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Psychosocial resilience in the face of a mediated terrorist threat

- **Pieter A. Maeseele, Gino Verleye and Isabelle Stevens**
  Ghent University, Belgium

- **Anne Speckhard**
  Georgetown University Medical School, Athens, Greece

ABSTRACT

After 9/11, studies concerning psychological and psychiatric effects of terrorism have greatly multiplied. Media exposure to terrorism has been shown to be a vital factor in these effects. However, there is a lack of pre-trauma research assessing the resilience of the civilian population in the face of a 'mediated' terrorist threat. This article discusses an eight-dimensional conceptual model of terrorism-related issues central to psychosocial resilience to terrorism. Survey results (N = 1040) are provided which present an index of these terrorism-related issues for Flanders (Belgium) in December 2004 and January 2005 and their correlations. They are also related to media use in the case of television, radio and the internet. The results clearly indicate the psychological repercussions of this terrorism threat in terms of media information-seeking behavior, risk perception and fear levels. Furthermore, the important role of government communication, the ambiguity of social support and the opposing outcomes of television and internet use are demonstrated.

KEY WORDS • Belgium • communication • media • resilience • risk • terrorism

Introduction

There is no question whether 9/11 has changed the political outlook of the world. Since 2001 a global war on terror has been proclaimed. Currently, wars are being fought in Iraq and Afghanistan, and following 9/11 there was Bali, Madrid, and the metro and bus bombings in London. Since 9/11, terrorism has been a dominant topic on the international and Western media agenda. Horrific images have been viewed around the world from that day onward, images which have become part of the collective consciousness. Since the attacks on the twin towers, Madrid, and London, the myth of invulnerability has been torn apart. People have been obliged to revise their perceptions

of the 'risk society' they live in, as global terror networks have established themselves as new global players on the stage of the 'World Risk Society' (Beck, 2002).

While intimidation of the civilian population is the ultimate goal of a terrorist attack, (the level of) resilience will be crucial for the prevention of intimidation. Terrorism is a pervasive kind of psychological warfare, literally aimed at striking terror in the hearts and minds of far more than the actual intended victims. This psychological warfare is conducted largely through the mass media – which knowingly or unwittingly amplifies the terrifying events – not with bombs or rockets, but through psychological operations (Paddock, 1989). In the post-9/11 world, managing the perceived threat has become as important as dealing with its real threat, due to the relevance of perceptions within an increasingly media-saturated international environ-ment (Archetti and Taylor, 2003; Beck, 1992).

In this context, the question arises of how much the individual factors the perceived risk of danger from this largely 'media experienced' event of global terrorism as having a real possibility of occurring in his or her midst. For social scientists, studying the consequences of this course of events for people's perceptions and behavior has become an important research endeavor. As a result, studies concerning psychological and psychiatric effects of terrorism have greatly multiplied in recent years. However, there is a lack of pre-trauma research assessing the resilience of the civilian population in the face of a mediated terrorist threat. The aim of this article is to briefly explore this key research issue. Survey results are provided for Flanders (the northern Dutch-speaking region of Belgium which has not experienced a terrorist attack in recent years) that present an index of, and relationships between, terrorism-related issues central to psychosocial resilience in the face of a terrorist threat, and their associations to different media.

In the first section of this article we review the literature on the psycho-logical and psychiatric effects of terrorism, from which we learn that media exposure has proven to be vital, but also that an extensive amount of atten-tion has been devoted to people's vulnerability and relatively little to their resilience. The concept of resilience is introduced in a second section, together with our conceptual model, which contains eight dimensions of terrorism-related issues central to psychosocial resilience in the face of a terrorist threat: attitudes toward governmental initiatives, preoccupation concerning media information-seeking and preparatory behavior, perceived risk and fear, factual knowledge about terrorism, mental distance, influence of the social network, major life stressors and personal and social psychological resources. In a third section we review the results of a survey (N = 1040) collected during December 2004 and January 2005 in which these dimensions were measured. In addition

to providing an index of Flemish scores on these different dimensions, we explore the correlations between them and relate them to television, internet and radio use. This article concludes by making a number of future research recommendations.

Literature review

Trauma, terrorism and media exposure

Research about the psychological and psychiatric effects of terrorism is mainly based upon epidemiological studies that measure symptoms of post-traumatic stress disorder (PTSD) (North et al., 1999; Redlener and Grant, 2002; Schlenger et al., 2002; Schuster et al., 2001). A substantial amount of evidence has demonstrated that people present at traumatic events develop afterward symptoms of post-traumatic stress (Rubonis and Bickman, 1991). Nonetheless, recent evidence indicates that people do not have to be present at the traumatic event to experience similar symptoms (Speckhard, 2002, 2003).

