symptoms were found to be significant following exposure to attack related media coverage (Holman et al., 2020; Meyers et al., 2015; Saylor et al., 2006). However, in Saylor et al. (2006), participants were also crime victims, thus this result cannot be generalised to the wider population. Furthermore, as mentioned above, high risk measurement bias was found for this study due to unclear exposure variable and lack of valid measurement tools used for crime victimisation and indirect exposure to terrorism.

Psychotic experiences were found to be related to duration of media exposure following an attack (Stickley et al., 2020). This study was found to have low risk in all the bias. However, the study was limited to Hispanic, Spanish, Latino or Asian descent population (Stickley et al., 2020). Anxiety and depression were found to be significant in Meyer et al. (2015); this study was also found to be low risk in all the bias. Outcomes related to substance misuse were also measured in this study; however, these outcomes were excluded from this review and only

reported due to other relevant outcomes measured in this study. Finally, functional impairment was found to be significantly impacted by graphic images exposure in a study with low-risk bias (Holman et al., 2020).

Table 2. Characteristics and findings – included studies

Study number, Author (year), Design	Aim	Population	Indirect exposure	Relevant outcomes	Measurements	Relevant hypothesis set by original authors	Statistical tests and Relevant findings
[1] Butler et al. (2009) Cohort	To examine the contributions of a range of factors (cognitive, emotional, social support, coping) to psychological resilience for those indirectly exposed to 9/11	General US population *n* = 1281 Recruited via internet, press release and promotion by association and organisation Mean age:45.19 Age range: 18-65+ 77.2% female / 22.8% male 92.1% White / 7.9 % others	Terrorist attack: 9/11 Time spent attending to 9/11 related media in the first few days after the attacks	Wellbeing and global distress	Psychological Wellbeing, and Brief Symptom Inventory (Ryff, 1989; Ryff & Keyes, 1995)	Media exposure is associated with high level of distress and low level of wellbeing	Zero-Order Correlations Wellbeing: T1 r = -.11; T2 r = -.14, p > .05 (ns) / Distress: T1 r = .24; T2 r = .22, p > .05 (ns)
[2] Choma et al. (2015) Cross-sectional	To examine whether viewing 9/11 footage affected peoples' perceived distress spanning past, present, and	British university students *n* = 174 Recruited via university Mean age: 24.92 (*SD* = 11.74) Age range: 17+	Terrorist attack: 9/11 9/11 video clip of event	Distress	Measures of temporal distress associated with 9/11, and distress concerning the possibility of a	Viewing 9/11 footage predicts greater distress at the possibility of future terrorism (H_1) and overall distress (H_2)	Regression H_1 = b = .54, t = 2.09, p = .038 H_2 = Distress in 9/11 condition (M =

	anticipated future	73.3% female / 26.7% male 94.8% White / 5.2% others			future terrorist attack (Kilpatrick & Cantril, 1960)	compared to neutral and fear exposure content	5.79) vs Neutral condition (M = 4.80; p = .003); Distress in 9/11 condition (M = 5.79) vs Fear condition (M = 4.62; p < .001)
[3] Holman et al. (2020) Cohort	To examine whether two qualities of BMB- related media exposure—graphicness and amount—had associations with psychological symptoms that are linked with functional impairment	General US population n = 3468-3492 Recruited via Knowledge networks panel (internet survey randomly assigned to USA households) Age range 18-65+, no mean 51.9% female/48.1% male 77.6 White/ 22.4% others	Terrorist attack: Boston Marathon Bombings (BMB) Graphic attack related media images - bloody and nongraphic chaotic non-bloody	Acute stress, PTSS, fear of future terrorism and functional impairment	Stanford Acute Stress Reaction Questionnaire (SASRQ; Cardeña et al., 2000) Modified version of the Primary Care PTSD Screen (PC-PTSD; Prins et al., 2004) Four items modified SF-36 (Ware &	H_1 = Exposure to graphic (bloody) BMB-related media images are associated with acute stress, PTSS, fear of future terrorism, and functional impairment compared to exposure to non- graphic BMB-related (chaotic non bloody) media images H_2 = More frequent exposure to graphic BMB-	Bivariate ordinary least squares regression T1 H_1 = Acute stress: b = .06, 95% CI = (.01, .10), p < .05 T2 H_1 = PTSD: b = .08, 95% CI = (.03; .13), p < .01; Fear of future terrorism: b = .09, 95% CI = (.05; .14), p < .001; Functional impairment: b = .06, 95% CI

					Sherbourne, 1992) Time 1 (T1): 2 to 4 weeks after BMB measuring acute stress and media exposure Time 2 (T2): 6 months later measuring PTSS, fear of future terrorism and functional impairment	related media images is associated with greater acute stress, PTSS, fear of future terrorism, and functional impairment	= (.01; .10), $p < .05$ T1 H_2 = Acute stress: b = .39, 95% CI = (.31, .46), $p < .001$ T2 H_2 PTSD: b = .32, 95% CI = (.25; .39), $p < .001$; Fear of future terrorism: b = .22, 95% CI = (.17; .27), $p < .001$; Functional impairment: b = .16, 95% CI = (.10; .22), $p < .001$.
[4] Meyers et al. (2015) Cross sectional	To examine the association between direct and indirect 9/11 exposure and post-9/11 onsets of psychopathology in the internalising	General US population n = 25239 Recruited via USA adults residing in homes and quarters Age range: 18-65+, no mean 58% female/ 42% male	Terrorist attack: 9/11 Indirect exposure through media, news, etc.	Alcohol (AD), nicotine (ND) and cannabis (CD) dependence, depression, anxiety, and PTSD	Alcohol Use Disorder and Associated Disabilities Interview Schedule, DSM-IV version (AUDADIS-IV; Grant et al., 2003)	Indirect exposure to 9/11 increases odd of meeting criteria for AD, ND, CD, depression, anxiety, and PTSD	Latent dimensional AD: OR = 1.40, 95% CI = (1.23, 1.58), $p < .0001$; ND: OR = 1.35, 95% CI = (1.25, 1.46), $p < .0001$;

	and externalising dimensions of psychiatric and substance use disorders	58.2% White/ 19% Black/ 18.4% Hispanic 4.5% others					CD: *OR* = 2.00, 95% *CI* = (1.25, 3.21), *p* = .004; Dep: *OR* = 1.27, 95% *CI* = (1.16, 1.38), *p* < .0001; Anx: *OR* = 1.45, 95% *CI* = (1.26, 1.66), *p* < .0001; PSTD: *OR* = 1.56, 95% *CI* = (1.40, 1.73), *p* < .0001.
[5] Saylor, DeRoma, & Swickert (2006) Cross-sectional	To examine whether college students with previous criminal victimisation history would report higher levels of trauma symptoms in the 24 hours following indirect exposure to 9/11	US University students (South Carolina) *n* = 415 Recruited via university Mean age: 21 Age range: 17-54 44% female/ 56% male 76% White/ 24% others	Terrorist attack: 9/11 Attack related media coverage – not specified	PTSD and criminal victimisation	Davidson Trauma Scale (Davidson et al., 1997) Victimisation history	Crime victim reports higher trauma symptoms then non-crime victim following indirect exposure	*t* test *t* = -2.52, *p* < .05

[6] Stickley et al. (2020) Cross-sectional	To examine if exposure to media relating to 9/11 was associated with reporting psychotic experiences	US population of Hispanic, Spanish, Latino, or Asian descent *n* = 4624 Recruited via the National Latino and Asian American Study (NLAAS) Mean age: 36.04 for no exposure and 42.53 for 12h+ exposure Age range: 18+ 58.55% female / 41.45% male in 12h+ exposure group All Spanish, Latino, or Asian	Terrorist attack: 9/11 Attack related media coverage e.g., TV, radio, newspapers, magasines, internet	Psychotic experiences (PE)	World Health Organization's Composite International Diagnostic Interview psychosis screen (Kessler & Üstün, 2004)	More than 12h of media exposure is associated with higher odds of PE compared with 1–4h exposure	Logistic regression *OR* = 3.00, 95% *CI* = (1.32; 6.83), *p* < .01
[7] Thompson, Holman, & Silver (2020) Cohort	To examine the predictors of selecting 9/11, an indirectly experienced collective trauma, as one's worst life event considering exposure to 9/11 related	General US population living outside New York *n* = 1606 Recruited via Knowledge networks panel (internet survey randomly assigned to USA households) Mean age: 49.52 (*SD* =16.12)	Terrorist attack: 9/11 Attack related media coverage e.g., television, radio, books, magasines, news-	Attack as most distressing life event	Diagnostic Interview Schedule trauma section (Robins, 1981) 9/11-related PTSD Checklist–Civilian Version (Weathers et al., 1993)	H_1 = Individuals who selected 9/11 as their most distressing life event were likely to report having watched more than 4h of 9/11-related television	H_1 = Chi-square $H_1 = \chi 2(1, 1606) = 9.60$, $p = .002$ H_2 = Logistic Regression $H_2 = OR = 1.91$, $p = .035$

	television coverage in the week following the attacks	Age range: 18-91 52.1% female/ 47.9% male 76.8% White/ 23.2% others	papers, online articles		Time 1 (T1): after 9/11 measuring acute stress response and 9/11 related media exposure Time 2 (T2): 1 year after 9/11 measuring stressful life events and 9/11 anniversary related media exposure	coverage in the week after the attacks H_2 = The frequency of watching 9/11-related television coverage in the week after the attacks predicts the selection of 9/11 as one's worst life event a year later	
[8] Updegraff, Silver & Holman (2008) Cohort	To examine what factors predict the degree of a person's search for and ability to find meaning following 9/11	General US population *n* = 931 Recruited via Knowledge networks panel (internet survey randomly assigned to USA households) Age range: 18-65+, no mean 50.8% Female / 49.2% Male No ethnicity information	Terrorist attack: 9/11 Live TV exposure	Searching for and finding meaning	Searching and finding meaning (two-item Likert scale measure)[8] Time 1 (T1): measuring searching for and finding meaning at 2 months post-9/11 Time 2 (T2): 1-year follow up	Searching for and finding meaning are predicted by live TV exposure	Hierarchical Regression – Time 1 Searching for meaning: *b* = .03, *t* = 0.76, 95% *CI* = (−.09; .21), *p* > .05 (ns); Finding meaning: *b* = .01, *t* = 0.31, 95% *CI* (-.17;

		measuring searching for and finding meaning (at 2 months post-9/11) with the outcomes of fears of future terrorism (at 1 year) and PTS symptoms (assessed at 1 and 2 years) – not relevant for SR hypothesis	.22), $p > .05$ (ns).

2.4 Discussion

The aim of this review was to understand the psychological and emotional impact of indirect exposure to terrorist attacks for the wider population. Many studies in the literature examined the impact of terrorism on direct victims. This review confirms that indirect exposure to terrorism has emotional and psychological consequences for the wider population. This study demonstrates the wider population can easily become an indirect victim of terrorism. This has drastic implication for media firms, and the frequency and type of images related to terrorism they broadcast.

2.4.1. Media exposure and its consequences

Indirect and direct exposure to attacks have been defined with various parameters, resulting in inconsistent findings. All the included studies used media exposure to measure the impact of indirect exposure to terrorist attacks. Media coverage as the indirect exposure was not an essential selection criterion; hence, it is relevant to highlight this was the common choice made in the eligible studies. Future studies should

explore whether other measures of indirect exposure exist to examine the impact of attacks on the wider population.

Studies have found association between television exposure to 9/11 and negative psychological consequences including distress and trauma symptoms (Holman & Silver, 2005; Schlenger et al., 2002; Schuster et al., 2001). This link was found to remain even when watching the footage 10 years after the attack (Choma et al., 2015). Thus, this implies possible negative outcomes when footages are shown within memorials or remembrances of traumatic events (Choma et al., 2015). The authors of this study demonstrated that television exposure was associated with distress, Islamophobia, and socio-political attitudes (Choma et al., 2015). Despite negative outcomes being triggered when exposed later in time, the negative impact following indirect exposure to such events decay over time (Liverant et al., 2004; Silver, 2002).

The frequency and duration (more than 4 hours) of watching 9/11 related media coverage increased the odds of experiencing the attacks as one's worse life event. Thus, indicating that distress can be experienced following a collective trauma even when experienced indirectly through television (Thompson et al., 2020). Additionally, in Stickley et al. (2020), increased media exposure was associated with

psychotic experiences controlling for the presence of mental illness. Traumatic events have been found to be linked to occurrence and onset of psychotic experiences (McGrath et al., 2017).

2.4.2 Media as an audio-visual stimulus

Indirect exposure for all included studies in this review, included media coverage with a visual component (images) and some also accompanied with auditory stimulus (video). News presented through video format can have a stronger impact than other type of news due to the feeling of witnessing events as live and due to quick updates (Cho et al., 2003; Uribe & Gunter, 2007). Television footages and online news include visual and auditory stimulus which translates to the audience as a more accurate representation of the reality (Jacobs & van Spanje, 2022). Nevertheless, when reporting traumatic events, media coverage can distort reality by disproportionally emphasising catastrophic events (Jacobs et al., 2018).

Updegraff et al. (2008) used live television coverage as their exposure to examine searching and finding meaning after an attack; however, nil significant result was found. It is worth adding that this study included 2.7% of participants who were also exposed directly to the attack through other criteria e.g., knowing someone in the attack.

This study was included due to the low percentage of direct victims. However, it is unclear if future studies should consider exposure through live television as a direct exposure given the results of this review and the role of media in vicarious trauma.

Due to the recent development of social media and online news, the general population is at increased risk of indirect exposure to collective trauma. Shearer & Gottfried (2017) also reported that social media and online news are becoming an important source for news updates. These sources can be unreliable and lead to distress related to misinformation and rumours (Jones et al., 2017). Please see Chapters 4 and 5 discussing belief in conspiracy theories in more depth.

Holman et al. (2020) manipulated the BMB media related coverage in their study design and found that the amount of exposure and the graphic nature of the exposure (bloody) was associated with functional impairment. Post-traumatic stress and fear of future terrorism were identified as mediators. Future studies should assess if media framing of attacks have psychological impacts (see empirical study of this thesis).

2.4.3 Individual characteristics and degree of impact

Individual characteristics can influence threat appraisal and psychological consequences (Velias & Corr, 2017; Weinberg et al., 2016). Wetcher (2007) suggested that perhaps individuals who are more sensitive to graphic images seek less media exposure. Questions remain about the characteristics of individuals who are more prone to repeated exposure to media coverage of terrorism or other large scale threatening event. It is possible that individuals with a less socially active life or who are more isolated spend longer time watching the news; thus, perhaps negative emotions such as low mood and anxiety are associated with such characteristics. Future studies should examine choice of media exposure (type, quantity, and frequency) and its relationship with individuals' characteristics and psychological impact resulting from the exposure. Jacobs & van Spanje (2022) found that individuals who consume "soft, popular and commercial news" are the most affected following news coverage of terrorism. Redmond et al. (2019) identified a gap in understanding media consumption patterns following a terrorist attack and individuals who are at higher risk of developing symptoms following exposure.

Thompson et al. (2020) identified African American, younger participants and individuals who had experienced fewer stressful life events at higher risk of naming 9/11 as their worst life event following exposure, whereas college education and exposure to violence and bereavement were protective. Furthermore, they found neuroticism to be a predictor for choosing 9/11 as their worst life event. Updegraff et al. (2008) found education, social network size and coping behaviours to be associated with resilience (distress / wellbeing). Updegraff et al. (2008) also identified that indirect exposure impacts on one's core assumptions about themselves and the world. Butler et al. (2009) discovered that negative changes in worldview strongly predicted distress and wellbeing levels following indirect exposure. Hence, targeting negative views about self and the world could help address indirect psychological consequences of terrorism. Psychological resilience to trauma should also be further explored in the context of collective trauma and terrorism. Additionally, Val and Linley (2006) reported on gender differences following the Madrid attack in 2004. Higher post-traumatic growth and positive changes were reported amongst women participants compared to men. This study adds to the literature examining resilience following terrorism exposure.

Childhood maltreatment and adversities have been identified as a risk factor for developing depression, anxiety and PTSD following indirect exposure to terrorism (Meyers et al., 2015). In a college sample (Nixon & Nishith, 2005), the association between prior trauma and traumatic symptoms following exposure was mediated by self and world negative beliefs. These beliefs and prior trauma were mediated by depression. This stresses that prior traumatic experiences and childhood adversities are important risk factors when indirectly exposed to terrorism. This should be taken into consideration when designing treatment to address the need of indirect victims of disasters and traumatic events.

Saylor et al. (2006) reported that when indirectly exposed to terrorism related media crime victims had significantly more traumatic symptoms in relation to the terrorist attack. Crime victims may have hyper selective attention when processing information which may explains this association (Field et al., 2001; Saylor et al., 2006). They may also have increased vigilance and be more sensitive to threats (Chiricos et al., 2000). The news report can also reactivate previously experienced disruptive events (Nellis & Savage, 2012). Nonetheless, a recent study looking at prior crime victimisation did not find it to be moderating the association between indirect exposure and fear of terrorism (Jacobs & van Spanje, 2022).

This systematic review excluded children; however, previous studies have reported indirect impact for children such as trauma related stress following exposure to traumatic events through media (Pfefferbaum et al., 1999, 2000). It has been recommended for parents to restrict attack related media viewing to children and for parents to discuss events with them (Schuster et al., 2001). Systematic review focusing on children is recommended to assess the indirect impact of terrorist attacks. This review has also excluded countries in conflict zones; however, there is an extensive literature examining indirect terrorism through media coverage and indirect impact of terrorism on children conducted in Israel/Palestine (e.g.: Slone & Shoshani, 2006). Hence, systematic review attempting to answer this question for children should consider extending their PICO criteria.

2.4.4 Practical implication

Disasters and mass traumatic events can impact on individuals who are not physically present especially if they can relate to the victims or feel targeted by the event (Dixon et al., 1993; Schuster et al., 2001). Media coverage of mass traumatic event are often immediate and can broadcast repeated graphic images which may increase the risk of psychological impact. It is recommended that media consider the frequency of graphic images related to terrorist events, introduce

warnings, and suggest coping mechanisms e.g., crisis numbers (Holman et al., 2014; Slone & Shoshani, 2010).

Traumatic events reported in the media extends beyond terrorism and other events such as natural disasters, hate crimes or attacks perpetuated by white supremacists/nationalists, and other mass violent event (Stickley et al., 2020). Media agencies should explore preventive strategies to minimise possible harm to the wider public while continuing to inform the population of such events. Future research should explore options to support potential victims of indirect exposure to threats via the media or other indirect means.

Indirect exposure to attacks and wellbeing was not found to be significant in Butler et al. (2009). However, Bajo et al. (2018) found in their study that wellbeing mediated the relationship between post-traumatic dysfunctional cognition and traumatic symptoms for indirect trauma exposure. Additionally, terrorism news coverage boosts mortality salience and threatened individuals' sense of wellbeing (Jacobs & van Spanje, 2022). Thus, wellbeing has been recommended as a key factor to address indirect exposure to collective trauma within preventive and recovery strategies (Bajo et al., 2018). Classic interventions to address specific psychological symptoms are also recommended at an

individual level such cognitive behavioural therapies (CBT) for anxiety and depression and trauma focused therapy for PTSD.

There are ethical considerations about the importance of the media reporting on disasters and its positive and negative consequences e.g., public awareness, policy changes, humanitarian assistance (Grizzard et al., 2017; Holman et al., 2020). News coverage of terrorism can also convey and intensify terrorist messages and their threats (Jacobs & van Spanje, 2022; Matthes et al., 2020; Shoshani & Slone, 2008; Sui et al., 2017). Thus, if media coverage of terrorism related content can increase distress and other negative emotions, and convey extremist views and terrorists hate messages, it can also lead to positive outcomes such as: humanitarian support, policy changes, collective emotions, increased control, gaining information about a crisis event, democracy, informing, making sense of crisis events, freedom of speech. Thus, it is important to weight the pros and cons of media broadcasting terrorist related information. Media should seek advice from researchers about how to report on mass violence while limiting psychological consequences for its audience. Nevertheless, Shoshani and Slone (2008) stress that reporting on terrorism involves "unavoidable psychological warfare elements".

Disasters caused by human involving intentional violence have been found to have greater mental health consequences, including distress and PTSD, than natural disasters (Norris, 2005; Schlenger et al., 2002). It is possible that the indirect victimisation of terrorism can be generalised to other traumatic events that can be experienced as a collective, such as the recent Covid-19 pandemic or media reports of internal conflict e.g., Ukraine crisis. Shechory-Bitton and Laufer (2021) explain that the sense of fear related to Covid-19 was intensified following reports in the media due to the unpredictable nature of the threat. Collective threats such as terrorism and a pandemic create a similar sense of fear and of daily life being threatened (Cohen-Louck & Levy, 2021). Further research is recommended to understand the role of media coverage of collective threatening events and psychological impact. Future studies should test if the findings in this review can be generalised to other large scale threatening events reported by the media.

2.4.5 Limitations and future directions

Studies examining impact of traumatic events such as terrorism are limited due to the nature of the attacks. Terrorist attacks are traumatic events that cannot be predicted; hence, preventing pre-event data collection (Val & Linley, 2006). Lack of data pre-exposure impedes

on the causal inference between the psychological symptoms and the exposure (Liverant et al., 2004; Schlenger et al., 2002).

Further studies are needed to explore experimental exposure and to support causal inference. In this review, significant results were found in both cohort and cross-sectional studies. Nevertheless, it is recommended for future research to attempt to control for variables that can impact the exposure-outcome association, and to minimise confounding and attrition bias. Additionally, using an experimental study design could address the voluntary exposure bias (choice of media consumption).

A recent study by Jacobs and van Spanje (2022) attempted such study design to examine moderating factors between exposure and fear of terrorism. They did not report significant results. They reported that the exposure in their study design was subtle and stated it would have been immoral and unrealistic to use an actual terror attack (Jacobs & van Spanje, 2022). Moreover, Holman et al. (2020) suggested manipulating the qualities of the media coverage, e.g., type of sounds, which could help identify emotional triggers. Therefore, further studies should attempt to explore how to manipulate the exposure event, or a quasi-experimental design may be preferred. The authors recommended

for future studies to use news stories as the exposure (Jacobs & van Spanje, 2022). Please refer to the study in Chapter 3. Ethical consideration should be reflected upon when using experimental or quasi experimental study designs to examine indirect exposure of collective trauma such as terrorism, as news media can be a source of vicarious contact (Tamborini et al., 2017).

Moreover, despite a recent increase in terrorism in Western Europe (including Berlin, Brussels, London, and Paris), eligible studies for this review only included events that occurred in the USA and mass terrorism attacks (9/11 and BMB). Further studies should explore the indirect impact of smaller scale attacks and attacks held in different countries. Studies looking at other attacks were found during the systematic search but were not meeting the PICO criteria.

Distress related to future terrorism attacks were found to be associated with 9/11 exposure (Choma et al., 2015). Other relevant but not eligible studies have identified similar links between media coverage of attacks and stress related symptoms (Schlenger et al., 2002; Schuster et al., 2001; Silver, 2002; Stein et al., 2004). Other studies have also found that indirect exposure is associated with fear of terrorism and threat perceptions (Cho et al., 2003; Matthes et al., 2020; Morin, 2016;

Nellis & Savage, 2012; Shoshani & Slone, 2008; Slone, 2000). Threat appraisal and fear of terrorism were excluded from this review as explained in the PICO criteria. It would be recommended for a systematic review or metanalysis to focus solely on threat appraisal and fear following indirect exposure.

2.5 Conclusion

This systematic review confirms that media coverage of mass violence such as terrorism is associated with vicarious trauma. Symptoms of depression, anxiety, trauma symptoms, stress / distress, psychotic experiences, and functional impairment have been found to be associated with exposure to terrorist attack related media coverage. It is recommended that future studies be conducted to explore specific type of media exposure, and to further examine the wider impact of media coverage of traumatic events. Options to support potential victims of indirect victimisation of terrorism should be developed whilst considering risk and protective factors such as childhood adversities, prior victimisation, and resilience. It is recommended for media to review how they broadcast information about terrorism to the wider public to attempt to minimise the risk of indirect victimisation.

Chapter 3: Did the news change your mind? Terrorist threats reported in the media and extremist attitudes

Abstract

Objectives: Chapter 2 found that media coverage of terrorism can lead to vicarious trauma and have negative psychological impact on its audience. Additionally, following recent terrorist attacks in England, the Home Office reported an increase of hate crimes. It is possible that the general population may become more paranoid and prejudiced in their assumptions following ambiguous media exposure about terrorist threats, leading to an increase in extremist views and acceptance of hate crimes. This research examined the impact of media coverage of terrorist threats on attitudes towards hate crimes and its association with extremist mind-set.

Methods: This research is an experimental study using online vignettes and questionnaires. Data were collected from the general population via social media. Participants were asked to read a hate crime scenario and to answer a questionnaire measuring their pro-hate crime attitudes. They were then randomly allocated to a news article vignette about a terrorism threat being reported either in an ambiguous or in a factual tone and asked again to answer the attitude questionnaire about the hate crime scenario. Variation in hate crime attitudes were also examined depending on the hate crime victim's attire.

Results: Variation in the way the main protagonist was wearing her hijab (head scarf) did not influence participant's attitudes towards hate crime $t(184) = 0.38$, $p = 0.70$. There was a significant difference in hate crimes attitudes between the pre and post media exposure $t(183)=-2.34$, $p = 0.02$. There is no difference in hate crime attitudes based on the type of news report exposure (factual or ambiguous) $t(182) = 1.32$, $p = 0.19$. Finally, the extremist mindset scale can predict hate crime attitudes $p < 0.01$ (95% $CI = 3.44, 10.00$). However, confounders were found.

Conclusions: Media exposure increases participant's pro-attitudes towards hate crimes. The results also demonstrate that the extremist mindset scale (MEM) predicts attitudes towards hate crimes. This study highlights the impact media can have on people's beliefs. This research adds to the literature on extremism and hate crime prevention. Further research should explore the link between media coverage of other threatening situations e.g., Brexit, Coronavirus and increases in extremist views and behaviours.

Key words: Extremism, Extremist Mind-set, Media, Hate crimes, Terrorism, Threats

3.1. Introduction

3.1.1. Hate Crimes and Media

The systematic review (Chapter 2) found that media coverage of terrorism is associated with negative psychological consequences. Therefore, it is important to explore if media framing of terrorist threats or attacks have a psychological impact on the general population exposed to this media. Jacobs and van Spanje (2022) also recommended for future studies to use news stories about terrorism where the terrorist threat is manipulated to reflect the news reporting style on terrorism. Moreover, Holman et al. (2020) suggested manipulating the qualities of the media coverage to help identify emotional triggers e.g., sounds (gunshots, screaming). Therefore, in this study participants were exposed to manipulated news articles.

Following recent terrorist attacks in England, the Home Office reported an increase of hate crimes. The number of racially motivated hate crimes increased by 14%, and religiously motivated hate crime increased by 40% between 2016/2017 and 2017/2018 (Home Office, 2018). In March 2021, the Home Office (2021) reported a 9% increase of hate crimes from the previous year, with a total of 124,091 new hate

crimes recorded in England and Wales. Three-quarters of these hate crimes were racially motivated (Home Office, 2021). Although, part of this increase can be explained by better awareness of what is a hate crime and improvement in recording system, such a high number of hate crimes reflect a sombre societal concern. Hence, it is of utmost importance to understand what may influence individuals to become more extremist in their views and at risk of perpetuating such crimes.

Little is known about the role of the media in the increase of hate crimes. In 2014, Hanes and Machin (2014) found a significant link between the increase of racially motivated hate crimes following terrorist attacks. They hypothesised that media coverage and media framing could influence this link, but this has not been demonstrated. Some studies have examined the relation between the increase of hate crimes and the economic cycles, population flows, and changes in political environment (Green et al., 2001), but there is a dearth of research investigating the impact of media coverage on hate crimes. Wanta et al. (2016) have previously demonstrated that international news coverage of negative nature (e.g., international conflict, terrorism, crime/drugs, military/nuclear arms) leads to an increase of negative thoughts and negative perception in their followers. This demonstrates that negative media coverage can influence public perception and an individual's

attitudes.

3.1.2. Terrorism and Media

Following a terrorist attack, the media is used by the public to better understand the event and its significance (Nacos et al., 2008). Slovic (2004) compared terrorism to dread risk and explained that it can lead to negative affective reactions. One of the points explored in this study was the association between the risk of terrorism and pro-attitudes towards hate crimes, which can be categorised as a negative affective reaction. Exposure to a terrorist threat is associated with negative emotions (see Chapter 2). When experiencing negative emotions, individuals are more likely to fear future attacks and to support interventions to reduce this risk (Lerner et al., 2003). Could pro-attitudes towards hate crime be an expression of that fear? People who are fearful sometimes convert that fear into anticipatory retaliatory violence (Jack & Egan, 2016).

When exposed to a threatening situation, one of the defence mechanisms is to flight (Newhagen, 1998). However, threat exposure via the media is unlikely to enable physical flight. Thus, cognitive defence mechanisms are preferred over behavioural strategies such as hostility and antagonism of the enemy (Bar-Tal et al., 1989). Due to the recent

increase in media exposure to terrorism, this may explain an increase of hatred directed at Muslim and Arab communities and the increase of white extremism in Western countries.

For example, exposure to videos of the Manchester terrorist attack were associated with higher dehumanisation of Arabs as they were considered as individuals belonging to the same group as the perpetuators of the attack (Scrimin & Rubaltelli, 2019). Lankford and Gillespie (2011) recommend re-humanising individual perceived as the enemy by extremist groups by tackling extremist propaganda and elicit empathy towards the dehumanised group. Higher level of emotional intelligence was also associated with lower level of dehumanisation (Scrimin & Rubaltelli, 2019). When unable to manage their emotions, individuals who are exposed to the threatening images were more likely to respond impulsively by blaming the whole group that they had associated with the terrorists (Rubaltelli & Pittarello, 2018). Whereas individuals who manage their emotions have been found to be less impacted by exposure to such stimuli (Peña-Sarrionandia et al., 2015).

3.1.3. Extremist Mind-Set and Radicalisation

Extremism is defined as:

> *"a verbal or active opposition to basic values in a society such as democracy, equality, liberty, rule of law, and tolerance for the faiths and beliefs of others"* (Lösel et al., 2018)

Stankov et al. (2010) have developed the Militant Extremist Mindset scale (MEM) to capture the mindset of those on the extremes of the psychological and political spectrum. Proviolence, vile world and divine power are the key components of the extremist mindset. Proviolence refers to the readiness to use violence to solve social problems. Vile world is associated with the blaming factor that provides justification for anger. Finally, divine power is a need to justify unfriendly thoughts and use of violence by resorting to something sacred or from higher moral principles (Stankov et al., 2010). People who tend to score high on the MEM scale tend to support violence more than the general population, be more unhappy about the situation in the world, and tend to seek justification for their views about the use of violence from a higher authority (Stankov et al., 2010). Is there a link between extremist mindsets and individuals with pro-attitudes towards hate crimes?

Radicalisation is the process whereby one develops extremist and radical views, attitudes and beliefs which can lead to radical behaviours i.e., terrorism (Wolfowicz et al., 2019). Pratchett et al. (2010) explain

that catalyst events (e.g., political, religious, or personal) and the exposure to a network or movement both partly explain why someone may become extremist. A triggering event such as terrorism or a crisis such as a pandemic can exacerbate extremist views when reported in the media. This could be influenced by stereotypes being reinforced by media reports and in turn increase prejudices. For instance, media may lead to stereotypes based on one's physical characteristics being associated with a social group e.g., head scarf associated with Islamic religious beliefs. This can in turn increase prejudice for women wearing this type of clothing leading to more discrimination. When engaging with others with similar extremist views, this reinforces the extremist mindset and create a group identity and group polarisation (Torok, 2013).

These extremist views may be used to justify violence to meet political and social aspiration (Doosje et al., 2016; Maskaliūnaitė, 2015). A systematic review (Christmann, 2012) revealed a dearth of research on non-violent radicalisation and processes occurring prior extremist violence. Indeed, radicalisation is rarely investigated at its early stages (Rahimullah et al., 2013). Extremist groups often use online media platforms to radicalise people by exposing a large audience to extremist material early in the radicalisation process (Nouh et al., 2019).

3.1.4. Aims

This study aimed to understand the impact that media coverage of terrorism threats has on attitudes towards hate crimes and its association with extremist mind-set. See below the study hypotheses:

- Hypothesis 1: The attire of the victim of the hate crime (face covered or uncovered) increases pro-hate crime attitudes
- Hypothesis 2: Media coverage of terrorist threats increases pro-hate crime attitudes
- Hypothesis 3: Tone of media coverage of terrorist threats increases pro-hate crime attitudes
- Hypothesis 4: Individuals with a higher score on the extremist mind-set scale are more likely to have pro-attitudes towards behaviour that might be called hate crime

3.2. Methodology

3.2.1. Study design, setting and participants

This research is an experimental cross-sectional study conducted in a general population sample in one point in time. Participants were recruited online using social media networks (Reddit and Facebook) and portals targeting a wider network range (see recruitment poster in Appendix E). No clinical cohort was sought. The aim of the study was broadly concealed, and participants were informed the study was exploring attitudes. Participants had the right to withdraw their consent at any point. A debrief was given to participants upon completion of the online study (see Appendix F). The data was collected using Bristol Online Survey. Data were collected from the 23rd of September 2019 until the 23rd of April 2020.

3.2.2. Sample size

A sample size calculation was carried out using G*Power to ensure the sample was adequately powered to meet the primary research objective of the study (Faul et al., 2007). It was estimated that a sample

size of 158 participants would provide an 80% chance of correctly rejecting the null hypothesis of no difference (see Appendix G for further details). The total sample size was 186 participants.

3.2.3. Ethics Approval (for Chapter 3 and 4)

The Faculty of Medicine and Health Sciences Research Ethics committee approved this study (Ethics Reference number: 299-1903; Appendix D). Key ethical considerations were met such as ensuring confidentiality and anonymity of participants using anonymous data. Participants were also provided with contact details of the researcher and supervisor to raise concerns, and the research ethic committee if wishing to make a formal complaint.

3.2.4. Procedure (for Chapter 3 and 4)

The data was collected using the Bristol Online Survey platform. The study procedure is presented in Figure 5.

Initially, the aim of the study was partially concealed as

participants were informed the study was exploring attitudes and the type of attitudes was not specified. Participants were informed the study was investigating individual's attitudes and directed to a consent page. The participant information sheet (PIS) stipulated the following: "*We are investigating individual's perception of news media stories, and how it can influence attitudes. You will be asked to answer 5 questionnaires and then to answer some questions about a scenario. It should take you about 30 minutes to complete this study".* It was calculated that the study took 25 to 30 minutes to complete during the piloting stage. This could potentially impact on the participants' fatigue. Therefore, when possible shorter test versions were preferred. Participants had the right to withdraw their consent at any point by closing their screen before competition. Three participants screened out and were automatically excluded; 186 participants completed the study.

Participants were then asked to answer a demographic questionnaire. Secondly, data was collected to measure individual characteristics and extremist mindset predisposition. Participants were asked to complete five psychometric tests to examine predictors of extremist mind-sets: the General Paranoia Scale (GPS; Fenigstein & Vanable, 1992): the Generic Conspiracist Beliefs Scale (GCB; Brotherton et al., 2013), the HEXACO-60 (Ashton & Lee, 2009); the Militant

Extremist Mindset Scale (MEM; Stankov et al., 2018); and the Short Tetrad: Four Identities Questionnaire (SD4; Paulhus et al., 2018). Please see Chapter 4 for full description of these scales. The study was split into two parts. In the first part, only the MEM was used; and in the second part, all psychometrics were used.

