

**More angry than scared? A study of Public Reactions to the Manchester Arena and London Bridge terror attacks of 2017.**

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**ABSTRACT**

Although public reaction to disaster has been the subject of much research, reactions to acts of terrorism have been studied less, sustaining a common assumption that fear is the generic response. The present paper tests this assumption through a survey of reactions to the Manchester Arena bombing and London Bridge attack of 2017, and the findings suggest that an important likely additional modal citizen reaction to such events is one of anger at the perpetrators, holding important implications for public policy and security practice in the wake of such acts.

**Keywords: anger, fear, terrorism, public reactions, disaster response**

## Introduction

The defining feature of terrorism is that its purpose is instrumental beyond the event itself to the achievement of a political or ideological purpose. That purpose may be well or poorly understood or articulated but it is central. Understanding the likely effect of such attacks on civilian behaviour is a constant policy and operational consideration. Indeed, increasing understanding of if and how people change or adjust their behaviour or political preferences in reaction to a recent act of terrorism denotes important implications for public safety and those charged with maintaining it.

So how might we begin to understand reactions to terror events? Evolutionary psychology is concerned with ‘the evolved *psychological mechanisms* that are particular to humans and that help shape behavioural responses in given contexts’<sup>1</sup> with some focusing on common human fears of particular situations<sup>2</sup>. Taking an evolutionary psychology perspective to human behaviour and emotion following acts of terrorism provides a theoretical insight into how humans may respond whilst accounting for why literature (as we will explore) tends only to focus upon fear as a response to terror. Evolution for humans as with most other species has conferred survival advantages by preparing us emotionally and physiologically to ‘fight’ or ‘flight’ when perceiving danger. Torre and Lieberman<sup>3</sup> suggest that this translation of arousal into specific emotional descriptors and actions is mediated by the interpretation of the situation. As humans we basically have two groups of emotions available based on our interpretation of the situation: those which imply a hostile movement towards and those which imply a defensive movement away from, whatever has evoked the emotion (e.g. a hostile aggressor). Put simply, anger is clearly a fight precursor, where fear is a precursor to flight<sup>4</sup>. The common assumption challenged in this paper is that acts of terrorism will simply provoke fear and flight reactions in the public and not those of anger and fight. However logical this may seem, it remains yet to be tested.

Although literally thousands of research articles have been produced since the terrorist events of the 11<sup>th</sup> September 2001 in the USA, much still remains focused on the terrorist, for example on how radicalisation had led to action. The primary point of departure of the present paper is to identify whether a common public reaction to an act of terrorism in the aftermath of the Manchester Arena and London attacks of 2017, is one of anger rather than fear? We believe that the answer holds important implications for those charged with maintaining public safety and contingency planning in the wake of such acts. If the public reaction to an act of terrorism is indeed likely to be one of anger than fear, then for example, people might be more likely to continue to congregate in public spaces directly after an attack, even more frequently and in larger numbers, thereby increasing their risk of being victims of follow-up attacks. Posing a major concern to policing and security services.

When one looks at the literature pertaining to the common reactions of victims of crime it is overwhelmingly dominated by studies of fear. This is suggested to be because “fear is a flight emotion, and fearful citizens are less likely than those fuelled by anger to take to the streets as rioters or vigilantes”<sup>4</sup>. So is the common assumption that victims’ reactions to crime will be one of flight/fear in fact correct? To the writers’ knowledge, there are only a handful of published studies that examine the emotional reactions of crime victims. In a paper published almost twenty years ago, Ditton, Farrall, Bannister, Gilchrist and Pease<sup>5</sup>, found the most prevalent emotional reaction of crime victims be one of ‘anger’. Despite this finding being supported by several other papers soon after, it did not lead to a substantial avalanche of research focused on victims’ emotions other than fear.

In a more recent study, using data taken from the fifteen most recent sweeps of the Crime Survey for England and Wales (CSEW), it was revealed that all crime types were more often met by anger than by fear<sup>4</sup>. Indeed, fear was only the fifth most common of the nine emotional responses to victimization offered by the survey. The authors posit that victims of

crime are more likely to feel anger than fear as something ‘has happened’, whereas as non-victims are more likely to report fear as their primary emotional reaction because it ‘has not happened to them’<sup>4</sup>. As such, they may feel that they have nothing to be angry about as being a victim is more abstract to them.

So why do we think that anger may be a more human likely reaction to victimisation than fear for both natural and human-made such as acts of terrorism? We begin with nature.