Mass media have collapsed space (and time) borders in human communication, enabling people to interact and live on a global scale (Beck, 2002; Giddens, 1990; Thompson, 1995). For example, numerous studies have shown that television coverage had a profound impact on children after the Challenger explosion (Terr et al., 1999), the first Gulf War (Cantor et al., 1993), and the Oklahoma City bombing (Pfefferbaum et al., 1999). The impact of the 9/11 attacks was reported as far away as Italy (Apolone et al., 2002) or India (Ray and Malhi, 2005), and was acutely experienced by expatriate Americans in Belgium (Speckhard, 2002, 2003). In these studies media and particularly television exposure is shown to be an important predictor of stress or traumatic symptoms, whatever the geographic distance from the attacks (see also Pfefferbaum et al., 2000, 2003). Graphic images have the potential to be traumatic in themselves in terms of their potential to create a 'witnessing' experience of trauma and their constant replay can also become traumatic reminders, resulting in persistent symptoms (Hayez, 2001). Personalizing the event and reflecting on oneself as a potential victim also proved to cause stress symptoms (Dixon et al., 1993), something that can occur via televised images.

In the literature on risk analysis and risk perception this is called the 'social amplification of risk', which is a theoretical framework that seeks to explain why certain events have enormous (psychological, social, economic, political, etc.) 'ripple effects' (Kasperson and Kasperson, 1996). It was Paul Slovic who in the aftermath of 9/11 identified 'cascading waves of impacts' and referred to the experiential mode of thinking, besides 'rational' risk analysis, as essential for decision-making in this context: it is intuitive and relies on

'images and associations, linked by experience to emotions and affect' (2002: 426). Brain research has shown that human beings think in terms of patterns and experiences and that the brain often makes matches between emotionally laden cues even before conscious cognitions are engaged, for instance pairing items which cue up fear states or match with previous learning (particularly traumatic experiences). These can easily be unconsciously paired together emotionally in patterns, even when logically they should not be (Damasio, 1994). In this sense, media accounts of terrorist attacks may ignite an experiential mode of thinking in each individual's mediated, social and cognitive construction of reality.

Resilience

Nonetheless, as those traumatic symptoms generally subside with time, Durodié and Wessely (2002), Garlan et al. (2005), Shalev (2004), Speckhard (2002, 2003) and Vázquez (2005) have argued that resilience is the more *common* response. A view on pathology based on lists of symptoms neglects those aspects which are more related to functioning and psychological integrity. According to Vázquez (2005), this could lead to the wrong assumption that a human being requires help for almost any difficulty. After establishing that the attacks of 9/11 and Madrid had a lower effect in the population than the predicted outcome, he wondered why there was an expectation of extended damage in populations. Human beings prove to be basically resilient to adversity, achieving this by a complex network of mediational, cognitive, motivational, behavioral and affective processes. It is of the utmost importance that in addition to research based on vulnerability, there is an equal amount of energy and attention paid to the mechanisms that prevent the majority of the population exposed to traumatic events from developing clinically significant responses. That is why we have chosen to focus on resilience in this study.

Resilience is an ambiguous theoretical construct because conceptual framework and methodological approaches lack consistency (Luthar et al., 2000; Reissman et al., 2004; Zimmerman and Arunkur, 1994). Some authors have argued that most research has concentrated on the individual, virtually ignoring social relationships or contextual factors. This is a shortcoming we specifically aim to address by looking at psychosocial resilience in the face of a terrorist threat. For this study, we have defined our resilience concept as consisting of the following three aspects (Luthar et al., 2000; Rutter, 1993; Strumpfer, 2001; Tusaie and Dyer, 2004; Zimmerman and Arunkur, 1994). First of all, we connect with the literature that states that there is no single source for resilience. This implies that we do not consider it to be a broad 'stable' individual trait. On the contrary, we consider resilience to be a dynamic

developmental process driven by the interactions among risk and protective factors at an intrapersonal and environmental level. It incorporates past and present experiences (in terms of cognitive structures formed by them) and expectations for the future, and is influenced by the strength and health of the individual's personal and social resources as well as his or her social network. Second, we consider resilience as a multidimensional phenomenon which demands a context- and domain-specific approach: we are looking at resilience purely in a context of terrorism. This includes cognitive, behavioral and emotional capacities as the most commonly used domains. Third, we situate the concept within a holistic framework, i.e. the larger social context of the individual, which necessarily incorporates the items listed earlier.