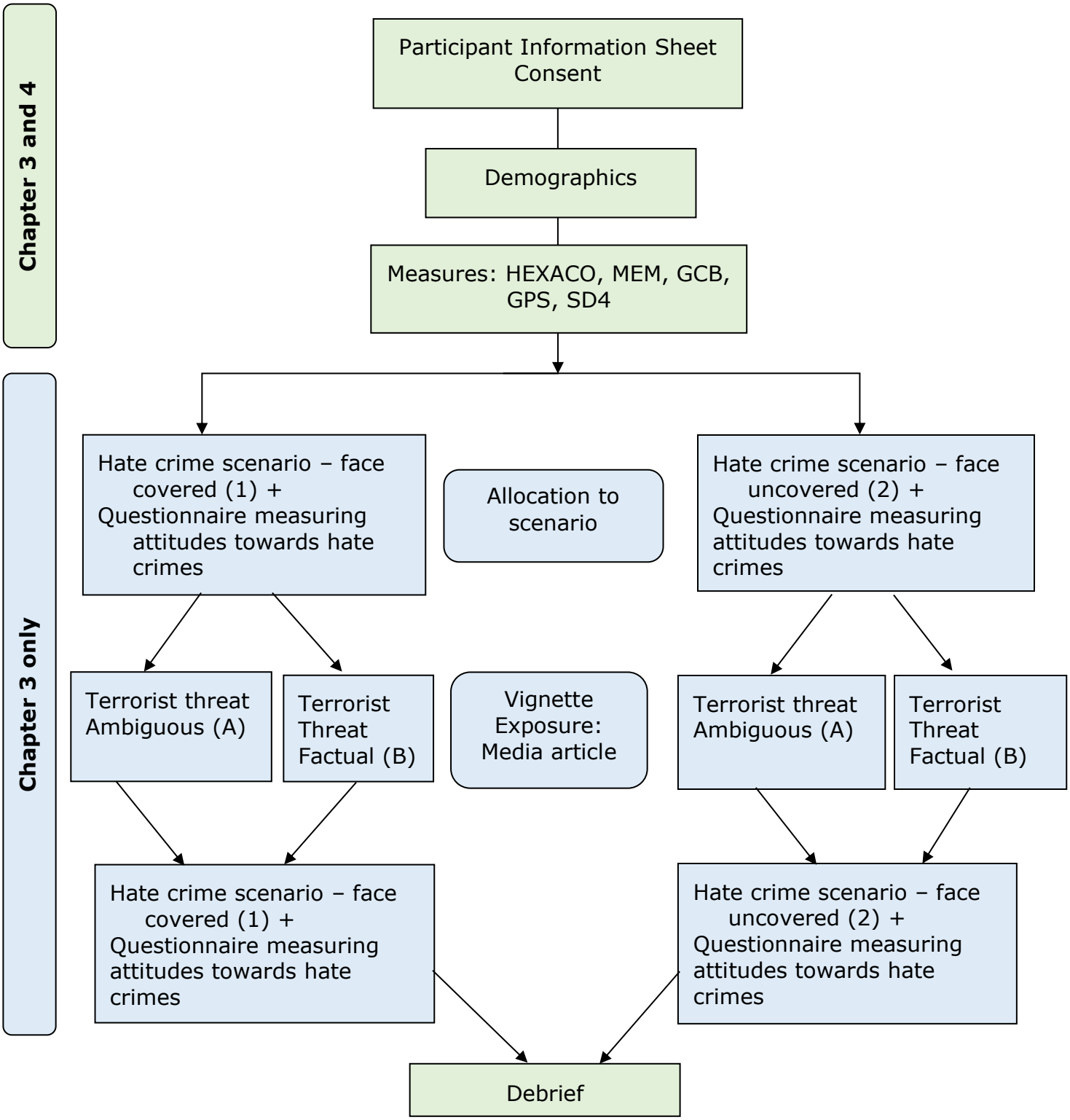
Participants were randomly allocated to the scenario with the only difference being the appearance of the victim. The allocation was done by asking participants to randomly select option 1 or 2, participants did not know what scenario they were allocated to and did not know what the other scenario was. Both scenarios were considered in this research as a hate crime. The difference between the scenarios was only the victim's appearance, with her face covered or uncovered with a head scarf. This difference was examined to establish if pro-hate crime attitudes would increase if the victim had more distinguishable features. Then, participants were asked to answer an attitude questionnaire about the hate crime scenario they read. They were asked to rate 8 statements using the following Likert-scale: strongly disagree, somewhat disagree, neither, somewhat agree, strongly agree. In a similar manner, participants were randomly allocated to a media article using the same randomisation process where participants were asked to randomly select option A or B, to either an ambiguous or a factual report of a terrorist

threat. Following the news article exposure, participants were asked to answer again the attitude questionnaire about the same hate crime vignette they were initially allocated to.

Following the pre and post questionnaire measuring attitudes towards the hate crime scenario, participants were asked if they had any other comments. This qualitative element was added to this study to collate any other relevant information participants wanted to share from the experiment. The comments were not aimed at answering any specific research hypothesis but were valuable information provided by participants. From an ethical point of view, this information could not be dismissed as relevant to the research question. Thus, it was decided that the qualitative comments would be included in the results.

Upon completion of the study, participants were directed to a debrief page explaining the aim of the study with some link to resources on this topic (see Appendix F). Participants were blinded to their allocation; however, the researcher was not, as there was only one researcher collecting and analysing the data.

Figure 5. Flow Diagram of Study procedure for Chapter 3 and 4



3.2.5. Measures and materials used in Chapter 3 only

3.2.5.1. Measures

Several measures were administered (Refer to Chapter 4 and Appendix H for further details). All scales used were reliable and valid and using a 5-point Likert-scale ranging from strongly disagree to strongly agree. High scores indicated more of the quality observed on all scales. Basic demographics were also collected.

In this chapter, only the Militant Extremist Mindset Scale (MEM; Stankov et al., 2018) was used. The MEM is a 24-item self-reported inventory measuring the three main processes of militant extremist mindset: Nastiness (Pro-Violence), Grudge (Vile World), and Excuse (Utopianism). This scale can be used to detect the extent of extremist attitudes in the general population. These subscales have internal consistencies of .80, .79, and .74, respectively. Also, all three scales of the militant extremist mindset have meaningful relationships to similar constructs (Sample item: '*There is a group of people whose uncompromised ideas and brave actions make my own life meaningful and worth living*').

3.2.5.2. Vignettes

Participants were randomly assigned to a hate crime scenario (1 or 2). See scenarios in Appendix I. The only difference in the two scenarios was that the victim of the hate crime was wearing a head scarf with her face covered or un-covered. This was manipulated to portray her with a subtle difference in her appearance. The difference of how she wears her head scarf can be associated with belonging to a social group with different cultural and/or religious beliefs. This manipulation was used as it was aligned with the written news article relating to 'Jihadi Brides' often portrayed wearing a traditional head scarf. The aim of adding this manipulation was to examine the level of prejudice participants may have and whether stereotypes can influence their views after reading the hate crime scenario.

Participants in both groups were asked to fill out the same questionnaire on attitudes towards the hate crime they read about after reading the scenario to measure their pro-hate crime attitudes.

The scenario was: *A woman was verbally assaulted in the street of London. She was wearing a hijab <u>covering her face</u> OR <u>with her face uncovered</u> (a hijab is a head covering worn in public by some Muslim*

women) and reported to the police that she was told 'if you want to wear that, go back to your own country' referring to her hijab.

Participants were then asked, "*how much do you agree or disagree with the following statement*" and were presented with 8 comments; 5 comments representing pro-hate crime attitudes i.e.: *the comment she received was justified, the person who assaulted her was only exercising their right to free speech*; and 2 comments (reverse score) representing anti-hate crime attitudes i.e.: *this is a hate crime, the woman was unfairly treated.* A Likert scale ranging from 1 to 5 was used: strongly disagree (1), somewhat disagree (2), neither (3), somewhat agree (4), strongly agree (5). Higher scores indicated pro-hate crime attitudes.

After the hate crime scenario, participants were randomly allocated to a media news article vignette and shown a media article about a terrorist threat. The vignettes were based on actual media information but edited to manipulate the tone of the presentation to reflect how information can be phrased in the media. Group A was randomly allocated to an article minimising and controlling information about a terrorism threat. Group B was randomly allocated to a media article being more factual about the same threat (control group). For instance, vignette A (ambiguous) reported: "*A British-born married*

woman who gave birth in a Middle East territory"; whereas Vignette B (factual) reported "*A British-born suspected 'Jihadi Bride' who gave birth in Islamic State-controlled Syrian territory*". See media articles in Appendix J. Following the media exposure, participants were presented with the same hate crime scenario and asked to read it again and answer the same attitude questionnaire. It was hypothesised that their views on the hate crime scenario where the victim was wearing a head scarf may be exacerbated by reading an article about a terrorist threat by Jihadi Brides, usually represented wearing head scarfs.

Both media articles and the attitude vignette questionnaire were focusing on recent terrorist threats in England and based on a particular story that was published in a general news magazine ("The Week") on "Jihadi Brides". This is phrased as it was presented (control) or in a more ambiguous and neutralised way which reduces the informational content (experimental condition). This aimed to assess if tone of reporting influenced attitudes towards hate crimes.

The study did not present intentionally provocative stimuli associated with violent extremism, instead only examining the effects of ambiguity compared to what would be presented in mass media. This ensured no possibility of incitement accusations.

3.2.6. Statistical analysis

T-tests were used to test the attitudes towards hate crimes following the exposure to media. A linear regression was used to test the association between the extremist mind-set scores and the attitudes towards hate crimes. Finally, thematic analysis was carried out to look at participants' comments after completing the attitude questionnaire. The data was analysed using SPSS. Listwise deletion was used to handle missing data.

3.3. Results

3.3.1. Participants

A total of 186 participants took part in this study. Demographics are shown in Table 3 (same as Chapter 4). Mean of participant's age was 34.04 years old (*SD*= 12.40); and the participant's average years of education since the age of 5 was 16.80 years (*SD*= 3.34). This sample involves: 68.3% of female participation, almost 70% of participants having a degree; 82.8% of white participants; only 10.2% politically conservative participants; and over 46% of non-religious participants. Hence, this sample appears to be more representative of a liberal and educated population.

Table 3. Demographics

Characteristics	*Freq(%)*
Gender	
Male	28
Female	68.3
Prefer not to say	2.2
Other	1.6
Employment	
Employed Full-Time	50
Employed Part-Time	10.2
Unemployed - Looking for work	2.2
Unemployed - Not looking for work	.5
Student	24.2
Retired	2.7
Self-Employed	5.4
Unable to work	2.7
Other	1.6
Religion	
Christian	29.0
Muslim	4.3
Hindu	.5
Buddhist	1.6
Jew	.5
Unaffiliated	11.3
Humanist	1.6
Agnostic	18.3
Atheist	28
Other	4.8

Characteristics	*Freq(%)*
Education	
No formal qualification	4.3
GCSE	7
A level	15.1
Degree	61.8
Post graduate qualification	8.1
Other	3.8
Ethnicity	
White British	46.8
White Other	36
Black British	.5
Black Other	2.7
Asian	4.8
Mixed Race	4.8
Other	3.8
Political belief	
Conservative	9.1
UKIP	1.1
Labour	24.7
Liberal Democrat	14.5
Green	8.1
None	29.6

3.3.2. Data Assumptions

All assumptions for t-tests and linear regression analysis were met. An analysis of standard residuals showed that the data contained no outliers (Std. Residual Min = -3.04; Std. Residual Max = 2.61). The data met the assumption of independent errors (Durbin-Watson value = 1.88). The normal P-P plot of standardised residuals indicated that the data was slightly skewed but approximately fall along a straight diagonal line, indicating that the data is normally distributed (see Figure 6). The scatterplot of standardised predicted values showed that the data met the assumptions of homogeneity of variance and linearity (See Figure 7).

Figure 6. Normal P-P Plot

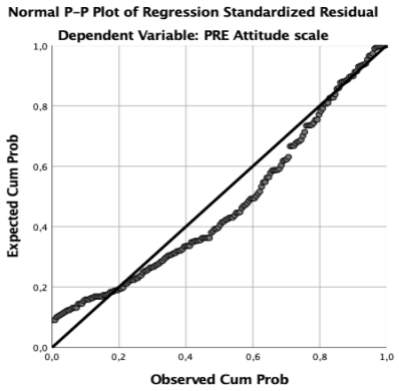
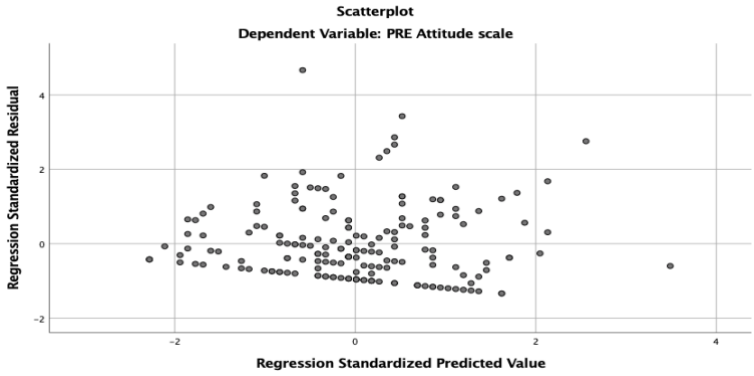


Figure 7. Scatterplot



3.3.3. Internal consistency

A reliability analysis was carried out on each psychometric questionnaire's subscales. Cronbach's alpha showed high internal consistency for each test, this ranging between acceptable and good reliability. Cronbach's alpha for each subscale is shown in Table 4.

Table 4. Descriptive statistics

	N	Mean (*SD*)	*α* (*n* of items)
MEM Total	186	2.12 (.49)	.83 (n=24)
Pre attitude scale	184	11.85 (5.25)	.81 (n=14)
Post attitude scale	184	12.36 (5.14)	.81 (n=14)
Ambiguous vignette (post)	116	12.74 (5.43)	n/a
Factual Vignette (post)	68	11.71 (4.57)	n/a
Face covered condition (pre)	106	12.01 (5.78)	n/a
Face uncovered condition (pre)	80	11.71 (4.41)	n/a

SD= Standard Deviation

α = Cronbach's Alpha

3.3.4. Terrorism in the media and increase of hate crimes

3.3.4.1. Independent t-test – Hate crime attitudes: hijab condition

- Hypothesis 1: The attire of the victim of the hate crime (face covered or uncovered) influences attitudes towards hate crimes

An independent-samples t-test was conducted to compare attitude scores between the participants allocated to scenario 1 – face covered and scenario 2 – face uncovered before exposure to the terrorist

threat. There was not a significant difference in the scores for face covered condition (*M* = 12.01 *SD* = 5.78) and face uncovered condition (*M* = 11.71, *SD* = 4.41); *t*(184) = 0.38, *p* = 0.70. These results suggest that variation in the way the main protagonist was wearing her hijab (head scarf) did not influence participant's attitudes towards hate crime. See Table 5.

Table 5. Independent Samples Test – Hijab condition

	Face covered condition Mean (*SD*)	Face uncovered condition Mean (*SD*)	Comparison Difference (95% *CI)*	*P-value (two-tailed)*
Hate crime attitudes	12.01 (5.78)	11.71 (4.41)	.30 (-1.23; 1.83)	.70 (NS)

NS: not statistically significant

N = 106 (face covered); N = 80 (face uncovered)

3.3.4.2. Paired t-test: pre and post exposure hate crime attitudes

- Hypothesis 2: Media coverage of terrorist threats influences attitudes towards hate crimes

The independent t-test indicates there is no confounding effect between the face covered and uncovered groups when examined pre-exposure. Thus, both groups were entered together (face covering and face uncovered).

A paired-samples t-test was conducted to compare pre and post hate crime attitude scores. There was a significant difference in the attitude scores pre exposure to the news article (M = 11.85, SD = 5.25) and attitude scores post exposure (M=12.36 SD=5.14) conditions; $t(183)=-2.34$, p = 0.02. The effect size for this analysis (d = 0.17) was found to be a small according to Cohen's (1988) convention. The difference is numerically not big enough, although statistically significant. In this study, a small effect size indicating a small difference between the two groups was likely because each group was measured in the same circumstances but with or without an exposure variable. The statistical difference, even with a small effect size, is therefore relevant in this study. These results indicate that media exposure influence pro-attitudes towards hate crimes. Specifically, these results suggest that when individuals are exposed to terrorist threat related by news article, they tend to have pro-attitudes towards hate crimes. See Table 6.

Table 6. Paired samples t-test

	Before exposure Mean (*SD*)	After exposure Mean (*SD*)	Comparison Difference (95% *CI)*	*P-value (two-tailed)*	Cohen's *d*
Hate crime attitudes	11.85 (5.25)	12.36 (5.14)	-.51 (-.94; -.08)	.02*	.17

**Statistically significant p < .05*

N = 184

3.3.5. Independent t-test – Attitudes post news article exposure: ambiguous vs factual vignette

- Hypothesis 3: Tone of media coverage of terrorist threats influences attitudes towards hate crimes

An independent-samples t-test was conducted to compare attitude scores between the participants exposed to vignette A (ambiguous news article) and participants exposed to vignette B (factual news article). There was not a significant difference in the scores following exposure to ambiguous news (M = 12.74, SD = 5.43) and factual news (M = 11.71, SD = 4.57) conditions; $t(182) = 1.32$, p = 0.19. Thus, there is not enough evidence to reject the null hypothesis

that there is no change in participant's pro-attitude towards hate crimes depending on if the news article relating the terrorist threat is ambiguous or factual. There is no difference between the groups. See Table 7.

Table 7. Independent Samples Test

	Ambiguous News Mean (*SD*)	Factual News Mean (*SD*)	Comparison Difference (95% *CI)*	*P-value (two-tailed)*
Hate crimes Attitude	12.74 (5.43)	11.71 (4.57)	1.04 (-.51; 2.58)	.19 (NS)

NS: not statistically significant

N = 116 (Ambiguous); N = 68 (Factual)

3.3.6. Linear regression - Extremist mind-set and hate crime attitudes

- Hypothesis 4: Individuals with a higher score on the extremist mind-set scale are more likely to have pro-attitudes towards behaviour that might be called hate crime.

A simple linear regression was calculated to test if participants with higher score on the extremist mind-set scale (MEM) are more likely to have pro-attitudes towards behaviour that might be called hate crime.

The baseline attitude scale was used to measure pro-attitudes towards behaviour that might be called hate crime (including both the face covered and uncovered groups) and the MEM scale was used to measure extremist mind-set. A significant regression equation was found $p < 0.01$ (95% CI = 3.44, 10.00). This signifies that participants' scores on the extremist mindset scale can predict their attitudes towards hate crimes; whereas higher MEM scores are associated with higher scores on the attitudes towards hate crime scale. See Table 8.

Demographics were tested as possible confounders. Gender was found to be a significant confounder; however, the association between the MEM and hate crime attitudes remain also significant when adding gender to the model. Age, political belief, education, employment religion and ethnicity were not found to be possible confounders. Measures used in Chapter 4 were also tested (see Chapter 4 for description of the measures). The total scores of the paranoia scale (GPS) and the total dark tetrad scale (SD4) were found to be significant confounders, whereby the hate crime attitudes could not be explained by the MEM scores anymore. Moreover, the Honest-Humility and Emotionality personality traits of the HEXACO measure were also found to be confounders; however, the MEM could still explain the hate crime

scores. The conspiracy belief scale (GCB) was not found as a possible confounder. Relevant confounders are described in Table 9.

Table 8. Linear regression analysis: Hate crime attitudes

	R	R^2	F (1, 18)	*p*	Predictors (*b, t, p*)
Pre-hate crime attitudes	.23	.05	10.16	.01**	MEM Total (2.43, 3.19, .002**)

***Statistically significant p < .01*

N = 184

Table 9. Confounders – Linear regression

Model[1]		***b***	***t***	***p***
1	MEM	2.43	3.19	.002
2	MEM	2.46	3.46	.001**
	Gender	-3.43	-5.54	.000**
3	MEM	1.23	1.46	.15
	Paranoia	.09	3.16	.002**
4	MEM	.95	1.23	.22
	Dark Tetrad	3.50	5.19	.000**
5	MEM	2.05	2.73	.007**
	Honesty-Humility	-1.69	-3.42	.001**
6	MEM	2.52	3.50	.001**
	Emotionality	-2.15	-4.96	.000**

[1]Dependent variable: Hate crime attitude (pre-exposure)

**Statistically significant p < .05*

***Statistically significant p < .01*

3.3.7. Quantitative result summary

Henceforward, results indicate a significant increase in pro-attitudes towards hate crimes following vignette exposure, suggesting that media exposure increased participant's pro-attitudes towards hate crimes. The results also demonstrate that the extremist mindset scale (MEM) predicts attitudes towards hate crimes.

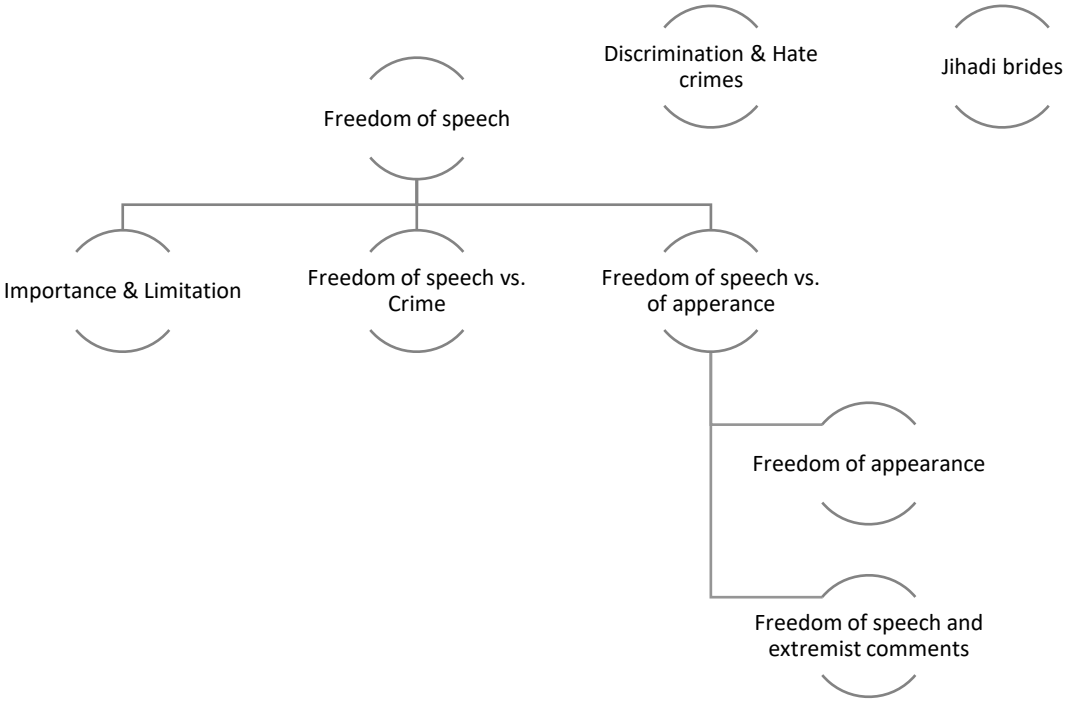
3.3.8. Qualitative comments

Participants were offered the opportunity to write comments following exposure to both hate crime scenarios of the women wearing a head scarf being verbally assaulted. They were asked "*do you wish to make any comments about this study or the passage you read?*". Participants were invited to comment on the hate crime scenario; or to provide generic comments.

Participants could write comments before and after reading the news articles about Jihadi brides. Participants wrote 43 comments prior the news articles and 27 after, with a total of 70 comments. Comments pre and post exposure were similar; thus, it was decided to group them together for the analysis. Thematic analysis was used to analyse the

comments. The main themes identified were freedom of speech, discrimination and hate crimes and Jihadi brides. See the thematic map in Figure 8.

Figure 8. Thematic Map



The main theme identified was freedom of speech. Participants had conflicted views between the importance of freedom of speech "*Freedom of speech more important than a right not to be offended*" and

its limitation *"hate speech will be the death of free speech".* Similarly, participants debated whether the assault was considered as a crime. Some suggested *"treating speech as a punishable crime is a slippery slope to oppression.",* whether others stated *"Freedom of speech […] ends when it infringes on another person's rights and freedoms. The verbal attacker should be prosecuted."*

Within the freedom of speech theme, there was a distinct theme about freedom of appearance and whether disagreeing with someone's appearance was acceptable. Some participants indicated that she should have the *"right"* and *"choice"* to wear what she wants and that *"forcing women to refrain from covering their bodies… [was] oppressive.* Other participants reacted to the scenario with more extremist comments: *"I also wouldn't walk around a Muslim country with a Christian cross on my T-shirt" and commenting "Immigration is a privilege not a right. Nations should only accept immigrants who will benefit the nation and are expected to integrate into society.".*

Some comments defined the scenario as a hate crime and there was some discussion about discrimination: *"Hate crime fuelled by fear and ignorance of diversity, they are too drawn in by right wing media". Another participant stated, "this kind of situation takes place on a regular*

basis and people still believe abuse and attack is ok". This is consistent with comments from participants who did not condemn the assault: *"Freedom means people can disagree with your choices. We should be able to say we don't agree with what someone wears"* and "*saying rude discriminatory things in passing is literally not a crime.".*

Finally, following exposure to the media article about Jihadi brides and re-exposed to the assault scenario, participants made some association between the assault and Jihadi brides: *"Just because she was wearing a hijab doesn't mean she's an Isis bride", "The news article does not give the right to generalise and be hateful towards anyone, it's disgusting behaviour".*

See in Table 10, the selected comments to highlight the identified themes.

Table 10. Qualitative data

Freedom of speech		
Importance and limitation	Importance of freedom of speech	Its limitation
	• *Freedom of speech is more important than a right not be offended."* • *"Regulating speech can be a slippery slope. Who decides what can be said or not?"*	• *"'Verbal assault' or hate speech will be the death of free speech"* • *"Free speech and injured words are different but nowadays we don't see the difference"*
Freedom of speech vs. Crime	It is free speech	It is a crime
	• *"Punishing the attacker impedes free speech. Treating speech as a punishable crime is a slippery slope to oppression."* • *"Saying rude discriminatory things in passing is literally not a crime."* • *It might actually become criminal if there was some sort of nonverbal threat"*	• *"Freedom (of speech, action, etc.) ends when it infringes on another person's rights and freedoms. The verbal attacker should be prosecuted."* • *"She has every right to wear a hijab and his words are not free speech, they are hate speech and should be prosecuted."* • *"This is a hate crime. Plain and simple. You don't need to be an academic to work that one out."*
Freedom of speech vs. appearance	Freedom of appearance	Freedom of speech and extremist comments
	• *"It's her choice to wear it, and her choice must be respected."* • *"We talk about freedom of speech, but we do not talk about freedom of appearance or style due to the double standard between White non-Muslim and non-White Muslim. If a women decide to wear a short skirt, a dress*	• *"I personally wouldn't go up to someone and make a comment like that, but I also wouldn't walk around a Muslim country with a Christian cross on my T-shirt."* • *"Freedom means people can disagree with your choices. We should be able to say we don't agree with what someone wears"*

	or a hijab it's her choice, her freedom." • *"The attacker has made a personal attack rather than disagreeing with a concept in general (I.e. wearing the hijab in public). Each person has rights but I believe once personally attacking someone you lose your free speech rights."* • *"Forcing women to refrain from covering their bodies, provided it's their own choice, is just as oppressive and misogynistic as forcing them to cover their bodies."*	• *"UK is a [secular] country. The woman should not have been wearing her hijab in public."* • *"Immigration is a privilege not a right. Nations should only accept immigrants who will benefit the nation and are expected to integrate into society."* • *"Right to religious expression but also a right to criticise change to your own country."*

Discrimination and hate crimes

- *"Clearly a racist comment. The woman's heritage has nothing to do with her religion. People are just scared of what they don't understand and don't go out their way to understand different perspectives"*
- *"Hate crime fuelled by fear and ignorance of diversity, they are too drawn in by right wing media and what they read on Facebook."*
- *"I feel strongly emotionally moved by the fact this kind of situation takes place on a regular basis and people still believe abuse and attack is ok. I feel a strong injustice and would always stand by and protect this woman."*

Jihadi Brides

- *"Just because she was wearing a hijab doesn't mean she's an Isis bride, or jihadi, or whatever else."*
- *"The news article does not give the right to generalise and be hateful towards anyone, it's disgusting behaviour."*
- *"Innocent until proven guilty; a hijab doesn't make you more of a threat than any other garment. Racial and ethnic profiling based on the behavior of a tiny group of radical religious extremists is hardly generalizable to the entire population of 2 billion followers of the Muslim faith, much less one singular woman/refugee."*

3.4. Discussion

3.4.1. Findings

This study examined media exposure and whether controlling information about terrorist threats influence individual's attitudes towards hate crimes. Results indicated a significant increase in pro-attitudes towards hate crimes following both vignette exposure depicting a terrorist threat, suggesting that media exposure of a terrorist threat (both factual and ambiguous) increased participant's pro-attitudes towards hate crimes. However, when exposed to a factual versus an ambiguous media article, no significant results were found in hate crime attitudes.

The chosen statistical tests answer the research question, however using alternative tests could help assess whether variables are confounded by one another. T-test was used to pool results together when found not significant and compare them across; however, a between/within subject (Mixed ANOVA) could have provided further information on confounding variables. Thus, the interpretation of the interaction between the manipulated variables was limited.

The linear regression analysis between the extremist mind-set scale scores and the hate crimes attitude questionnaire scores was examined. The findings confirmed that the MEM predicts attitudes towards hate crimes. Individuals with a higher score on the extremist mind-set scale were more likely to have pro-attitudes towards behaviours accepting of hate crimes. Nevertheless, paranoia belief, dark tetrad traits, gender and the honesty-humility and emotionality personality traits were found to be possible confounders.

Furthermore, freedom of speech was elicited as the main theme in the thematic analysis. Subthemes were also identified: limitation of freedom of speech, debating if the vignette was a hate crime or freedom of speech, and the freedom of appearance. Each subtheme was divided into two categories: extreme views vs more moderated views. Discrimination and Jihadi brides were also elicited as themes with participants voicing their concerns about discrimination. Despite it being challenging, it is of paramount important for governments to develop policies respecting freedom of speech and other individual freedoms whilst preventing extremism (Madriaza & Ponsot, 2015).

3.4.2. Power of the media and ethical concerns

Shoshani and Slone (2008) previously commented on the attitudinal and emotional change caused by media exposure. Results of this study attests to this, and further support that extremist attitudes increase following media exposure of terrorism threats. The media aims to report real and factual events with no intention to influence viewers emotions or attitudes. Whilst covering terrorism, the media may relate inevitable warfare elements which impact on individuals' attitudes (Shoshani & Slone, 2008). Reports of terrorism in the media has an impact on emotions (see Chapter 2) and attitudes (this study). This stresses the power of the media, especially when reporting on threatening events such as terrorism.

Results from this study raises important and concerning ethical implication for the media. Such ethical issues were previously raised by Slone and Shoshani (2006) who were concerned about the role of the media when reporting terrorist events. Despite evidence of the detrimental effect of certain media materials, the media continues to relay information regarding threatening events such as terrorism on the principles of freedom of speech, democracy and informing the public (Dahl, 1989). Media policy should be empirically reviewed to gauge the

interaction between exposure to media content and the choice from viewers to be exposed.

3.4.3. Hate crimes and media exposure

Media can be used as a vector to increase hatred towards a targeted community. Rubaltelli et al. (2020) explained that media often insinuate that terrorists can be hidden amongst asylum seekers and illegal immigrants. Some of the more comments collated during this study support this i.e.: *"Immigration is a privilege not a right. Nations should only accept immigrants who will benefit the nation and are expected to integrate into society".* During the Covid-19 pandemic, similar hatred was reported, especially xenophobia, following reports of the health threat in the media. For instance, it was reported that there was an increase of racially motivated hate crimes (physical violence and harassment) towards Asians in America possibly feared as it was reported that the virus emerged in Wuhan, China in December 2019 (Gover et al., 2020).

A study conducted in the Netherlands found that social alienation, depression, and lack of confidence in authority (amongst other features) can trigger someone with extremist views to act on them and commit a

terrorist act (Elzinga et al., 2010). Interestingly, similar results were found in this thesis, in Chapter 2, adverse psychological outcomes following exposure to terrorism media i.e., depression were found; and in this chapter exposure to terrorism via the media was found to increase risk of developing extremist views. Furthermore, social alienation and lack of confidence in authority can be associated with conspiracist theories which have been found in Chapter 4 to predict extremists.

3.4.4. Practical implication

Holding a grudge towards an individual or a group is one of the principles underlying the extremist mindset which is likely to lead to violence. Stankov et al. (2018) identified grudges as one of the most efficient elements to target when trying to prevent extremism; for instance, by promoting diversity and tolerance. Grudge is when a threat is perceived from the outside; and it is likely that by controlling this outside threat that grudge can be reduced; however, further empirical evidence is needed (Stankov et al., 2018). From a practical point of view, it may be easier to challenge social influences rather than personal characteristics. Especially, as extremist violence is often used to meet political or religious goals and extremists have been described as socially conservative (Stankov et al., 2018).

West and Vile World are components of the grudge on the MEM scale. Stankov et al. (2018) suggested that media campaigns and policy decisions could tackle these factors. For instance, the media could reduce enemy perception in certain communities; and it could counter moral rottenness. However, as the media tends to report negative stories rather than positive; targeting vile world views via the media may be challenging; nevertheless, this may be achievable through social media platforms (Stankov et al., 2018).

3.4.5. Limitations

This study used an experimental study to understand the impact of indirect terrorist threats on the general population. This study should be replicated using an in-situ design with a current threat possibly using live media. This could allow for extremist attitudes to be measured following exposure whilst allowing for environmental and societal mediating and moderating factors. Alternatively, this study could be replicated on a smaller scale in a lab rather than an online study to control for a greater quantity of factors.

One limitation of this study was the lack of significant results when manipulating media framing of the threat. Further studies could replicate this study using various media formats other than news articles. It is possible that larger modifications to the ambiguous versus factual news articles may have led to a statistically significant difference. Further studies looking at extremism could attempt to use media framing by using similar techniques used in propaganda or conspiracy theories to test if hate crime attitudes changes following exposure to such type of media.

The MEM scale is not an adequate tool for psychological profiling but rather useful to detect extremism in a general sample. As the MEM represents the key psychological processes of extremism; further research should explore how elements of this scale could be revisited to create a tool to detect risk of radicalisation (Stankov et al., 2018).

Furthermore, men are often associated with violent extremism and radicalisation and some links have been made with terrorism and toxic masculinity (Haider, 2016). Further research should explore this construct and whether it can predict extremism in the general population and how could this be used in preventive strategies. Women have also been associated with radicalisation (Blee, 2005; Campion, 2020).

Further research is needed to understand radicalisation and extremism from a gender perspective.

3.5. Conclusion

This research examined the impact of media coverage of terrorism threats on attitudes towards hate crimes and its association with extremist mind-set. This study highlights the impact media can have on people's beliefs. This research adds to the literature on extremism and hate crime prevention. Further research should explore the link between media coverage of other threatening situations e.g., Brexit, Coronavirus and increases in extremist views and behaviours.

Chapter 4: The making of an extremist: the influence of personality traits and conspiracy beliefs

Abstract

Objectives: Extremist mindset can lead to violent acts, political discord, wars, and injustice. Nevertheless, little is known about extremism psychological construct, or persons who are more vulnerable to such behaviour. The literature indicates that previously unknown individuals can be quickly radicalised. This study analysed the relationships between extremist mindset, personality traits, paranoia, and beliefs in conspiracy theories in a general population sample, with the aim to understand personal disposition underlying extremist views.