*“Decades of ‘disaster’ movies and novels and press coverage, emphasise the general theme that a few ‘exceptional’ individuals lead the masses of frightened and passive victims to safety”<sup>6</sup>.*

Despite numerous research studies demonstrating the contrary e.g.<sup>7 8 9</sup> ‘conventional wisdom’ according to Perry and Lindell<sup>6</sup>, continues to hold that typical patterns of citizen disaster response take the form of panic, shock or passivity and there is little reason to believe that this has changed since. Research has continued to show that most people after disasters do not exhibit ‘shock reactions’ with few developing what is termed ‘panic flight’, instead they tend to behave in what they consider to be their best interest, given their limited understanding of the situation in which they find themselves<sup>6</sup>. Furthermore, on the whole, people have been found to respond in more constructive ways to disasters (and threats of) by attributing as much information and resources that they can in order to cope with such problems. Tierney, Lindell and Perry<sup>10</sup>, for example, found antisocial behaviour (e.g. looting and rioting) to be relatively rare reactions to disasters with behaviour in the disaster response period more likely to be rational and generally ‘prosocial’, whereby members of the public are more likely to volunteer help and assistance (e.g. participating in searches for survivors and providing supplies), producing what has been referred to as a ‘therapeutic community’<sup>11</sup> of mutual support. Indeed, research suggests that in the short-term at least, disasters may have

‘integrative effects’ upon the victim community which promote cohesion among not just immediate victims but also between others in unaffected areas, including across the world<sup>6</sup>.

Focusing upon reactions to terrorism, Roach, Pease and Sanson<sup>12</sup> suggest that ‘terrorism connotes four implicit invitations to citizens’;

1. To ascribe political or quasi-political purpose to acts or threats of violence
2. To evoke distinctive emotional responses
3. To regard such acts as justifying levels of retaliation and vigilance which are inappropriate in other circumstances
4. To regard themselves as potential targets.

Of most interest to us here are the second and fourth of their connotations that terrorists use acts of terror to evoke distinctive emotional responses. Moreover, these emotional responses must be of levels sufficient enough to induce fear of victimisation great enough to pressure governments to either settle with the terrorists, or to serve to destabilise the target administration, for example by making daily life more difficult by increasing security searching at airports, or by devoting resources to counter-terrorism services which are unsustainable in the long-term **Error! Bookmark not defined.** Although this makes perfect sense when one looks at the use of terrorism from the terrorist’s perspective, it is not as straight-forward if one looks at it from the perspective of the audience (i.e. the people). Furthermore, thoroughly understanding the emotional responses following terror attacks past focusing upon fear is imperative particularly when one considers the overwhelming response to crime is anger.

Literature pertaining to the emotional response of anger following acts of terrorism is certainly sparse but there is, albeit limited literature outlining additional common reactions. Some studies of how people react to acts of terrorism have highlighted particular behaviour

changes such as an increased reluctance to travel by air following the 9/11 terrorist attacks on New York, USA. Directly after these attacks in 2001 involving American Airlines and United Airlines jets (both American companies) many Americans took to driving long distances instead of travelling. As a consequence (although not directly linked) there was a significant increase in driving fatalities in the years immediately following 9/11<sup>13</sup>. Similar transport related passenger behaviour changes were found after the July 2005 London bombings, which targeted underground (tube) trains and buses<sup>14</sup>.

There is some research to suggest that the setting of terror threat levels (usually by Government Security Services) can influence public perceptions resulting in some common behaviour changes. Crijns, Cauberghe, and Hudders<sup>15</sup>, in a recent study investigated the responses of 805 Belgium citizens exploring the relationship between the terror threat level and behaviour changes and found that increased terror threat levels led to higher vigilance in public places and participants reported reduced levels of participating in public events and using public transport. Furthermore, the researchers reported that over sensationalism or drama of the events by the media decreased participants' level of risk.

Fischhoff et al.<sup>16</sup> investigated perceptions of the risk of terrorism in the months following 9/11 and found that those participants who lived within 100 miles of the World Trade Centre rated their risk of being a victim of terrorism higher than those who lived over 100 miles away from it. Similar results were found in a later study by Woods et al<sup>17</sup> who explored participants' perceptions of risk of terrorism based on the location of a participant's residence. They found that those who lived within five miles of five major cities and nuclear powerplants within Michigan State rated their risk of being a victim of terrorism higher than those participants living further away from what they perceived to be more likely key terrorism targets<sup>17</sup>. The finding of a relationship between proximity (i.e. closer than at more

risk) and perceptions of risk of victimisation is no doubt an obvious one, but few studies to date have been conducted which test this<sup>12</sup>.