Methodology

The conceptual model: ResiScope[Pop1]

Starting from a resilience concept that stresses the idea of a holistic but context-specific process, and the context being psychosocial resilience in the face of a terrorist threat, we map out the different dimensions that are considered to be part of this process. Our model should first of all start from the individual psychological aspects of resilience. The literature on psychological or psychosocial resilience emphasizes the *personal* and *social resources* of the individual (see also Carver, 1998; Klohnen, 1996; Levant, 2002; Tugade and Fredrickson, 2004). The internationally validated ego-resiliency scale by Block and Kremen (1996) contains a set of traits such as self-esteem, optimism, etc., shown to serve substantial protective functions among individuals facing adversity. We have included this scale integrally in the survey. These intra-individual characteristics are shaped by environmental or external factors: social resources that include the perceived social network and support, life events, attachment style, and family history (Carver, 1998; Tusaie and Dyer, 2004). These characteristics are assumed to serve as protective factors for psychosocial resilience in the face of a terrorist threat.

Second, from the literature we also learn that certain recently experienced stressors can have significant consequences on psychological resilience (Adams et al., 2005; Levant, 2002; Schuster et al., 2001; Tusaie and Dyer, 2004). *Major life stressors* such as disease, death in the family or social network, etc., that have caused emotional disturbances may temporarily change an individual's perceptions of social reality. The occurrence of a major life stressor has been shown to enhance the risk factor. A list of 13 possible major life stressors was included in the survey.

The two dimensions so far (personal and social resources, major life stressors) have a general nature. Now we need to go deeper into the terrorism-related issues. A major player that can act as a buffer in the face of a terrorist threat is the government. Proper communication on the topic together with a demonstration of safety and emergency scenarios should lower the feelings of fear and potential risk – thus enhancing resilience – while inadequate communication has proven to undermine public trust – thus decreasing resilience. The well-known dilemma for governments is 'informing but not alarming' and the problem arises when the public is left in an information vacuum and media start to speculate (Archetti and Taylor, 2003; Durodié and Wessely, 2002), or in the most negative scenarios when the government lies, misleads or gives too alarming, incomplete or complex information for frightened citizens to respond to in an appropriate manner (Speckhard, 2005). The amorphous and anonymous nature of the current terrorist threat provides governments with a clear comparative advantage over other actors within the information space. So we also measure the *attitude towards governmental initiatives*: we inquire about the perceived preparedness to prevent potential attacks or reduce their negative consequences, as well as satisfaction with quantity and quality of governmental information. A positive attitude towards governmental initiatives is assumed to enhance resilience regarding terrorist threats (protective mechanism), while a negative attitude could add to the threat (enhancing the risk mechanism).

An extensive body of literature points out that media exposure to terrorist events is an important predictor of symptoms of stress (Ahern et al., 2002; Apolone et al., 2002; Cantor et al., 1993; Fremont et al., 2005; Pfefferbaum et al., 1999, 2000, 2003; Ray and Malhi, 2005; Terr et al., 1999). Media exposure is widely regarded as 'indirect exposure' to a terrorist attack with 'secondary victims' as a consequence. Therefore, we have included a *personal preoccupation* dimension that measures to what extent people indicate that they pay attention to items on terrorism in the media or actively search the media for information about terrorism (for instance, to reduce uncertainty: see Boyle et al., 2004). But it is equally interesting to know if in addition to media information-seeking behavior people are also physically preparing themselves for terrorist attacks by taking precautionary measures like buying gasmasks or setting up a private emergency plan. The personal preoccupation dimension thus measures both media and preparatory behavior.

Since there is a growing consensus in the social sciences that levels of factual information moderate individual attitudes, preferences, (risk) perceptions and (risk) behaviors, we are highly interested in the influence(s) of factual *knowledge* on the other dimensions (Evans and Durant, 1995;

Miller, 1998; Siegrist and Cvetkovich, 2000). A discriminating test measuring the knowledge of 17 factual questions concerning terrorism was attached.

In Schuster et al. (2001) and Cantor et al. (1993), talking to others and discussing your feelings about what has happened (probably seen on television) proved to be a significant coping strategy, especially for people who experienced substantial stress reactions. A *social support* dimension was therefore included that reflects to what extent one's social network (colleagues, friends, family, etc.) is able to influence perceptions about terrorist threats and act as a kind of buffer. We inquire about opinion leadership, the extent to which people can talk to others about terrorism, and the extent to which people feel sufficiently backed up by their social network in the face of (questions about) terrorism.