Methods: This research is a cross-sectional study within a general population sample. Data were collected online using questionnaires to measure predisposition to extremist views and behaviours. A total of 186 participants took part in this study. A multiple regression analysis was conducted to see if the extremist mindset (MEM) is associated with personality traits (HEXACO), the Dark Tetrad (SD4), conspiracy belief (CGB), paranoia (GPS), and demographics. Correlation and factor analyses were also conducted to identified associations between these constructs.

Results: Conspiracy belief and paranoia were found to significantly influence the extremist mindset. Sadism and honesty-

humility were also found to be of predictive value. Strong associations between extremism and the Dark Tetrad were also identified.

Conclusion: Conspiracist ideation and personality traits were found to influence the extremist mindset. Policy makers should focus on addressing dispositions associated with extremist mindsets to reduce the risk of radicalisation amongst vulnerable individuals. Future review of existing risk assessments or development of new tools should also consider these findings to identify individuals more accurately at risk of becoming extremist in the wider population.

Key words: Extremism, Extremist Mindset, Conspiracy, Terrorism, Paranoia, Dark Tetrad, Personality.

4.1. Introduction

Political, and religious violence have been driven by extremism throughout history and across nations, with zealous ideologically driven individuals harming persons who do not share those beliefs. This behaviour is also known as terrorism. Extremism remains one of our world's greatest threats with violent acts, political discords, wars, and injustices occurring daily. Extremist ideologies are often motivated by religion, ethnicity, or political belief (Doosje et al., 2016). For many countries, understanding extremism remains an urgent matter especially when such ideologies lead to violence (Lösel et al., 2018). Nevertheless, little is known about extremism as a psychological construct, and how it should be addressed in our current society. This study examined personal dispositions of individuals correlating these with a standard measure of extremist views, exploring the foundations of these constructs.

4.1.1. The Extremist-Mindset

Extremism implies a verbal or active opposition to basic values in a society such as democracy, equality, liberty, rule of law, and tolerance for the faiths and beliefs of others' (Lösel et al., 2018).

Although all violent extremists have extremist views, not all individuals with extremist attitudes will commit violent acts in relation to these beliefs (McCauley & Moskalenko, 2017; Neumann, 2013). Various risk factors and protective factors can explain this relationship (Stern, 2016). Nevertheless, having extremist attitudes is the best factor found (with the largest effect) to predict extremist violent behaviours (Wolfowicz et al., 2019). Henceforward, it is of paramount importance to understand the mindset of individuals who hold extremist views to help prevent terrorism and other violent acts associated with extremist views.

The Militant Extremist Mindset scale (MEM; Stankov et al., 2018) was developed to capture the mindset of those with extremes beliefs (Stankov et al., 2010). Individuals who score high on the MEM scale tend to support violence more than the general population, be more unhappy about the situation in the world and tend to seek justification for their

views about the use of violence from a higher authority (Stankov et al., 2010). High MEM scores indicate that individuals are supportive of terrorism including associated violence. This scale can be used to detect the level of radicalisation in the general population (Stankov et al., 2018). It is worth adding that this scale assesses personal characteristics but does not encompass situational and social contexts when assessing extremism or its antecedents. Nastiness, Grudge and Excuse have been identified as the key components of the extremist mindset (Stankov et al., 2018).

MEM Nastiness (Pro-violence) refers to the acceptance and justification of using violent acts to solve social problems. Stankov et al. (2010) identified the following themes within this facet of the extremist mindset: devaluation of the enemy, hostility toward moderate people and moderate means, intolerance of differing views, revenge, the need to correct injustice, and elimination of the differences between enemies. Nastiness is defined as an antisocial trait often related to other constructs such as authoritarianism, dogmatism, machiavellianism, and political conservatism.

MEM Grudge (Vile World) is associated with blame, which provides justification for anger. In this facet of the extremist mindset, the world

is depicted as vile and miserable. Vile world refers to the belief that there is something wrong with the current world. Within the Grudge factor, the West and Western values is seen as the enemy, being immoral and having committed acts of violence towards other countries (Stankov et al., 2018). Deviating from traditions to Western cultures can then be used as justification for terrorist attacks (e.g.: attack in a Kabul Western-style shopping centre; Manchester's attack of Ariana Grande's concert). The themes of this facet are puritanism, feelings of anomie, anti-capitalism, anti-modernism, anti-democratism and cynicism toward traditional ethics. Individuals scoring high on this facet may be less influenced by ideological aspects of radicalisation; hence, they are more likely to become self-radicalising "lone wolf" terrorists and could benefit from counselling therapy (Stankov et al., 2018). Stankov et al. (2010) suggested that MEM Grudge could also be reduced with the use of the media, community groups and education. (Stankov et al., 2018) warns that if this facet is not controlled, there is a likelihood of home-grown terrorism emerging from anyone alienated from liberal democracy (e.g., events in Seattle following the 2020 Black Lives Matter movement).

The last facet is MEM Excuse (Utopianism), previously labelled *Divine Power*. Excuse refers to the need to justify unfriendly thoughts and use of violence using higher moral principles derived from spiritual

power or from an idealistic goal (Stankov et al., 2010, 2018). The themes of this facet of the extremist mindset are: Chiliasm (i.e., millennial thinking), the feeling that one's group is special, readiness for self-sacrifice, and belief in life and reward after death. Excuse can lead to justification of violent actions by making them more acceptable.

4.1.2. Radicalisation at the individual level

Radicalisation is the process in which individuals become more extreme in their views. The literature on radicalisation has explored different levels of radicalisation - at the individual level, at the relational and community level, at the societal level, and triggering events (du Bois, 2017). Madriaza and Ponsot (2015) found that extremists were usually young men searching for an identity. Although the political and societal context are important when trying to understand extremism, (Stankov et al., 2018) emphasised that extremism cannot be explained without an understanding of the psychology of the individual. Kruglanski et al. (2019) suggested that extremists' behaviours were fulfilling individuals' needs; hence, were rational actions. Kruglanski et al. (2019) also highlighted the importance of understanding psychological mechanism of extremist behaviour. Further studies need to be carried

out to evaluate individual extremist risk factors among non-violent extremists and among the general population (Klausen, 2016; Smith, 2018). In their systematic review, (Christmann, 2012) also acknowledged the poor understanding of individual factors in the literature and recommended for future research to be exploring extremism and radicalisation preceding acts of violence. In this review, authors also stressed the lack of a recognisable set of characteristics to describe terrorists and invited future research to define what these characteristics may be (Christmann, 2012). Further evidence-based studies are needed to help identify individuals at risk of becoming extreme in their views, and who are at increased risk of taking part in violent actions (Scarcella et al., 2016).

A recent meta-analysis reviewed the literature to identify putative risk and protective factors of radicalisation (Wolfowicz et al., 2019). In their metanalysis, Wolfowicz et al. (2019) found that radical attitudes, intentions, and behaviours were associated with religious group identity and fundamentalism as well as with the degree of integration and cohesion of individuals (e.g., social bonds, types of peers, parental involvement). They also found that individual and collective strains (such as unemployment, discrimination) may impact on social and self-control; thus, increasing the risk of developing radical views. Direct exposure or

indirect exposure via media to violence as well as posting politically related content online also influenced radical views. Radical attitudes were found to have the largest effect on radical behaviours. Socio-demographic characteristics were found to have small to non-significant effects. In their review, the authors again emphasised the need for future research to focus on psychological and personality traits (Stern, 2016; Victoroff, 2005; Wolfowicz et al., 2019).

Furthermore, when examining behavioural patterns, motivations, and demographics, significant overlaps between violent extremists and criminals were found (Basra & Neumann, 2016; Clarke & Newman, 2006; Mullins, 2009; Wolfowicz et al., 2019). This suggests an overlap between the risk and protective factors for criminality with becoming radicalised (Lösel et al., 2018). One area that could be further tested within extremism group is the age desistance found in gangs (Pyrooz & Decker, 2011). As extremism is psychologically demanding, studies have suggested extremism cannot sustain long period of extreme behaviours (Stephens et al., 2018). Henceforward, the association between extremism and demographics has been examined in this study.

4.1.3. Personality traits and Dark Tetrad

Scarcella et al. (2016) highlighted in their study the need to identify individuals who are at increased risk of being radicalised. Extremes of personality increase risk in other areas, so one might consider personality pre-dispositions as a risk-increasing factor for being more sympathetic to extreme views and scoring higher on the MEM scale. Many individuals may hold beliefs or have an ideology without being extreme; hence the importance of finding ways to differentiate them with extremists. Personality factors often sharpen one's understanding of high risk situations (e.g. drugs, pornopgraphy, horror movies) where troubled personalities are more disrupted by these situations than more ajusted individuals. Consequently, identifying psychological characteristics for each of the key components of the extremist mindset could help in targeting specific individual's characteristics of extremists. Additionally, identifying personal pre-dispositions of the MEM facets may lead to new intervention prospects to reduce extremist views.

In this study, personality traits (HEXACO) and the dark tetrad traits: machiavellianism, narcissism, psychopathy and sadism were tested as possible predictors of MEM scores. The HEXACO measures

personality traits, which comprises the Big Five structure with the addition of an Honest–Humility dimension. The HEXACO model includes six personality domains: honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience (Ashton & Lee, 2009). This model outperforms other personality measures for capturing the core personalities of the dark tetrad (Book et al., 2015; Lee et al., 2013).

The Dark Triad (DT) comprises three socially averse personality constructs: psychopathy, narcissism, and machiavellianism (Paulhus & Williams, 2002). Following research on dark personalities, sadism was added to the DT forming the dark tetrad (Book et al., 2016; Buckels et al., 2013; Chabrol et al., 2009). Psychopathy is described by recklessness and impulsive behaviour (Jones & Paulhus, 2011) with primary psychopathy characterised by low empathy and callousness (Kennealy et al., 2010; Wai & Tiliopoulos, 2012); and secondary psychopathy is characterised by impulsivity and anti-social lifestyle and behaviours (Jakobwitz & Egan, 2006; Kimonis et al., 2011). Narcissism is defined by behavioural grandiosity and perceived entitlement, persistent attention seeking, and excessive self-focus, (Millon & Davis, 1996; Pincus & Lukowitsky, 2010). Machiavellianism involves a selfish, manipulative tendency motivated by instrumentality (Jones & Paulhus,

2009). Finally, sadism is the derivation of pleasure from the distress or harm of others (Baumeister & Campbell, 1999). Non-sexual 'everyday sadism' (Buckels et al., 2013) refers to everyday cruelty, such as enjoying watching violent sports or movies (Baumeister & Campbell, 1999).

Several studies of the DT/Tetrad and personality have established a negative correlation between dark traits and agreeableness (Book et al., 2016; Egan et al., 2014; Furnham et al., 2013; Jakobwitz & Egan, 2006; O'Boyle et al., 2015; Paulhus & Williams, 2002). Individuals with low agreeableness scores hold grudges against those who have harmed then, are critical of others' shortcomings, are stubborn in defending their point of view, and feel anger in response to mistreatment (Ashton & Lee, 2009). In studies using the HEXACO tool to measure personality, the honesty-humility dimension has also been found to be consistently negatively associated with the dark tetrad constructs (Book et al., 2016; Lee & Ashton, 2005). Individuals with low honesty-humility score tends to manipulate and take advantage of others, flatter others to get what their want, are inclines to break rules for personal profit, are motivated by material gain, and have a strong sense of self-importance (Ashton & Lee, 2009).

Extremist attitudes were associated with authoritarian/fundamentalist personality, narcissism, personality disorder, and with traditional criminogenic factors (i.e.: low self-control, thrill seeking/ risk-taking personality, low legitimacy, criminal history) (Wolfowicz et al., 2019). The dark tetrad was also associated with risky and sensation-seeking activities (Crysel et al., 2013); thus, it was predicted that the Dark Tetrad and the extremist mindset would be related. Low honesty-humility and low agreeableness (personality traits measured using the HEXACO scale) were previous found associated with dark traits; thus, it was hypothesised they could be associated with the extremist mindset given the overlap characteristics found in previous studies between radical attitudes and dark traits.

In the current study, the relationships between extremist mindset, the dark tetrad and personality traits were examined. Based on previous studies (Pailing et al., 2014), it was predicted that following a factor analysis, the four dark tetrad constructs would load positively in a singular dimension, where both honesty-humility and agreeableness would load negatively. Antagonistic interpersonal behaviour has previously been found to be predicted by personality (Campbell et al., 2011; Kessler et al., 2010). More especially, dark tetrad traits were identified as predictors of unethical and antisocial outcomes (Kish-

Gephart et al., 2010; Tang et al., 2008). Self-reported dark tetrad constructs have also been found to be associated with violence (Pailing et al., 2014) and risky and sensation-seeking activities (Crysel et al., 2013). Thus, it is hypothesised that individual dark tetrad constructs could influence self-reported extremist traits.

4.1.4. Paranoia and Conspiracy thinking

Saalfeld et al. (2018) demonstrated that paranoid thinking could be influenced by perceived group affiliation (political group and social status). Thus, paranoia level was also assessed to determine any association with the MEM scores. Paranoia is defined as thinking and feeling one is under threat despite little evidence of any threat. Delusional thinking or paranoid thinking are beliefs held to be true despite clear contradictory evidence (Freeman & Garety, 2004). Thinking of delusional nature has been shown to be prevalent in the non-clinical population (Cella et al., 2011; Freeman, Gittins, et al., 2008; Jack & Egan, 2016; Johns & Van Os, 2001). Paranoid thinking in non-clinical population contributes to misinterpretation of stimuli and increased perception of risk in the environment (Jack & Egan, 2016). Moreover, jumping to conclusion reasoning bias has been found as an important

cognitive mechanism in paranoia involving the rapid appraisal of a stimuli to form a conclusion without considering alternative explanations (Freeman, Pugh, et al., 2008; Garety & Freeman, 2013). Thus, individuals who are more prone to paranoid thinking tends to accept hypotheses as correct despite little evidence (Fine et al., 2007).

Following previous terrorist attacks such as 9/11 and the 7/7 bombing, conspiracy theories were endorsed by many people (Brotherton et al., 2013; Stempel et al., 2007; Swami et al., 2010). Paranoid thinking contributes to misinterpretation of stimuli and increased perception of risk (Jack & Egan, 2016). Conspiracy theory beliefs have been associated with delusional ideation (Dagnall et al., 2016), paranoia and mistrust (Jolley et al., 2021). A study conducted within the general population found that one in ten individuals believed that they were the victim of a conspiracy (Verdoux et al., 1998).

Bartlett & Miller (2010) found that conspiracy belief can help to foster political extremism. A conspiracy belief is when a situation is explained by a theory where one is deemed to be acting in secret for their own benefit at the expense of others (Uscinski & Parent, 2014). Conspiracy theories exacerbate and magnify extremist attitudes (Douglas et al., 2019). Reading about conspiracy theories about a

specific social group was also found to increase discrimination and prejudice towards this group i.e., Jewish community (Bilewicz et al., 2013; Jolley, Meleady, et al., 2020). Furthermore, beliefs in conspiracy theories have also been associated with low-level crime (Jolley et al., 2019), support for violence toward conspirators (Jolley & Paterson, 2020), out-group hostility (Biddlestone et al., 2020; Marchlewska et al., 2019), and intergroup conflict and prejudice (Kofta et al., 2020). Conspiracy theory beliefs can lead to negative attitudes and risky behaviours. For example, it can impact on health-related behaviours. Fears surrounding theories about vaccinations have led to a decline in vaccination rates and intention to vaccinate (Jolley & Douglas, 2014b; Kata, 2010; Salmon et al., 2005). Theories about AIDS/HIV have impacted attitudes about preventive measures and treatment. Henceforward, based on the existing literature, it is hypothesised that paranoid and conspiracy thinking influence the extremist mindset.

4.1.5. Aims

This study focuses on personal predispositions of individuals with extreme views compared to individuals with more moderate views. This study analysed the relationships between extremist mindset, normal

personality traits, dark tetrad traits, paranoia, and belief in conspiracy theories in a general population sample, with the aim to better understand psychological constructs underlying extremist views.

Based on the current literature, it is hypothesised that extremist mindset will be associated with a combination of personality traits, belief in conspiracy theories and paranoid belief. Extremist views are likely to be highly associated with dark tetrad traits as both antagonistic in nature (state of opposition; being unkind to others in a malicious manner). As honesty-humility and agreeableness are negatively correlated with the dark tetrad, if the dark tetrad is found to be associated with the extremist mindset, both personality traits are also likely to be associated with the extremist mindset. It is also hypothesised that having more antagonistic traits will be associated with higher paranoid beliefs which then could lead to an increase in conspiracy beliefs. Hence, it is hypothesised that having antagonistic traits (extremist views and/or dark tetrad traits) may be associated with increased belief in conspiracies.

4.2. Methodology

Please refer to Chapter 3 for ethics approval and (3.2.3).

4.2.1. Study design, setting and participants

This research is a correlational study conducted in a general population sample in one point in time. Participants were recruited online using social media networks (Reddit and Facebook) and portals targeting a wider network range (see recruitment poster in Appendix E). No clinical cohort was sought. The aim of the study was broadly concealed, and participants were informed the study was exploring attitudes. Participants had the right to withdraw their consent at any point. A debrief was given to participants upon completion of the online study (see Appendix F). The data was collected using Bristol Online Survey. Data were collected from the 23rd of September 2019 until the 23rd of April 2020.

4.2.2. Sample size

A sample size calculation was carried out using G*Power to ensure the sample was adequately powered to meet the primary research

objective of the study (Faul et al., 2007). It was estimated that a sample size of 158 participants would provide an 80% chance of correctly rejecting the null hypothesis of no difference (see Appendix G for further details). The total sample size was 186 participants.

4.2.3. Measures

The following measures were used. All scales have good psychometric characteristics and using a 5-point Likert-scale ranging from strongly disagree to strongly agree. High scores indicate more of the quality observed on all scales. Basic demographics were also collected. See all measures in Appendix H.

- The General Paranoia Scale (GPS; Fenigstein & Vanable, 1992): The GPS is a 20-item self-reported scale and includes items assessing both ideas of persecution and reference. Each item is rated on a 5-point scale (1-5). Scores can range from 20 to 100, with higher scores indicating greater paranoid ideation. This measure has been shown to have a Cronbach's alpha of .84 (Sample item: '*I am bothered by people outside, in cars, in stores, etc. watching me'*).

- The Generic Conspiracist Beliefs Scale (GCB; Brotherton et al.,

2013): The GCB Scale is a 15-item self-reported scale measuring individual differences in generic conspiracist ideation. This scale has internal reliability ranging between .87 and .98, has content and criterion-related, convergent and discriminant validity, and good test-retest reliability. The conspiracy belief scale used in this study has five facets: government malfeasance, extraterrestrial cover-up, malevolent global conspiracies, personal wellbeing, and control of information. All 5 factors were moderately to strongly positively inter-correlated, and all strongly correlated with the overall scale score. This indicates the total score is likely to be sufficient (Sample item: '*The government permits or perpetrates acts of terrorism on its own soil, disguising its involvement*').

- HEXACO-60 (Ashton & Lee, 2009): The HEXACO-60 is a 60-item, self-report Personality Inventory measure that measures: honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience. This measure has been shown to have satisfactory internal consistency reliability (ranged from .73 to .80 in the community sample) and to have criterion and construct validity. The administration time is relatively brief, and it is therefore recommended to use it in any research in which the aim is to measure the major dimensions of

personality but in which time constraints permit only a short inventory (Sample item: '*People have often told me that I have a good imagination*' - Openness).

- Militant Extremist Mindset Scale (MEM; Stankov et al., 2018): The MEM scale is a 24-item self-reported inventory measuring the three main processes of militant extremist mindset: Nastiness (Pro-Violence), Grudge (Vile World), and Excuse (Utopianism). This scale can be used to detect the extent of extremist attitudes in the general population. These subscales have acceptable to good internal consistencies of .80, .79, and .74, respectively. Also, all three scales of the militant extremist mindset have meaningful relationships to similar constructs (Sample item: '*There is a group of people whose uncompromised ideas and brave actions make my own life meaningful and worth living*').

- Short Tetrad: Four Identities Questionnaire (SD4; Paulhus et al., 2018): The dark tetrad traits of psychopathy, narcissism, Machiavellianism, and sadism will be measured using the SD4, a new 28-item, self-report personality inventory. This measure has been shown to have good internal consistency with Cronbach's alpha ranging from .80 to .87 and significant subscale inter-

correlations p<.001 (Sample psychopathy item: '*I tend to fight against authorities and their rules*').

The measures were administered in the following order: the HEXACO, the MEM, the SD4, the GCB, and the GPS. The order of the questionnaires is unlikely to have an impact on the results.

4.2.4. Procedure and variables

Please refer to Chapter 3, section 3.2.4 for further details. Firstly, participants were informed the study was investigating individual's attitudes and directed to a consent page. They were then asked to answer a demographic questionnaire. Secondly, data was collected to measure individual characteristics and extremist mindset predisposition. The study analysed the relationship amongst trait measures aiming to identify if the following factors - personality traits, conspiracy belief, and paranoia - were associated with the outcome: extremist views. The participants were asked to complete questionnaires, see measures described in 4.2.3. Participants were then exposed to vignettes and asked to answer several questions following exposure (see Chapter 3 of this thesis). Upon completion of the study,

participants were directed to a debrief page explaining the aim of the study with some link about resources on this topic.

4.2.5. Statistical analysis

Correlational analyses were used to examine the relationship between the HEXACO personality dimensions, the dark tetrad traits, paranoia, conspiracy belief and the extremist mindset scales. A factor analysis was conducted to reduce the overlapping scales into a smaller number of specific dimensions and find new theoretical model. Multiple regression analyses were conducted to examine if extremist mindsets (MEM Total) could be influenced by personality traits (HEXACO), the Dark Triad (SD4), conspiracy theory belief (CGB), paranoia, and demographics. Multiple regressions were also run on each of the MEM subscales: Nastiness (Pro-Violence), Grudge (Vile World) and Excuse (Utopianism). The data was analysed using SPSS. Listwise deletion was used to handle missing data.

4.3. Results

Please refer to Chapter 3 for participants information (3.1).

4.3.1. Internal consistency

A reliability analysis was carried out on each psychometric questionnaire's subscales. Cronbach's alpha showed acceptable to high internal consistency for each test. Descriptive statistics and Cronbach's alpha for each subscale is shown in Table 11.

Table 11. Descriptive statistics

	Mean	*SD*	Skewness	Kurtosis	*α*
HEXACO Honesty-Humility	3.64	.75	-.68	.58	.79
HEXACO Emotionality	3.25	.81	-.37	-.12	.84
HEXACO Extraversion	3.28	.77	-.30	-.45	.84
HEXACO Agreeableness	3.18	.69	.01	-.06	.79
HEXACO Conscientiousness	3.75	.69	-.65	.17	.81
HEXACO Openness to Experience	3.81	.65	-.49	-.36	.75
MEM Total	2.12	.49	.12	.35	.83
MEM Nastiness (Pro-Violence)	1.45	.54	2.09	7.17	.79
MEM Grudge (Vile World)	2.35	.68	.20	-.16	.75
MEM Excuse (Utopianism)	2.55	.84	-.02	-.64	.85
SD4 Machiavellianism	3.07	.73	-.37	.04	.78
SD4 Narcissism	2.55	.79	.13	-.07	.82
SD4 Psychopathy	1.89	.70	.70	-.15	.77
SD4 Sadism	2.03	.80	.62	-.25	.79
GCB Total	2.57	.80	.16	-.35	.91
GCB Government Malfeasance	2.92	1.00	.01	-.63	.76
GCB Malevolent Global Conspiracies	2.55	1.10	.31	-.77	.84
GCB Extra-terrestrial cover-up	1.90	1.01	1.03	.13	.88
GCB Personal Wellbeing	2.22	.92	.47	-.47	.72
GCB Control of Information	3.25	.91	-.32	-.01	.65
Paranoia	49.41	14.33	.03	-.54	.90

N=186

SD= Standard Deviation

α = Cronbach's Alpha

4.3.2. Correlation

Correlational analyses were used to examine the relationship between the HEXACO personality dimensions, the dark tetrad traits, paranoia, conspiracy belief and the extremist mindset scales.

All data assumptions were met for the correlation test. The data met the assumption of collinearity as multicollinearity was not a concern. The histogram of standardised residuals indicated that the data contained approximately normally distributed errors, as did the normal P-P plot of standardised residuals. The datasets also met the assumption of independent errors, and the assumption of non-zero variances with all variance value over zero.

Results indicated that the extremist mindset scale is negatively correlated with honest-humility ($r(186) = -.15, p < .05$) and agreeableness ($r(186) = -.16, p < .05$). It also indicated that the extremist mindset scale, the conspiracy theory belief, and the paranoia scale were all positively correlated with the dark tetrad dimensions. Results are shown in Table 12. The correlational analysis also showed that the extremist mindset scale, the conspiracy theory belief scale, and the paranoia scale are all strongly positively correlated. See Table 13.

Table 12. Correlational analysis between Personality traits and MEM, GCB and Paranoia

	MEM TOTAL	MEM Nastiness Pro-violence	MEM Grudge Vile World	MEM Excuse Utopianism	GCB TOTAL	Paranoia
HEXACO Honesty-Humility	**-.15***	**-.30****	**-.22****	.11	-.12	**-.36****
HEXACO Emotionality	.02	-.14	.04	.10	.09	.09
HEXACO Extraversion	-.03	-.003	-.12	.05	-.02	**-.36****
HEXACO Agreeableness	**-.16***	**-.26****	**-.19****	.05	-.07	**-.26****
HEXACO Conscientiousness	-.12	-.09	**-.16***	-.03	-.09	-.07
HEXACO Openness to Experience	.01	-.04	-.004	.04	.02	-.05
SD4 Machiavellianism	**.24****	**.26****	**.26****	.04	**.16***	**.36****
SD4 Narcissism	**.26****	**.20****	**.19****	**.17***	**.24****	**.20****
SD4 Psychopathy	**.31****	**.29****	**.32****	.09	**.30****	**.21****
SD4 Sadism	**.31****	**.38****	**.36****	.003	**.26****	**.36****

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

N=186

Table 13. Correlational analysis between MEM, GCB and Paranoia

	1	2	3	4	5	6	7	8	9	10	11
1- MEM TOTAL	1										
2- MEM Nastiness Pro-violence	.55**	1									
3- MEM Grudge Vile World	.80**	.34**	1								
4- MEM Excuse Utopianism	.75**	.04	.36**	1							
5- GCB TOTAL	.43**	.05	.44**	.37**	1						
6- GCB Government Malfeasance	.31**	-.07	.39**	.27**	.82**	1					
7- GCB Malevolent Global Conspiracies	.37**	.06	.34**	.33**	.86**	.64**	1				
8- GCB Extra-terrestrial cover-up	.32**	.07	.26**	.30**	.72**	.41**	.48**	1			
9- GCB Personal Wellbeing	.42**	.17*	.39**	.31**	.85**	.61**	.71**	.57**	1		
10- GCB Control of Information	.33**	-.02	.37**	.28**	.80**	.67**	.58**	.44**	.58**	1	
11- Paranoia	.46**	.25**	.46**	.27**	.45**	.40**	.37**	.27**	.37**	.40**	1

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

N= 186

4.3.3. Factor Analysis

Following the correlation analyses results (Tables 12 and 13), an Explanatory Factor Analysis (EFA) was conducted to reduce overlapping and correlated scales into a smaller number of specific dimensions that may suggest a theoretical model, and possibly develop new constructs. An EFA aims to explore underlying theoretical model and underlying structure in a large set of variables.

4.3.3.1. First factor analysis

An oblique rotation (oblimin) was carried out on the 19 variables of this dataset to explore its factorial structure. The oblique rotation was used because the factors were correlated (see correlation in Tables 12 and 13). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .80. Bartlett's test of sphericity (153) = 1296.62, $p < .001$, indicating that correlation structure is adequate for factor analyses. The maximum likelihood factor analysis with a cut-off point of .40 and the Kaiser's criterion of eigenvalues greater than 1 (see Field, 2009; Stevens, 1992) yielded a three-factor solution as the best fit for the data, accounting for 50.5% of the variance. See Figure 9 for Kaiser scree plot. Ideal pattern for Kaiser scree plot is a steep curve

followed by a bend and a straight line; this is consistent with this scree plot. Components in the steep curve suggest the three-factor solution.

The results of this factor analysis are presented in Table 14 and 15. The first dimension was measured by 8 variables: all the GCB subscales, the MEM Excuse and Grudge subscale, and the Paranoia scale. This dimension encompasses conspiracist ideation traits and extremist mindset traits. The second dimension also included 8 variables: HEXACO Honesty-Humility and Agreeableness, MEM Grudge and Nastiness, SD4 Sadism, Machiavellianism and Psychopathy, and the Paranoia scale. This dimension mainly encompasses extremist and personality traits including the dark tetrad traits. The last dimension was measured by 5 variables: HEXACO Emotionality, Extraversion and Openness to Experience, and SD4 Psychopathy and Narcissism. This dimension only incorporates personality traits. Table 12 reports on the correlation between each factor.

Figure 9. Kaiser scree plot

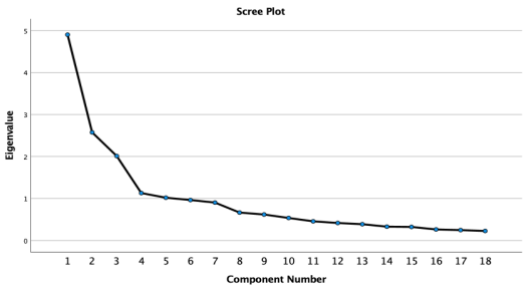


Table 14. Exploratory Factor Analysis

	Factor		
Items	**Conspiracist ideation and MEM**	**Personality traits and MEM**	**Personality traits**
GCB Malevolent Global Conspiracies	.84		
GCB Personal Wellbeing	.83		
GCB Government Malfeasance	.79		
GCB Control of Information	.77		
GCB Extra-terrestrial cover-up	.71		
MEM Excuse	.56		
MEM Grudge	.46	-.41	
Paranoia	.42	-.51	
HEXACO Honesty-Humility		.75	
SD4 Sadism		-.72	
SD4 Machiavellianism		-.62	
MEM Nastiness		-.58	
HEXACO Agreeableness		.54	
SD4 Psychopathy		-.56	.45
HEXACO Extraversion			.79
HEXACO Emotionality			-.67
SD4 Narcissism			.63
HEXACO Openness to Experience			.55
HEXACO Conscientiousness			
Rotated Eigenvalue	4.96	2.62	2.01
% variance	26.09	13.80	10.61
Cronbach's *α*	.32	.10	.10

[1]*Extraction method: Principal Component Analysis; Rotation method; Oblimin with Kaiser normalisation.*

Table 15. Component correlation matrix[1]

Component	1	2	3
1 – Conspiracy belief traits	1		
2 – Extremist traits	-.21	1	
3 – Personality traits	.03	-.09	1

[1]Extraction Method: Principal compenent analysis.
Rototaion method: Oblimin with Kaiser normalization

4.3.3.2. Second factor analysis

Items from the first two factors were further explored using the same technique with less variables. An oblique rotation (oblimin) was carried out on 11 variables of this dataset to explore its factorial structure. Following the results on the correlational analyses (see Tables 12 and 13), only the honest-humility and agreeableness from the HEXACO scale were included. The 3 MEM subscales, 4 dark tetrad traits, GCB total score and paranoia were also included.

The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .78. Bartlett's test of sphericity (55) = 558.04, $p < .001$, indicating that correlation structure is adequate for factor analyses. The maximum likelihood factor analysis with a cut-off point of

.40 and the Kaiser's criterion of eigenvalues greater than 1 (see Field, 2009; Stevens, 1992) yielded a two-factor solution as the best fit for the data, accounting for 48.5% of the variance, see Kaiser scree plot in Figure 10. The two-factor solution results are shown in Table 16 and the correlation between the two factors in Table 17.

This analysis differentiates the conspiracy thinking from the extremist mindset. The first factor is measured by the four dimensions of the dark tetrad, the MEM nastiness, and low traits of honesty-humility and agreeableness. This factor captures extremism associated with personality traits. The second factor is measured by the MEM excuse and the MEM Grudge, the GCB total and paranoia. This factor encompasses variables that relates to extremism associated with conspiracy and paranoid thinking.

Figure 10. Kaiser scree plot – Two factors

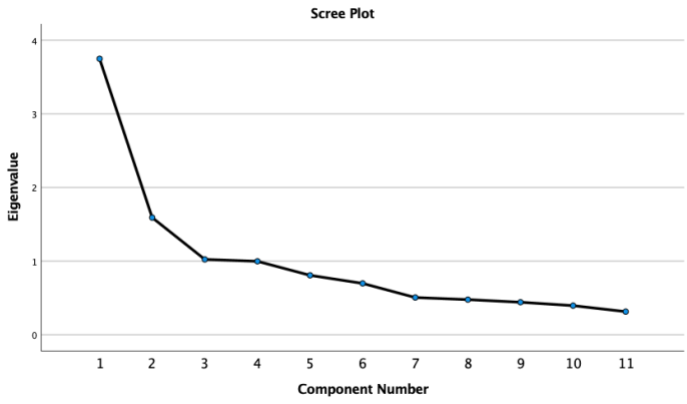


Table 16. Exploratory Factor Analysis – Two factors[1]

	Factor	
Items	**Extremist traits**	**Conspiracy belief traits**
HEXACO Honesty-Humility	-.76	
SD4 Sadism	.74	
SD4 Psychopathy	.64	
SD4 Machiavellianism	.63	
MEM Nastiness	.58	
HEXACO Agreeableness	-.57	
SD4 Narcissism	.53	
MEM Excuse		.83
GCB Total		.76
MEM Grudge		.64
Paranoia		.52
Rotated Eigenvalue	3.75	1.59
% variance	34.08	14.47
Cronbach's *α*	.24	.15

[1]*Extraction method: Principal Component Analysis; Rotation method; Oblimin with Kaiser normalisation.*

Table 17. Component correlation matrix – Two factors[1]

Component	1	2
1 – Extremist traits	1	
2 – Conspiracy belief traits	.26	1

[1]*Extraction Method: Principal compenent analysis. Rototaion method: Oblimin with Kaiser normalization*

4.3.4. Influential factors of MEM

Multiple regression analyses were conducted to examine if the extremist mindset (MEM Total) is influenced by personality traits (HEXACO), the Dark Triad (SD4), conspiracy belief (CGB), paranoia, and demographics. Multiple regressions were also run on each of the MEM subscales: Nastiness (Pro-Violence), Grudge (Vile World) and Excuse (Utopianism). Missing data were handled with the listwise deletion technique on SPSS resulting in 179 participants.