Findings from research exploring a link between levels of fear generated and proximity to an attack<sup>12</sup> suggests it unlikely that an act of terrorism will produce an even distribution of fear and changes in behaviour irrespective of where the act of terrorism occurs. Moreover, the findings identified what they refer to as the ‘perceived-distance effect’, with those living closest geographically to an attack more likely to change their behaviour as a direct reaction<sup>12</sup>.

So, is there evidence to suggest that some people are likely to change their behaviour after an act of terrorism because they are angry and not scared? Goodwin and Gaines<sup>18</sup> demonstrated in their UK paper that despite the perception of risk of terror being high, participants reported surprisingly low levels of behaviour change. Similar relationships have been demonstrated<sup>19 20</sup> suggesting that acts of terror can be and are met with high levels of resilience. Using data from the CSEW, researchers<sup>12</sup> compared data on the frequenting of night-clubs by people living in London and elsewhere for the months of July 2004 and July 2005. With the London terror attack occurring on the 7<sup>th</sup> July, they anticipated that the number of people reporting going clubbing in July 2005 would be considerably less than that for July 2004. In fact, the opposite was found, with more respondents reporting that they went out clubbing more in July 2005. The reported increase, however, only held for those respondents in the London area, and not those in the surrounding areas of the Home Counties<sup>12</sup>. Roach et al. suggest that when an act of terrorism occurs, young people are, to quote the pop-star Prince, more likely to ‘party like it’s 1999’, than be scared into staying in their homes, which they explain in terms of an evolutionary drive to propagate one’s genes in a ‘it’s now or never’ scenario<sup>12</sup>.



A further important consideration is that of the media. For the majority, the media provides the information following acts of terror which informs emotional responses and behaviour change. Consequently, in any study measuring public responses to terrorism it is crucial to address and understand the role of the media. As expected, literature in relation to media consumption and fear of terrorism suggests that those who actively access media and thus are exposed to a greater extent, demonstrate higher levels of fear for themselves<sup>21</sup> and for others<sup>22</sup>. However, as documented throughout the focus within this area of research concentrates on fear and ‘flight’ but not that of anger and ‘fight’, which is hypothesised in this paper to be an important emotional response to study following acts of terrorism.

The present paper is primarily concerned with exploring this common assumption that the most likely public reaction to an act of terrorism will be fear of victimisation, by asking a sample of UK based people how they felt about two recent terrorist attacks on the UK mainland; the Manchester Arena and London attacks of 2017. Based on our previous research and on a basic understanding of evolutionary psychology and sociology. we propose that an equally plausible reaction to an act of terrorism will be one of anger, most likely to be directed at the perpetrators, and not necessarily fear of becoming a victim. If found to be correct, then the need to better understand people’s behaviour in the days immediately preceding an act of terrorism for issues of public safety and security are immense. As a result, the present paper seeks to address the following research questions:

- Are people’s reaction to an act of terrorism more likely one of fear or anger?
- Does either reaction induce a change in behaviour in people’s daily routines and behaviours?
- Do the people change their behaviour after an act of terrorism more to reflect the ‘flight (i.e. avoid public places and public transport) or ‘fight’ (i.e. show anger and defiance) options?

- Do people think that media coverage of influenced their reactions and behaviour just after the Manchester and London Bridge attacks in 2017?

### **Method**

On 22<sup>nd</sup> May 2017, a capacity audience attending a concert by singer Ariana Grande were preparing to leave the MEN Arena in Manchester. Just after half past ten o'clock, explosion took place in the lobby of the venue which killed twenty-two and injured some two hundred and fifty of those present. Salaman Abedi, born in Manchester and the son of Libyan parents, was identified as the suicide bomber.

Some two weeks later in London, a van was driven onto the pavement (sidewalk). When the van stopped, three men armed with knives emerged and attacked pedestrians. This event resulted in the deaths of eight people. A further forty-eight were injured<sup>23</sup>. The temporal closeness of the Manchester and London attacks led some to suggest that 'the UK was under attack'<sup>24</sup> and the national threat level determined by the UK Security Services was raised to critical for the first time in nine years<sup>24</sup>. Although these attacks were significantly different in terms of victimology (e.g. predominantly young people at a pop concert in Manchester and indiscriminate people at London Bridge and the surrounding area, many of them out socialising in bars and restaurants) and method of terror used (e.g. suicide bombing and knife attacks) when taken together, these events provide a narrow time window within which the effects of and reactions to acts of terrorism on the British public can be instanced.

Participants for the study were recruited through several different means including use of social media (e.g. Twitter and Facebook) by providing an electronic link to the survey; links distributed by several different organisations (including police); and students via university email. Although 461 potential participants responded to the survey, after screening

for incomplete questionnaires (from which 31 responses were removed) a final sample of 430 participants took part in the study (n=430) with 97% (n=415) claiming UK citizenship at the time of data collection. 95% (n= 410) stated that they were in paid employment, education or training at the time data collection. The median age of participants who took part in the study was found to be 30 years (M=33.67, SD=15.48)<sup>1</sup>.