Crucial factors in our model are of course the perceived risk of a local terrorist attack as well as the fear of being at certain public places in the face of a terrorist threat. Studies in risk perception have demonstrated that risks are subjectively defined by individuals (Krimsky and Golding, 1992). Although it would be tempting to consider this dimension as the natural negative outcome our model lacks so far, reality is more complex. *Perceived risk and fear* can just as well act as a risk mechanism in our model. And eventually, it is also important to be able to differentiate between individuals who relate to the issue and others who do not really care and thus possess a rather high *mental distance*. Perceptions about hazards have often proven to be related to mental distance (Krimsky and Golding, 1992). Completed by 15 items measuring various socio-demographic variables, our survey ended up with a total of 199 items. As this is an exploratory study bringing together different concepts from different disciplines, we were forced to start out with a very broad range of items in the survey.

We thus came to an eight-dimensional conceptual model for psychosocial resilience in the face of a terrorist threat (see Figure 1). Six dimensions – attitudes toward governmental initiatives, personal preoccupation, perceived risk and fear, knowledge, mental distance and social support – relate specifically to terrorism. The other two dimensions – major life stressors, personal and social resources – have a general nature. As this is a broad exploratory study no specific hypotheses were put forward, only some assumptions abstracted from previous research on different parts of the model. Each of the dimensions could serve as input, output or mediator variable for the others, in the end all contributing to psychosocial resilience in the face of a terrorist threat. In our analysis we will provide, first of all, an index of the underlying concepts in our model/survey for Flanders. Second, we will have a look at how these concepts correlate, before concluding by relating them to media use.
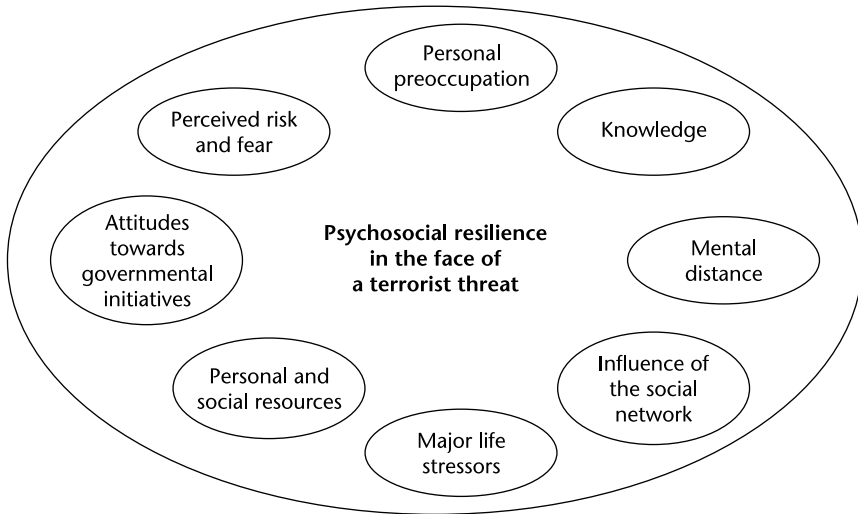
Figure 1 ResiScope^Pop, the conceptual model of psychosocial resilience in the face of a terrorist threat for the general public.

The sample

The data for the survey (N = 1040) were collected by undergraduate students in Communication Sciences at Ghent University (UGent, Belgium) in December 2004 and January 2005 in Flanders, Belgium. Each student was asked to have 10 people from pre-defined age groups and backgrounds complete the survey. To avoid possible fraud, students were asked to provide a telephone number for each respondent, so in theory each survey could be validated. Overall, the sample is representative, except for a slight over-representation of higher educated individuals and under-representation of older people (above 65).

Results and discussion

Index of terrorism-related issues concerning psychosocial resilience

We started our analysis with a principal components analysis (PCA) to reduce and classify our 199 variables. This has transformed our initial conceptual model into an empirical model with 73 variables (minus socio-demographics). On the basis of a principal components analysis and cronbach's alpha for scale reliability, Table 1 displays the following 11 concepts: knowledge, preparedness of government, quantity and quality of government information, media behavior, preparatory behavior, talking to peers, mental distance, fear in public places, perceived risk, and ego-resiliency.[2]

Table 1 Description of concepts

Concept	Description	No. of items	Label	Cronbach's alpha
Knowledge	Level of objective knowledge about terrorism	13	Knowled	0.77
Preparedness of government	Perceived level of preparedness of various government levels	9	Govprep	0.86
Quantity of information by government	Satisfaction with the amount of information given by various governments	4	Govquan	0.86
Quality of information by government	Perceived quality of government information	4	Govqual	0.75
Media behavior	Respondent's media information search	5	Ppmedia	0.81
Preparatory behavior	Behavior towards protection	3	Ppact	0.68
Talking to peers	Sharing information about terrorism with peers	7	Buftalk	0.86
Mental distance	The degree one feels involved with the topic	5	Mentdist	0.81
Fear in public places	Level of increased fear for terrorist attacks in public places	4	Fear	0.79
Perceived risk	Perceived probability of attacks in Belgium	3	Risk	0.73
Ego-resiliency	Ego-resiliency scale by Block and Kremen (1996)	14	Ego-res	0.78