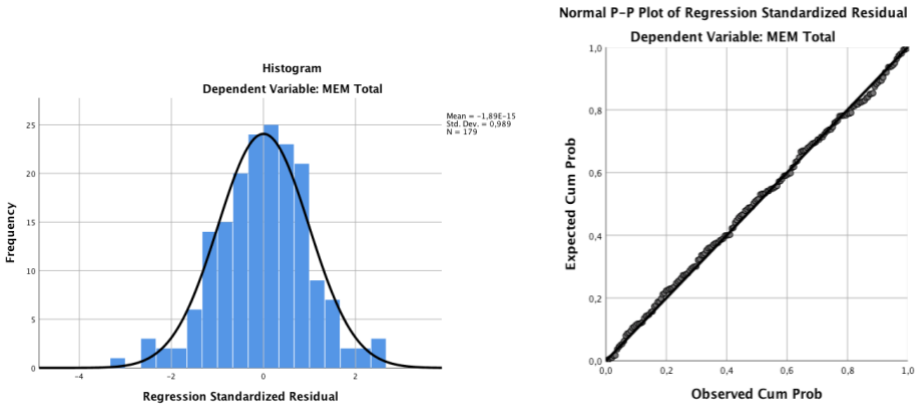
4.3.5. Data assumptions

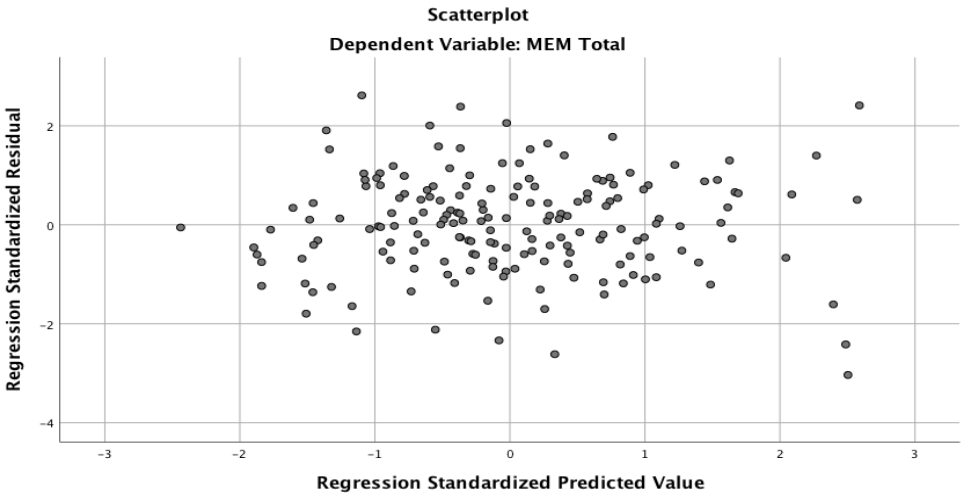
An analysis of standard residuals was carried out on the data to identify any outliers for the MEM total score, MEM Grudge and MEM Excuse which showed no outliers within these datasets. The analysis of standard residuals indicated that participant 69 needed to be removed for the dataset examining MEM Nastiness as the independent variable. Participant 69 contributed to a high standardised residual score of 5.4. Once participant 69 was removed, analysis of standard residuals suggested that without this participant, the data contained no outliers.

All other assumptions required to carry out a multiple regression analysis for the 4 multiple regression analysis (MEM total and the 3 MEM

subscales) were met. Thus, tests to see if the data met the assumption of collinearity indicated that multicollinearity was not a concern. The histogram of standardised residuals indicated that the data contained approximately normally distributed errors, as did the normal P-P plot of standardised residuals. The datasets also met the assumption of independent errors, and the assumption of non-zero variances with all variance value over zero. See for instance Figure 11 for the MEM Total as the independent variable.

Figure 11. Data assumptions: histogram, normal P-P plot and scatterplot





4.3.6. Multiple regression results

A multiple regression was conducted to see if extremist mindsets (MEM Total, MEM Nastiness, MEM Grudge, and MEM Excuse) could be influenced by personality (HEXACO: honesty-humility and agreeableness), the dark tetrad (SD4: Machiavellianism, narcissism, psychopathy, and sadism), conspiracy theory belief, paranoia and age. Some personality traits were dropped out of this analysis following results of the correlational analysis. For each MEM subscale and the total score, a significant regression equation was found with these constructs. The results of the regression indicated that these constructs explained a significant amount of the MEM total score and each of the MEM subscales. Conspiracy belief and paranoia were found to significantly

influence the MEM total, MEM Grudge and MEM Excuse. Honesty-humility was also found to influence the MEM Grudge. Sadism was found to be the only construct that influence the MEM Nastiness. Significant results of the regression analysis are presented in Table 18. A more detailed result table can be found in Appendix K.

Table 18. Regression analysis

	R^2	Adj R^2	F (9, 176)	*p*	Explanatory variables (*b, t, p*)
MEM Total	.31	.28	8.91	.001	GCB (.14, 3.16, .002) Paranoia (.01, 3.67, .001)
MEM Nastiness	.21	.17	5.13	.001	Sadism (.14, 2.31, .02)
MEM Grudge	.33	.29	9.41	.001	GCB (.22, 3.47, .001) Paranoia (.01, 3.07, .002)
MEM Excuse	.22	.18	.5.58	.001	GCB (.29, 3.56, .001) Paranoia (.01, 2.81, .005) Honesty-Humility (.25, 2.68, .008)

4.3.7. MEM and Demographic data

A regression analysis was conducted to test if the MEM total score could be influenced by the following demographic information: age, gender, education level and years of education from the age of 5,

employment, ethnicity, political belief, and religion. The dataset was not normally distributed; therefore, a bootstrap regression was preferred.

The bootstrap analysis was conducted for each of the MEM subscales and the MEM total. The demographic data were collapsed into simpler categories (e.g., religion: religious, not religious, others - see Appendix K for full coding). None of the demographic information were found to have statistically significant influence on the MEM scores. Results indicated that demographics only have a small influence on MEM scores. Detailed results can be found in Appendix K.

4.4. Discussion

4.4.1. Findings

The aim of this study was to explore personality traits and psychological constructs underlying non-violent extremists among the general population. Basic personality traits, the dark tetrad, paranoia, and belief in conspiracies were examined to determine their association with the extremist mindset.

Conspiracy belief and paranoia were found to be strong indicators of the extremist mindset. Both constructs predicted higher scores on the MEM total, MEM Grudge and MEM Excuse. Additionally, the extremist mindset scale, the conspiracy belief scale and the paranoia scale were all strongly positively correlated indicating a strong association between these constructs. Moreover, honesty-humility and sadism were the only personality traits found to have predictive values of the extremist mindset. Lower scores on the honesty-humility predicted higher scores on MEM grudge; and sadism was found to be the sole predictor of MEM Nastiness. In line with previous studies, the extremist mindset was found to be negatively correlated with honest-humility and agreeableness, suggesting that both these personality traits overlap with extremist traits

(Book et al., 2016; Egan et al., 2014; Furnham et al., 2013; Jakobwitz & Egan, 2006; Lee & Ashton, 2005; O'Boyle et al., 2015; Paulhus & Williams, 2002). Previous studies suggested that lower honesty-humility predicts general exploitative strategies, whereas lower agreeableness predicts anti-social outcomes, such as violence (Lee et al., 2013). Despite the dark tetrad not being predictive of the MEM, the four dimensions were all positively correlated with extremist mindset, conspiracy belief and paranoia scale, indicating some overlap and association with the dark tetrad.

A factor analysis was conducted and then adjusted with less items to explore theoretical models. The second analysis extracted a more adjusted two-factor dimension. One dimension highlighted the extremist traits construct, and the other one the conspiracy thinking construct. The four dark tetrad constructs were found to load positively in a singular dimension alongside MEM Nastiness, where both honesty-humility and agreeableness would load negatively. This factor captures extremist traits and indicates an overlap between personality traits including the dark tetrad constructs and MEM Nastiness. The second factor encompasses variables that relates to extremism associated with conspiracy and paranoid thinking including the MEM excuse and the MEM Grudge, the GCB total and paranoia.

Furthermore, demographics and background information were not found to be predictive of the MEM scores. Some non-significant differences were observed: participants with high education had lower MEM scores; participants who described themselves as 'other genders' and 'other ethnicity' had higher MEM scores; and participants affiliated to the UKIP political party had also higher MEM scores.

These findings were found from a general population sample, indicating that extremist mindset can be found within a generic sample rather than a forensic or specific population. Nevertheless, the demographics indicated some sampling bias, with participants being mainly educated females and particularly WEIRD (Western, Educated, Industrialised, Rich, and Democratic) population (Henrich et al., 2010). However, this also highlights that research on extremism can have significant findings within a liberal democrat population sample.

4.4.2. Implication

It is of paramount importance to understand the mindset of individuals who hold extremist views to help identify individuals at risk of becoming extreme in their views or at risk of committing violent extremist acts. One of the main findings in this study is the association

found between extremist mindset and conspiracy thinking. Conspiracy theories spread fast and to a wider group of individuals using social media and the Internet with an increased risk of exposing individuals with extremist mindset to conspiracy theories that could collide with their views and lead to higher risk of violent extremism (Federal Bureau of Investigation, 2019). Christmann (2012) described the Internet as a radicalisation incubator. Henceforward, having established an evidence-based association between conspiracy theories and extremist mindset is crucial for extremism prevention. Future preventive policies should focus on addressing conspiracy theories and paranoid thinking as an attempt to reduce extremism. It is recommended for future research to critically assess valid tools used to measure conspiracy beliefs and how these could be used to identify individuals at risk of becoming more extreme in their views (see Chapter 5 of this thesis). Future research should also investigate the association between conspiracy beliefs and levels of paranoia; and how media framing could influence radicalisation processes (see Chapter 3 of this thesis).

Additionally, sadism was identified as the sole predictor of the MEM Nastiness facet of extremism. Intervention to reduce sadistic traits should be used within extremism prevention programmes. Stephens and al (2018) recommended including empathy to reduce the risk of

individuals engaging in violent extremism. Existing studies have already evaluated the inclusion of empathy training as beneficial in reducing risk of violent extremism (Aly et al., 2014; A. Feddes et al., 2013). Besides, in this study, we also identified two personality aspects associated with extremists: low agreeableness and low honesty-humility. Identifying any of these traits and characteristics within individuals may help identify those at higher risk of extremism. Future research could also incorporate these traits within tailored intervention to reduce extremism.

Stankov et al. (2018) suggested that the Grudge component of the extremist mindset (akin to grievance thinking in criminal conditions, a known predictor) was the most amenable to respond to intervention. In this study, honesty-humility, paranoia, and conspiracy beliefs were identified as factors influencing the MEM Grudge. Henceforward, Grudge is one of the extremist mindset facets that researchers should investigate further to find suitable interventions to reduce personal traits and paranoid thinking underlying this facet of extremism.

Further studies should investigate age desistance for individuals who hold extremist ideologies and become violent extremists. Gender perspective of radicalisation also remains an under-researched field (Stephens et al., 2018). In this study, extremist mindset was non-

significantly higher for individuals who had spent less time in education which implies little original thoughts in these individuals. Stephens et al. (2018) recommended the development of certain cognitive abilities could reduce extremism. The development of critical thinking is key for individuals to be able to assess, to analyse and to question any extremist messages or ideas they are exposed to (Ghosh et al., 2017). Education has been identified as the main vector for individuals to develop critical thinking skills which in turn can help them assess and critically engage with extremist messages (Davies, 2009; Mattsson & Säljö, 2018).

Evidence based intervention programmes to prevent extremism remains limited (Christmann, 2012). Future work on extremism prevention should focus on protective factors identified in the literature to develop policies and strategies to reduce the risk of extremism and radicalisation (Lösel et al., 2018). Policies and interventions should also be shaped using existing literature on preventing radicalisation including reviews which have outlined guidelines for such interventions at the individual, community, and societal level (Madriaza & Ponsot, 2015; Stephens et al., 2018).

Conspiracy belief and paranoia were found to significantly influence the extremist mindset. Sadism and honesty-humility were also

found to be of predictive value. Strong associations between extremism and the dark tetrad were also identified. These results have practical implications for the prevention of violent extremism. Policy makers should focus on these constructs and traits to reduce the risk of radicalisation amongst the wider population. Future review of existing risk assessments or development of new tools should also include these findings to improve accuracy when identifying individuals at risk of becoming extremist in the wider population.

Please refer for Appendix L for the poster presentation of this chapter at the British Psychological Society (BPS) Forensic Psychology Annual conference in June 2021.

Chapter 5: Critique of the General Conspiracy Belief Scale (GCB)

Abstract:

Background: The General Conspiracist Belief scale (GCB) is a 15-item self-reported scale measuring individual differences in generic conspiracist ideation. The GCB has five subscales: government malfeasance, extraterrestrial cover-up, malevolent global conspiracies, personal wellbeing, and control of information. This scale was used in Chapter 4 and found to be associated with the extremist mindset.

Aim: The GCB's usefulness was reviewed prior to conduction of Chapter 4 and the findings are presented in this chapter. The internal consistency found in Chapter 4 is also presented to review this tool. This chapter evaluates the psychometric properties of the GCB, its research use, and its limitation.

Results: The GCB scale is a reliable and valid tool to use to measure generic belief in conspiracy theories. Evidence for internal reliability, content validity, criterion validity, convergent and discriminant validity are presented. Factorial validity is further discussed as inconsistencies were reported across studies. It is also recommended for future research to re-examine its test-retest validity.

Discussion: Given the good psychometric properties of this scale; it is recommended for this scale to be used when assessing belief in conspiracy theories; however, future research on factorial validity is

needed. This will further inform on the dimensional aspect of conspiracist ideation. Temporal and cultural limitation of assessing generic conspiracist ideation are also discussed.

5.1. Introduction

5.1.1. Overview of conspiracist ideation

Many people believe that their government played a role in major terrorist attacks i.e., 7/7 bombings in London and 9/11 attacks in USA (Soni, 2007; Swami et al., 2010). In America, half the population was observed to endorse at least one conspiracy theory (Oliver & Wood, 2014).

A conspiracy belief is when a situation is explained by a theory where one is deemed to be intentionally acting in secret for their own benefit at the expense of others to accomplish malevolent goals (Uscinski & Parent, 2014). A conspiracy theory refers to a claim with weak evidence which is less plausible than other explanations and contradict the most widely agreed and accepted theories (Brotherton et al., 2013). Jolley & Douglas (2014) explained that conspiracy theories are based on the belief that actions are deliberate and premeditated. These theories provide an alternative plausible explanation for official deficient explanations of a social or political event (Drinkwater et al., 2012).

Conspiracy beliefs have been associated with negative outcomes in various domains: stress, health-related, socio-political, and

environmental (Douglas et al., 2016; Swami et al., 2016). The present thesis has found that conspiracist ideation is also associated with extremist mindset. Therefore, if believing in conspiracy theories leads to adverse individual and social outcomes, it is important to adequately assess conspiracist ideation amongst the general population.

Major world events, particularly those that are traumatic and emotive, are known to increase levels of stress (Goenjian et al., 2000). In addition to being stressful, such events also increase feelings of uncertainty, confusion, and existential threat (van Prooijen & Jostmann, 2013). In such a climate, some individuals may engage in sense-making processes aimed at restoring individual agency and a belief that the world is orderly and predictable (van Prooijen & Acker, 2015). This is particularly relevant in this thesis examining the extremism mindset and indirect exposure to terrorist threats. Douglas et al. (2019) explains that conspiracy theory triggers prejudice which is associated with genocide and acts of terrorism.

Conspiracy theories have driven violence throughout history, but social media and the Internet have enabled conspiracy theories to be spread to a wider audience (Christmann, 2012). Furthermore, conspiracy theories can exacerbate extremist views (Bartlett & Miller)

(2010). Thus, individuals at risk of developing extremist views will be more easily exposed to conspiracy with greater risk of committing acts of violence as a result. Political conspiracy theories likely motivate domestic extremism and support violent actions (Federal Bureau of Investigation, 2019).

5.1.2. Purpose of the critique

> *"A psychological test may be described justly as a good test if it has certain characteristics. It should be at least an interval scale, be further reliable, valid and discriminating, and either have good norms or fit a Rasch or similar model with high precision, or be expertly tailored to its subjects."* (Kline, 2015, p16).

This review aimed to critically evaluate the psychometric properties of the General Conspiracist Belief scale (GCB; Brotherton et al., 2013). A psychometric test is a standardised test which aims at measuring psychological traits, beliefs, thoughts, attitudes, or behaviours. The GCB scale is a measure of general conspiracy theorising. Belief refers to what a person assumes to be true and can be held with various degrees of certainty (Rust & Golombok, 2014). Beliefs are different from attitudes; beliefs refer to a cognitive function only,

whereas there is an affective component in attitudes i.e., likes and dislikes (Rust & Golombok, 2014).

The GCB scale was used in this thesis in the cross-sectional study. According to the findings in this present thesis, conspiracy beliefs are associated with extremism. A reliable and valid tool to measure beliefs in conspiracy theories could help identify individuals within the general population at risk of becoming extremist; possibly preventing violent and criminal behaviours motivated by extremist views. If unreliable and invalid tools are used in a study, this will ultimately introduce a degree of bias in the study.

This study is a supplementary chapter to the cross-sectional study and findings presented in Chapter 4. The GCB was used in the empirical study and the preliminary research to evaluate this tool and to review its usefulness are presented below. This chapter also reports on the internal consistency found in Chapter 4 to review this tool. This chapter evaluates the psychometric properties of the GCB, its research use, and its limitation.

5.2. Overview of the Tool

5.2.1. The GCB scale

The GCB test is a 15-item self-reported scale measuring individual differences in generic conspiracist ideation. Higher scores on this measure reflect greater generic conspiracist ideation. The conspiracy belief scale used in this study has five subscales, also refer to as facets in the literature, and described below:

- Government malfeasance refers to allegations of routine criminal conspiracy within governments (Sample item: "*The government permits or perpetrates acts of terrorism on its own soil, disguising its involvement*")
- Extraterrestrial cover-up refers to the deception of the public about the existence of aliens (Sample item: "*Secret organizations communicate with extraterrestrials, but keep this fact from the public*")
- Malevolent global conspiracies refer to allegations that small, secret groups exert total control over global events (Sample item: "*A small, secret group of people is responsible for making all major world decisions, such as going to war*")

- Personal wellbeing refers to conspiracist concerns over personal health and liberty such as the spread of diseases and the use of mind-control technology (Sample item: "*The spread of certain viruses and/or diseases is the result of the deliberate, concealed efforts of some organization*")
- Control of information refers to unethical control and suppression of information by organisations including the government, the media, scientists, and corporations. (Sample item: "*A lot of important information is deliberately concealed from the public out of self-interest*")

Please refer to the Appendix H for the full 15-item questionnaire.

5.2.2. The development of GCB

Initially, conspiracy belief was measured assessing beliefs of selected event-based conspiracy theories (Abalakina-Paap et al., 1999; Darwin & Neave, 2011; Douglas & Sutton, 2011; Goertzel, 1994; Leman & Cinnirella, 2007; Swami et al., 2010). Psychometrics properties of tools measuring real-world conspiracy theories have not been well validated and often only reports internal reliability (Brotherton et al., 2013). Furthermore, specific conspiracy theory tool assesses beliefs on

a set of current conspiracy theories rather than generic theories. Tools may not be comparable with each other due to differences in wording or due to the inclusion versus exclusion of specific theories.

Generic conspiracy beliefs can predict endorsement of specific conspiracy theories; thus, conspiracist ideation is described as a monological belief system (Goertzel, 1994; Wood et al., 2012). Therefore, the GCB scale was developed. This scale is a generic measure that can be used consistently across the literature, resulting in a more cohesive and consolidated body of research on beliefs of conspiracy theories (Brotherton et al., 2013). The GCB attempts to measure conspiracist ideation by first identifying the facets of this construct. It focuses on thematic concepts without referring to specific conspiracy theories (Denovan et al., 2020). The developers of the tools first piloted a 75-item questionnaire: the Conspiracist beliefs scale (long-form). The questionnaire was administrated to 489 participants recruited online.

The long form questionnaire was a 5-point Likert-scale with the following scoring options for each item: 1: *definitely not true*; 2: *probably not true;* 3: *not sure/cannot decide;* 4: *probably true*; 5: *definitely true*. Each item was intended to reflect generic conspiracist beliefs rather than being event based. Literature on conspiracy theories

was reviewed by the authors of the tool to identify generic beliefs representatives of real-world conspiracy beliefs. Instead of using specific events or bodies often associated with conspiracy theories (e.g., 9/11), more generic terms were used (e.g., significant events).

Sixteen items were removed due to being negatively worded and an Explanatory Factor Analysis (EFA) was conducted on the remaining 59 items. A five-factor model was extracted. For the tool to remain economical and concise, only three items were then associated per factor. Some items were merged into one from the long questionnaire to form the definitive scale. As a result, a 15-item questionnaire was developed capturing the five facets of conspiracy beliefs. A Confirmatory Factor Analysis (CFA) confirmed the five-factor model had adequate fit for the 15-item version. The final questionnaire was also a 5-point Likert-scale with the same labels as the long form. This questionnaire was piloted onto an undergrade student population.

5.2.3. Alternative and supplementary tools

Conspiracist ideation have been measured using two types of scales: scales measuring real-world conspiracy theories (e.g., the moon landings were faked) and scales measuring generic conspiracy beliefs

(Swami et al., 2017). Specific conspiracy belief scales also exist to measure specific belief in real word conspiracy theory (e.g., beliefs about 9/11 conspiracies).

5.2.3.1. Real-world conspiracy theory scales

There are several scales looking at range of conspiracy theories which have been treated as unidimensional by scholars by computing an overall score to measure global conspiracist ideation. These scales include: the Belief in Specific Conspiracies Scale (Abalakina-Paap et al., 1999), the Conspiracy Theory Belief Scale (Douglas & Sutton, 2011), the Composite Conspiracy Beliefs Scales (van Prooijen et al., 2015), and the Belief in Conspiracy Theories Inventory (BCTI; Swami et al., 2010).

The most widely used scale measuring real-word conspiracy theories is the BCTI (Swami et al., 2010). The BCTI is a 15-item scale reported to have high internal reliability (α=0.92). Sample item: *"The Oklahoma City bombers, Timothy McVeigh and Terry Nichols, did not act alone, but rather received assistance from neo-Nazi groups"*. The tool was initially developed using a 14-item questionnaire. An EFA was conducted and indicated a one-dimension model. A new adapted version using 15-item was developed (Swami et al., 2011). Nevertheless, the

factor validity of the new 15-item tool was not assessed, questioning the evidence for factorial validity.

When examining dimensionality, tools examining endorsement of a range of specific conspiracy theories rather than a generic belief tends to be one-dimensional. This is because a belief in one conspiracy theory indicates likelihood of belief in another theory (Goertzel, 1994; Swami et al., 2011). This is referred to as the monological belief system where various conspiracy theory beliefs are intercorrelated (Swami et al., 2017).

Furthermore, construct validity is questionable for all scales measuring real-world theories as items may need amending to reflect locally and culturally relevant theories and up-to-date popular theories (Swami et al., 2017). Also, measuring endorsements of conspiracy theories may not measure accurately conspiracist ideation.

Additionally, specific measures have been designed to measure specific real-world theories. For instance, the belief in 9/11 conspiracy theories (Swami et al., 2010) is a 17-item tool with high internal consistency ($\alpha = 0.97$) measuring specific conspiracy theory relating to the 9/11 terrorist attacks; and the Belief in 7/7 conspiracy theories

(Swami et al., 2011) is a 12-item questionnaire with high internal consistency (α = 0.95) measuring conspiracy ideation relating to the London bombings of July 7, 2005.

5.2.3.2. Generic conspiracy theory scales

The GCB scale is set to measure general conspiracist ideation without the historical and social context of specific events. Other tools were developed aiming at measuring the same construct: Conspiracy Theory Questionnaire (CTQ; Darwin et al., 2011), a subscale of the Epistemically Unwarranted Beliefs Scale (EUBS; Lobato et al., 2014), the Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013), and the One-Item Conspiracy Measure (OICM; Lantian et al., 2016). Factor validity for the CTQ and EUBS have not been tested and one factor structure has been assumed.

Internal consistency and factor validity could not be assessed for the OICM due to only being a one-item questionnaire ("*I think that the official version of the events given by authorities very often hides the truth*"). However, acceptable test-re-test reliability was reported. Convergent validity was also reported as moderate for this scale. The one-item questionnaire was recommended for scholars pressed for time;

but it does not reflect dimensionality issues of conspiracy beliefs which have been raised in study examining other scales (Swami et al., 2017).

The Conspiracy Mentality Questionnaire (CMQ) has a 12-item version (Imhoff & Bruder, 2014) and a 5-item version (Bruder et al., 2013); however, the 5-item version is most widely used in the literature (Swami et al., 2017). Swami et al. (2017) questioned the construction of the scale, and the construct validity of the items i.e., lack of reflection of conspiracist ideation on items 1-3 on the 5-item scale which may reflect rationale beliefs rather than a conspiracist belief. Factor validity was reported for the 5-item scale, with one factor solution extracted after an EFA; however, the one-dimensional model had poor fit when assessed using a CFA. Convergent validity was moderate. Sample item: *"I think that there are secret organizations that greatly influence political decisions".*

Additionally, a scale was developed for adolescent aged 11 and over: the Adolescent Conspiracy Beliefs Questionnaire (ACBQ; Jolley et al., 2021). This scale is a 9-item questionnaire and has good psychometric properties (Jolley et al., 2021). This tool measures generic conspiracy beliefs and its suitable for young participants. Such tool can

help understand the emergence of conspiracy thinking and its psychological antecedents (Jolley et al., 2021).

Thus, given the existing report of its psychometric properties, the GCB is the most widely used tool to measure conspiracist ideation and preferred over real-world conspiracy scales. Therefore, this tool was chosen and used in the empirical study (see Chapter 4).

5.3. Evaluation of the GCB scale

The GCB scale was evaluated by examining its psychometric properties. Reliability and validity are characteristics of a good psychological test. Reliability refers to as the stability and consistency of test results. There are two types of psychometric reliability: internal consistency and test-retest reliability. Validity refers to how well a test measures what it is supposed to test. To be valid, a test also needs to be discriminating and not overlap with other psychological constructs. Finally, a test needs to have appropriate norms (Kline, 2015).

5.3.1. Internal consistency

Reliability analysis provides information about individual items of a scale and the extent to which these items, measuring the same attribute, are related with each other. Cronbach Alpha measured internal consistency using the average inter-item correlation and a score above .70 is considered good (Kline, 2013). Cronbach Alpha for the GCB total score was reported in 13 studies ranging between .82 to .97 indicating excellent internal consistency. In Chapter 4, Cronbach Alpha for the GCB total score was .91. Internal consistencies for each subscale were also reported in Chapter 4: .76 for government malfeasance, .84 for

malevolent global conspiracies, .88 for extra-terrestrial cover-up, .72 for personal wellbeing, and .65 for control of information. See Table 19.

Table 19. GCB's internal consistency

Studies	Cronbach *a*
Brotherton et al. (2013)	.93 - .95
Swami et al. (2014)	.91
Moulding et al. (2016)	.95
Lantian et al. (2016)	.85 - .94
Brotherton & French (2014)	.88
Brotherton & French (2015)	.88 - 92
Brotherton & Eser (2015)	.97
van der Tempel & Alcock, (2015)	.92
Dieguez et al. (2015)	.82 - .88
Wood (2016)	.93 - .95
Cichocka et al. (2016)	.91 - .93
Stojanov (2015)	.91
Pennycook et al. (2015)	.95
Denovan et al. (2020)	.95
Chapter 4	.91

5.3.2. Test-retest reliability

Test-retest reliability measures the stability of test results over repeated time. The measurement of test-retest reliability is measured using correlational analysis (Pearson's r). The minimum correlation recommended is .80 (Kline, 2013).

Brotherton et al. (2013) found a positive and strong correlation between mean GCB scores at Time 1 and Time 2 ($r = 0.89$, $p < 0.001$), indicating good test-retest reliability. Test-retest data were voluntarily; and 42 of the 70 participants approached at time 2 completed the GCB scale. They found that the GCB scores did not change significantly over the 5-week interval using a paired samples *t*-test; $t\ (40) = 1.14$, $p = 0.26$ (Brotherton et al., 2013). Nevertheless, a minimum gap of three months between time one and time two is recommended to assess test-retest reliability to account for chances of recall (Kline, 2013). Therefore, caution should be taken when using this tool until further test-retest reliability is established. None of the other studies using this scale reported test-retest reliability analysis

.

5.3.3. Face validity

Face validity assesses that the questionnaire measures what it is supposed to from a lay-person perspective. None of the studies using the scale have commented on its face validity. The GCB measures five facets of belief in conspiracy theories: government malfeasance, extraterrestrial cover-up, malevolent global conspiracies, personal wellbeing, and control of information. A conspiracy theory refers to a prominent world issue often specific to current social context.

Goertzel (1994) explains that the best predictor of conspiracist ideation is acceptance of another conspiracy theory. Additionally, Wood et al. (2012) found that specific conspiracy beliefs are predicted by beliefs of more generic conspiracy theories. Thus, Brotherton et al. (2013) suggested that assessing belief on a single generic statement can provide a valid indication on more specific conspiracy beliefs. Based on the theory that belief in specific conspiracy theories can be measured by more generic statements about broader conspiracy theory; the GCB scale applies this model by measuring 5 generic type of conspiracy theories. Therefore, the GCB appears to have good face validity and to be relevant and appropriate in measuring generic conspiracist beliefs. Nevertheless, other types of validity need to be explored to confirm the test measures conspiracy belief appropriately.

5.3.4. Content validity

Content validity assess that the test measures all aspects it is supposed to. A confirmatory factor analysis completed by Brotherton et al. (2013) confirmed content validity of the scale as adequately accounting for the five facets of conspiracist beliefs. However, limiting conspiracy theories to these 5 broad themes may compromised some the content validity as not reflecting the complexity of real-world conspiracy theories e.g.: beliefs that the world was sucked into a black hole and that the world ended in 2012; beliefs that the titanic did not sink or again beliefs that sirens were responsible for shipwrecks. These beliefs are complex and in most real-world conspiracy beliefs, several facets cover its content.

Brotherton et al. (2013) defended this choice by explaining that a generic measure accounts for specific conspiracy beliefs. Brotherton et al. (2013) explained that using 15 generic item scale is economical and can be administered to any sample population by decontextualising specific conspiracy beliefs. Also, by using generic theories, the GCB remains an appropriate tool to use over time as specific theories rapidly changes. Finally, Brotherton et al. (2013) acknowledged that these five themes are intercorrelated and can merge in the real-world conspiracy

theories. Hence, the scale is indented to measure the unidimensional construct of conspiracist ideation.

5.3.5. Factorial validity

Factorial validity is determined by a statistical technique known as factor analysis and measure the correlation of the different factors within a test.

The developers of the scale found that a five-factor model had better fit than the overall test score (Brotherton et al., 2013). They extracted five facets of conspiracist ideation using an EFA. These factors were described as *"fundamental underlying assumptions about the world"* influencing conspiracist ideation rather than categories of conspiracy theories (Brotherton et al., 2013, p.7). The EFA was limited as the sample size was not large enough to conduct such analysis; thus, also impacting on generalisability of the findings (Swami et al., 2017).

Swami et al. (2017) carried out an explanatory and a confirmatory factor analysis. Using the EFA, they found that a two-factor model should be extracted. Nevertheless, when conducting the CFA, fit indices were poor for both the one- and two- factor models, refuting a one-

dimensional structure of the scale and the two-factor structure. This contradicts previous theories about the evidence of the unidimensional aspect of conspiracist ideation (Goertzel, 1994; Wood et al., 2012).

Swami et al. (2017) then examined the 5-factor model proposed by Brotherton et al. (2013); however, the fit indices for the 5-factor model was also found to be poor; indicating that this model should be omitted. Thus, none of the model had adequate fits indicating fundamental issues with the dimensionality of this test.

Given the concerns about the GCB factorial structure, Drinkwater et al. (2020) compared the five-factor solution with one, two, and three-factor models in two independent British samples. Results in both studies indicated superior fit for the correlated five-factor solution. Drinkwater et al. (2020) found good alpha and omega total reliability for the five facets and total score. This indicates that the overall score is appropriate to be used to measure belief in conspiracy theories. All the facets were also highly intercorrelated. This is consistent with reports from the authors of the tool that each facets reflect associated assumptions (Brotherton et al., 2013; Drinkwater et al., 2020).

The existing literature has conflicting results regarding the five-factor dimensions of the GCB scale. There were no systematic differences in the studies that could explain these variations, other than the five-factor model was found in UK-based studies (Drinkwater et al., 2020). Thus, further investigation on measurement bias and sampling bias is to be considered to further comment on the factorial variations of the tool across studies.

5.3.6. Convergent and criterion validity

Convergent validity refers to whether a test has similar results than other tools measuring the same construct. A positive correlation between different tests measuring the same construct is required to confirm validity.

Convergent validity was measured for various studies using the GCB scale. Correlation scores ranged between .40 and .86. indicating low to strong positive correlation depending on the tool it was compared with. See details in Table 20. Overall, there was a strong positive correlation reported between the GCB and BCTI scores. Other moderate correlation with other tools were all statistically significant. This confirms convergent validity of the GCB.

Criterion validity refers to whether the tool matches other tools. These findings confirm acceptable criterion-related validity as scores on other measures of conspiracist ideation correlates with the GCB scores. This indicates that the GCB successfully predict endorsement of specific conspiracy theories e.g., 9/11 attacks and anti-vaccination beliefs.

Table 20. Convergent validity

	Convergent validity with GCB scale (Correlation = *r)*					
Tools*	**Studies**					
	Brotherton et al. (2013)	Moulding et al. (2016)	Lantian et al. (2016)	Dieguez et al. (2015)	Wood (2016)	Swami et al. (2014)
Belief in Conspiracy Theories Inventory (BCTI)	.82; .86	.83	.66; .83			.75
9/11 conspiracy theories	.75					.64
7/7 conspiracy theories	.67					
Fictitious conspiracy theories	.61	.68				
True conspiracy theories		.60				
Conspiracy Mentality Questionnaire (CMQ)		.65	.55; .75			.75
One-item conspiracy theory			.50; .72			.74
Classical conspiracy theories				.46*;* .68; .63		
US historical conspiracy theories					.75	
Anti-vaccination beliefs						.40

*See Appendix M for scales details and references.

5.3.7. Discriminant validity

Discriminant validity assess whether constructs are distinct and uncorrelated. It is demonstrated when tests measuring different theoretical constructs are confirmed not to be highly correlated with each other.

Personality traits have been measured by Brotherton et al. (2013) to assess its correlation with the GCB scores using the IPIP Big Five inventory (Goldberg, 1999) to measure openness, conscientiousness, extraversion, agreeableness, and neuroticism. Internal consistency scores for the five factors of this test are acceptable with Cronbach Apha scores ranging between .75 and .90. A small significant correlation was found between the greater GCB scores and lower conscientiousness traits. There were no other significant correlations found between the GCB scores and the other 4 personality traits. Whereas Swami et al. (2010, 2011, 2013) have found correlation between the GCB scores and the agreeableness and openness traits. Only small correlations have been found between the Big Five and the GCB scale, with results not being consistent across studies but overall confirming discriminant validity (Brotherton et al., 2013; Swami et al., 2010, 2011, 2013).

Additionally, in Brotherton et al. (2013) the GCB scores were unrelated to emotional intelligence measured with the Trait Emotional Intelligence Questionnaire – Short Form (TEIQues-SF; Petrides & Furnham, 2006) and sensation seeking measured with the Sensation Seeking Scale (SSS-V; Zuckerman, 2007).

These findings confirmed that the GCB scale has discriminant validity being weakly correlated or independent from other unrelated psychological constructs.

5.3.8. Appropriate norms

Norm group refers to the sample of the population who participated in the development and validation of the test. Normative data refers to their results being collated in an average distribution which can be compared to future test scores.

A diverse sample was used when the tool was developed by exploring the essential facets of conspiracist ideation and 500 participants were recruited online: 225 females vs. 269 males, mean age of 35.9 (SD = 13.9), 43.8% British, 26.4% American and 25.6% described as other nationalities. This sample seems to be representative of the British

population due to its recruitment process, characteristics of the sample, and large size of the sample.

Once the 15-item scale was developed, the developers piloted the GCB scale on 235 undergraduate students from UK universities. The scores were normally distributed indicating that variation in ideation were appropriately captured by the scale. Nevertheless, participants were primary female (77.9%) and British or Irish (75.7%) with a mean age of 24.97 (SD = 8.76). Therefore, the scale reliability, validity and factor structure were tested on a skewed sample population.