To facilitate data collection an online survey was developed using Qualtrics software. After clicking a link to the survey, potential participants were immediately provided with a brief, outlining the aims of the research and information on ethical considerations such as confidentiality and the right to withdraw, and that their participation in the survey would take no longer than 15 minutes. If participation was agreed, then further information was provided regarding what the survey would entail and the type of questions that would be asked,

To begin with, all participants were asked to answer a series of demographic questions asking their; age, occupation, current residence, home town, and any religious orientation. Next, they were asked answer a series of questions by selecting responses ranging from '*did not feel this emotion*' to '*strongly felt this emotion*' in order to gauge their anger towards the security services, the perpetrators, and the level of fear that they personally experienced was caused by the Manchester and London Bridge terror attacks of 2017.

The next set of survey questions encouraged participants to self-explore whether they remembered any changes in their routine/normal behaviour (either consciously or unconsciously) as a direct reaction to the two attacks. Lastly, participants were asked to

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<sup>1</sup> M=Mean, SD= Standard Deviation, N=Number of Participants

estimate the degree to which they considered the media had influenced their reactions and behaviour soon after the two attacks of 2017<sup>2</sup>.

### **Findings/results**

Before asking participants to answer questions about their reactions, they were asked to recall the emotions they felt/experienced just after the both the Manchester and London Bridge attacks. A content analysis of the 430 participants' responses highlighted that 15 separate codes should be used. These are displayed in table 1.

PLEASE INSERT TABLE 1 HERE

#### *Emotional responses to the Manchester and London attacks*

Table two shows participants' responses to each of the three questions used to determine the level of fear, anger towards perpetrators', and anger towards the security services) reported after each terror attack. A Wilcoxon signed ranks test<sup>3</sup> was conducted to identify any significant differences between participants' responses for the Manchester and London Bridge attacks. As can be seen, the only emotional response that differed statistically significantly was the higher level of anger expressed towards the London Bridge terror attack perpetrators than the Manchester attack perpetrator.

PLEASE INSERT TABLE 2 HERE

As well as comparing the emotional responses of participants for both the Manchester and London Bridge attacks, it was necessary to compare the differences within individual

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<sup>2</sup> Data generated in this study was measured at 'ordinal' level using Likert questions. As a result, the statistical analysis strategy of the present study was to use non-parametric bivariate analyses as the assumptions of parametric tests are not met by the data presented here. Content analysis was also applied to the free text area at the end of the survey. A coding procedure was conducted by one member of the research team and 15 different categories emerged that can be seen in table one.

<sup>3</sup> Wilcoxon signed ranks test is a non-parametric statistical test of difference that compares two sets of scores, which originate from the same participants. Please contact the authors for further explanation if required.

participant answers. As can be seen from table two, the primary emotion reported by participants following the Manchester attack was anger towards the perpetrator, followed by fear for themselves, and then anger towards the security services. In order to determine whether the scores for the emotions felt by participants following the Manchester attack significantly differed. In order to do this a Friedman's test<sup>4</sup> was conducted, which was significant  $\chi^2=497.01$   $P<.001$ , suggesting that anger (as displayed in table 2) to be the prominent emotion and this was significant (i.e. not the result of chance). As can be seen in table two, participant emotions following the London attack appear to mirror the pattern found for the Manchester attack and to determine whether this was statistically significant a second Friedman's test was conducted, which again was significant at the  $\chi^2=537.22$ ,  $p<.001$  level. The primary emotion reported by all participants following both attacks was therefore one of anger towards the perpetrator(s) responsible for committing the two acts of terror.

Another research question was the extent to which different factors had influenced the emotional reactions of the participants following both the Manchester and London Bridge attacks. The results are displayed in Table 3. Firstly, proximity to the attack which was measured in two ways: distance (in miles) between the attack from (i) the participants' current address and (ii) what they considered to be their 'hometown'. Spearman's non-parametric correlations were undertaken to determine the extent to which proximity (closeness) to an attack most influenced participants' emotions first for the Manchester where the distance between participants' current residences and their home towns were found to be significantly negatively correlated (albeit at a weak level) with feelings of fear. This suggests

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<sup>4</sup> A Friedman's tests is a non-parametric statistical tests that compares three or more related scores to determine whether they significantly differ. Please contact the authors for further explanation if required.

that the closer participants resided to Manchester the higher the levels of fear they felt, as was found in the study by Roach et al<sup>12</sup>.