Table 2 provides an index of the scores on the terrorism-related issues we have connected to psychosocial resilience for Flanders. Higher values were found, i.e. about one third of the percentage of scores falls within the $4 \leq \times \leq 6$ interval, for media behavior (Ppmedia: 33.1%), perceived risk (Risk: 30.7%), ego-resiliency (Ego-res: 61.3%), and knowledge (Knowled: 74.6% of scores falls within $7 \leq \times \leq 10$). This effectively means that a significant proportion of respondents actively searched the media for information on terrorism and displayed a high level of factual knowledge about terrorism. When we put this next to the low score for mental distance (Mentdist: mean 2.50 and only 5.7% $\geq$ 4), our data clearly suggest that Flemings are very aware of the terror topic, which was found to be high on the social agenda. Although Flanders has never suffered an attack, terrorism and its consequences preoccupy people. For instance, almost one in three thinks that we can expect a local attack anytime soon (Risk: 30.7% $\geq$ 4). Increased levels of fear for public places were found in about 10 percent of the population (Fear: 11.8% $\geq$ 4). In this sense, an important part of the terrorists' mission appears to be accomplished – they have managed to spread fear throughout a society that in reality remains

Table 2 Descriptive parameters on the conceptual level

Concept	Mean[a]	% ≥ 4[b]
Knowled[c]	8.50	74.6
Govprep	3.14	8.7
Govquan	2.67	10.9
Govqual	2.98	7.3
Ppmedia	3.55	33.1
Ppact	1.81	2.4
Buftalk	3.31	19.5
Mentdist	2.50	5.7
Fear	2.89	11.8
Risk	3.43	30.7
Ego-res	4.14	61.3

[a] This column contains the mean on a scale from 1 to 6. This means that the lower (higher) the mean deviates from the middle 3.5 position, the worse (better) the concept scores in the population.
[b] This classification allows the computation of the fraction of high scale scores in the rescaled 1–6 simple sum scale. This column reports the percentage of scores within the $4 \leq x \leq 6$ interval. In other words: how large is the percentage of respondents who yield higher values on these concepts?
[c] The level of objective knowledge is measured using 13 binary right/wrong questions; these 13 remained after an item analysis on the original 17 items where the level of difficulty needed to be not less than 0.1 and not larger than 0.9. The correlation with the total scale value needed to be at least 0.3. The sum scale takes on values from 0 to 13. The second column reports the percentage of scores in the interval $7 \leq x \leq 13$.

virtually untouched, except psychologically, by terrorism. Nonetheless, hardly anyone is found to be physically preparing him or herself against attacks, buying gas masks or building bunkers (Ppact: 2.4% ≥ 4), which likely means that they do not feel the need at this point, or do not believe in its usefulness. Government preparedness and information concepts (Govprep: mean = 3.14, Govquan: mean = 2.67, Govqual: mean = 2.98) were found to have average scores, and thus display room for improvement, especially concerning the quantity of information. And last, but certainly not least, Flemings were shown to be generally ego-resilient (Ego-res: 61.3% ≥ 4).

Correlations[3]

Perceptions of government   Table 3 indicates the presence of a general attitude toward the government as the correlations between the three concepts Govprep, Govquan and Govqual were found to be significant (r = 0.289, r = 0.258 and r = 0.385). People who perceived the government to be prepared were more likely to rate the quantity and quality of its information as good and vice versa. This general attitude was positively associated with having lower levels of fear in public places (r = –0.139, r = –0.143, r = –0.127, respectively). This appears to confirm our assumption of a positive attitude towards governmental initiatives being a protective factor enhancing psychosocial resilience regarding terrorist threats. This is reinforced by the fact

Table 3 FIML correlations

	Knowled	Govprep	Govquan	Govqual	Ppmedia	Ppact	Buftalk	Mentdist	Fear	Risk	Egores
Knowled	1.										
Govprep	.010	1.									
Govquan	–.056	.289*	1.								
Govqual	.076	.258*	.385*	1.							
Ppmedia	.139*	–.031	–.139*	–.008	1.						
Ppact	–.013	.039	–.053	–.090*	.314*	1.					
Buftalk	.381*	.032	.013	.099*	.477*	.277*	1.				
Mentdist	–.320*	.066	.113*	.027	–.246*	–.096*	–.384*	1.			
Fear	–.031	–.139*	–.143*	–.127*	.307*	.309*	.215*	–.239*	1.		
Risk	–.088*	–.039	–.095*	–.149*	.217*	.483*	.097*	–.082*	.386*	1.	
Ego-res	.236*	.073	.039	.103*	.066	.054	.226*	–.133*	–.050	–.053	1.