5.3.9. Translation of the tool

The tool was translated into French and Macedonian (Dieguez et al., 2015; Stojanov, 2015); however, factorial validity was not tested in these new linguistic and cultural groups (Swami et al., 2017). The GCB was also translated in Persian (Atari et al., 2019). There was poor evidence of the scale's construct validity and lack of factorial validity evidence in this Iranian population sample (Atari et al., 2019). Finally, a Japanese version was developed, and a two-factor model was extracted: General Conspiracist Beliefs and Extraterrestrial Conspiracist Beliefs (Majima & Nakamura, 2020). The authors explained that this difference

of the scale facets was likely to be due to cultural nature of conspiracy theories in the Japanese culture compared to Western culture (Majima & Nakamura, 2020).

5.4. Discussion

5.4.1. Findings

The GCB measures beliefs in conspiracy theories. The present study examines the psychometric properties of the GCB scale. This evaluation of the GCB scale confirms its reliability, content validity, criterion validity, convergent and discriminant validity.

The monological belief system theory of conspiracist ideation underpins the development of this tool (Goertzel, 1994; Wood et al., 2012). This scale measures generic conspiracy ideation and its psychometric properties confirms it is measuring what it is supposed to. The tool is widely accessible and easy to administer and to score.

Given the good psychometric property of this scale; it is recommended for this scale to be used when assessing belief in conspiracy theories. Nevertheless, there a few limitations to consider when using this tool. These are described below.

5.4.2. One or multi-dimensional construct?

The factorial validity of the tool has revealed concerns with regards to the unidimensional aspect of conspiracist ideation. Previous research has stipulated that conspiracist ideation was unidimensional (Bruder et al., 2013; Goertzel, 1994; Swami et al., 2010; Wood et al., 2012). The five facets of the GCB scale were found to be correlated in the original study and used as fundamental assumptions which promote conspiracist ideation. Swami et al. (2017)'s findings raised concerns regarding the factorial validity of the tool. These were contradicted by Drinkwater et al. (2020)'s findings who confirmed that the five-factor model was a good fit in two studies with a UK based sample.

Real-world conspiracy theories do evolve and change rapidly often merging between the five facets initially described by the GCB developers; for instance, a single specific conspiracy theory can overlap between different facets i.e., the fear of Covid-19 vaccine and 5G (giving cancer and Covid-19) is covered by control of information and government malfeasance. It is possible that the issue with the factorial validity of the tool lies on whether it captures single or multiple dimensions of conspiracy beliefs (Swami et al., 2017).

It is unclear if generic conspiracist Ideation is a one dimensional or a multi-dimensional construct (Swami et al., 2017). Further research should explore when the five-facets or the one-dimension of the scale is most appropriate. This could be done by testing the various factor models in a large and heterogenous sample to reduce random factors (Drinkwater et al., 2020). Chapter 4 sample was mostly liberal and thus, a CFA was not thought due to a rather skewed sample. It is possible that the dimensional aspect of conspiracist ideation is tinted by cultural differences and variation in societal norms which could influence belief in conspiracy theories (Drinkwater et al., 2020).

5.4.3. Cultural limitation

In a population representative of the West e.g., British; American, the GCB content validity has been demonstrated. Nevertheless, GCB has cultural limitation. Further research should explore psychometric properties of the tool in more culturally diverse samples. The five facets from the GCB scale reflect assumptions of conspiracy beliefs particularly in Western culture (Brotherton et al., 2013). Although these assumptions are removed from any historical context they are underpinned by events and conspiracy beliefs which were popular in Western countries.

These assumptions need to be tested and validated with various population before they can be assumed to be universal and unchanging assumptions of conspiracy theories. It may be that other cultural groups have different types of conspiracy theories (Brotherton et al., 2013).

In the context of examining conspiracist ideation in a non-Western population, the CMQ may be a preferred tool due to its more generic approach, although caution should be taken if using this tool due to its content validity. The GCB scale may be prone to cultural response variation when explicitly referring to topics such as technology or terrorism which can be interpreted and viewed differently by divergent societies (Bruder et al., 2013; Drinkwater et al., 2020).

Future research should examine the GCB in diverse cultural groups (Atari et al., 2019). If universal conspiracy theory assumptions cannot be determined, then future tools measuring conspiracy beliefs should be developed considering cultural context.

5.4.4. Temporal limitation

The GCB scale may need to be reviewed overtime to confirm that the assumptions underpinning the tool remain unchanged in time as

predicted when the tool was developed. Conspiracy theories evolve with time and a scale can quickly become obsolete. Beliefs in conspiracy theories are dynamic, constantly evolving with current popular beliefs which grows with time. Drinkwater et al. (2020) refers to this as temporal instability and gives the example of how conspiracy theories relating to terrorism fluctuate with media attention. Please refer to Chapter 2 of this thesis examining reports of terrorism in the media and its impact.

It is possible that temporal variations in conspiracy theories impact on the factorial structure of the tool; thus, possibly explaining concerns with various dimensional structure found. It is recommended for further research to investigate the scale test-retest reliability; although confirmed in the original study of the scale after 5 weeks; this has not been tested since and only demonstrates short-term test-retest reliability. Examining item endorsement across different point in time may help established temporal stability for all the scale items (Drinkwater et al., 2020).

5.5. Conclusion

This study reviewed the psychometric properties of the GCB scale. The GCB scale is a reliable and valid tool to use to measure generic belief in conspiracy theories. Caution should be taken when interpreting results as factorial validity should be explored to determine whether the tool can be interpreted using the five facets or its overall score. Caution should also be taken about generalisability of the tool to diverse population sample and whether the tool is temporally stable. It is recommended for further research to explore solutions to these limitations. As a result, this could lead to a modification of scale items to produce a more generic, intemporal and universal tool to measure belief in conspiracy theories.

Chapter 6: Discussion

This chapter summarises the findings of the thesis, makes recommendation about future direction for research and comments on practical and ethical implication.

6.1. Aims

The overall purpose of this thesis was to explore the extremist mindset and understand the role of exposure to media reports of terrorism.

The main research aims of this thesis were:

- To review the psychological and emotional impact for indirect victims of terrorism (Chapter 2)
- To test if media framing of a terrorist threat can influence attitudes towards hate crimes and its association with extremist mindset (Chapter 3)
- To examine the association between extremist mindset with personality traits, paranoia, and belief in conspiracy theories (Chapter 4)
- To critically evaluate the General Conspiracist Belief scale (GCB; Brotherton et al., 2013) (Chapter 5)

6.2. Summary of findings

This thesis explored the extremist mindset and the role of exposure to media reports of terrorism.

A systematic review was carried out to understand the psychological and emotional impact of indirect exposure to terrorism. Indirect exposure was examined as: any reports via the media of terrorist threats or attacks e.g., live tv, news articles, images, videos, radio broadcast. Findings of the systematic review confirmed that viewing media coverage of mass violence such as terrorism is associated with several psychological effects: greater distress and acute stress, lower wellbeing, trauma symptoms, functional impairment, depression, anxiety, and psychotic experiences. Other psychological and emotional impacts were also identified by the included studies: impact on searching and finding meaning, distress about future attacks and identifying the exposure event as their worse life event.

It was found in Chapter 2 that media coverage of terrorism can have psychological impact on its audience. The following chapter examined the impact of media coverage of terrorist threats on attitudes towards hate crimes and its association with extremist mind-set. This

study also examined media framing of terrorist threats and its influence on extremist attitudes within the general population. Results indicated a significant increase in pro-attitudes towards hate crimes following vignette exposure, suggesting that media exposure increased participant's pro-attitudes towards hate crimes. However, when exposed to a factual versus an ambiguous media article, no significant results were found in hate crime attitudes. Furthermore, freedom of speech was elicited as one of the main themes in the thematic analysis when examining attitudes towards hate crimes. Findings also confirmed that individuals with a higher score on the extremist mind-set scale were more likely to have pro-attitudes towards hate crimes.

Finally, the extremist mindset was explored. Basic personality traits, the dark tetrad, paranoia, and belief in conspiracy theories were examined to determine their association with the extremist mindset. To measure belief in conspiracy theories, the general conspiracist belief scale (Brotherton et al., 2013) was critically evaluated. The evaluation of the GCB scale confirmed its reliability, content validity, criterion validity, convergent and discriminant validity. Nevertheless, caution should be taken when interpreting results as factorial validity should be explored to determine whether the tool can be interpreted using the five facets or its overall score. Caution should also be taken about

generalisability of the tool to diverse population sample and whether the tool is temporally stable.

Conspiracy theory beliefs and paranoia were found to be strong indicators of the extremist mindset. The extremist mindset scale, the conspiracy belief scale and the paranoia scale were all strongly positively correlated indicating a strong association between these constructs. Moreover, honesty-humility and sadism were the only personality traits found to have predictive values of the extremist mindset. Lower scores on the honesty-humility predicted higher scores on MEM grudge; and sadism was found to be the sole predictor of MEM Nastiness. The extremist mindset was found to be negatively correlated with honest-humility and agreeableness, suggesting that both these personality traits overlap with extremist traits. Despite the dark tetrad not being predictive, the four dimensions were all positively correlated with extremist mindset, conspiracy belief and paranoia scale, indicating some overlap and association. Factor analyses were conducted, and a two-factor dimension was extracted on the second analysis. One dimension highlighted the extremist traits construct, and the other one the conspiracy thinking construct. This factor encompasses variables that relates to extremism associated with conspiracy and paranoid thinking including the MEM excuse and the MEM Grudge, the GCB total and

paranoia. Overall, conspiracist ideation and personality traits were found to influence the extremist mindset.

6.3. Theoretical implication

The initial theoretical model underpinning the thesis was presented in the introduction. Please refer to Figure 12 for the revisited conceptual framework of this thesis including new findings.

In the systematic review, media coverage of terrorism was found to have adverse psychological and emotional consequences on its audience. These included trauma, depression, anxiety, distress, functional impairment, lower wellbeing, and psychotic experiences. Traumatic symptoms and distress were the most common consequences reported in the literature. Besides emotions, terrorism related media exposure was also found to impact on thinking processes. The literature has shown that fear can lead to behaviours associated with increased risk perception. Anderson and Bushman (2018) reported that exposure to violent media can increase hostile appraisals; thus, increase the sense of threats. Several studies have found that indirect exposure to terrorism is associated with fear and threat perceptions (e.g., Matthes et al., 2020; Morin, 2016; Nellis & Savage, 2012).

Findings in Chapter 3 indicated that exposure to terrorist threats related news articles lead to an increase of attitudes accepting of hate crimes. This is concordant with the current literature on the impact of media violence on real life violence. These findings add to the current literature examining the General Aggression Model (GAM; Anderson & Bushman, 2003). The GAM explains how exposure to aggression-related stimulus such as violence in the media leads to aggressive behavioural responses. Additionally, individuals who were less likely to condemn the hate crime after media exposure; also scored high on the extremist mind-set scales. Hate crimes are more likely to be perpetuated in period of social change as a group may see their value threatened by social change and result in violence aiming to protect their norms and values (Keenan, 2020). The interest-group theory (Sellin, 1938) explains that violence directed at groups seen with differing norms is motivated by an attempt to assert power over the other group and to maintain their norms.

Participants were exposed to a news article about Jihadi brides and terrorist threats, and their pro-attitudes towards a hate crime scenario was measured pre and post exposure. The news article is likely to have foster the social and cultural change that increases hate crimes in society as explained by Keenan (2020). According to the social

learning theory (Bandura, 1977), aggression is learnt from the environment by observation and imitation. Henceforward, not condemning the hate crimes is a concerning thinking process which could lead to future imitation of this type of aggression. When condemning hate crimes, the public promotes tolerance and diversity, which are paramount elements in the efforts to tackle extremist views (Stankov et al.; 2018). If extremist views are not only permitted but commended, there is a risk for violent escalation e.g., hate crimes, terrorism. Furthermore, such terrorist acts when reported by the media, can, on their own, trigger more extremist views, reinforcing the vicious circle of extremism.

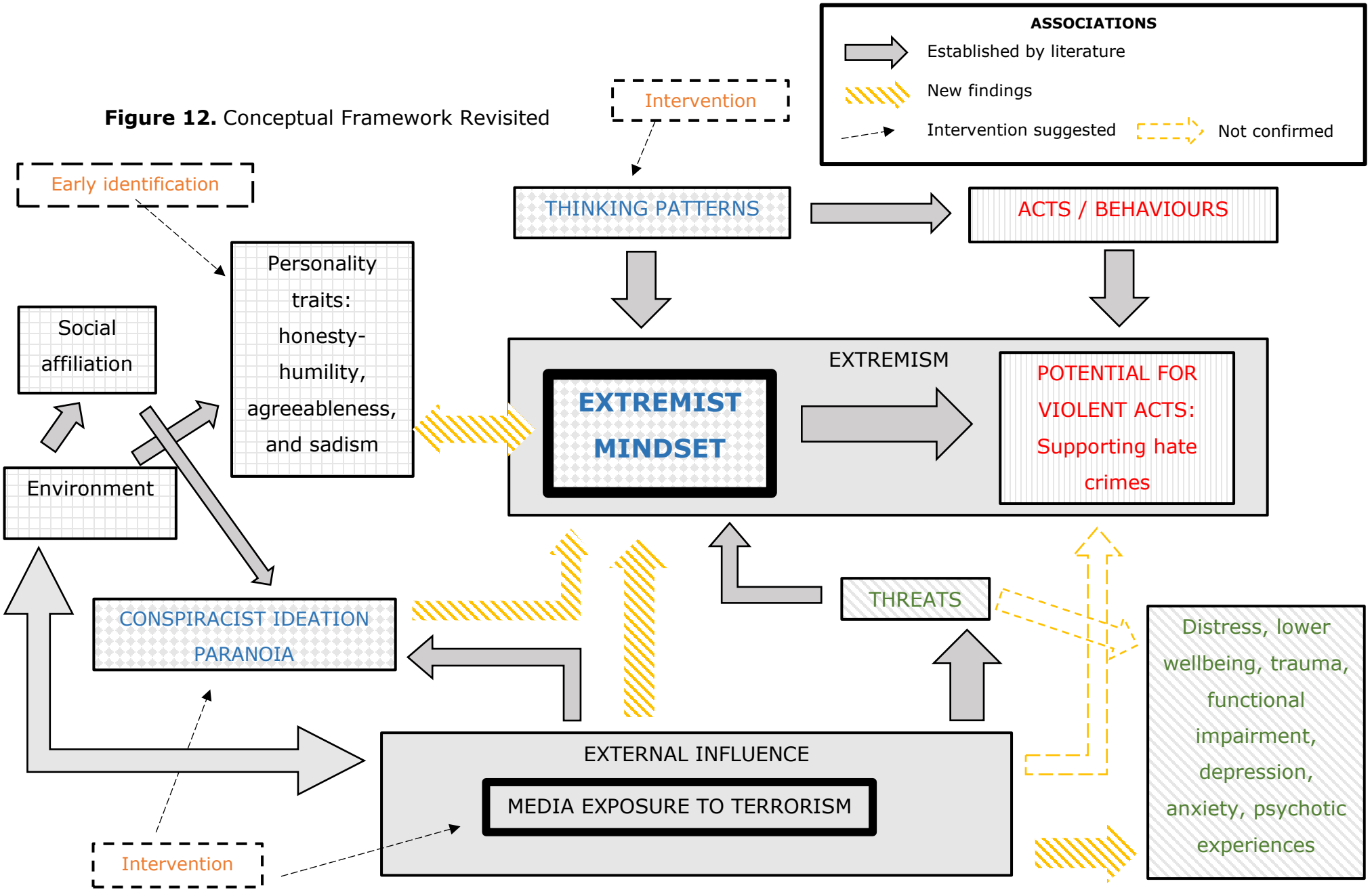
Beliefs in conspiracy theories (Chapter 5) have led to extremist behaviours such as witch hunts, genocide, and acts of terrorism (Douglas et al., 2019). In this thesis, conspiracy beliefs and paranoia were found to significantly influence high scores on the extremist mindset (Chapter 4); indicating that individuals who are more prone to paranoia and who have higher conspiracist ideation are also more likely to have extremist views. Media coverage has also been found to feed into conspiracy theory beliefs (Jones et al., 2017). Therefore, media exposure increases conspiracist ideation as well as extremist ideation, also conspiracist ideation was found to influence the extremist mindset.

Johnson (2018) found in their study that being suspicious of the media is associated with increased belief in conspiracy theories and paranoia and resulted in the radicalisation of white men in the USA. The findings in this thesis are consistent with others who have found a link between extremist views and conspiracy theory beliefs (Bartlett & Miller, 2010; Douglas et al., 2019). Beliefs in conspiracy theories have been associated with low-crime, support for violence and out-group hostility (Biddlestone et al., 2020; Jolley et al., 2019; Jolley & Paterson, 2020); thus, there is a risk of increased violent behaviours when beliefs in conspiracy theories are associated with extremist views. Measuring conspiracist ideation in the general population accurately is therefore important to address these risk issues.

Sadism, one of the dark tetrad traits was also found to significantly influence the extremist mindset. However, all the other dark tetrad traits were also highly correlated with the extremist mindset. Kay (2021) also found association between the dark tetrad traits and conspiracist ideation. Finally, honest-humility and agreeableness were found to be negatively associated with extremist mindset, indicating lower levels of these personality traits suggest higher extremist views.

According to cognitive-behavioural theories, emotions and thoughts are intrinsically linked to behaviours (Beck, 1979). Therefore, extremist mindsets could lead to consequential behaviours e.g., hate crimes. Although not all individual with extremist views will commit violent extremist acts, extremist attitudes best predict violent extremist behaviours (Wolfowicz et al., 2019). Henceforward, understanding the mindset of individuals who hold extremist views can help prevent extremist violent acts. These findings could also help with early identification of people at risk of radicalisation and in developing preventing strategies to reduce the extremist mindset. Additionally, these findings have practical implication for prevention of adverse outcomes following exposure to terrorism related media e.g., psychological consequences, extremist views. It would be easier for preventive programmes and policies to address extremist views before acts of violence are committed. Early identification of personality traits associated with the extremist mindset could help identify individuals at risk of becoming extremist. Interventions to tackle extremist mindset are more likely to be effective if targeting thinking patterns and external influences as these are more malleable and prone to changes than personality traits.

Figure 12. Conceptual Framework Revisited



6.4. Practical implication

6.4.1. Media reporting on terrorism

Terrorism has indirect sombre consequences such as increase in negative attitudes towards outgroups, and an increase in hate crimes following terrorist attacks (e.g., Huddy et al., 2002; Rubaltelli & Pittarello, 2018; Swahn et al., 2003). Terrorism related media can act as a catalyst for intensified stereotype beliefs and changing enemy perceptions (Shoshani & Slone, 2008). For instance, right wing extremism has increased because of the Internet and social media (Nouh et al., 2019). Lankford and Gillespie (2011) recommend re-humanising individual perceived as the enemy by extremist groups. Media could help tackling extremist propaganda and elicit empathy to reduce enemy perception. However, as the media tends to report negative stories; targeting vile world views with positive stories via the news media may be challenging; nevertheless, this may be achievable through social media platforms (Stankov et al., 2018).

Media can also distort reality by disproportionally emphasising catastrophic events (Jacobs et al., 2018). Johnson (2018) suggested

further control of fake version real news circulation. This is particularly relevant given the intrinsically link between media exposure, conspiracist ideation and extremist mindset. Media coverage of mass traumatic events are often immediate and can broadcast repeated graphic images which may increase the risk of psychological impact. For instance, increased media exposure has been associated with psychotic experiences (Stickley et al., 2020) and functional impairment (Holman et al., 2020). Traumatic events reported in the media extends beyond terrorism and other events such as natural disasters, hate crimes or attacks perpetuated by white supremacists/nationalists, and other mass violent events (Stickley et al., 2020). Furthermore, television footages and online news include visual and auditory stimulus which translates to the audience as a more accurate representation of the reality (Jacobs & van Spanje, 2022). It is recommended that media consider the frequency of graphic images related to terrorist events, introduce warnings, and suggest coping mechanisms e.g., crisis numbers (Holman et al., 2014; Slone & Shoshani, 2010). Media agencies should explore preventive strategies to minimise possible harm to the wider public while continuing to inform the population of traumatic violent events. Also, it has been recommended for parents to restrict attack related media viewing to children and for parents to discuss events with them (Schuster et al., 2001).

Adverse outcomes following terrorism related media exposure were associated with negative views about the world and self (Butler et al., 2009; Updegraff et al., 2008). Hence, targeting negative views about self and the world could help address indirect psychological consequences of terrorism. Terrorism related news coverage threatened individuals' sense of wellbeing (Jacobs & van Spanje, 2022). Thus, wellbeing has been recommended as a key factor to address indirect exposure to collective trauma within preventive and recovery strategies (Bajo et al., 2018). Coping behaviours (Updegraff et al., 2008) were also identified as protective; thus, it may be worth for broadcasters to offer coping strategies to their viewers. Furthermore, higher education and social network size were also found to reduce the impact of indirect exposure (Thompson et al., 2020; Updegraff et al., 2008). Local authorities could help provide access to education and encourage social activities to promote resilience in their communities.

6.4.2. Extremism prevention

A smaller group of radicalised individuals commits violent acts such as terrorism. Nevertheless, the literature has focused its examination on terrorism rather than the radicalisation process; whereby once develops extremist views (Christmann, 2012). This systematic bias in the

literature automatically excludes the study of individuals who are developing or at risk of developing extremist views without committing acts of violence. This present thesis aimed to develop an in-depth understanding of this population; with the hope to enhance preventive strategies to tackle extremism.

A study conducted in the Netherlands found that social alienation, depression, and lack of confidence in authority (amongst other features) can trigger someone with extremist views to act on them and commit a terrorist act (Elzinga et al., 2010). Interestingly, Chapter 2 of this thesis examines adverse psychological outcomes following exposure to terrorism media i.e., depression, and Chapter 3 confirmed exposure to terrorism via the media increases risk of developing extremist views. Furthermore, social alienation and lack of confidence in authority can be associated with conspiracist theories which have been found in Chapter 4 to be associated with the extremist mindset.

Prevention policies and programmes should not be limited to addressing risk factors but also promoting protective factors and building resilience amongst individuals at higher risk (Madriaza & Ponsot, 2015). Existing programmes have been heavily criticised; for example, Prevent and their focus on Muslim communities (e.g., Kundnani, 2009; Liht &

Savage, 2013). Such programmes can increase risk factors i.e., being seen as an out-group, and reinforcing the association between this group and terrorists. Interventions are best initiated when the person is either joining or leaving an extremist group as programmes should focus on the future and follow a personalised approach considering someone's journey and situation (Ramalingam, 2014). With regards to prisoners, Ramalingam (2014) explained that interventions are best carried out at the point of release as the individual will be focused on their future. Despite it being challenging, it is recommended for governments to develop policies aiming at preventing extremist acts while respecting freedom of speech and other individual freedoms (Madriaza & Ponsot, 2015). This was demonstrated in one of this thesis study (Chapter 3); where freedom of speech was one of the main themes elicited by participants after being exposed to a hate crime scenario.

Future reviews of existing risk assessments and study developing new assessment tools should consider the findings from this thesis to identify individuals more accurately at risk of becoming extremist in the wider population. Preventive programmes and policies should explore new traits found to be associated with extremist mindsets. For instance, having established an evidence-based association between conspiracy theories and extremist mindset is crucial, and extremism prevention

policies and programmes should focus on identifying and addressing beliefs in conspiracy theories and paranoid thinking as an attempt to reduce extremism. Additionally, sadism was found to be a factor influencing the extremist mindset; therefore, intervention to reduce sadistic traits should be explored, e.g., by encouraging empathy (Stephens et al., 2018). Besides, low agreeableness and low honesty-humility were also associated with the extremist mindset; thus, identifying these traits may help identify those at higher risk of extremism. It may be easier to challenge external influences rather than personality traits. Stankov et al. (2018) identified grudges (outside threats) as one of the most efficient elements to target when trying to prevent extremism; for instance, by promoting diversity and tolerance.

Islamist and right-wing extremists have been observed to be younger men and in search of identity (Madriaza & Ponsot, 2015). Kruglanski et al. (2019) explained that quest for significance is one of the main cognitive mechanisms underlying violent extremism; by attempting to regain significance using violence. Violent extremism automatically jeopardises other needs such as safety, comfort, and empathy and compassion for others. This can be referred to as the the 'goal pull' effect where increasing intention on one goal result in the withdrawal attention on other goals (Shah & Kruglanski, 2002). Henceforth, Kruglanski et al.

(2019) suggested reducing this feeling of insignificance for example by providing professional education and increase socially constructive activities and aiming at maintaining other needs. Additionally, programmes to avoid being re-indoctrinate should focus on independent thinking, learning how to challenge group assumptions and not to trust group thinking (Lankford & Gillespie, 2011). Stephens et al. (2018) recommended that the development of certain cognitive abilities could reduce extremism. The development of critical thinking is key for individuals to be able to assess, to analyse and to question any extremist messages or ideas they are exposed to (Ghosh et al., 2017). Education has been identified as the main vector for individuals to develop critical thinking skills which in turn can help them assess and critically engage with extremist messages (Davies, 2009; Mattsson & Säljö, 2018).

6.5. Research limitation

Both empirical studies have some sampling bias. Despite recruiting a sample aiming to be representative of the general population, demographics showed that participants were mainly educated females and particularly WEIRD (Western, Educated, Industrialised, Rich, and Democratic) population (Henrich et al., 2010). Obtaining a larger sample may help improving the sampling method in the future. As significant

results were found, findings demonstrated that research on extremism can have significant findings within a liberal democrat population sample. Additionally, both studies are cross-sectional and thus, no causal inference can be made.

The systematic review excluded countries in conflict zones; however, there is an extensive literature examining indirect terrorism through media coverage and indirect impact of terrorism conducted in Israel/Palestine, especially looking at children (e.g.: Slone & Shoshani, 2006). Hence, systematic review attempting to answer this question focusing on children should consider extending their PICO criteria.

Terrorist attacks are traumatic events that cannot be predicted; hence, preventing pre-event data collection (Val & Linley, 2006). Lack of data pre-exposure impedes on the causal inference between the psychological symptoms and the exposure (Liverant et al., 2004; Schlenger et al., 2002). Using an experimental study design could address the voluntary exposure bias (choice of media consumption) and allowed for pre-data collection.

6.6. Future directions

Future research examining the racialisation process may wish to focus on situational and external influences and cognitive processes rather than personality factors. The radicalisation process cannot be limited to personality factors and can be better explained by examining the wider context. This thesis has demonstrated that cognitive processes can influence the radicalisation process. Situational and external influences i.e., media exposure and events influence these cognitive processes for instance when interacting with extremist messages and the critical thinking ability to assess these. Focusing heavily on personality when targeting extremism may omit other important processes that leads to extremism. Circumstantial aspects of radicalisation may be more prone to change compared with personality traits.

With regards to media exposure, future studies should examine choice of media exposure (type, quantity, and frequency) and its relationship with individuals' characteristics and psychological impact resulting from the exposure. Studies looking at extremism could attempt to use media framing by using similar techniques used in propaganda or conspiracy theories to test if hate crime attitudes changes following

exposure to such type of media. Future studies should test if the present findings can be replicated and generalised to other threatening events reported by the media e.g., Covid-19 pandemic, war in Ukraine. Future research should explore options to support potential victims of indirect exposure to threats via the media. Additionally, all scenarios included in this thesis were in writing format. It would be interesting to replicate the empirical study using multimedia such as videos.

Further research should explore how elements of the MEM scale could be revisited to create a tool to detect risk of radicalisation (Stankov et al., 2018). Women have also been associated with radicalisation (Blee, 2005; Campion, 2020). However, gender perspective of radicalisation remains an under-researched field (Stephens et al., 2018). Further research is needed to understand radicalisation and extremism from a gender perspective. Furthermore, men are often associated with violent extremism and radicalisation and some links have been made with terrorism and toxic masculinity (Haider, 2016). Further research should explore this construct and whether it can predict extremism in the general population and how could this be used in preventive strategies. Finally, age desistance for individuals who hold extremist ideologies and become violent extremists should be further explored by academics.

Further research should explore extremism in more culturally diverse samples and test if present findings can be replicated. The construct of extremism could vary in non-Western population and further cultural exploration is recommended. This is particularly relevant if wanting to identify extremist who may commits terrorist acts in a Western country as likely to be from non-Western cultures. Additionally, the GCB scale was used in the empirical studies and found to be significantly associated with the MEM. The GCB scale is prone to cultural response variation especially when referring to topics such as terrorism which can be interpreted and viewed differently by divergent societies (Bruder et al., 2013; Drinkwater et al., 2020). Future research should examine conspiracist ideation cultural variations and how it relates to the extremist mindset.

6.7. Ethical considerations

Preventive measures targeting individuals at risk of becoming extremist may have negative ramifications. For example, early identification may not be ethical because of labelling someone before they act. This could lead to unwarranted attention for certain communities and reinforcing the stigma between this group and

terrorists. Existing prevention programmes have been heavily criticised; for example, Prevent for focusing on Muslim communities (e.g., Kundnani, 2009; Liht & Savage, 2013). Furthermore, this could lead to discrimination towards these groups and racism. This would then be counterproductive as increasing extremist views (discrimination, racism) instead of reducing them.

Despite evidence of the detrimental effect of certain media materials, the media continues to relay information regarding threatening events such as terrorism on the principles of freedom of speech, democracy and informing the public (Dahl, 1989). Media policy should be empirically reviewed to gauge the interaction between exposure to media content and the choice from viewers to be exposed.

There are ethical considerations about the importance of the media reporting on disasters e.g., public awareness, policy changes, humanitarian assistance (Grizzard et al., 2017; Holman et al., 2020). News coverage of terrorism can also convey and intensify terrorist messages and their threats (Jacobs & van Spanje, 2022; Matthes et al., 2020; Shoshani & Slone, 2008; Sui et al., 2017). Shoshani & Slone (2008) stressed that reporting on terrorism involves "unavoidable psychological warfare elements". Ethical consideration should be

reflected upon when designing studies to examine indirect exposure of collective trauma such as terrorism, as media can be a source of vicarious contact (Tamborini et al., 2017). Given the impact of terrorism reported in the media, scholars have to considerate their exposure method in new study designs. Exposure is recommended to be subtle as it would be immoral and unrealistic to use an actual terror attack (Jacobs & van Spanje, 2022). The authors recommended for future studies to use news stories as the exposure, which was applied in this thesis (Jacobs & van Spanje, 2022).

Media can be used as a vector to increase hatred towards a targeted community. Rubaltelli et al. (2020) explained that media often insinuate that terrorists can be hidden amongst asylum seekers and illegal immigrants. During the Covid-19 pandemic, similar hatred was reported, especially xenophobia, following reports of the health threat in the media. For instance, it was reported that there was an increase of racially motivated hate crimes (physical violence and harassment) towards Asians in America possibly feared as it was reported that the virus emerged in Wuhan, China in December 2019 (Gover et al., 2020). Additionally, extremist views and attitudes were found to be influenced by beliefs in conspiracy theories. Media coverage is not always factual and can be used as a warfare tool for propaganda purposes. Conspiracy

theories relating to terrorism fluctuate with media attention (Drinkwater et al., 2020).

6.8. Conclusion

Extremist mindset can lead to violent extremist acts such as terrorism and domestic hate crimes; thus, it is essential to identify contributory factors and where intervention may be appropriate to reduce the extremist mindset when there is a risk of associated violent behaviours. This thesis aimed at exploring the extremist mindset and the role of exposure to media reports of terrorism. The thesis investigated potential contributory factors to the extremist mindset and its possible consequences. The contributory factors of interest are personality traits, media reporting of terrorist attacks, and conspiracist ideation. The key consequence explored is pro- attitudes for domestic hate crimes.

A systematic review on the consequences of indirect exposure to terrorist attacks was conducted. Due to the heterogeneity of the studies, data was synthesised narratively. A cross-sectional study was conducted to examine the factors influencing the extremist mindset and the impact of media on pro-hate crime attitudes. 186 participants were recruited

online via social media platforms. Data were analysed quantitively using SPSS and a brief thematic analysis was also conducted to review generic comments.

Findings confirmed that exposure to media coverage of terrorism has emotional and psychological consequences and is associated with vicarious trauma. Conspiracy belief and paranoia were found to significantly influence the extremist mindset. Sadism and honesty-humility were also found to be of predictive value of extremism. Strong associations between extremism and the dark tetrad were also identified. Furthermore, significant increase in pro-attitudes towards hate crimes following exposure to a news article about a terrorist threat was found. Additionally, several negative psychological effects were observed following indirect exposure to terrorism via the media.

This has drastic implication for media firms, and the frequency and type of images related to terrorism they broadcast. It is recommended for future studies to examine the wider impact of media coverage of traumatic events. Options to support potential victims of indirect victimisation of terrorism should also be developed. Media coverage of terrorist threats was also found to increase extremist views and attitudes. This thesis adds to the literature on extremism and hate

crime prevention. Further research should explore the link between media coverage of other threatening situations e.g., Brexit, Coronavirus and increases in extremist views and behaviours. Conspiracy belief, paranoia, sadism, and honesty-humility traits were found to significantly influence the extremist mindset. Belief in conspiracy belief was found to be one of the main factors influencing the extremist mindset. The GCB scale measuring such beliefs was reviewed and reported as a valid and reliable tool to use; however, caution regarding the cultural and temporal limitation of measuring conspiracist ideation was discussed. These results have practical implications for the prevention of extremism.

6.8 Final remark

"No one is born hating another person because of the colour of his skin, or his background or his religion. People learn to hate, and if they can learn to hate, they can be taught to love, for love comes more naturally to the human heart than its opposite" (Mandela, 1994)

References

Abalakina-Paap, M., Stephan, W. G., Craig, T., & Gregory, W. L. (1999). Beliefs in conspiracies. *Political Psychology*, *20*(3), 637–647. https://doi.org/10.1111/0162-895X.00160

Aber, J. L., Gershoff, E. T., Ware, A., & Kotler, J. A. (2004). Estimating the effects of september 11th and other forms of violence on the mental health and social development of New York City's youth: A matter of context. *Applied Developmental Science*, *8*(3), 111–129. https://doi.org/10.1207/s1532480xads0803_2

Ahern, J., Galea, S., Resnick, H., Kilpatrick, D., Bucuvalas, M., Gold, J., & Vlahov, D. (2002). Television images and psychological symptoms after the September 11 terrorist attacks. *Psychiatry*, *65*(4), 289–300. https://doi.org/10.1521/psyc.65.4.289.20240

Allsopp, K., Brewin, C. R., Barrett, A., Williams, R., Hind, D., Chitsabesan, P., & French, P. (2019). Responding to mental health needs after terror attacks. *The BMJ*, *366*. https://doi.org/10.1136/bmj.l4828

Aly, A., Taylor, E., & Karnovsky, S. (2014). Moral disengagement and building resilience to violent extremism: An education intervention. *Studies in Conflict and Terrorism*, *37*(4), 369–385. https://doi.org/10.1080/1057610X.2014.879379

Anderson, C. A., & Bushman, B. J. (2003). *Human Aggression* (Vol. 53). Annual Reviews. https://www.annualreviews.org/doi/abs/10.1146/annurev.psych.53.100901.135231

Anderson, C. A., & Bushman, B. J. (2018). Media violence and the general aggression model. *Journal of Social Issues*, *74*(2), 386–413. https://doi.org/10.1111/JOSI.12275

Ashton, M. C., & Lee, K. (2009). The HEXACO-60: A short measure of the major dimensions of personality. *Journal of Personality Assessment*. https://doi.org/10.1080/00223890902935878

Atari, M., Afhami, R., & Swami, V. (2019). Psychometric assessments of Persian translations of three measures of conspiracist beliefs. *PLoS ONE*, *14*(4). https://doi.org/10.1371/journal.pone.0215202

Bajo, M., Blanco, A., Stavraki, M., Gandarillas, B., Cancela, A., Requero, B., & Díaz, D. (2018). Post-traumatic cognitions and quality of life in terrorism victims: The role of well-being in indirect versus direct exposure. *Health and Quality of Life Outcomes*, *16*(1). https://doi.org/10.1186/s12955-018-0923-x

Ball-Rokeach, S. J., & Defleur, M. L. (1976). A Dependency Model of Mass-Media Effects. *Communication Research*, *3*(1), 3–21. https://doi.org/10.1177/009365027600300101

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Barlett, C. P., & Anderson, C. A. (2013). *Examining media effects the general aggression and general learning models*.