Age of participants also showed a significant negative weak relationship with feelings of fear suggesting that older individuals felt significantly less fear than younger participants. Age and anger towards the security services following the Manchester attack were moderately negatively correlated at a statistically significant level, suggesting that the younger participants reported reacting more angrily.

PLEASE INSERT TABLE 3 HERE

Table four displays the results for the same analyses but for the questions pertaining to the London Bridge attack. As with the Manchester terror attack, participants reported feeling fearful for themselves, but also anger towards the security services. A negative correlation between these emotions was found with age at a weak and moderate level. Unlike the reported responses to the Manchester attack, however, no significant correlations were found regarding their proximity or closeness to the attack.

PLEASE INSERT TABLE 4 HERE

#### *Behavioural reactions to the two attacks*

Another research question explored was whether, and if so to what extent, behaviour might have been changed in reaction to the terror attacks of 2017 (e.g. an increase in fear produced a decrease in socialising in the short-term). Participants were asked questions probing their behaviour directly after the two attacks and were asked to respond by indicating whether, if so to what extent, they felt that their behaviour changed in the aftermath of the attacks, using the following basic options: it was less, the same, more, and not applicable. The results are displayed in table 4. As can be seen, participants reported that generally they felt that their behaviour did not change after the attacks, although a reduction in the use of

public transport was reported as being the highest behavioural change reported after the attacks, closely followed by a reduction in the frequenting of pubs, clubs and leisure venues immediately after the attacks. Behaviours reported to have moderately increased were online activity (i.e. use of the internet) specifically to contact friends and family.

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Another research question was whether/how proximity to the attack locations had had an influence on their behaviour. Spearman's<sup>5</sup> correlations were conducted with the results displayed in table five. As can be seen, the results indicate that proximity to the location where the attacks took place did not appear to have a significant relationship with all but one of the behaviours explored within the present study, with proximity to Manchester, measured by the distance in miles from the participants' home town and online contact between friends and family being of any real statistical significance, suggesting that those whose home towns were closer to Manchester made significantly more online contact with friends and family following the terror attacks.

PLEASE INSERT TABLE 6 HERE

Another area of interest was if the age of the participant had influenced behaviour after both terrorist attacks. Spearman's correlations indicated that there was no significant relationship between age and the following: visiting friends and family ( $\rho = -.07, p = .192, N = 410$ )<sup>6</sup>, making online contact with friends and family ( $\rho = -.05, p = .346, N = 408$ ), and reacting to people of distinctive ethnic dress in a more or less friendly way ( $\rho = -.05, p = .346, N = 408$ ). The relationship between age and frequenting pubs, clubs and leisure venues

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<sup>5</sup> A Spearman's correlation is a statistical test of a relationship shared between two variables that are measured at an ordinal level. Please contact the authors for further explanation if required.

<sup>6</sup>  $\rho$  = statistical symbol for Spearman's test.

following the terror attacks produced a significant positive weak correlation  $rho = .12$ ,  $p < .021$ ,  $N = 382$  suggesting that older participants were more likely to go out more following the terror attacks. A similar relationship also emerged for the use of public transport with a significant weak positive correlation occurring  $rho = .19$ ,  $p < .001$ ,  $N = 343$  again suggesting that older individuals were also more likely to use public transport more following the terror attacks.

### *Media coverage*

As stated, a likely influence on public reactions to the terror acts was the extent to which participants believed that the media had influenced their emotional responses. The results are shown in table seven.

### PLEASE INSERT TABLE 7 HERE

As can be seen, generally participants felt that the media had had a profound effect on increasing their fear for both themselves and their friends and family. Interestingly, also in increasing the levels of anger they felt towards the perpetrators. Importantly, this increased anger effect did not include anger towards the police and security services so did not reflect an increase in anger generally, but was likely to have increased towards the perpetrators of the attacks when the media reported their identities, so providing focal points at which to direct the anger felt.

A final focus of the survey was to identify any links between a participant's proximity (closeness) to the terror attacks by looking at both a participant's current residence, their hometowns and their responses to the media effect questions displayed in table six. Spearman's rho correlational analysis found that distance in miles between Manchester and a participant's current address shared a significant negative weak correlation with levels of fear produced regarding participants themselves produced by the media  $rho = -.23$ ,  $p < .001$ ,



$N=422$ , suggesting that those that lived closer to Manchester had identified that the media had increased the level of fear that they had experienced. The same relationship was also found for the distance between Manchester and the participants' home towns  $\rho=-.16, p<.001, N=421$ . With regard to the media's influence on feelings of anger toward the perpetrators, the only significant correlation found was with the distance between Manchester and participants' home towns  $\rho=-.10, p<.034, N=416$ , suggesting that those participants who identified their home town as closer to Manchester were influenced to significantly greater levels by the media regarding anger felt towards the perpetrator. Finally, Spearman's rho correlational analyses identified a significant relationship between distance between Manchester from participants' home towns and the extent to which participants sought out the news coverage following the terror attacks  $\rho= -.12, p<.039, N=409$ , suggesting that those participants whose home towns were closer to Manchester were more likely to check the news coverage significantly more than normal than those whose home towns are located further away.