* denotes significant correlations on the p < .01 level.

that (the perception of) a higher quantity and especially higher reliability of government information is also found to be negatively correlated with the perceived risk for a local attack ($r = -0.095$ and $r = -0.149$). It is striking that the perception of government preparedness in the face of terrorism only correlated with two other concepts outside the general government attitude, while the two information concepts displayed substantial associations with a majority of the concepts. This suggests that a government perceived as a good communicator is much more important than any perception of preparedness, which again confirms the primacy of communication and information in our contemporary societies, even in the face of a physical threat such as terrorism.

Personal preoccupation   Both preoccupation concepts inquired about specific behavior concerning this topic (Ppmedia x Ppact: 0.314), i.e. searching for information in the media (Ppmedia) or displaying certain preparatory actions (Ppact), and similar significant correlations were found. We found significant correlations between both behavior concepts and talking to peers about terrorism on the one hand ($r = 0.477$ and $r = 2.77$), and between both behavior concepts and fear in public places on the other ($r = 0.307$ and $r = 0.309$). This confirms the studies on the psychological effects of terrorism in which media exposure – when it comes to terrorism – has proven to induce negative symptoms, whether traumatic symptoms or fear. Yet it is impossible to know which way these correlations run. One could argue that people who are more fearful will seek information in the media (that depict horrific images) and seek support in their social network or, on the other hand, a subjective feeling of fear after watching images from terrorist attacks can be (inter-subjectively) reinforced or confirmed in social encounters. In fact this latter view would confirm many studies of psycho-social contagion and even mass sociogenic illnesses which have occurred in societies where one group fears poisoning by an enemy other – this has occurred in Chechnya, Kosovo (Hay and Foran, 1991) and Palestine (Modan et al., 1983).

Furthermore, the importance of government information manifests itself once again: people are shown to search the media for information when government information quantity disappoints ($r = -0.139$), and display a higher incidence of preparing for their own protection when the information reliability is perceived to be lacking ($r = -0.090$). Although the correlation is quite weak it is significant, as this is not the case with the perceived level of government preparedness. Again, the perception of reliable government communication is found to be more important than government preparedness.

Perceived risk and fear   It is important to know what exactly correlates with higher levels of fear or risk perception (Risk x Fear: r = 0.386), as a 'terror-tax', for instance, could damage the economy (consumer confidence, domestic demand) in a nation with higher scores for these two dimensions. These correlations were found when quantity (r = –0.095 and r = –0.143) and quality of government information (r = –0.149 and r = –0.127) were perceived to be lacking, and people searched the media for their information (r = 0.217 and r = 0.307), chose to protect themselves (r = 0.483 and r = 0.309), talked to their peers about this topic (r = 0.097 and r = 0.215; again inter-subjectively reinforcing each other's fear?), or displayed lower mental distances (r = –0.082 and r = –0.239). This constellation of variables indicates an ideal place for governments to intervene effectively because it may mean that if a government creates confidence it can lower fear states (and risk perceptions) as well as unnecessary and wasteful preparatory behaviors.

Social support   Other than the previously mentioned substantial associations with both behavior concepts and higher levels of fear and risk perception, talking to peers about terrorism (Buftalk) is found to be important for the level of factual knowledge (r = 0.381) and ego-resiliency (r = 0.226). The latter was expected and confirms resilience literature. Of course mental distance from the topic is low when people tend to speak about it with their peers (r = –0.384).

Mental distance, knowledge, and ego-resiliency   What is interesting about the mental distance concept (Mentdist) is that it discriminates between people who relate to the topic and people for whom the age of terrorism has never arrived. The only positive association with the mental distance concept we found was with information quantity by government (r = 0.113): respondents who thought the government already provided enough information were more likely to display higher levels of mental distance. The negative association between ego-resiliency and mental distance (r = –0.133) is quite remarkable: does this suggest that respondents who did not relate to the issue of terrorism displayed a shortage of the set of traits (such as optimism, self-esteem, etc.) proven to serve protective functions in the face of adversity?