Barron, D., Morgan, K., & Towell, T. (2014). Associations between schizotypy and belief in conspiracist ideation. *Personality and Individual Differences*, *20*, 156–159. https://www.sciencedirect.com/science/article/pii/S0191886914003821

Bar-Tal, D., Graumann, C. F., Kruglanski, A. W., & Stroebe, W. (1989). *Stereotyping and prejudice: Changing conceptions*. Springer-Verlag Publishing. https://psycnet.apa.org/record/1989-97993-000

Bartlett, J., & Miller, C. (2010). The power of unreason: conspiracy theories, extremism and counter-terrorism. In *Demos* (Issue August). Demos. http://www.demos.co.uk/files/Conspiracy_theories_paper.pdf?1282913891

Basra, R., & Neumann, P. R. (2016). Criminal pasts, terrorist futures : European jihadists and the new crime-terror nexus. *Perspectives on Terrorism*, *10*(6), 25–40.

Baumeister, R. F., & Campbell, W. K. (1999). The intrinsic appeal of evil: sadism, sensational thrills, and threatened egotism. *Personality and Social Psychology Review : An Official Journal of the Society for Personality and Social Psychology, Inc*, *3*(3), 210–221. https://doi.org/10.1207/s15327957pspr0303_4

Beck, A. (1979). *Cognitive therapy and the emotional disorders*. https://books.google.com/books?hl=en&lr=&id=nSFvAAAAQBAJ&oi=fnd&pg=PT8&ots=FgeB3yRB_u&sig=4x_8HzKgOT0er8R8oV6s-DxWbmc

Biddlestone, M., Green, R., & Douglas, K. M. (2020). Cultural orientation, power, belief in conspiracy theories, and intentions to reduce the spread of COVID-19. *British Journal of Social Psychology*, *59*(3), 663–673. https://doi.org/10.1111/BJSO.12397

Bilewicz, M., Winiewski, M., Kofta, M., & Wójcik, A. (2013). Harmful ideas, the structure and consequences of anti-semitic beliefs in Poland. *Political Psychology*, *34*(6), 821–839. https://doi.org/10.1111/POPS.12024

Blanchard, E. B., Kuhn, E., Rowell, D. L., Hickling, E. J., Wittrock, D., Rogers, R. L., Johnson, M. R., & Steckler, D. C. (2004). Studies of the vicarious traumatization of college students by the September 11th attacks: Effects of proximity, exposure and connectedness. *Behaviour*

Research and Therapy, *42*(2), 191–205. https://doi.org/10.1016/S0005-7967(03)00118-9

Blee, K. (2005). Women and organized racial terrorism in the United States. *Studies in Conflict and Terrorism*, *28*(5), 421–433. https://doi.org/10.1080/10576100500180303

Bogart, L. M., Wagner, G., Galvan, F. H., & Banks, D. (2010). Conspiracy beliefs about HIV are related to antiretroviral treatment nonadherence among African American men with HIV. *Journal of Acquired Immune Deficiency Syndromes (1999)*, *53*(5), 648. https://doi.org/10.1097/QAI.0B013E3181C57DBC

Book, A., Visser, B. A., Blais, J., Hosker-Field, A., Methot-Jones, T., Gauthier, N. Y., Volk, A., Holden, R. R., & D'Agata, M. T. (2016). Unpacking more "evil": What is at the core of the dark tetrad? *Personality and Individual Differences*, *90*, 269–272. https://doi.org/10.1016/j.paid.2015.11.009

Book, A., Visser, B. A., & Volk, A. A. (2015). Unpacking "evil": Claiming the core of the Dark Triad. In *Personality and Individual Differences*. https://doi.org/10.1016/j.paid.2014.09.016

Bronstein, M. v., Pennycook, G., Bear, A., Rand, D. G., & Cannon, T. D. (2018). Belief in fake news is associated with delusionality, dogmatism, religious fundamentalism, and reduced analytic thinking. *Journal of*

Applied Research in Memory and Cognition, *8*(1), 108–117. https://doi.org/10.1016/j.jarmac.2018.09.005

Brotherton, R., & Eser, S. (2015). Bored to fears: Boredom proneness, paranoia, and conspiracy theories. *Personality and Individual Differences*, *80*, 1–5. https://doi.org/10.1016/j.paid.2015.02.011

Brotherton, R., & French, C. C. (2014). Belief in conspiracy theories and susceptibility to the conjunction fallacy. *Applied Cognitive Psychology*, *28*(2), 238–248. https://doi.org/10.1002/ACP.2995

Brotherton, R., & French, C. C. (2015). Intention seekers: conspiracist ideation and biased attributions of intentionality. *PloS One*, *10*(5). https://doi.org/10.1371/JOURNAL.PONE.0124125

Brotherton, R., French, C. C., & Pickering, A. D. (2013). Measuring belief in conspiracy theories: The Generic Conspiracist Beliefs scale. *Frontiers in Psychology*, *4*(MAY). https://doi.org/10.3389/fpsyg.2013.00279

Bruder, M., Haffke, P., Neave, N., Nouripanah, N., & Imhoff, R. (2013). Measuring individual differences in generic beliefs in conspiracy theories across cultures: Conspiracy mentality questionnaire. *Frontiers in Psychology*, *0*, 225. https://doi.org/10.3389/FPSYG.2013.00225

Buckels, E., Jones, D., & Paulhus, D. (2013). Behavioral confirmation of everyday sadism. *Psychological Science*, *24*(11), 2201–2209. https://doi.org/10.1177/0956797613490749

Buckley, K., & Anderson, C. (2006). A theoretical model of the effects and consequences of playing video games. In P. PVorderer & J. Bryant (Eds.), *Playing video games: Motives, responses, and consequences* (pp. 363–378). Lawrence Erlbaum Associates Publishers. https://psycnet.apa.org/record/2006-05034-024

Butler, L. D., Koopman, C., Azarow, J., Blasey, C. M., Magdalene, J. C., DiMiceli, S., Seagraves, D. A., Hastings, T. A., Chen, X.-H., Garlan, R. W., Kraemer, H. C., & Spiegel, D. (2009). Psychosocial predictors of resilience after the September 11, 2001 terrorist attacks. *Journal of Nervous & Mental Disease*, *197*(4), 266–273. https://doi.org/10.1097/NMD.0b013e31819d9334

Campbell, W. K., Hoffman, B. J., Campbell, S. M., & Marchisio, G. (2011). Narcissism in organizational contexts. *Human Resource Management Review*, *21*(4), 268–284. https://doi.org/10.1016/j.hrmr.2010.10.007

Campion, K. (2020). Women in the extreme and radical right: Forms of participation and their implications. *Social Sciences*, *9*(9). https://doi.org/10.3390/SOCSCI9090149

Cardeña, E., Koopman, C., Classen, C., Waelde, L. C., & Spiegel, D. (2000). Psychometric properties of the Stanford Acute Stress Reaction Questionnaire (SASRQ): A valid and reliable measure of acute stress. *Journal of Traumatic Stress*, *13*(4). https://doi.org/10.1023/A:1007822603186

Cella, M., Sisti, D., Rocchi, M. B. L., & Preti, A. (2011). Delusional profiles among young adults: A latent class analysis of delusion proneness. *Psychiatry Research*, *185*, 97–101. https://doi.org/10.1016/j.psychres.2010.04.054

Chabrol, H., Van Leeuwen, N., Rodgers, R., & Séjourné, N. (2009). Contributions of psychopathic, narcissistic, Machiavellian, and sadistic personality traits to juvenile delinquency. *Personality and Individual Differences*, *47*(7), 734–739. https://doi.org/10.1016/j.paid.2009.06.020

Chavis, A., Hudnut-Beumler, J., Webb, M. W., Neely, J. A., Bickman, L., Dietrich, M. S., & Scholer, S. J. (2013). A brief intervention affects parents' attitudes toward using less physical punishment. *Child Abuse & Neglect*, *37*(12), 1192–1201. https://doi.org/10.1016/J.CHIABU.2013.06.003

Chiricos, T., Padgett, K., & Gertz, M. (2000). Fear, TV news, and the reality of crime. *Criminology*, *38*(3). https://doi.org/10.1111/j.1745-9125.2000.tb00905.x

Cho, J., Boyle, M. P., Keum, H., Shevy, M. D., McLeod, D. M., Shah, D. v., & Pan, Z. (2003). Media, terrorism, and emotionality: Emotional differences in media content and public reactions to the September 11th terrorist attacks. *Journal of Broadcasting &*

Electronic Media, *47*(3), 309–327. https://doi.org/10.1207/s15506878jobem4703_1

Choma, B. L., Charlesford, J. J., Dalling, L., & Smith, K. (2015). Effects of viewing 9/11 footage on distress and Islamophobia: A temporally expanded approach. *Journal of Applied Social Psychology*, *45*(6), 345–354. https://doi.org/10.1111/jasp.12300

Christmann, K. (2012). Preventing religious radicalisation and violent extremism: A systematic review of the research evidence. *Youth Justice Board*, 1–77. https://doi.org/10.13140/2.1.4641.6169

Cichocka, A., Marchlewska, M., & de Zavala, A. G. (2016). Does self-love or self-hate predict conspiracy beliefs? Narcissism, self-esteem, and the endorsement of conspiracy theories. *Social Psychological and Personality Science*, *7*(2), 157–166. https://doi.org/10.1177/1948550615616170

Clarke, R. V. G., & Newman, G. R. (2006). *Outsmarting the Terrorists*. https://books.google.com/books?id=nkP9aU1dMFQC&pgis=1

Cohen-Louck, K., & Levy, I. (2021). Viruism: The need for a new term describing COVID-19 impact in context of viral victimization. *Psychological Trauma: Theory, Research, Practice, and Policy*, *13*(1). https://doi.org/10.1037/tra0000945

Criss, D. (2017). *When is a crime a hate crime and when is it terrorism?* https://edition.cnn.com/2017/04/19/us/hate-crime-or-terrorism-definition-trnd/index.html

Crone, M., & Harrow, M. (2011). Homegrown terrorism in the West. *Terrorism and Political Violence*, *23*(4), 521–536. https://doi.org/10.1080/09546553.2011.571556

Crysel, L. C., Crosier, B. S., & Webster, G. D. (2013). The Dark Triad and risk behavior. *Personality and Individual Differences*, *54*(1), 35–40. https://doi.org/10.1016/j.paid.2012.07.029

Dagnall, N., Denovan, A., Drinkwater, K., Parker, A., & Clough, P. (2016). Toward a better understanding of the relationship between belief in the paranormal and statistical bias: The potential role of schizotypy. *Frontiers in Psychology*, *7*(JUL). https://doi.org/10.3389/FPSYG.2016.01045/FULL

Dagnall, N., Drinkwater, K., Parker, A., Denovan, A., & Parton, M. (2015). Conspiracy theory and cognitive style: A worldview. *Frontiers in Psychology*, *6*(FEB). https://doi.org/10.3389/FPSYG.2015.00206

Dahl, R. A. (1989). Democracy and its Critics. In *Democracy and Its Critics*. Yale University Press.

Darwin, H., & Neave, N. (2011). Belief in conspiracy theories. The role of paranormal belief, paranoid ideation and schizotypy. *Personality*

and Individual Differences. https://doi.org/10.1016/j.paid.2011.02.027

Davidson, J. R. T., Book, S. W., Colket, J. T., Tupler, L. A., Roth, S., David, D., Hertzberg, M., Mellman, T., Beckham, J. C., Smith, R. D., Davison, R. M., Katz, R., & Feldman, M. E. (1997). Assessment of a new self-rating scale for post-traumatic stress disorder. *Psychological Medicine*, *27*(1), 153–160. https://doi.org/10.1017/S0033291796004229

Davies, L. (2009). Educating against extremism: Towards a critical politicisation of young people. *International Review of Education*, *55*(2–3), 183–203. https://doi.org/10.1007/s11159-008-9126-8

Denovan, A., Dagnall, N., Drinkwater, K., Parker, A., & Neave, N. (2020). Conspiracist beliefs, intuitive thinking, and schizotypal facets: A further evaluation. *Applied Cognitive Psychology*, *34*(6), 1394–1405. https://doi.org/10.1002/ACP.3716

Dieguez, S., Wagner-Egger, P., & Gauvrit, N. (2015). Nothing happens by accident, or does It? A low prior for randomness does not explain belief in conspiracy theories. *Psychological Science*, *26*(11), 1762–1770. https://doi.org/10.1177/0956797615598740

DiMaggio, C., & Galea, S. (2006). The behavioral consequences of terrorism: A meta-analysis. *Academic Emergency Medicine*, *13*(5), 559–566. https://doi.org/10.1197/j.aem.2005.11.083

Dixon, P., Rehling, G., & Shiwach, R. (1993). Peripheral victims of the Herald of Free Enterprise disaster. *British Journal of Medical Psychology*, *66*(2). https://doi.org/10.1111/j.2044-8341.1993.tb01741.x

Doosje, B., Moghaddam, F. M., Kruglanski, A. W., de Wolf, A., Mann, L., & Feddes, A. R. (2016). Terrorism, radicalization and de-radicalization. *Current Opinion in Psychology*, *11*, 79–84. https://doi.org/10.1016/j.copsyc.2016.06.008

Douglas, K. M., & Sutton, R. M. (2011). Does it take one to know one? Endorsement of conspiracy theories is influenced by personal willingness to conspire. *The British Journal of Social Psychology*, *50*(3), 544–552. https://doi.org/10.1111/J.2044-8309.2010.02018.X

Douglas, K. M., Sutton, R. M., Callan, M. J., Dawtry, R. J., & Harvey, A. J. (2016). Someone is pulling the strings: hypersensitive agency detection and belief in conspiracy theories. *Thinking and Reasoning*, *22*(1), 57–77. https://doi.org/10.1080/13546783.2015.1051586

Douglas, K. M., Sutton, R. M., & Cichocka, A. (2017). The psychology of conspiracy theories. *Current Directions in Psychological Science*, *26*(6), 538–542. https://doi.org/10.1177/0963721417718261

Douglas, K. M., Uscinski, J. E., Sutton, R. M., Cichocka, A., Nefes, T., Ang, C. S., & Deravi, F. (2019). Understanding conspiracy theories. *Political Psychology*, *40*(S1), 3–35. https://doi.org/10.1111/pops.12568

Drinkwater, K., Dagnall, N., Denovan, A., & Neave, N. (2020). Psychometric assessment of the Generic Conspiracist Beliefs Scale. *PLoS ONE*, *15*(3). https://doi.org/10.1371/journal.pone.0230365

Drinkwater, K., Dagnall, N., & Parker, A. (2012). Reality testing, conspiracy theories, and paranormal beliefs. *Journal of Parapsychology*, *76*(1), 57–77. https://e-space.mmu.ac.uk/619337/

du Bois, C. (2017). *Literature Review on Radicalisation*. https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5c2d85f61&appId=PPGMS

Egan, V., Chan, S., & Shorter, G. W. (2014). The Dark Triad, happiness and subjective well-being. *Personality and Individual Differences*, *67*, 17–22. https://doi.org/10.1016/j.paid.2014.01.004

Elzinga, P., Poelmans, J., Viaene, S., Dedene, G., & Morsing, S. (2010). Terrorist threat assessment with formal concept analysis. *ISI 2010 - 2010 IEEE International Conference on Intelligence and Security Informatics: Public Safety and Security*, 77–82. https://doi.org/10.1109/ISI.2010.5484773

Faul, F., Buchner, A., Erdfelder, E., & Mayr, S. (2007). A short tutorial of GPower. *Tutorials in Quantitative Methods for Psychology*, *3*(2), 51–59. https://doi.org/10.20982/tqmp.03.2.p051

Feddes, A., Mann, L., & Doosje, B. (2013). *Scientific approach to formulate indicators and responses to radicalisation: Empirical study*. https://dare.uva.nl/personal/pure/en/publications/scientific-approach-to-formulate-indicators-and-responses-to-radicalisation-empirical-study(0a8b01ac-4e43-4be4-bd43-6815f6679469).html

Federal Bureau of Investigation. (2019). *Anti-government, identity based, and fringe political conspiracy theories very likely motivate some domestic extremists to commit criminal, sometimes violent activity*. https://www.justsecurity.org/wp-content/uploads/2019/08/420379775-fbi-conspiracy-theories-domestic-extremism.pdf

Fenigstein, A., & Vanable, P. A. (1992). Paranoia and Self-Consciousness. *Journal of Personality and Social Psychology*, *62*(1), 129–138. https://doi.org/10.1037/0022-3514.62.1.129

Field, N. P., Classen, C., Butler, L. D., Koopman, C., Zarcone, J., & Spiegel, D. (2001). Revictimization and information processing in women survivors of childhood sexual abuse. *Journal of Anxiety Disorders*, *15*(5). https://doi.org/10.1016/S0887-6185(01)00076-7

Fine, C., Gardner, M., Craigie, J., & Gold, I. (2007). Hopping, skipping or jumping to conclusions? Clarifying the role of the JTC bias in delusions. *Cognitive Neuropsychiatry*, *12*(1), 46–77. https://doi.org/10.1080/13546800600750597

Franks, B., Bangerter, A., Bauer, M. W., Hall, M., & Noort, M. C. (2017). Beyond "monologicality"? Exploring conspiracist worldviews. *Frontiers in Psychology*, *8*(JUN), 861. https://doi.org/10.3389/FPSYG.2017.00861/BIBTEX

Freeman, D., & Garety, P. (2004). *Paranoia: The psychology of persecutory delusions*. Psychology Press. https://www.taylorfrancis.com/books/mono/10.4324/9780203508633/paranoia-daniel-freeman-philippa-garety

Freeman, D., Gittins, M., Pugh, K., Antley, A., Slater, M., & Dunn, G. (2008). What makes one person paranoid and another person anxious? The differential prediction of social anxiety and persecutory ideation in an experimental situation. *Psychological Medicine*, *38*(8), 1121–1132. https://doi.org/10.1017/S0033291708003589

Freeman, D., Pugh, K., & Garety, P. (2008). Jumping to conclusions and paranoid ideation in the general population. *Schizophrenia Research*, *102*(1–3), 254–260. https://doi.org/10.1016/j.schres.2008.03.020

Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The Dark Triad of personality: A 10 Year review. *Social and Personality Psychology Compass*, *7*(3), 199–216. https://doi.org/10.1111/spc3.12018

Galea, S., Nandi, A., & Vlahov, D. (2005). The epidemiology of post-traumatic stress disorder after disasters. *Epidemiologic Reviews*, *27*(1), 78–91. https://doi.org/10.1093/epirev/mxi003

Galily, Y., Yarchi, M., Tamir, I., & Samuel-Azran, T. (2016). The Boston game and the ISIS match: Terrorism, media, and sport. *American Behavioral Scientist*, *60*(9), 1057–1067. https://doi.org/10.1177/0002764216632844

Garety, P. A., & Freeman, D. (2013). The past and future of delusions research: From the inexplicable to the treatable. In *British Journal of Psychiatry* (Vol. 203, Issue 5, pp. 327–333). Cambridge University Press. https://doi.org/10.1192/bjp.bp.113.126953

Gentile, D. A., Anderson, C. A., Yukawa, S., Ihori, N., Saleem, M., Ming, L. K., Shibuya, A., Liau, A. K., Khoo, A., Bushman, B. J., Rowell Huesmann, L., & Sakamoto, A. (2009). The effects of prosocial video games on prosocial behaviors: International evidence from correlational, longitudinal, and experimental studies. *Personality & Social Psychology Bulletin*, *35*(6), 752. https://doi.org/10.1177/0146167209333045

Ghosh, R., Chan, W. Y. A., Manuel, A., & Dilimulati, M. (2017). Can education counter violent religious extremism? *Canadian Foreign Policy Journal*, *23*(2), 117–133. https://doi.org/10.1080/11926422.2016.1165713

Gil-Rivas, V., Holman, E. A., & Silver, R. C. (2004). Adolescent vulnerability following the September 11th terrorist attacks: A study of parents and their children. *Applied Developmental Science*, *8*(3), 130–142. https://doi.org/10.4324/9780203764336-3

Goenjian, A. K., Steinberg, A. M., Najarian, L. M., Fairbanks, L. A., Tashjian, M., & Pynoos, R. S. (2000). Prospective study of posttraumatic stress, anxiety, and depressive reactions after earthquake and political violence. *American Journal of Psychiatry*, *157*(6), 911–916. https://doi.org/10.1176/appi.ajp.157.6.911

Goertzel, T. (1994). Belief in conspiracy theories. *Political Psychology*, *15*(4), 731. https://doi.org/10.2307/3791630

Golan, C., & Shai, S. (2004). *Low intensive conflict* (.). Tel Aviv, Israel: Ma'arachot Publishing, Ministry of Defense Publication.

Goldberg, L. R. (1999). A broad-bandwidth, public-domain, personality inventory measuring the lower-level facets of several Five-Factor models. In I. Mervielde, I. Deary, F. de Fruyt, & F. Ostendorf (Eds.), *Personality Psychology in Europe* (Vol. 7, pp. 7–28).

Tilburg, The Netherlands: Tilburg University Press. https://ipip.ori.org/A%20broad-bandwidth%20inventory.pdf

Gover, A. R., Harper, S. B., & Langton, L. (2020). Anti-Asian hate crime during the COVID-19 pandemic: Exploring the reproduction of inequality. *American Journal of Criminal Justice 2020 45:4*, *45*(4), 647–667. https://doi.org/10.1007/S12103-020-09545-1

Grant, B. F., Dawson, D. A., Stinson, F. S., Chou, P. S., Kay, W., & Pickering, R. (2003). The Alcohol Use Disorder and Associated Disabilities Interview Schedule-IV (AUDADIS-IV): Reliability of alcohol consumption, tobacco use, family history of depression and psychiatric diagnostic modules in a general population sample. *Drug and Alcohol Dependence*, *71*(1). https://doi.org/10.1016/S0376-8716(03)00070-X

Green, D. P., Mc Falls, L. H., & Smith, J. K. (2001). Hate crime: An emergent research Agenda. *Annual Review of Sociology*, *27*(1), 479–504. https://doi.org/10.1146/annurev.soc.27.1.479

Grizzard, M., Huang, J., Weiss, J. K., Novotny, E. R., Fitzgerald, K. S., Ahn, C., Ngoh, Z., Plante, A., & Chu, H. (2017). Graphic violence as moral motivator: The effects of graphically violent content in news. *Mass Communication and Society*, *20*(6). https://doi.org/10.1080/15205436.2017.1339804

Haider, S. (2016). The shooting in Orlando, terrorism or toxic masculinity (or both?). *Men and Masculinities*, *19*(5), 555–565. https://doi.org/10.1177/1097184X16664952

Hall, P. M. (2016). Symbolic interaction. *The Blackwell Encyclopedia of Sociology*, 1–5. https://doi.org/10.1002/9781405165518.WBEOSS310.PUB2

Hanel, P. H. P., & Vione, K. C. (2016). Do student samples provide an accurate estimate of the general public? *PLoS ONE*, *11*(12). https://doi.org/10.1371/JOURNAL.PONE.0168354

Hanes, E., & Machin, S. (2014). Hate crime in the wake of terror attacks: Evidence from 7/7 and 9/11. *Journal of Contemporary Criminal Justice*, *30*(3), 247–267. https://doi.org/10.1177/1043986214536665

Hase, V., Engelke, K. M., & Kieslich, K. (2020). The things we fear. Combining automated and manual content analysis to uncover themes, topics and threats in fear-related news. *Journalism Studies*, *21*(10), 1384–1402. https://doi.org/10.1080/1461670X.2020.1753092

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Most people are not WEIRD. In *Nature* (Vol. 466, Issue 7302, p. 29). Nature Publishing Group. https://doi.org/10.1038/466029a

Holman, E. A., Garfin, D. R., Lubens, P., & Silver, R. C. (2020). Media exposure to collective trauma, mental health, and functioning:

Does it matter what you see? *Clinical Psychological Science*, *8*(1), 111–124. https://doi.org/10.1177/2167702619858300

Holman, E. A., Garfin, D. R., & Silver, R. C. (2014). Media's role in broadcasting acute stress following the Boston Marathon bombings. *Proceedings of the National Academy of Sciences*, *111*(1). https://doi.org/10.1073/pnas.1316265110

Holman, E. A., & Silver, R. C. (2005). Future-oriented thinking and adjustment in a nationwide longitudinal study following the september 11th terrorist attacks. In *Motivation and Emotion* (Vol. 29, Issue 4, pp. 389–410). https://doi.org/10.1007/s11031-006-9018-9

Home Office. (2018). Hate Crime, England and Wales, 2015/16. *UK Home Office*, *October*, 1–40. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/467366/hosb0515.pdf

Home Office. (2021). *Hate crime, England and Wales, 2020 to 2021*. https://www.gov.uk/government/statistics/hate-crime-england-and-wales-2020-to-2021/hate-crime-england-and-wales-2020-to-2021

Huddy, L., Feldman, S., Capelos, T., & Provost, C. (2002). The consequences of terrorism: Disentangling the effects of personal and national threat. *Political Psychology*, *23*(3), 485–509. https://doi.org/10.1111/0162-895X.00295

Imhoff, R., & Bruder, M. (2014). Speaking (un–)truth to power: Conspiracy mentality as a generalised political attitude. *Https://Doi.Org/10.1002/per.1930*, *28*(1), 25–43. https://doi.org/10.1002/PER.1930

Iqbal, M. Z. (2015). The media–terrorism symbiosis: a case study of Mumbai attacks, 2008. *Asian Journal of Communication*, *25*(2), 197–212. https://doi.org/10.1080/01292986.2014.944924

Jack, A., & Egan, V. (2016). Paranoid thinking, cognitive bias and dangerous neighbourhoods: Implications for perception of threat and expectations of victimisation. *International Journal of Social Psychiatry*, *62*(2), 123–132. https://doi.org/10.1177/0020764015599998

Jackson, R., Jarvis, L., Gunning, J., & Breen-Smyth, M. (2011). *Terrorism: A critical introduction*. Macmillan International Higher Education. https://books.google.com/books?hl=en&lr=&id=JTJdAQAAQBAJ&oi=fnd&pg=PR10&dq=Jackson,+R.,+Jarvis,+L.,+Gunning,+J.,+%26+Breen-Smyth,+M.+(2011).+Terrorism:+A+critical+introduction.+&ots=sXWiy6vOEF&sig=D9a8mJ1tlW9pr-J7ZXwvjX3YllQ

Jacobs, L., Damstra, A., Boukes, M., & de Swert, K. (2018). Back to reality: The complex relationship between patterns in immigration

news coverage and real-world developments in Dutch and Flemish newspapers (1999–2015). *Mass Communication and Society*, *21*(4). https://doi.org/10.1080/15205436.2018.1442479

Jacobs, L., & van Spanje, J. (2022). Who's afraid of terror news? The interplay between news consumption patterns, personal experiences and fear of terrorism. *Mass Communication and Society*, 1–23. https://doi.org/10.1080/15205436.2022.2026402

Jakobwitz, S., & Egan, V. (2006). The dark triad and normal personality traits. *Personality and Individual Differences*, *40*(2), 331–339. https://doi.org/10.1016/j.paid.2005.07.006

Johann, M., & Oswald, M. (2019). Emotional effects of terroristic communication: Between professional propaganda and media coverage. *Journal for Deradicalization*, *19*, 219–258. https://doi.org/10.1080/09636412.2017.1280304

Johns, L. C., & Van Os, J. (2001). The continuity of psychotic experiences in the general population. In *Clinical Psychology Review* (Vol. 21, Issue 8, pp. 1125–1141). Pergamon. https://doi.org/10.1016/S0272-7358(01)00103-9

Johnson, J. (2018). The self-radicalization of white men: "Fake news" and the affective networking of paranoia. *Communication, Culture and Critique*, *11*(1), 100–115. https://doi.org/10.1093/ccc/tcx014

Jolley, D., & Douglas, K. M. (2014a). The social consequences of conspiracism: Exposure to conspiracy theories decreases intentions to engage in politics and to reduce one's carbon footprint. *British Journal of Psychology*, *105*(1), 35–56. https://doi.org/10.1111/BJOP.12018

Jolley, D., & Douglas, K. M. (2014b). The effects of anti-vaccine conspiracy theories on vaccination intentions. *PLOS ONE*, *9*(2), e89177. https://doi.org/10.1371/JOURNAL.PONE.0089177

Jolley, D., Douglas, K. M., Leite, A. C., & Schrader, T. (2019). Belief in conspiracy theories and intentions to engage in everyday crime. *British Journal of Social Psychology*, *58*(3), 534–549. https://doi.org/10.1111/bjso.12311

Jolley, D., Douglas, K. M., Skipper, Y., Thomas, E., & Cookson, D. (2021). Measuring adolescents' beliefs in conspiracy theories: Development and validation of the Adolescent Conspiracy Beliefs Questionnaire (ACBQ). *British Journal of Developmental Psychology*, *39*(3), 499–520. https://doi.org/10.1111/bjdp.12368

Jolley, D., Douglas, K. M., & Sutton, R. M. (2018). Blaming a few bad apples to save a threatened barrel: The system-justifying function of conspiracy theories. *Political Psychology*, *39*(2), 465–478. https://doi.org/10.1111/pops.12404

Jolley, D., Mari, S., & Douglas, K. M. (2020). Consequences of conspiracy theories. In *Routledge Handbook of Conspiracy Theories*. Routledge. https://doi.org/10.4324/9780429452734-2_7

Jolley, D., Meleady, R., & Douglas, K. M. (2020). Exposure to intergroup conspiracy theories promotes prejudice which spreads across groups. *British Journal of Psychology*, *111*(1), 17–35. https://doi.org/10.1111/bjop.12385

Jolley, D., & Paterson, J. L. (2020). Pylons ablaze: Examining the role of 5G COVID-19 conspiracy beliefs and support for violence. *British Journal of Social Psychology*, *59*(3), 628–640. https://doi.org/10.1111/bjso.12394

Jones, D. N., & Paulhus, D. L. (2014). Introducing the Short Dark Triad (SD3): A brief measure of dark personality traits. *Assessment*, *21*(1), 28–41. https://doi.org/10.1177/1073191113514105

Jones, D., & Paulhus, D. (2009). Machiavellianism. In M. R. Leary & R. H. Hoyle (Eds.) (Eds.), *Handbook of individual differences in social behavior* (pp. 93–108). The Guilford Press. https://psycnet.apa.org/record/2009-12071-007

Jones, D., & Paulhus, D. (2011). The role of impulsivity in the Dark Triad of personality. *Personality and Individual Differences*, *51*(5), 679–682. https://doi.org/10.1016/j.paid.2011.04.011

Jones, N. M., Thompson, R. R., Dunkel Schetter, C., & Silver, R. C. (2017). Distress and rumor exposure on social media during a campus lockdown. *Proceedings of the National Academy of Sciences*, *114*(44). https://doi.org/10.1073/pnas.1708518114

Jowett, G. S., & O'Donnell, V. (2012). *Propaganda and persuasion* (5th ed.). Sage. https://hiddenhistorycenter.org/wp-content/uploads/2016/10/PropagandaPersuasion2012.pdf

Kampf, Z. (2014). News-Media and Terrorism: Changing Relationship, Changing Definitions. *Sociology Compass*, *8*(1), 1–9. https://doi.org/10.1111/soc4.12099

Kasperson, R. E., Renn, O., Slovic, P., Brown, H. S., Emel, J., Goble, R., Kasperson, J. X., & Ratick, S. (1988). The social amplification of risk: A conceptual framework. *Risk Analysis*, *8*(2), 177–187. https://doi.org/10.1111/J.1539-6924.1988.TB01168.X

Kata, A. (2010). A postmodern Pandora's box: Anti-vaccination misinformation on the Internet. *Vaccine*, *28*, 1709–1716. https://doi.org/10.1016/j.vaccine.2009.12.022

Kay, C. S. (2021). Actors of the most fiendish character: Explaining the associations between the Dark Tetrad and conspiracist ideation. *Personality and Individual Differences*, *171*. https://doi.org/10.1016/j.paid.2020.110543

Keenan, N. (2020). Theories of violence. *Philologia*, *12*(1), 1. https://doi.org/10.21061/ph.222

Keller, C., Siegrist, M., & Gutscher, H. (2006). The role of the affect and availability heuristics in risk communication. *Risk Analysis*, *26*(3), 631–639. https://doi.org/10.1111/J.1539-6924.2006.00773.X

Kennealy, P. J., Skeem, J. L., Walters, G. D., & Camp, J. (2010). Do core interpersonal and affective traits of PCL-R psychopathy interact with antisocial behavior and disinhibition to predict violence? *Psychological Assessment*, *22*(3), 569–580. https://doi.org/10.1037/a0019618

Kessler, R. C., McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., Aguilar-Gaxiola, S., Alhamzawi, A. O., Alonso, J., Angermeyer, M., Benjet, C., Bromet, E., Chatterji, S., De Girolamo, G., Demyttenaere, K., Fayyad, J., Florescu, S., Gal, G., Gureje, O., … Williams, D. R. (2010). Childhood adversities and adult psychopathology in the WHO world mental health surveys. *British Journal of Psychiatry*, *197*(5), 378–385. https://doi.org/10.1192/bjp.bp.110.080499

Kessler, R. C., & Üstün, T. B. (2004). The World Mental Health (WMH) Survey Initiative version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *International Journal of Methods in Psychiatric Research*, *13*(2). https://doi.org/10.1002/mpr.168

Kilpatrick, F. P., & Cantril, H. (1960). Self-anchoring scaling: A measure of individuals' unique reality worlds. *Journal of Individual Psychology*, *16*, 158–173. https://psycnet.apa.org/record/1961-02186-001

Kimonis, E. R., Skeem, J. L., Cauffman, E., & Dmitrieva, J. (2011). Are secondary variants of juvenile psychopathy more reactively violent and less psychosocially mature than primary variants? *Law and Human Behavior*, *35*(5), 381–391. https://doi.org/10.1007/s10979-010-9243-3

Kish-Gephart, J. J., Harrison, D. A., & Treviño, L. K. (2010). Bad apples, bad cases, and bad barrels: Meta-analytic evidence about sources of unethical decisions at work. *Journal of Applied Psychology*, *95*(1), 1–31. https://doi.org/10.1037/a0017103

Klausen, J. (2016). *The role of social networks in the evolution of Al Qaeda-inspired violent extremism in the United States, 1990-2015*. https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=272576

Kline, P. (2015). A handbook of test construction (psychology revivals): Introduction to psychometric design. In *A Handbook of Test Construction (Psychology Revivals)*. Routledge. https://doi.org/10.4324/9781315695990

Kline, R. (2013). *Beyond significance testing: Statistics reform in the behavioral sciences* (2nd ed.). Washington, DC: American

Psychological Association. https://idostatistics.com/kline-2013-beyond-significance-testing-statistics-reform-behavioral-sciences/

Knudsen, H. K., Roman, P. M., Johnson, J. A., & Ducharme, L. J. (2005). A changed America? The effects of September 11th on depressive symptoms and alcohol consumption. *Journal of Health and Social Behavior*, *46*(3), 260–273. https://doi.org/10.1177/002214650504600304