## **Discussion**

So, is exploring what common public reactions to acts of terrorism important? In our opinion, the short answer is 'yes very much so'. If, for example, people (especially young males) tend to be angry about acts of terrorism instead of scared, then the way that they react may increase the chances of their victimisation. In the extreme case, if those angered by a recent terrorist event react by frequenting nightclubs<sup>12</sup> and other public spaces (e.g. concerts) more, then they make themselves vulnerable to greater 'carnage in follow-up events'<sup>12</sup>. If this is at odds with the common perception that an act of terrorism will generate fear and that deter people from socialising or going about their normal business, then those charged with public safety need to deter people from frequenting the area of a recent attack. We now summarise the findings in relation to our initial research questions.

1. *Is the overwhelming reaction to an act of terrorism by the public more likely to be one of fear or anger?*

The findings of the present study suggest that the public reaction to an act of terrorism is likely to be more one of anger at the perpetrators than one of increased vulnerability to victimisation. That said, several interesting nuances were found (1) participants reported feeling more anger after the London attacks than after the Manchester attack and (2) the closer participants lived to Manchester then the higher the level of fear they reported feeling after that attack. Taking point (1) first, a likely explanation for participants feeling more anger after the London attack may be that as the London attack came only a few weeks after the Manchester attack after which people were already angry towards the perpetrators, then a second attack added to their anger even more having a kind of ‘cumulative anger effect’. Although future research would need to explore this point further, the overall finding that people’s most likely reaction to an act of terror is one of anger at the perpetrators, it does support the findings of previous research looking at reactions to crime and fear of crime by Ditton et al<sup>5 4</sup>. Further research is also needed to determine how the mode of attack (e.g. bomb or a knife attack) affects the level of anger felt towards the perpetrators, as well as the age of the targets (e.g. young people at a pop concert).

The finding that people who resided or came from Manchester reported experiencing higher levels of fear for the Manchester attack (point 2 above) is intuitive and chimes with the finding of previous research in this area<sup>12</sup>, that terrorisms ‘footprint of fear’ is essentially localised to close proximity to the site of the attack and or what they refer to as the ‘perceived distance effect’<sup>12</sup>. So how might this help those charged with keeping the public safe? Although more research is need to provide more concrete answers, it suffices to say that those close to an attack will be most frightened, with those more distant being angry and so not likely change their behaviour in a more security conscious way.

Our findings also support those of the Roach et al.<sup>12</sup>, that it is the young people who are most likely to experience higher levels of fear and anger. The question is if so then do they change their behaviour as a consequence immediately after an attack?

2. *Is it a fear or anger reaction that induces a change in people's daily routines and behaviours after an act of terrorism?* If so do the public change their behaviour after an act of terrorism more to reflect the 'flight (i.e. avoid public places and public transport) or 'fight' (i.e. show anger and defiance) options?

In the present study, the relationship between age and fear and anger for London Bridge was reported as being relatively the same as for the Manchester attack, with the younger people reporting higher levels of fear and anger. Overall, participants reported that both attacks had little immediate effect on their behaviour in relation to going out socialising, travelling on public transport, or reacting to people of different ethnicity in different ways. In sum, participants largely reported doing the same as usual. Older participants, however, reported that they went out more and used public transport more than the younger counterparts reported. This finding is rather curious and the at face value contradicts the finding of Roach et al.**Error! Bookmark not defined.** that young people tend to socialise more after an attack but that this reaction is only likely to be localised to the place of the attack.

In terms of common public reactions to acts of terrorism, the findings here suggest that closeness to an event can have an amplifying effect of people's reactions to a terror attack and supports Roach et al.<sup>12</sup> suggestion that such acts leave a relatively small, localised, 'foot-print of fear' in terms of the numbers of people that they scare. The reader might consider this obvious, but our point is that the most common likely reaction to acts of terrorism by people with no link to the place in which it occurs is one of anger at the perpetrators not fear, where routine behaviours appear to be little effected. The behaviour most effected appears to have

been use of the internet and the contacting of family and friends was reported as being increased by those participants associated with Manchester. Again, this localised effect is best explained by those seeking assurance that their loved ones are safe and well, alongside displaying a shared anger with those living closest to the Manchester attack.