Although factual knowledge (Knowled) is a highly contentious construct (who decides what should be known or what is true and what is not?), it proved to be relevant for our model: a higher level of factual knowledge on terrorism correlated with searching the media for information (r = 0.139), discussing this information with peers (r = 0.381), and a lower mental distance (r = –0.32) as well as a lower risk perception (r = –0.088). The latter correlation is quite weak though. Unlike mental distance, people with higher levels of

factual knowledge on terrorism were found to possess the protective ego-resiliency traits in higher numbers (r = 0.236). These two correlations suggest that in our contemporary world well-functioning people relate to this topic which is considered to be of vital importance for an engaged citizen, at least in Flanders.

And last, but certainly not least, ego-resiliency (Egores) correlated with talking to peers about terrorism (r = 0.226), relating to the topic (r = –0.133), and knowing more facts about it (r = 0.236). Ego-resilient people also tended to give higher ratings to the quality of government information (r = 0.103), which – as we have seen – correlates with other positive consequences. No significant correlation was found with fear or risk perception.

General media use

Table 4 provides the relationships between the 11 concepts and media use in the case of television, radio and the internet. Radio usage does not correlate with any of the concepts, in contrast with TV and internet use. We found that the more people reported watching TV, the less factual knowledge on terrorism they possessed (r = –0.205). We found the exact opposite result with the internet: a significant positive correlation between knowledge and internet use (r = 0.376). The same goes for ego-resiliency (r = –0.186 versus r = 0.183), preparatory behavior (r = 0.088 versus r = –0.088), mental distance (r = 0.086 and r = –0.134), fear in public places (r = 0.093 and r = –0.149), and perceived risk (r = 0.088 and r = –0.111). In all these cases, internet use appears to be related to the rather protective functions concerning psychosocial resilience in the face of a terrorist threat, while television use enhances the risk factor on many fronts. The fact that we found a significant correlation between searching for information in the media and television use was expected (r = 0.180), as we inquired in Ppmedia about searching for information on television and in newspapers. A substantial association was also found between talking to peers about terrorism and internet usage (r = 0.243), thereby suggesting that people who often use the internet tend to discuss what they find on the web about terrorism with their peers, while no significant relationship was found for TV.

Conclusion

The aim of this study was to explore the resilience of the public in Flanders, Belgium, in the face of a mediated terrorist threat. To this end, several dimensions central to psychosocial resilience and terrorism were brought together in a conceptual model, of which our data emphasized the following

Table 4 Correlations between the concepts and media use

Concept	TV	Radio	Internet
Knowled	−.205*	−.061	.376*
Govprep	−.011	.019	.000
Govquan	.017	−.004	.047
Govqual	.019	−.040	.048
Ppmedia	.180*	.044	.028
Ppact	.088*	.029	−.088*
Buftalk	−.031	.032	.243*
Mentdist	.086*	.040	−.134*
Fear	.093*	.018	−.149*
Risk	.088*	.059	−.111*
Ego-res	−.186*	−.018	.183*

* denotes significant correlations on the p <. 01 level.

concepts: factual knowledge, preparedness of government, quantity as well as quality of government information, media behavior, preparatory behavior, talking to peers, mental distance, fear in public places, perceived risk and ego-resiliency.

The index of the scores on these concepts revealed that although Flanders has not (yet) suffered an attack, the terrorist threat preoccupies people. Approximately one-third of respondents were found to actively search the media for information on terrorism and an equal number expected a local attack soon. Increased levels of fear for public places were found in about 10 percent of the sample. But while these data clearly indicate the psychological repercussions of this terrorism threat, hardly anyone was found to be physically preparing him or herself against attacks, buying gas masks or building bunkers. This is where the buck appears to stop in a pre-trauma society like Flanders in 2004–5.

Three important observations emerged from the correlations between these concepts. First, the attitude towards governmental initiatives was shown to be a crucial factor in our model: a perception of a prepared government that is at the same time a good and reliable communicator is associated with lower levels of fear and perceived risk. Interestingly, the communicator role proved to be much more important than the physical preparedness role, thereby affirming the primacy of communication and information in our contemporary societies, even in the face of a physical threat such as terrorism. Second, our two behavior concepts, i.e. searching the media for information and preparing oneself for an attack, were strongly related to talking to peers about terrorism and higher levels of fear and risk perception. And this is

where the ambiguous role of social support becomes clear: although we found a positive association with ego-resiliency (as was expected), the data also suggest that when it comes to a terrorist threat people are likely to inter-subjectively reinforce their fears instead of mitigating these. And third, when it comes to general media use, internet and television usage were found to be diametrically opposed in our model. The more a person uses the internet the more he or she was associated with the protective factors in our model, while we found the exact opposite with television use: this medium was found to be associated with the risk factor on many fronts.