Kofta, M., Soral, W., & Bilewicz, M. (2020). What breeds conspiracy antisemitism? The role of political uncontrollability and uncertainty in the belief in Jewish conspiracy. *Journal of Personality and Social Psychology*. https://doi.org/10.1037/PSPA0000183

Kruglanski, A. W., Fernandez, J. R., Factor, A. R., & Szumowska, E. (2019). Cognitive mechanisms in violent extremism. *Cognition*, *188*(December 2018), 116–123. https://doi.org/10.1016/j.cognition.2018.11.008

Kundnani, A. (2009). *Spooked! How not to prevent violent extremism*. https://www.kundnani.org/wp-content/uploads/spooked.pdf

Lankford, A., & Gillespie, K. (2011). Rehabilitating terrorists through counter-indoctrination: Lessons learned from the Saudi Arabian program. *International Criminal Justice Review*, *21*(2), 118–133. https://doi.org/10.1177/1057567711407333

Lantian, A., Muller, D., Nurra, C., & Douglas, K. M. (2016). Measuring belief in conspiracy theories: Validation of a French and English

single-item scale. *International Review of Social Psychology*, *29*(1), 1–14. https://doi.org/10.5334/IRSP.8/METRICS/

Lawyer, S. R., Resnick, H. S., Galea, S., Ahern, J., Kilpatrick, D. G., & Vlahov, D. (2006). Predictors of peritraumatic reactions and PTSD following the September 11th terrorist attacks. *Psychiatry*, *69*(2), 130–141. https://doi.org/10.1521/psyc.2006.69.2.130

Lee, K., & Ashton, M. C. (2005). Psychopathy, Machiavellianism, and narcissism in the five-factor model and the HEXACO model of personality structure. *Personality and Individual Differences*, *38*(7), 1571–1582. https://doi.org/10.1016/j.paid.2004.09.016

Lee, K., Ashton, M. C., Wiltshire, J., Bourdage, J. S., Visser, B. A., & Gallucci, A. (2013). Sex, power, and money: Prediction from the Dark Triad and Honesty-Humility. *European Journal of Personality*, *27*(2), 169–184. https://doi.org/10.1002/per.1860

Leman, P., & Cinnirella, M. (2007). *A major event has a major cause: Evidence for the role of heuristics in reasoning about conspiracy theories*. https://www.researchgate.net/profile/Patrick-Leman/publication/285852159_A_major_event_has_a_major_cause_Evidence_for_the_role_of_heuristics_in_reasoning_about_conspiracy_theories/links/5de0d2b4a6fdcc2837f3ee98/A-major-event-has-a-major-cause-Evidence-for-the-role-of-heuristics-in-reasoning-about-conspiracy-theories.pdf

Lerner, J. S., Gonzalez, R. M., Small, D. A., & Fischhoff, B. (2003). Effects of fear and anger on perceived risks of terrorism: A national field experiment. *Psychological Science*, *14*(2), 144–150. https://doi.org/10.1111/1467-9280.01433

Liht, J., & Savage, S. (2013). Preventing Violent Extremism through Value Complexity: Being Muslim Being British. *Journal of Strategic Security*, *6*(4), 3. https://doi.org/http://dx.doi.org/10.5038/1944-0472.6.4.3

Liverant, G. I., Hofmann, S. G., & Litz, B. T. (2004). Coping and anxiety in college students after the September 11th terrorist attacks. *Anxiety, Stress and Coping*, *17*(2), 127–139. https://doi.org/10.1080/00033790420002214l2

Lobato, E., Mendoza, J., Sims, V., & Chin, M. (2014). Examining the relationship between conspiracy theories, paranormal beliefs, and pseudoscience acceptance among a university population. *Applied Cognitive Psychology*, *28*(5), 617–625. https://doi.org/10.1002/ACP.3042

Lösel, F., King, S., Bender, D., & Jugl, I. (2018). Protective factors against extremism and violent radicalization: A systematic review of research. *International Journal of Developmental Sciences*, *12*(1–2), 89–102. https://doi.org/10.3233/DEV-170241

Madriaza, P., & Ponsot, A. (2015). Preventing radicalization: A systematic review. In *International Centre for the Prevention of Crime*. International Centre for the Prevention of Crime. https://doi.org/10.13140/RG.2.1.4862.1682

Majima, Y., & Nakamura, H. (2020). Development of the Japanese version of the Generic Conspiracist Beliefs scale (GCBS-J). *Japanese Psychological Research*, *62*(4), 254–267. https://doi.org/10.1111/JPR.12267

Mandela, N. (1994). *Long walk to freedom: The autobiography of Nelson Mandela* (1st ed.). Little Brown and Company. https://www.worldcat.org/title/long-walk-to-freedom-the-autobiography-of-nelson-mandela/oclc/31530423

Marchlewska, M., Cichocka, A., Łozowski, F., Górska, P., & Winiewski, M. (2019). In search of an imaginary enemy: Catholic collective narcissism and the endorsement of gender conspiracy beliefs. *The Journal of Social Psychology*, *159*(6), 766–779. https://doi.org/10.1080/00224545.2019.1586637

Marshall, R. D., Bryant, R. A., Amsel, L., Suh, E. J., Cook, J. M., & Neria, Y. (2007). The psychology of ongoing threat: Relative risk appraisal, the September 11 attacks, and terrorism-related fears. *American Psychologist*, *62*(4), 304–316. https://doi.org/10.1037/0003-066X.62.4.304

Marshall, R. D., & Galea, S. (2004). Science for the community: Assessing mental health after 9/11. *Journal of Clinical Psychiatry*, *65*(1), 37–43. https://doi.org/10.4088/JCP.v65n0106

Maskaliūnaitė, A. (2015). Exploring the theories of radicalization. *International Studies. Interdisciplinary Political and Cultural Journal*, *17*(1), 9–26. https://doi.org/10.1515/IPCJ-2015-0002

Matthes, J., Kaskeleviciute, R., Schmuck, D., von Sikorski, C., Klobasa, C., Knupfer, H., & Saumer, M. (2020). Who differentiates between muslims and Islamist terrorists in terrorism news coverage? An actor-based approach. *Journalism Studies*, *21*(15). https://doi.org/10.1080/1461670X.2020.1812422

Mattsson, C., & Säljö, R. (2018). Violent extremism, national security and prevention. institutional discourses and their implications for schooling. *British Journal of Educational Studies*, *66*(1), 109–125. https://doi.org/10.1080/00071005.2017.1337870

McCauley, C., & Moskalenko, S. (2017). Understanding political radicalization: The two-pyramids model. *American Psychologist*, *72*(3), 205–216. https://doi.org/10.1037/AMP0000062

McGrath, J. J., Saha, S., Lim, C. C. W., Aguilar-Gaxiola, S., Alonso, J., Andrade, L. H., Bromet, E. J., Bruffaerts, R., Caldas de Almeida, J. M., Cardoso, G., de Girolamo, G., Fayyad, J., Florescu, S., Gureje, O., Haro, J. M., Kawakami, N., Koenen, K. C., Kovess-Masfety, V.,

Lee, S., … Kessler, R. C. (2017). Trauma and psychotic experiences: transnational data from the World Mental Health Survey. *British Journal of Psychiatry*, *211*(6). https://doi.org/10.1192/bjp.bp.117.205955

Meyers, J. L., Lowe, S. R., Eaton, N. R., Krueger, R., Grant, B. F., & Hasin, D. (2015). Childhood maltreatment, 9/11 exposure, and latent dimensions of psychopathology: A test of stress sensitization. *Journal of Psychiatric Research*, *68*, 337–345. https://doi.org/10.1016/j.jpsychires.2015.05.005

Miller, A., & Leshner, G. (2007). How viewers process live, breaking, and emotional television news. *Media Psychology*, *10*(1), 23–40. https://doi.org/10.1080/15213260701300915

Millon, T., & Davis, R. (1996). *Disorders of personality: DSM-IV and beyond*. John Wiley & Sons. https://psycnet.apa.org/record/1995-98803-000/

Morin, A. (2016). Framing terror. *Journalism & Mass Communication Quarterly*, *93*(4). https://doi.org/10.1177/1077699016660720

Moulding, R., Nix-Carnell, S., Schnabel, A., Nedeljkovic, M., Burnside, E. E., Lentini, A. F., & Mehzabin, N. (2016). Better the devil you know than a world you don’t? Intolerance of uncertainty and worldview explanations for belief in conspiracy theories.

Personality and Individual Differences, *98*, 345–354. https://doi.org/10.1016/J.PAID.2016.04.060

Mullins, S. (2009). Parallels between crime and terrorism: A social psychological perspective. *Studies in Conflict and Terrorism*, *32*(9), 811–830. https://doi.org/10.1080/10576100903109776

Nacos, B. L., Bloch-Elkon, Y., & Shapiro, R. Y. (2008). Prevention of terrorism in post-9/11 America: News coverage, public perceptions, and the politics of homeland security. *Terrorism and Political Violence*, *20*(1), 1–25. https://doi.org/10.1080/09546550701734028

Nell, V. (2006). Cruelty's rewards: the gratifications of perpetrators and spectators. *The Behavioral and Brain Sciences*, *29*(3), 211–224. https://doi.org/10.1017/S0140525X06009058

Nellis, A. M., & Savage, J. (2012). Does Watching the News Affect Fear of Terrorism? The Importance of Media Exposure on Terrorism Fear. *Crime & Delinquency*, *58*(5). https://doi.org/10.1177/0011128712452961

Neumann, P. R. (2013). The trouble with radicalization. *International Affairs*, *89*(4), 873–893. https://doi.org/10.1111/1468-2346.12049

Newhagen, J. E. (1998). TV news images that induce anger, fear, and disgust: Effects on approach-avoidance and memory. *Journal of*

Broadcasting and Electronic Media, *42*(2), 265–276. https://doi.org/10.1080/08838159809364448

Nixon, R. D. v., & Nishith, P. (2005). Brief report: September 11 attacks: Prior interpersonal trauma, dysfunctional cognitions, and trauma response in a midwestern university sample. *Violence and Victims*, *20*(4). https://doi.org/10.1891/088667005780927610

Norris, F. (2005). *Range, magnitude, and duration of the effects of disasters on mental health: Review update 2005*. New Hampshire: Dartmouth Medical School and National Centre for PTSD. https://www.researchgate.net/publication/228776235_Range_Magnitude_and_Duration_of_the_Effects_of_Disasters_on_Mental_Health_Review_Update_2005

Norris, F. H., Friedman, M. J., & Watson, P. J. (2002). 60,000 Disaster victims speak: Part II. Summary and implications of the disaster mental health research. *Psychiatry*, *65*(3), 240–260. https://doi.org/10.1521/psyc.65.3.240.20169

Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981-2001. *Psychiatry*, *65*(3), 207–239. https://doi.org/https://doi.org/10.1521/psyc.65.3.207.20173

Nouh, M., Jason Nurse, R. C., & Goldsmith, M. (2019). Understanding the radical mind: Identifying signals to detect extremist content on Twitter. *2019 IEEE International Conference on Intelligence and Security Informatics, ISI 2019*, 98–103. https://doi.org/10.1109/ISI.2019.8823548

O'Boyle, E. H., Forsyth, D. R., Banks, G. C., Story, P. A., & White, C. D. (2015). A meta-analytic test of redundancy and relative importance of the Dark Triad and five-factor model of personality. *Journal of Personality*, *83*(6), 644–664. https://doi.org/10.1111/jopy.12126

Ofman, P. S., Mastria, M. A., & Steinberg, J. (1995). Mental health response to terrorism: The World Trade Center bombing. *Journal of Mental Health Counseling*, *17*(3), 312–320. https://doi.org/https://psycnet.apa.org/record/1996-92234-001

Oliver, J. E., & Wood, T. J. (2014). Conspiracy theories and the paranoid style(s) of mass opinion. *American Journal of Political Science*, *58*(4), 952–966. https://doi.org/10.1111/AJPS.12084

Pailing, A., Boon, J., & Egan, V. (2014). Personality, the Dark Triad and violence. *Personality and Individual Differences*, *67*, 81–86. https://doi.org/10.1016/j.paid.2013.11.018

Paulhus, D., Buckels, E., Trapnell, P., & Jones, D. (2021). Screening for dark personalities: The Short Dark Tetrad (SD4). *European Journal*

of Psychological Assessment, *37*(3), 208–222. https://doi.org/10.1027/1015-5759/a000602

Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, *36*(6), 556–563. https://doi.org/10.1016/S0092-6566(02)00505-6

Peña-Sarrionandia, A., Mikolajczak, M., & Gross, J. J. (2015). Integrating emotion regulation and emotional intelligence traditions: a meta-analysis. *Frontiers in Psychology*, *6*(FEB). https://doi.org/10.3389/FPSYG.2015.00160

Pennycook, G., Allan Cheyne, J., Barr, N., Koehler, D. J., & Fugelsang, J. A. (2015). On the reception and detection of pseudo-profound bullshit. *Judgment and Decision Making*, *10*(6), 549–563. http://wisdomofchopra.com.

Petrides, K. v, & Furnham, A. (2006). The role of trait emotional intelligence in a gender-specific model of organizational variables. *Journal of Applied Social Psychology*, *36*(2), 552–569. https://doi.org/https://doi.org/10.1111/j.0021-9029.2006.00019.x

Pfefferbaum, B., Nixon, S. J., Krug, R. S., Tivis, R. D., Moore, V. L., Brown, J. M., Pynoos, R. S., Foy, D., & Gurwitch, R. H. (1999). Clinical needs assessment of middle and high school students following the 1995 Oklahoma City bombing. *American Journal of*

Psychiatry, *156*(7), 1069–1074. https://doi.org/10.1176/ajp.156.7.1069

Pfefferbaum, B., Seale, T. W., Mcdonald, N. B., Brandt, E. N., Rainwater, S. M., Maynard, B. T., Meierhoefer, B., & Miller, P. D. (2000). Posttraumatic stress two years after the Oklahoma city bombing in youths geographically distant from the explosion. *Psychiatry*, *63*(4). https://doi.org/10.1080/00332747.2000.11024929

Pfeiffer, C. P. (2012). Terrorism and its oxygen: A game-theoretic perspective on terrorism and the media. *Behavioral Sciences of Terrorism and Political Aggression*, *4*(3), 212–228. https://doi.org/10.1080/19434472.2011.594629

Pincus, A. L., & Lukowitsky, M. R. (2010). Pathological narcissism and narcissistic personality disorder. *Annual Review of Clinical Psychology*, *6*(1), 421–446. https://doi.org/10.1146/annurev.clinpsy.121208.131215

Pratchett, L., Thorp, L., Wingfield, M., Lowndes, V., & Jabbar, R. (2010). *Preventing support for violent extremism through community interventions: A review of the evidence*. https://researchprofiles.canberra.edu.au/en/publications/preventing-support-for-violent-extremism-through-community-interv

Prins, A., Ouimette, P., Kimerling, R., Camerond, R. P., Hugelshofer, D. S., Shaw-Hegwer, J., Thrailkill, A., Gusman, F. D., & Sheikh, J. I. (2004). The primary care PTSD screen (PC–PTSD): development and operating characteristics. *Primary Care Psychiatry*, *9*(1). https://doi.org/10.1185/135525703125002360

Pyrooz, D. C., & Decker, S. H. (2011). Motives and methods for leaving the gang: Understanding the process of gang desistance. *Journal of Criminal Justice*, *39*(5), 417–425. https://doi.org/10.1016/j.jcrimjus.2011.07.001

Rahimullah, R., Larmar, S., & Abdalla, M. (2013). Understanding violent radicalization amongst Muslims: A review of the literature. *Journal of Psychology and Behavioral Science*, *1*(1). https://www.academia.edu/download/76830751/3.pdf

Ramalingam, V. (2014). *Old threat, new approach: Tackling the far right across Europe guide for policy makers*. https://www.isdglobal.org/wp-content/uploads/2016/03/OldThreatNewApproach_2014.pdf

Redmond, S., Jones, N. M., Holman, E. A., & Silver, R. C. (2019). Who watches an ISIS beheading—And why. *American Psychologist*, *74*(5). https://doi.org/10.1037/amp0000438

Rich, P. B. (2013). Understanding terror, terrorism, and their representations in media and culture. *Studies in Conflict and*

Terrorism, *36*(3), 255–277. https://doi.org/10.1080/1057610X.2013.755915

Robins, L. N. (1981). National Institute of Mental Health Diagnostic Interview Schedule. *Archives of General Psychiatry*, *38*(4). https://doi.org/10.1001/archpsyc.1981.01780290015001

Rubaltelli, E., & Pittarello, A. (2018). Negative emotion and trait emotional intelligence in reaction to terrorist attacks. *Personality and Individual Differences*, *123*, 247–252. https://doi.org/10.1016/j.paid.2017.11.036

Rubaltelli, E., Priolo, G., Scrimin, S., & Moscardino, U. (2020). Media exposure to terrorism and perception of immigrants as a threat: The role of emotional intelligence and psychophysiological self-regulation. *Risk Analysis*. https://doi.org/10.1111/risa.13498

Rubaltelli, E., Scrimin, S., Moscardino, U., Priolo, G., & Buodo, G. (2018). Media exposure to terrorism and people's risk perception: The role of environmental sensitivity and psychophysiological response to stress. *British Journal of Psychology*, *109*(4), 656–673. https://doi.org/10.1111/bjop.12292

Rust, J., & Golombok, S. (2014). Modern psychometrics. In *Modern Psychometrics* (3rd ed.). Routledge. https://doi.org/https://doi.org/10.4324/9781315787527

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6). https://doi.org/10.1037/0022-3514.57.6.1069

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, *69*(4). https://doi.org/10.1037/0022-3514.69.4.719

Saalfeld, V., Ramadan, Z., Bell, V., & Raihani, N. J. (2018). Experimentally induced social threat increases paranoid thinking. *Royal Society Open Science*, *5*(8). https://doi.org/10.1098/rsos.180569

Salmon, D. A., Moulton, L. H., Omer, S. B., DeHart, M. P., Stokley, S., & Halsey, N. A. (2005). Factors associated with refusal of childhood vaccines among parents of school-aged children: a case-control study. *Archives of Pediatrics & Adolescent Medicine*, *159*(5), 470–476. https://doi.org/10.1001/ARCHPEDI.159.5.470

Saylor, C., DeRoma, V., & Swickert, R. (2006). College students with previous exposure to crime report more PTSD after 9-11-2001. *Psychological Reports*, *99*(2), 581–582. https://doi.org/10.2466/pr0.99.2.581-582

Scarcella, A., Page, R., & Furtado, V. (2016). Terrorism, radicalisation, extremism, authoritarianism and fundamentalism: A systematic review of the quality and psychometric properties of assessments. *PLoS ONE*, *11*(12), 1–19. https://doi.org/10.1371/journal.pone.0166947

Schleifer, R. (2006). Psychological operations: A new variation on an age old art: Hezbollah versus Israel. *Studies in Conflict and Terrorism*, *29*(1), 1–19. https://doi.org/10.1080/10576100500351185

Schlenger, W. E., Caddell, J. M., Ebert, L., Jordan, B. K., Rourke, K. M., Wilson, D., Thalji, L., Dennis, J. M., Fairbank, J. A., & Kulka, R. A. (2002). Psychological reactions to terrorist attacks. *JAMA*, *288*(5), 581. https://doi.org/10.1001/jama.288.5.581

Schmid, A. P. (2007). The response problem as a definition problem. *Terrorism and Political Violence*, *4*(4), 7–13. https://doi.org/10.1080/09546559208427172

Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., Zhou, A. J., Kanouse, D. E., Morrison, J. L., & Berry, S. H. (2001). A national survey of stress reactions after the September 11, 2001, terrorist attacks. *New England Journal of Medicine*, *345*(20), 1507–1512. https://doi.org/10.1056/NEJM200111153452024

Scrimin, S., & Rubaltelli, E. (2019). Dehumanization after terrorism: the role of psychophysiological emotion regulation and trait emotional intelligence. *Current Psychology*, 1–8. https://doi.org/10.1007/s12144-019-00189-x

Sederer, L., Ryan, K. L., & Rubin, J. F. (2003). The psychological impact of terrorism: Policy implications. *International Journal of*

Mental Health, *32*(1), 7–19. https://doi.org/10.1080/00207411.2003.11449576

Sellin, T. (1938). Culture conflict and crime. *American Journal of Sociology*, *44*(1), 97–103. https://doi.org/10.1086/217919

Shamseer, L., Moher, D., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. *BMJ*, *349*(jan02 1). https://doi.org/10.1136/bmj.g7647

Shearer, E., & Gottfried, J. (2017, September 7). *News use across social media platforms*. https://www.pewresearch.org/journalism/2017/09/07/news-use-across-social-media-platforms-2017/

Shechory-Bitton, M., & Laufer, A. (2021). Fear of the Unknown: Does Fear of Terrorism Differ From Fear of Contracting COVID-19? *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.660777

Shoshani, A., & Slone, M. (2008). Efficacy of clinical interventions for indirect exposure to terrorism. *International Journal of Stress Management*, *15*(1), 53–75. https://doi.org/10.1037/1072-5245.15.1.53

Silber, M. D., & Bhatt, A. (2007). *Radicalization in the West: The homegrown threat*. https://www.brennancenter.org/sites/default/files/legacy/Justice/20090000.Radicalization.in.the.West-Statement.of.Clarification.pdf

Silver, R. C. (2002). Nationwide longitudinal study of psychological responses to September 11. *JAMA*, *288*(10), 1235. https://doi.org/10.1001/jama.288.10.1235

Slone, M. (2000). Responses to media coverage of terrorism. *Journal of Conflict Resolution*, *44*(4), 508–522. https://doi.org/10.1177/0022002700044004005

Slone, M., & Shoshani, A. (2006). Evaluation of preparatory measures for coping with anxiety raised by media coverage of terrorism. *Journal of Counseling Psychology*, *53*(4), 535–542. https://doi.org/10.1037/0022-0167.53.4.535

Slone, M., & Shoshani, A. (2010). Prevention rather than cure? Primary or secondary intervention for dealing with media exposure to terrorism. *Journal of Counseling and Development*, *88*(4), 440–448. https://doi.org/10.1002/j.1556-6678.2010.tb00044.x

Slone, M., Shoshani, A., & Baumgarten-Katz, I. (2008). The relation between actual exposure to political violence and preparatory intervention for exposure to media coverage of terrorism. *Anxiety,*

Stress and Coping, *21*(3), 243–261. https://doi.org/10.1080/10615800701510124

Slovic, P. (2004). What's fear got to do with it - It's affect we need to worry about. *Missouri Law Review*, *69*. https://heinonline.org/HOL/Page?handle=hein.journals/molr69&id=981&div=&collection=

Slovic, P. (2013). The feeling of risk: New perspectives on risk perception. *The Feeling of Risk: New Perspectives on Risk Perception*, 1–457. https://doi.org/10.4324/9781849776677

Smith, A. (2018). *How radicalization to violent extremism occurs in the United States: What research sponsored by the National Institute of Justice tells us*. https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=272331

Soni, D. (2007). *Conspiracies and cover up*. https://www.channel4.com/news/articles/society/law_order/77%2Bthe%2Bconspiracy%2Btheories/545762.html

Stankov, L., Knežević, G., Saucier, G., Radović, B., & Milovanović, B. (2018). Militant Extremist Mindset and the Assessment of Radicalization in the General Population. *Journal of Individual Differences*, *39*(2), 88–98. https://doi.org/10.1027/1614-0001/a000253

Stankov, L., Saucier, G., & Knežević, G. (2010). Militant extremist mind-Set: Proviolence, vile world, and divine power. *Psychological Assessment*. https://doi.org/10.1037/a0016925

Stein, B. D., Elliott, M. N., Jaycox, L. H., Collins, R. L., Berry, S. H., Klein, D. J., & Schuster, M. A. (2004). A national longitudinal study of the psychological consequences of the September 11, 2001 terrorist attacks: Reactions, impairment, and help-seeking. *Psychiatry: Interpersonal and Biological Processes*, *67*(2). https://doi.org/10.1521/psyc.67.2.105.35964

Stempel, C., Hargrove, T., & Stempel, G. H. (2007). Media use, social structure, and belief in 9/11 conspiracy theories. *Journalism and Mass Communication Quarterly*, *84*(2), 353–372. https://doi.org/10.1177/107769900708400210

Stephens, W., Sieckelinck, S., & Boutellier, H. (2018). Preventing Violent Extremism: A Review of the Literature. *Studies in Conflict and Terrorism*, 1–16. https://doi.org/10.1080/1057610X.2018.1543144

Stern, J. (2016). Radicalization to extremism and mobilization to violence: What have we learned and what can we do about it? *Annals of the American Academy of Political and Social Science*, *668*(1), 102–117. https://doi.org/10.1177/0002716216673807

Stickley, A., Oh, H., Sumiyoshi, T., Narita, Z., Shirama, A., Shin, J. il, & Waldman, K. (2020). The September 11, 2001, terrorist attacks,

media exposure, and psychotic experiences among Asian and Latino Americans. In *Psychiatry and Clinical Neurosciences* (Vol. 74, Issue 10, pp. 572–573). Blackwell Publishing. https://doi.org/10.1111/pcn.13115

Stojanov, A. (2015). Reducing conspiracy theory beliefs. *Psihologija*, *48*(3), 251–266. https://doi.org/10.2298/PSI1503251S

Sui, M., Dunaway, J., Sobek, D., Abad, A., Goodman, L., & Saha, P. (2017). U.S. news coverage of global terrorist incidents. *Mass Communication and Society*, *20*(6). https://doi.org/10.1080/15205436.2017.1350716

Sun, K. (2009). The legal definition of hate crimes and the hate offender's distorted cognitions. *Issues in Mental Health Nursing*, *27*(6), 597–604. https://doi.org/10.1080/01612840600642877

Swahn, M. H., Mahendra, R. R., Paulozzi, L. J., Winston, R. L., Shelley, G. A., Taliano, J., Frazier, L., & Saul, J. R. (2003). Violent attacks on Middle Easterners in the United States during the month following the September 11, 2001 terrorist attacks. *Injury Prevention*, *9*(2), 187–189. https://doi.org/10.1136/ip.9.2.187

Swami, V., Barron, D., Weis, L., Voracek, M., Stieger, S., & Furnham, A. (2017). An examination of the factorial and convergent validity of four measures of conspiracist ideation, with recommendations

for researchers. *PLoS ONE*, *12*(2). https://doi.org/10.1371/journal.pone.0172617

Swami, V., Chamorro-Premuzic, T., & Furnham, A. (2010). Unanswered questions: A preliminary investigation of personality and individual difference predictors of 9/11 conspiracist beliefs. *Applied Cognitive Psychology*, *24*(6), 749–761. https://doi.org/10.1002/acp.1583

Swami, V., Coles, R., Stieger, S., Pietschnig, J., Furnham, A., Rehim, S., & Voracek, M. (2011). Conspiracist ideation in Britain and Austria: Evidence of a monological belief system and associations between individual psychological differences and real-world and fictitious conspiracy theories. *British Journal of Psychology*, *102*(3), 443–463. https://doi.org/10.1111/j.2044-8295.2010.02004.x

Swami, V., & Furnham, A. (2014). Political paranoia and conspiracy theories. In J. W. van Prooijen & P. A. M. van Lange (Eds.), *Power politics, and paranoia: why people are suspicious about their leaders* (pp. 218–236). Cambridge University Press. https://westminsterresearch.westminster.ac.uk/download/572029d8d8be839531fcfb9d159cfc5d10806eeb5459433d7a042480c7f2e9e4/251319/9781107035805c12_p218-236.pdf

Swami, V., Furnham, A., Smyth, N., Weis, L., Lay, A., & Clow, A. (2016). Putting the stress on conspiracy theories: Examining associations between psychological stress, anxiety, and belief in

conspiracy theories. *Personality and Individual Differences*, *99*, 72–76. https://doi.org/10.1016/j.paid.2016.04.084

Swami, V., Pietschnig, J., Tran, U. S., Nader, I. W., Stieger, S., & Voracek, M. (2013). Lunar lies: The impact of informational framing and individual differences in shaping conspiracist beliefs about the moon landings. *Applied Cognitive Psychology*, *27*(1), 71–80. https://doi.org/10.1002/ACP.2873

Swami, V., Voracek, M., Stieger, S., Tran, U. S., & Furnham, A. (2014). Analytic thinking reduces belief in conspiracy theories. *Cognition*, *133*(3), 572–585. https://doi.org/10.1016/J.COGNITION.2014.08.006

Swing, E. L., & Anderson, C. A. (2008). How and what do videogames teach? *Children's Learning in a Digital World*, 64–84. https://doi.org/10.1002/9780470696682.CH3

Tajfel, H., & Turner, J. C. (1982). Social psychology of intergroup relations. *Annual Review of Psychology*, *33*(1), 1–39. https://doi.org/https://doi.org/10.1146/annurev.ps.33.020182.000245

Tamborini, R., Hofer, M., Prabhu, S., Grall, C., Novotny, E. R., Hahn, L., & Klebig, B. (2017). The impact of terrorist attack news on moral intuitions and outgroup prejudice. *Mass Communication and*

Society, *20*(6), 800–824. https://doi.org/10.1080/15205436.2017.1342130

Tang, T. L. P., Chen, Y. J., & Sutarso, T. (2008). Bad apples in bad (business) barrels: The love of money, machiavellianism, risk tolerance, and unethical behavior. *Management Decision*, *46*(2), 243–263. https://doi.org/10.1108/00251740810854140

The Crown Prosecution Service. (2017). *Hate crime*. https://www.cps.gov.uk/crime-info/hate-crime

Thompson, R. R., Holman, E. A., & Silver, R. C. (2020). Worst life events and media exposure to terrorism in a nationally representative U.S. sample. *Journal of Traumatic Stress*, *33*(6), 984–993. https://doi.org/10.1002/jts.22534

Torabi, M. R., & Seo, D. C. (2004). National study of behavioral and life changes since September 11. *Health Education and Behavior*, *31*(2), 179–192. https://doi.org/10.1177/1090198103259183

Törnberg, P. (2018). Echo chambers and viral misinformation: Modeling fake news as complex contagion. *PLoS ONE*, *13*(9), 1–21. https://doi.org/10.1371/journal.pone.0203958

Torok, R. (2013). Developing an explanatory model for the process of online radicalisation and terrorism. *Security Informatics 2013 2:1*, *2*(1), 1–10. https://doi.org/10.1186/2190-8532-2-6

Travis, A. (2008). *MI5 report challenges views on terrorism in Britain*. http://www.guardian.co.uk/uk/2008/aug/20/uksecurity.terrorism1

United Nations Security Council. (2004). *Resolution 1566 (2004)*. https://documents-dds-ny.un.org/doc/UNDOC/GEN/N04/542/82/PDF/N0454282.pdf?OpenElement

Unz, D., Schwab, F., & Winterhoff-Spurk, P. (2008). TV news - The daily horror?: Emotional effects of violent television news. *Journal of Media Psychology*, *20*(4), 141–155. https://doi.org/10.1027/1864-1105.20.4.141

Updegraff, J. A., Silver, R. C., & Holman, E. A. (2008). Searching for and finding meaning in collective trauma: Results from a national longitudinal study of the 9/11 terrorist attacks. *Journal of Personality and Social Psychology*, *95*(3), 709–722. https://doi.org/10.1037/0022-3514.95.3.709

Uribe, R., & Gunter, B. (2007). Are `sensational' news stories more likely to trigger viewers' emotions than non-sensational news stories? *European Journal of Communication*, *22*(2). https://doi.org/10.1177/0267323107076770

USA Department of Defense. (2001). *Dictionary of military and associated terms*. https://irp.fas.org/doddir/dod/jp1_02-april2010.pdf

Uscinski, J., & Parent, J. (2014). *American conspiracy theories*. https://doi.org/https://doi.org/10.1093/acprof:oso/9780199351800.001.0001

Val, E. B., & Linley, P. A. (2006). Posttraumatic growth, positive changes, and negative changes in Madrid residents following the March 11, 2004, Madrid train bombings. *Journal of Loss and Trauma*, *11*(5), 409–424. https://doi.org/10.1080/15325020600685519

van der Tempel, J., & Alcock, J. E. (2015). Relationships between conspiracy mentality, hyperactive agency detection, and schizotypy: Supernatural forces at work? *Personality and Individual Differences*, *82*, 136–141. https://doi.org/10.1016/J.PAID.2015.03.010

van Prooijen, J. W., & Acker, M. (2015). The influence of control on belief in conspiracy theories: conceptual and applied extensions. *Applied Cognitive Psychology*, *29*(5), 753–761. https://doi.org/10.1002/ACP.3161

van Prooijen, J. W., & Douglas, K. M. (2017). Conspiracy theories as part of history: The role of societal crisis situations. *Memory Studies*, *10*(3), 323–333. https://doi.org/10.1177/1750698017701615

van Prooijen, J. W., & Jostmann, N. B. (2013). Belief in conspiracy theories: The influence of uncertainty and perceived morality.