*3. Do people think that media coverage of influenced their reactions and behaviour just after the Manchester and London Bridge attacks in 2017?*

The last research question was designed to explore whether participants felt that their reactions and behaviour just after the attacks were influenced by media coverage, and that the media had had a profound effect on increasing their fear for both themselves and their friends and family, but interestingly also in increasing the levels of anger they felt towards the perpetrators. Importantly, this increased anger effect did not include anger towards the police and security services so did not reflect an increase in anger generally, but was likely to have increased towards the perpetrators of the attacks when the media reported their identities, so providing focal points at which to direct the anger felt. Again a localised effect was found with those in closest proximity (or links to) Manchester reporting the highest levels of media effect.

As with most exploratory studies of this kind, a certain amount of caution needs to be exercised when interpreting the findings. First, as with all self-report measures, one has to assume the veracity of participant answers. Second, and arguably most importantly, this study asked participants to recollect their feelings, reactions and behaviours for two events, emotive as they may be, more than six months in the past. The obvious danger being that their initial reactions after the attacks may have given way to different interpretations six months later – i.e. that initial fear may have retrospectively been

replaced by anger. Although we acknowledge this as a possibility, we ask the reader at what point they consider ethically the right time to be to ask people questions about such traumatic events – one day after, one week after, one month after, or longer? Our decision to ask participants six months later was not taken lightly. Third, although the participant sample was reasonably sized, there was a noticeable skew towards younger people from the North of England, probably as a result of the high-percentage of participants that responded to our requests to participate posted on social media. Further research may wish to achieve a more representative sample, but taking the findings from the Roach et al.<sup>12</sup> study which indicated that young people are more likely to increase certain behaviours (some might be classed as risky) after a terror attack than older people, we thought the participant recruitment we chose to be the most appropriate.

#### *Further research*

As an exploratory study we believe that the findings invite further investigation of the variation of anger (fight) and fear (flight) reactions to acts of terrorism. If correct, then the finding that fear is the more localised reaction to an act of terrorism based on close proximity to a terror attack, with anger the more generalised one experienced by people not close to (or with links to) the location of the attack. Further research is needed to look at whether this same pattern of reactions holds for attacks at transport hubs (such as railways and airports) and modes of public transport (e.g. trains and airplanes). It has been suggested that attacks at transport hubs and or on methods of public transport may have different effects and so induce different reactions in people because they interfere with an individual's perception of threat distance (i.e. perceived -distance effect)<sup>12</sup>. An attack at an airport, for example, may produce a much wider footprint of fear based on an increased vulnerability of flying **Error!**

**Bookmark not defined.** as was shown after the 9/11 attacks, than an attack on an iconic

building in a capital city. We think that this study sufficiently demonstrates the need to explore different reactions to acts of terrorism rather than the current default which is that we are all equally scared and so react in the same ways. We are not and do not, which denotes important implications for public safety and security in the aftermath of terrorist attacks.

As a final word, although the core purpose of an act of terrorism is to scare, there is growing evidence to suggest that it often only scares those closest to an attack, with those not experiencing anger more than fear. Further research is needed to explore how different modes of attack can evoke different levels of fear and anger, so that public reactions to acts of terrorism are to be better understood and better planned for in terms of public safety and security. The findings from this exploratory study suggest that the public must not be assumed homogenous in terms of reacting to acts of terrorism, which holds big implications for future victimisation and terrorism research.

## Notes

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Table 1. Results of a content analysis of participants' free text accounts of their emotional responses following the Manchester and London Bridge terror attacks.

Emotional response	Count	Percentage of participants
Emotional distress, sadness and upset	127	27.60%
Feeling shocked	125	27.10%
Disgusted, horrified, sickened	119	25.80%
Feelings of fear/worry/ anxiety	90	19.50%
Thoughts and concerns for the victims and their families	80	17.40%
Feelings of anger	68	14.80%
The events were not surprise and were expected	38	8.24%
Worried for friends and relatives	32	6.90%
Thoughts relating to questioning how the perpetrator could do this	31	6.70%
Worried about the ramifications and the effect on the Muslim community	20	4.30%
Impressed and warmed by the public and emergency response	15	3.25%
Unaffected by the events	11	2.40%
Relief that they were not involved	7	1.5 %
Interested/ fascinated by the events and news coverage	5	1.10%
Sadness for the perpetrator	3	0.70%
		N=461

Table 2. Comparison of reported reactions to the Manchester and London attacks using the Wilcoxon Signed Ranks Test