There were three main limitations in this study. First, we started out with a very broad spectrum including items from different fields in a large survey (199 variables). This has limited the possibilities for an in-depth analysis of some of our dimensions. Second, our principal component analysis identified no meaningful and reliable concepts from our personal and social resources item series – except for the ego-resiliency scale by Block and Kremen (1996) – and a statistically insufficient number of respondents indicated any major life stressors, which is why both dimensions were excluded in the present analysis. And third, we looked at the interactions of many concepts related to resilience to terrorism, but we did not decide on or define the outcome measure of what exactly makes a person resilient or non-resilient. Instead we preferred at the outset to model how these concepts worked together. We did assume that less fear and a smaller risk perception enhances psycho-social resilience, although we acknowledge that this is not a black and white opposition. Moderate levels of fear or risk perception may make an individual more alert and capable of assessing danger (see the experiential mode: Slovic, 2002).

As we plan to repeat this survey every year, the first updated survey will include measurements of xenophobia, Islam, race and ethnic group perceptions as well as scales for acute stress or PTSD. We believe longitudinal research and international comparisons would be very interesting. The in-depth analysis of the process of psychosocial resilience to terrorism with its related concepts can offer a solid foundation for intervention programs. This strategy has the potential to integrate clear role definitions for governments, policy-makers, mental health professionals, social institutions, and mass media and communication experts. Repeating the measurements over time will allow close monitoring of any intervention programs or effects of (inter)national terrorist attacks. The public is an important partner in the preparedness for a terrorist attack – not only in resisting intimidation or minimizing the consequences of a terrorist threat, but also in rising as one united community, one nation, people and government together to face the terrorists.

Notes

1 'Pop' refers to population and indicates that this version of the ResiScope model applies to the general public. The ResiScope^{Pro} version applies to the first responder or the professional (Verleye et al., 2006).

2 Although 55 items were incorporated as indicators of personal and social psychological resources, no meaningful and reliable concepts were identified in that exhaustive item list, except for the ego-resiliency scale. And although it was possible to indicate 13 different major life stressors in the survey, only about 2.5 percent of respondents reported to have experienced severe trauma from one or more incidents. Therefore, both of these dimensions have been excluded from further analyses.

3 Table 3 reports the correlations between our 11 concepts. Because we have some missing values in the sum scores (ranging between 0.7% and 6%) and we aim at using this matrix in further SEM models, these correlations were computed with Full Information Maximum Likelihood in AMOS (Arbuckle, 2003). These estimates are unbiased in the presence of missing data (Verleye, 1999).

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Biographical notes

Pieter A. Maeseele is a doctoral student at the Department of Communication Studies and the Centre for Critical Philosophy at Ghent University, Belgium. As a media socio-logist, his research broadly focuses on the interplay between science and the media in the risk society, primarily in the context of biotechnology and terrorism.
Address: Department of Communication Studies, Ghent University, Korte Meer 7-9-11, Ghent B-9000 Belgium. [email: Pieter.Maeseele@UGent.be]

Gino Verleye is Associate Professor at the Department of Communication Studies at Ghent University. His research and teaching focuses on the domain of quantitative methodology. He is a member of the NATO Human Factors & Medicine Research and Technology Experts Group (HFM-140/RTG) on the Psychosocial, Cultural and Organizational Aspects of Terrorism.
Address: Department of Communication Studies, Ghent University, Korte Meer 7-9-11, Ghent B-9000 Belgium. [email: Gino.Verleye@UGent.be]

Isabelle Stevens is a teaching assistant and PhD student at the Department of Communication Studies at Ghent University, Belgium. Her main research objectives include a threesome of customized conceptual frameworking, empirical implementation and formulation of strategic risk communication management implications. She mainly focuses on governmental risk communication in the medially and socially constructed risk society.
Address: Department of Communication Studies, Ghent University, Korte Meer 7-9-11, Ghent B-9000 Belgium. [email: Isabelle.Stevens@UGent.be]

Anne Speckhard is Adjunct Associate Professor of Psychiatry at Georgetown University Medical School. She has been working in the field of posttraumatic stress disorder and has extensive experience working in the former Soviet Union, Europe, and the Middle East. She is chair of the NATO Human Factors & Medicine Research and Technology Experts Group (HFM-140/RTG) on the Psychosocial, Cultural and Organizational Aspects of Terrorism.
Address: Georgetown University Medical School, 91 Vassilisis Sofias Ave, 10160 Athens, Greece.
[email: ASpeckhard@AnneSpeckhard.com]