European Journal of Social Psychology, *43*(1), 109–115. https://doi.org/10.1002/EJSP.1922

van Prooijen, J. W., Krouwel, A. P. M., & Pollet, T. v. (2015). Political extremism predicts belief in conspiracy theories. *Http://Dx.Doi.Org/10.1177/1948550614567356*, *6*(5), 570–578. https://doi.org/10.1177/1948550614567356

Velias, A., & Corr, P. J. (2017). Effects of terrorism threat on economic preferences: The role of personality. *Journal of Terrorism Research*, *8*(2). https://doi.org/10.15664/jtr.1305

Verdoux, H., Maurice-Tison, S., Gay, B., Van Os, J., Salamon, R., & Bourgeois, M. L. (1998). A survey of delusional ideation in primary-care patients. *Psychological Medicine*, *28*(1), 127–134. https://doi.org/10.1017/S0033291797005667

Victoroff, J. (2005). The mind of the terrorist: A review and critique of psychological approaches. *Journal of Conflict Resolution*, *49*(1), 3–42. https://doi.org/10.1177/0022002704272040

Wagner-Egger, P., & Bangerter, A. (2007). La vérité est ailleurs: Corrélats de l'adhésion aux théories du complot [The truth lies elsewhere: Correlates of belief in conspiracy theories]. *Revue Internationale de Psychologie Sociale*, *20*(4), 31–61. https://www.cairn.info/revue-internationale-de-psychologie-sociale-2007-4-page-

31.htm?fbclid=IwAR3978Yj0bA8G0Mbx5L6UXDyCDlo04xZ9QmmlE8csF422RQM4ytG0nphbvc

Wai, M., & Tiliopoulos, N. (2012). The affective and cognitive empathic nature of the dark triad of personality. *Personality and Individual Differences*, *52*(7), 794–799. https://doi.org/10.1016/j.paid.2012.01.008

Wanta, W., Golan, G., & Lee, C. (2016). Agenda setting and international news: Media influence on public perceptions of foreign nations. *Journalism and Mass Communication*, *81*(2), 364–377. https://doi.org/10.1177/107769900408100209

Ware, J. E., & Sherbourne, C. D. (1992). The MOS 36-ltem Short-Form Health Survey (SF-36). *Medical Care*, *30*(6). https://doi.org/10.1097/00005650-199206000-00002

Weathers, F., Litz, B., Herman, D., Huska, J., & Keane, T. (1993). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility*. Paper presented at the Annual Convention of the International Society for Traumatic Stress Studies. https://www.researchgate.net/publication/291448760_The_PTSD_Checklist_PCL_Reliability_validity_and_diagnostic_utility

Weinberg, M., Besser, A., Zeigler-Hill, V., & Neria, Y. (2016). Bidirectional associations between hope, optimism and social support, and trauma-related symptoms among survivors of

terrorism and their spouses. *Journal of Research in Personality*, *62*. https://doi.org/10.1016/j.jrp.2016.03.002

Wetcher, J. H. (2007). *Post-September 11: Terrorism exposure, threat appraisal, and distress in college students*. https://www.proquest.com/openview/c913aa1200fae84e479a9931e8c875fe/1?pq-origsite=gscholar&cbl=18750&diss=y

Whittaker, J. O. (1997). Psychological warfare in Vietnam. *Political Psychology*, *18*(1), 165–179. https://doi.org/10.1111/0162-895X.00052

Wirth, W., & Schramm, H. (2005). *Media and emotion* (3rd ed.). Communication research trends. http://cscc.scu.edu/trends/v24/v24_3.pdf

Wolfowicz, M., Litmanovitz, Y., Weisburd, D., & Hasisi, B. (2019). A field-wide systematic review and meta-analysis of putative risk and protective factors for radicalization outcomes. In *Journal of Quantitative Criminology* (Issue 0123456789). Springer US. https://doi.org/10.1007/s10940-019-09439-4

Wood, M. J. (2016). Some dare call it conspiracy: Labelling something a conspiracy theory does not reduce belief in It. *Political Psychology*, *37*(5), 695–705. https://doi.org/10.1111/POPS.12285

Wood, M. J., Douglas, K. M., & Sutton, R. M. (2012). Dead and alive: Beliefs in contradictory conspiracy theories. *Social Psychological*

and Personality Science, *3*(6), 767–773. https://doi.org/10.1177/1948550611434786

Zuckerman, M. (2007). The sensation seeking scale V (SSS-V): Still reliable and valid. *Personality and Individual Differences*, *43*(5), 1303–1305. https://doi.org/10.1016/J.PAID.2007.03.021

Appendices

Appendix A – Inclusion Criteria Checklist

First author, date, country		
Inclusion Criteria	**Criterion met?**	**Comment**
Study design: Is this study a primary research?	Yes Unclear Discuss No	
Population: Is the population living in a western country (Europe, North America)?	Yes Unclear Discuss No	
Outcomes: Are individual psychological impacts of terrorism measured following indirect exposure? Clear psychological impact measured e.g., trauma, stress, depression, anxiety *Excluded measure of fear / fear of future attacks (main aim from terrorism is to produce fear) – interested in what the fear/terrorism exposure led to*	Yes Unclear Discuss No	

Is the outcome measured quantitatively? Is a valid tool used to measure the outcome?		
Intervention/exposure: Have the participants been <u>indirectly</u> exposed to a terrorism? Is the data clear about the indirect exposure – excluded if sample include direct victim *This excludes witnesses to the attacks, knowing someone who died from the attack, emergency responders / health care professionals helping the victims following the attack.*	Yes Unclear Discuss No	
Study inclusion: If all questions answered with yes, include study.	YES NO	

Appendix B – Quality Assessment Tool

The National Institutes of Health (NIH) quality assessment tool for observational cohort and cross-sectional studies www.nhlbi.nih.gov/health-topics/study-quality-assessment-tools			
Major Components	Response options		
1. Was the research question or objective in this paper clearly stated?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
2. Was the study population clearly specified and defined?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
3. Was the participation rate of eligible persons at least 50%?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
5. Was a sample size justification, power description, or variance and effect estimates provided?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
6. For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
7. Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g., categories of exposure, or exposure measured as continuous variable)?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported

9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
10. Was the exposure(s) assessed more than once over time?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
12. Were the outcome assessors blinded to the exposure status of participants?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
13. Was loss to follow-up after baseline 20% or less?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)?	Yes	No	Cannot Determine/ Not Applicable/ Not Reported
Quality Rating	Good	Fair	Poor
Additional Comments (If Poor, please state why):			

Appendix C – Data Extraction Form

Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement (Shamseer et al., 2015).

A) Study Characteristics:

1. Author:
2. Year:
   Article Title:
   Source:
3. Study design:
4. Country:
5. Exposure:
   - Event
   - Type of indirect exposure e.g., describe media type, frequency of exposure
   - Tool used to assess exposure

Notes: other types of exposure reported in the study which will be excluded in this review, add any information relevant to the funding of the study

B) Participant characteristics:

1. Demographics of participants:
   - Target population (inclusion and exclusion)
   - Relevant demographics

C) Study results:

1. Study outcomes:
   - Outcomes measured – type of psychological effect
   - Tool used and validity, assessor blind
2. Number of participants (follow up and dropouts)
3. Statistical analysis:
   - Statistics analysis used (and confounding adjustments – reported in quality assessment.
4. Summary of findings:

D) Notes:

Appendix D – Ethical Approval

University of Nottingham
UK | CHINA | MALAYSIA

Email: FMHS-ResearchEthics@nottingham.ac.uk

Faculty of Medicine & Health Sciences
Research Ethics Committee
c/o Faculty PVC Office
School of Medicine Education Centre
B Floor, Medical School
Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham, NG7 2UH

30 April 2019

Caroline Devismes
Doctorate in Forensic Psychology Student
c/o Dr Vince Egan
Associate Professor of Forensic Psychology Practice
Centre for Family and Forensic Psychology
Psychiatry and Applied Psychology
B23, Yang Fujia Building
Jubilee Campus
Wollaton Road
Nottingham, NG8 1BB

Dear Ms Devismes

Ethics Reference No: 299-1903 **– please always quote**	
Study Title: The presentation of Terrorist threats reported in the media and extremist mind-set: does it impact on attitudes towards hate crimes?	
Chief Investigator/Supervisor: Dr Vince Egan, Associate Professor of Forensic Psychology Practice/Director of MSc Forensic Psychology by Research, DivisionPsychiatry and Applied Psychology	
Lead Investigators/student: Caroline Devismes, Doctorate in Forensic Psychology Student.	
Proposed Start Date: 13.01.2019	**Proposed End Date:** 31.12.2020

Thank you for submitting the above application and the following documents were received:

- FMHS REC Application form and supporting documents version 1.0: 24.02.2019

These have been reviewed and are satisfactory and the study has been given a favourable opinion.

A favourable opinion has been given on the understanding that:

1. The protocol agreed is followed and the Committee is informed of any changes using a notice of amendment form (please request a form).
2. The Chair is informed of any serious or unexpected event.
3. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely

Professor Ravi Mahajan
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee

Appendix E – Recruitment poster



PARTICIPATE NOW

nottingham.onlinesurveys.ac.uk/media-mindset

Your answers will help develop the current research in the field of Forensic Psychology. In turn, we are hoping to gain a better understanding of a certain type of mind-set and its link with media coverage and crime. This survey takes 25 to 30 min to complete in order to efficiently assess your views.

University of Nottingham
UK | CHINA | MALAYSIA

Contact information msxcd10@exmail.nottingham.ac.uk

Appendix F – Debriefing form

Final Page

Thank you for participating as a research participant in the present study. This research project is looking at the impact media coverage of terrorist threats may have on attitudes towards hate crimes. This study also looks at potential predispositions of having extremist views.

Following recent terrorist attacks in England, the Home Office reported an increase of hate crimes. It is possible that ordinary people may become more paranoid and prejudiced in their assumptions following ambiguous media exposure about terrorist threats, leading to an increase in extremist views and acceptance of hate crimes.

Please find below some interesting resources related to this research:

- The origins of countless conspiracy theories – Ted Ed video
- Resources for sceptics – Skeptics magazine website
- How do you prevent extremism? – BBC Website
- How young people join extremist groups and how to stop them – Ted Talk video

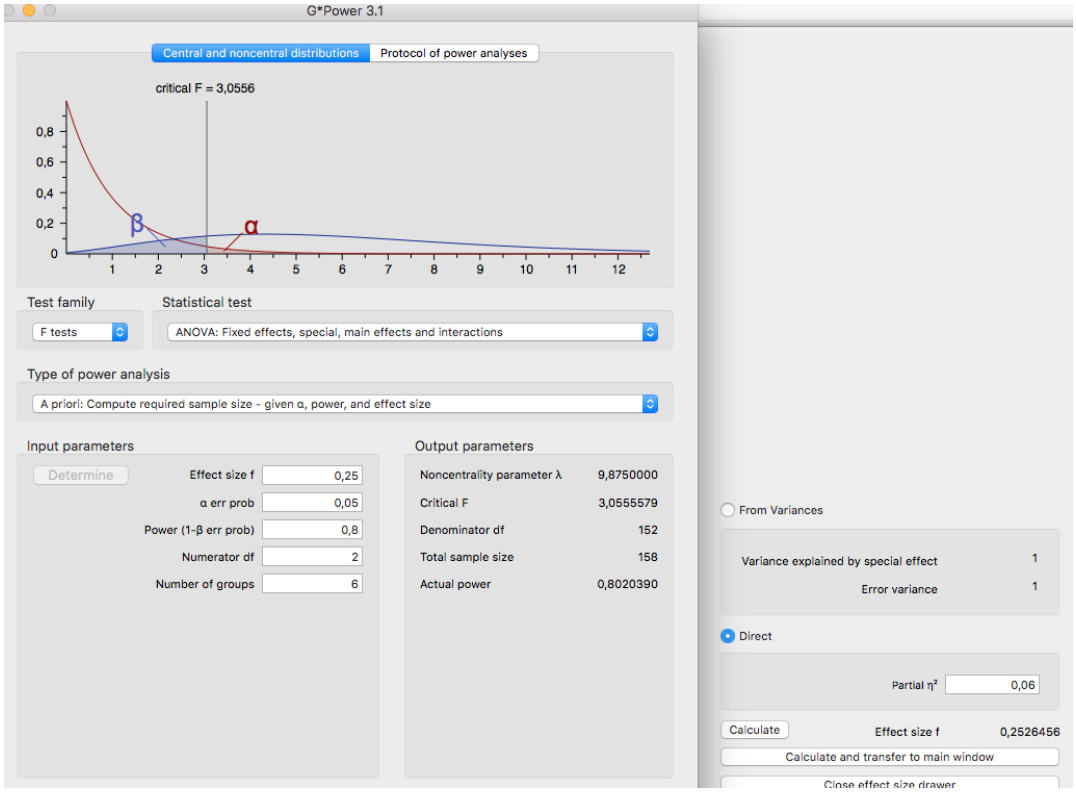
Again, we thank you for your participation in this study. If you know of any friends or acquaintances that are eligible to participate in this study, we request that you not discuss it with them until after they have had the opportunity to participate. Prior knowledge of questions asked during the study can invalidate the results. We greatly appreciate your cooperation.

If you have any questions about this project, you may contact the Lead Researcher Caroline Devismes (msxcd10@exmail.nottingham.ac.uk) or if you have any concerns about any aspect of this study please contact the Research Supervisor: Dr Egan (mczve@exmail.nottingham.ac.uk).

Appendix G – G Power Calculation

- Selected F Test
- Selected ANOVA in statistical test
- Determine Effect Size f: Clicked on Determine > ticked on Direct and add the value of 0.06 = partial n2 (eta squared) conventions: small = .02, medium = .06, large = 0.014. For this calculation, we will assume a medium effect size (0.06) = clicked on calculate effect size
- Alpha error prob = Type I error rate= 0.05
- Power 0.80%
- Numerator df 2:
    - Dependant variables: low, medium and high = 3 – 1 = 2df
    - 2 groups = 2 – 1 = 1df
    - powering interaction (3-1) * (2-1) = 2df
- Number of Groups 6: 2 groups and 3 different anwers 2x3 = 6

There is a 80% chance of correctly rejecting the null hypothesis of no difference with a total of 158 participants.



Appendix H – Questionnaires

1. **The General Paranoia Scale** (GPS; Fenigstein and Vanable, 1992) : Please rate how applicable each belief is to you by selecting a number between 1 (not at all applicable to me) and 5 (extremely applicable to me).

1. Someone has it in for me
2. I sometimes feel as if I'm being punished
3. I believe that I have often been punished without cause
4. Some people have tried to steal my ideas and take credit for them
5. My parents and family find more faults with me than they should
6. No one really cares what happens to you
7. I am sure I get a raw deal from life
8. Most people will use somewhat unfair means to gain a profit or an advantage, rather than lose it
9. I often wonder what hidden reason another person may have for doing something nice for you
10. It is safer to trust no one
11. I have often felt that strangers were looking at me critically
12. Most people make friends because friends are likely to be useful to them
13. Someone has been trying to influence my mind
14. I am sure I have been talked about behind my back
15. Most people inwardly dislike putting themselves out to help other people
16. I tend to be on my guard with people who are somewhat more friendly than I expected
17. People have said insulting and unkind things about me
18. People often disappoint me
19. I am bothered by people outside, in cars, in stores, etc. watching me
20. I have often found people jealous of my good ideas just because they had not thought of them first

2. **The Generic Conspiracist Beliefs Scale** (GCB; Brotherton, French & Pickering, 2013):

Beliefs About the World

There is often debate about whether or not the public is told the whole truth about various important issues. This brief survey is designed to assess your beliefs about some of these subjects. Please indicate the degree to which you believe each statement is likely to be true on the following scale: Definitely not true; Probably not true; Not sure/cannot decide; Probably true; Definitely true

1. The government is involved in the murder of innocent citizens and/or well-known public figures, and keeps this a secret
2. The power held by heads of state is second to that of small unknown groups who really control world politics
3. Secret organizations communicate with extra-terrestrials, but keep this fact from the public
4. The spread of certain viruses and/or diseases is the result of the deliberate, concealed efforts of some organization
5. Groups of scientists manipulate, fabricate, or suppress evidence in order to deceive the public
6. The government permits or perpetrates acts of terrorism on its own soil, disguising its involvement
7. A small, secret group of people is responsible for making all major world decisions, such as going to war
8. Evidence of alien contact is being concealed from the public
9. Technology with mind-control capacities is used on people without their knowledge
10. New and advanced technology which would harm current industry is being suppressed
11. The government uses people as patsies to hide its involvement in criminal activity

12. Certain significant events have been the result of the activity of a small group who secretly manipulate world events
13. Some UFO sightings and rumors are planned or staged in order to distract the public from real alien contact
14. Experiments involving new drugs or technologies are routinely carried out on the public without their knowledge or consent
15. A lot of important information is deliberately concealed from the public out of self-interest

3. **HEXACO-60** (Ashton & Lee, 2009):

On the following pages you will find a series of statements about you. Please read each statement and decide how much you agree or disagree with that statement. Then write your response in the space next to the statement using the following scale: 5 = strongly agree, 4 = agree, 3 = neutral (neither agree nor disagree), 2 = disagree, 1 = strongly disagree. Please answer every statement, even if you are not completely sure of your response.

1 _____ I would be quite bored by a visit to an art gallery.
2 _____ I plan ahead and organize things to avoid scrambling at the last
3 _____ I rarely hold a grudge, even against people who have badly
4 _____ I feel reasonably satisfied with myself overall.
5 _____ I would feel afraid if I had to travel in bad weather conditions.
6 _____ I wouldn't use flattery to get a raise or promotion at work, even if
7 _____ I'm interested in learning about the history and politics of other
8 _____ I often push myself very hard when trying to achieve a goal.
9 _____ People sometimes tell me that I am too critical of others.
10 _____ I rarely express my opinions in group meetings.
11 _____ I sometimes can't help worrying about little things.
12 _____ If I knew that I could never get caught, I would be willing to steal
13 _____ I would enjoy creating a work of art, such as a novel, a song, or a

14 _____ When working on something, I don't pay much attention to small
15 _____ People sometimes tell me that I'm too stubborn.
16 _____ I prefer jobs that involve active social interaction to those that
17 _____ When I suffer from a painful experience, I need someone to make
18 _____ Having a lot of money is not especially important to me.
19 _____ I think that paying attention to radical ideas is a waste of time.
20 _____ I make decisions based on the feeling of the moment rather than
21 _____ People think of me as someone who has a quick temper.
22 _____ On most days, I feel cheerful and optimistic.
23 _____ I feel like crying when I see other people crying.
24 _____ I think that I am entitled to more respect than the average person
25 _____ If I had the opportunity, I would like to attend a classical music
26 _____ When working, I sometimes have difficulties due to being
27 _____ My attitude toward people who have treated me badly is "forgive
28 _____ I feel that I am an unpopular person.
29 _____ When it comes to physical danger, I am very fearful.
30 _____ If I want something from someone, I will laugh at that person's
31 _____ I've never really enjoyed looking through an encyclopedia.
32 _____ I do only the minimum amount of work needed to get by.
33 _____ I tend to be lenient in judging other people.
34 _____ In social situations, I'm usually the one who makes the first move.
35 _____ I worry a lot less than most people do.
36 _____ I would never accept a bribe, even if it were very large.
37 _____ People have often told me that I have a good imagination.
38 _____ I always try to be accurate in my work, even at the expense of
39 _____ I am usually quite flexible in my opinions when people disagree
40 _____ The first thing that I always do in a new place is to make friends.
41 _____ I can handle difficult situations without needing emotional support
42 _____ I would get a lot of pleasure from owning expensive luxury goods.
43 _____ I like people who have unconventional views.
44 _____ I make a lot of mistakes because I don't think before I act.

45 _____ Most people tend to get angry more quickly than I do.
46 _____ Most people are more upbeat and dynamic than I generally am.
47 _____ I feel strong emotions when someone close to me is going away
48 _____ I want people to know that I am an important person of high
49 _____ I don't think of myself as the artistic or creative type.
50 _____ People often call me a perfectionist.
51 _____ Even when people make a lot of mistakes, I rarely say anything
52 _____ I sometimes feel that I am a worthless person.
53 _____ Even in an emergency I wouldn't feel like panicking.
54 _____ I wouldn't pretend to like someone just to get that person to do
55 _____ I find it boring to discuss philosophy.
56 _____ I prefer to do whatever comes to mind, rather than stick to a plan.
57 _____ When people tell me that I'm wrong, my first reaction is to argue
58 _____ When I'm in a group of people, I'm often the one who speaks on
59 _____ I remain unemotional even in situations where most people get
60 _____ I'd be tempted to use counterfeit money, if I were sure I could get

4. **Militant Extremist Mindset Scale** (MEM; Stankov, 2018):

Notes. A 5-point Likert scale was used to assess strong agreement (5) and strong disagreement (1) with the statements.

1. Our enemy's children are like scorpions; they need to be squashed before they grow up.
2. If violence does not solve problems, it is because there was not enough of it.
3. Compromise is just another word for cowardice.
4. Our immeasurable sufferings call for merciless revenge.

5. Frankly, I feel like chopping the head off of those who disagree with me on important matters.

6. Those who advocate peaceful change are the worst enemy of social change.

7. No sacrifice of human lives is too much if it can lead to a better and a more just life.

8. All of our enemies should be treated the same, whether they are men or women, children or adults, armed or unarmed.

9. Today's society suffers from a crisis of values, greed, and corruption.

10. It is hard to behave in a relaxed and carefree way in this soulless and competitive world.

11. Evil has been reincarnated in the cult of markets and the rule of multinational companies.

12. Our people are in danger, everybody is trying to divide us and hurt us.

13. Those who talk about freedom and democracy are really advocating promiscuity and sin.

14. In reality, political freedom is simply an invitation to cause chaos and social disturbances.

15. Most people are like animals: their only concern is to satisfy their bellies and their lust.

16. Fairytales about moral principles are used by the powerful to tyrannize the weak and powerless.

17. One day all people in this world will be united in truth.

18. I believe that a new type of human, free of greed and selfishness, will be created one day.

19. One day, a just world, free of exploitation and dictatorship, will be created.

20. There is a group of people whose uncompromised ideas and brave actions make my own life meaningful and worth living.

21. I am in awe of those who sacrifice their lives to the fight for truth and justice.

22. The unbreakable bond between the members of my group is sealed by the noble goals we are trying to achieve.

23. My people are destined to accomplish important things.

24. Real life begins after one's life on earth.

5. **Short Tetrad: Four Identities Questionnaire** (SD4; Paulhus, et al., 2021):

Rate your agreement with each statement using a 5-point scale: 1 Strongly Disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree.

IDENTITY 1: "CRAFTY"

1. It's not wise to let people know your secrets.

2. Whatever it takes, you must get the important people on your side.
3. Avoid direct conflict with others because they may be useful in the future.
4. Keep a low profile if you want to get your way.
5. Manipulating the situation takes planning.
6. Flattery is a good way to get people on your side.
7. I love it when a tricky plan succeeds.

IDENTITY 2: "SPECIAL"

8. People see me as a natural leader.
9. I have a unique talent for persuading people.
10. Group activities tend to be dull without me.
11. I know that I am special because people keep telling me so.
12. I have some exceptional qualities
13. I'm likely to become a future star in some area.
14. I like to show off every now and then.

IDENTITY 3: "WILD"

15. People often say I'm out of control.
16. I tend to fight against authorities and their rules.
17. I'm tempted to punch people who anger me.
18. I tend to dive in, then ask questions later.
19. I've been in trouble with the law.
20. I sometimes get into dangerous situations.
21. People who mess with me always regret it.

IDENTITY 4: "MEAN"

22. Watching a fist-fight excites me.
23. I really enjoy violent films and video games.
24. It's funny when idiots fall flat on their face.
25. I enjoy watching violent sports.
26. Some people deserve to suffer.
27. I like to troll people on Internet sites.
28. I know how to hurt someone with words alone.

Appendix I – Scenario and attitude questionnaire

A woman was verbally assaulted last night in the street of London. She was walking home from the grocery shop. She was wearing a hijab (a head covering worn in public by some Muslim women) and reported to the police that she was told to go home to her country if she wants to wear her hijab.

How much do you agree or disagree with the following statements?

	Strongly Disagree (1)	Somehwat Disagree (2)	Neither (3)	Somewhat Agree (4)	Strongly Agree (5)
The comment she received was justified					
The woman should not have been wearing her hijab in public					
This is a hate crime (R)					
She deserved what has happened to her					
The attacker should not be prosecuted					
The person who assaulted her was only exercising their right to free speech.					
The woman was unfairly treated (R)					
Total score R=reverse scoring					

Appendix J – Vignettes

Group A – Minimised and Controlled information about terrorism threats

Source – BBC – anonymised

https://www.bbc.co.uk/news/uk-44495366

As fighters for the Islamic State group return home from the Middle East following defeats in Syria and Iraq, UK security services are faced with the difficult job of deciding who could pose a potential terror risk. Haya is in her 30s. She wears a black hijab which leaves her young face uncovered. Haya has just come back to the UK after months in Turkish detention. Her explanation for being there is a version of a story used by many and therefore attracts suspicion. She claims she left London with her husband for Turkey in 2013, moving for his work and taking their young son. At the time, the Islamic State (IS) group was encouraging people to join its self-declared caliphate across the Turkish border in Syria. Haya says that while in Turkey she gave birth to her other two children, but that only two weeks after moving there, her British passport was stolen while she was on a train. This missing passport would be key to the next part of her life, where she and her children would be held in Turkish custody and deported back to the UK on suspicion of terrorism. After moving to Turkey, Haya says that she and her husband had marriage problems and divorced. She says she met a new partner and that he was driving the family through Turkey when they were stopped at a random

checkpoint. Haya said she was asked to show her ID. Not being able to show your passport is a red flag for the Turkish authorities. More than 600 miles away from the border with Syria, Haya and her children were taken to a removal centre. They were placed on the ground floor, which she said was known as "the terrorist wing" with several suspected jihadi brides. When she landed back in England, the police detained her, along with her children, for questioning before telling her she was accused of travelling to Syria to be part of IS. "They don't have any evidence that's the thing - or else they would have convicted me." But with no evidence to prove her version of events, says she knows she is still being watched. Haya's explanation for being in what she calls "the wrong place at the wrong time" is similar to stories told by many other returnees. She was cautious about telling her story and spoke softly and guardedly during our interview. Before she agreed, she asked us to keep her identity secret. It seems there's no bigger taboo than being accused of being a member of IS once you're living back home. According to the Home Office, 900 men, women and children have left the UK for areas occupied by IS in Syria and Iraq since 2012. Of those, 40% have now returned home. The issue for UK security services is telling apart those who travelled for law-abiding purposes - such as humanitarian missions - from those who joined IS.

Group B – Factual Information – control group

Source – Times: anonymised

https://www.theweek.co.uk/isis/91113/jihadi-bride-arrested-at-heathrow-with-two-year-old-son

A British-born suspected "jihadi bride" who gave birth in Islamic State-controlled Syrian territory was arrested after returning to the UK with her toddler son earlier this month, it has emerged. The 30-year-old British woman was released on bail following her arrest at an English Airport under terrorism laws. Authorities across Europe are reportedly preparing for an inpouring of further ISIS brides and their children. "Female immigrants to the Islamic State have been fleeing the caliphate by the hundreds," "From North Africa to Western Europe, the new arrivals are presenting an unexpected challenge to law enforcement officials, who were bracing for an influx of male returnees but instead have found themselves deciding the fate of scores of women and children." The Times says that more than 100 British women are thought to have travelled to Syria and Iraq to join jihadist groups. According to report last May, citing counterterrorism sources and a former jihadi bride, up to ten British women and their children left the extremists' so-called caliphate in the first few months of 2017, and a couple had "already made it back to the UK".

Appendix K – Extended results of regression analysis – Chapter 4

Table 21. Bootstrap Regression Analysis – Demographic Data

	Model Summary		ANOVA		
	R	**Adjusted R**	**F**	**df**	**Sig.**
MEM Total	.26	.02	1.52	8	.16
Nastiness	.22	.003	1.06	8	.40
Grudge	.24	.01	1.35	8	.27
Excuse	.28	.03	1.71	8	.10

Table 22. Bootstrap for coefficients - Demographic Data

	B	BCa 95% CI		p
MEM Total				
Constant	2.36	1.81	2.83	.00
Gender	.02	-.14	.16	.72
Age	-.01	-.01	.00	.07
Years of education	-.00	-.03	.03	.89
Employment	.02	-.11	.16	.73
Ethnicity	.06	-.06	.17	.33
Political Belief	.01	-.07	.09	.74
Education level	-.06	-.14	.01	.16
Religion	.02	-.02	.06	.21
MEM: Nastiness (Pro-Violence)				
Constant	1.34	.52	1.94	.00
Gender	.01	-.23	.31	.96
Age	-.01	-.01	-.00	**.01***
Years of education	.01	-.03	.06	.51
Employment	.12	-.00	.25	.08
Ethnicity	.03	-.08	.14	.63
Political Belief	.03	-.08	.12	.61
Education level	-.06	-.16	.02	.19
Religion	-.00	-.04	.03	.87
MEM: Grudge (Vile World)				
Constant	3.27	2.44	3.98	.00

Gender	-.03	-.22	.13	.73
Age	-.01	-.02	0.0	**.04***
Years of education	-.01	-.05	.02	.41
Employment	-.11	-.30	.08	.22
Ethnicity	.04	-.11	.20	.61
Political Belief	-.04	-.15	.07	.54
Education level	-.01	-.14	.10	.89
Religion	.002	-.044	.04	.94
MEM: Excuse (Utopianism)				
Constant	2.48	1.48	3.38	.00
Gender	.09	-.21	.40	.51
Age	.00	-.01	.01	.99
Years of education	-.01	-.06	.06	.82
Employment	.06	-.18	.30	.59
Ethnicity	.10	-.07	.28	.23
Political Belief	.05	-.08	.19	.44
Education level	-.12	-.25	.01	.11
Religion	.07	-.01	.14	**.05***

*Bootstrap results are based on 2000 bootstrap samples; *p<.05*

Simplified coding for categorical demographic data:

- Gender: male, female, others
- Education: no qualification, GCSE, A level, higher education, others
- Employment: working, not working, others

- Religion: religious, not religious, others
- Ethnicity: white, black, other ethnicities
- Political beliefs: left, right, others, none

Table 23. Coefficients of the regression analysis

	MEM Total			MEM Nastiness			MEM Grudge			MEM Excuse		
	B	**t**	**p**	**B**	**t**	**p**	**B**	**t**	**p**	**B**	**t**	**p**
Constant	.66	1.82	.07	1.37	3.23	.001	.82	1.66	.10	-.23	-.35	.73
Age	-.002	-.58	.57	-.001	-.28	.78	-.003	-.83	.41	-.001	-.14	.89
HEXACO Honesty-humility	.07	1.33	.19	-.07	-1.09	.28	.02	.28	.78	.25	2.68	.008
HEXACO Agreeableness	-.02	-.32	.75	-.08	-1.39	.17	-.04	-.53	.60	.07	.78	.44
SD4 Machiavellianism	.04	.73	.47	.05	.73	.47	.08	1.07	.29	-.01	-.08	.94
SD4 Narcissism	.05	.98	.33	.02	.28	.78	-.04	-.58	.56	.16	1.88	.06
SD4 Psychopathy	.08	1.33	.19	.07	.95	.35	.13	1.53	.13	.04	.42	.68
SD4 Sadism	.03	.62	.54	.14	2.31	.02	.08	1.13	.26	-.13	-1.34	.18
GCB Total	.14	3.16	.002	-.08	-1.49	.14	.22	3.47	.001	.29	3.56	.000
Paranoia	.01	3.66	.000	.004	1.38	.17	.01	3.07	.002	.01	2.81	.005

Appendix L – Poster presentation at BPS conference, Forensic Psychology Annual Conference in June 2021

PREDICTORS OF EXTREMISM IN THE GENERAL POPULATION

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INTRODUCTION

- **Political and religious violence** has been driven by extremism throughout history and across nations.
- This behaviour is also known as **terrorism.**
- **Extremism** remains one of our world's greatest threats with violent acts, political discords, wars and injustices occurring daily.
- For many countries, **understanding extremism** remains an urgent matter especially when such ideologies lead to violence (Lösel et al, 2018).
- Nevertheless, little is known about extremism as a **psychological construct**, and how it should be addressed in our current society.
- This study analysed the relationships between extremist mindset, normal personality traits, dark tetrad traits, paranoia, and belief in conspiracy in a general population sample.

THE AIM IS TO UNDERSTAND PERSONAL DISPOSITIONS UNDERLYING EXTREMIST VIEWS





METHOD

- Cross-sectional study within a general population sample (n=186).
- Online psychometric questionnaires to measure predisposition to extremist views and behaviours.
- A multiple regression analysis was conducted to see if extremist mindsets (MEM) could be predicted by personality traits (HEXACO), the Dark Tetrad (SD4), conspiracy belief (CGB), paranoia, and demographics.
- Correlation and factor analyses were also conducted to identified associations between these constructs.





RESULTS

- **Conspiracy belief** (*b*=.14, *t*=3.16, *p*=.002) **and paranoia** (*b*= .01, *t*=3.67, *p*=.001) were found to be strong predictors of extremism. **Sadism** (*b*=.14, *t*=2.31, *p*=.02) **and honesty-humility** (*b*=.25, *t*=2.68, *p*=.008) were also of predictive value for facets of extremism.
- Strong associations between extremism and the **Dark Tetrad** were found (*p*=<.01).
- Extremist mindset was negatively correlated with **honest-humility and agreeableness** (*p*=<.05). Lower honesty-humility predicts general exploitative strategies; whereas lower agreeableness predicts anti-social outcomes, such as violence (Lee et al., 2013).
- Demographics and background information were not predictive of the MEM scores.
- These findings were found from a general population sample, indicating that **extremist mindset can be found within a generic sample** rather than a forensic or specific population.

IMPLICATIONS

- Future preventive policies should focus on addressing conspiracy theories and paranoid thinking.
- Intervention to reduce sadistic traits should be used within extremism prevention programmes.
- Future research could also incorporate the identified personality traits within tailored intervention to reduce extremism.
- Further studies should investigate age desistance.
- Gender perspective of radicalisation also remains an under-researched field (Stephens et al., 2018).
- Extremist mindset was non-significantly higher for less educated individuals. The development of certain cognitive abilities including critical thinking could reduce extremism (Ghosh et al, 2017; Stephens et al, 2018)

CONCLUSION

- It is of paramount importance to understand the mindset of individuals who hold extremist views to help **identify individuals at risk of becoming extreme** in their views or at risk of committing violent extremist acts.
- This study identifies **conspiracy thinking, paranoia and personality traits as predictors of extremist mindset**.
- Policy makers should focus on addressing dispositions associated with extremist mindsets to reduce the risk of radicalisation amongst vulnerable individuals.
- Future review of existing risk assessments or development of new tools should take into account these findings to more accurately identify individuals at risk of becoming extremist in the wider population.





IT IS OF PARAMOUNT IMPORTANCE TO UNDERSTAND THE MINDSET OF INDIVIDUALS WHO HOLD EXTREMIST VIEWS

References

Ghosh, R., Chan, W. Y. A., Manuel, A., & Dilimulati, M. (2017). Can education counter violent religious extremism? *Canadian Foreign Policy Journal, 23*(2), 117–133. https://doi.org/10.1080/11926422.2016.1165713; Lee, K., Ashton, M. C., Wiltshire, J., Bourdage, J. S., Visser, B. A., & Gallucci, A. (2013). Sex, power, and money: Prediction from the Dark Triad and Honesty-Humility. *European Journal of Personality, 27*(2), 169–184. https://doi.org/10.1002/per.1860; Lösel, F., King, S., Bender, D., & Jugl, I. (2018). Protective factors against extremism and violent radicalization: A systematic review of research. *International Journal of Developmental Sciences, 12*(1–2), 89–102. https://doi.org/10.3233/DEV-170241; Stephens, W., Sieckelinck, S., & Boutellier, H. (2018). Preventing violent extremism: A review of the literature. *Studies in Conflict and Terrorism, 0*(0), 1–16. https://doi.org/10.1080/1057610X.2018.1543144; images: Google images

Appendix M – Description of tools used in convergent validity table

Belief in Conspiracy Theories Inventory (BCTI; Swami et al., 2010) This is a 14-item scale consisting of items describing specific real-world events or organizations (α=0.92).
9/11 conspiracist beliefs scale (Swami et al., 2010) The main scale consists of 17 items measuring specific conspiracy theory relating to the 9/11 terrorist attacks. The scale has two consists of two facets: 9/11 conspiracist beliefs (10 items) and beliefs that the U.S. government conspired to cover-up what happened on September 11, 2011 (7 items). (α = .97)
Beliefs in 7/7 conspiracy theories (Swami et al., 2011) This 12-item scale measures the range of conspiracy theories specific to the London bombings of July 7, 2005 (α = 0.95).
Belief in fictitious Red Bull conspiracy theories (Swami et al., 2011) This 12-item scale measured a range of novel conspiracy theories regarding the energy drink Red Bull (α = 0.90).
Measure of 'true' conspiracy theories (Swami et al., 2010) The BCTI-True contained 7-items that are generally considered to represent "accepted" or "true conspiracies. The items are designed to represent the full spectrum from knowingly fictional theories to common but debated theories to generally accepted theories.
Conspiracy Mentality Questionnaire (Bruder et al., 2013) There are 12- and 5-item version of the CMQ, we used the 5-item version of the scale. Higher scores on this scale reflect greater generic conspiracist ideation (α=0.84).
One-item conspiracy theory (Lantian et al., 2016) Participants are presented with instructions that allude to some political and social events being debated. Participants are then asked to rate the following item.
The classical conspiracy theory (Wagner-Egger & Bangerter, 2007) This four-item scale measures adherence to classical conspiracy theories (the September 11 attacks, the assassination of John F. Kennedy, Princess Diana's car crash, and the Apollo 11 moon landing).
Endorsement of 5 US historical conspiracy theories (Wood, 2016) This scale has 5 items following the same format as the GCB. Rather than speculative conspiracy theories, these items referred to confirmed episodes in American history in which the government or other powerful actors engaged in conspiratorial conduct (α = 83).
Anti-vaccination beliefs (Jolley & Douglas, 2014b) This 8-item tool measures belief in anti-vaccination conspiracy theories (α = .85).