	Manchester Attack			London Attack			Z	P
	Mdn	M	SD	Mdn	M	SD		
Fear for yourself	2.0	2.43	1.32	2.0	2.32	1.29	-2.98	.067
Anger towards the perpetrator	5.0	4.08	1.26	5.0	4.10	1.18	-.55	.003



Anger towards the security services	1.0	1.67	1.10	1.0	1.62	1.08	-1.83	.580
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Participants selecting not applicable were excluded from the analysis  
N=430

Table 3. Spearman's Correlation Analyses of the primary emotions reported following the Manchester attack with age and proximity to the attack

Emotion Variables	Age of participant		Distance between Manchester and current residence		Distance between Manchester and home town	
	<i>Rho</i>	<i>P</i>	<i>Rho</i>	<i>P</i>	<i>Rho</i>	<i>P</i>
Anger towards the perpetrator	-.06	.193	-.03	.517	-.08	.11
Fear for themselves	-.23**	.001	-.10*	.031	-.15	.002*
Anger towards the security services	-.34**	.001	-.00	.960	-.01	.919

\*\*Significant at .001 Significant at .05

N=430

Participants selecting not applicable were excluded from the analysis

Table 4. Spearman's Correlation Analyses investigating primary emotions following the London attack with age and proximity

Emotion Variables	Age of participant		Distance between London and current residence		Distance between London and home town	
	<i>Rho</i>	<i>P</i>	<i>Rho</i>	<i>P</i>	<i>Rho</i>	<i>P</i>
Anger towards the perpetrator	-.06	.229	-.02	.658	-.04	.453
Fear for themselves	-.20**	.001	-.01	.920	-.03	.532
Anger towards the security services	-.34**	.001	-.05	.361	-.02	.661

\*\*Significant at .001 Significant at .05 N=430

Table 5. Self-reported behaviour following both the Manchester and London attacks

	More	Same	Less	M	SD	Md	N
Go to pubs, clubs or leisure venues	2.6%	80.6%	16.8%	1.86	.42	2.00	382
Use public transport	0.6%	81.9%	17.5%	1.83	.39	2.00	343
Make online contact with friends and family	22.5%	77.2%	0.2%	2.22	.42	2.00	423
Visit family and friends	5.9%	92.2%	2.0%	2.04	.28	2.00	410
React to people of a distinctive ethnicity in a friendly way	6.8%	88.3%	5.0%	2.02	.34	2.00	400

Responses recorded as follows: 1= Less, 2 = Same, 3=More

Participants selecting not applicable were excluded from the analysis

Table 6. Spearman’s correlations exploring proximity and behaviour change following the Manchester and London terror attacks

	Distance in miles from Manchester (Current residence)			Distance in miles from Manchester (home town)			Distance in miles from London (Current residence)			Distance in miles from London (home town)		
	<i>Rho</i>	<i>P</i>	<i>N</i>	<i>Rh o</i>	<i>P</i>	<i>N</i>	<i>Rho</i>	<i>P</i>	<i>N</i>	<i>Rho</i>	<i>P</i>	<i>N</i>
Go to pubs, clubs or leisure venues	.08	.102	38 2	.05	.33	38 2 2	-.02	.746	381	.06	.228	382
Use public transport	.05	.326	34 3	.05	.33	34 3 3	.02	.731	343	.10	.060	343
Make online contact with friends and family	-.08	.129	40 8	.01 *	.04	40 5 7	.06	.214	407	.011	.829	407
Visit family and friends	-.01	.853	41 0	-.05	.36	40 1 9	.02	.653	409	-.03	.534	409
React to people of a distinctive ethnicity in a friendly way	-.03	.618	49 9	-.01	.91	39 7 9	-.02	.719	399	.01	.896	399

\*Significant at .05 level Participants selecting not applicable were excluded from the analysis

Table 7. Self-reported media influence following the terror attacks

	More	Same	Less	M	SD	Mdn	N
Influence fear for your family	45.9 %	52.9%	2.1%	2.45	.52	2.0	416

ANGRY NOT SCARED?

Make you feel anger towards the perpetrator	50.1 %	48.4%	1.4%	2.49	.53	3.0	417
Make you feel anger towards the security services	8.6%	78.9%	12.5%	1.96	.46	2.0	361
Fear for yourself over and above the impacts of the events themselves	37.4 %	60.4%	2.1%	2.35	.52	2.0	422
Since the terror attacks how often do you seek out news coverage	13.4 %	74.6%	12.0%	2.01	.51	2.00	409

Responses recorded as follows: 1= Less, 2 = Same, 3=More  
 Participants selecting not applicable were excluded from the analysis.