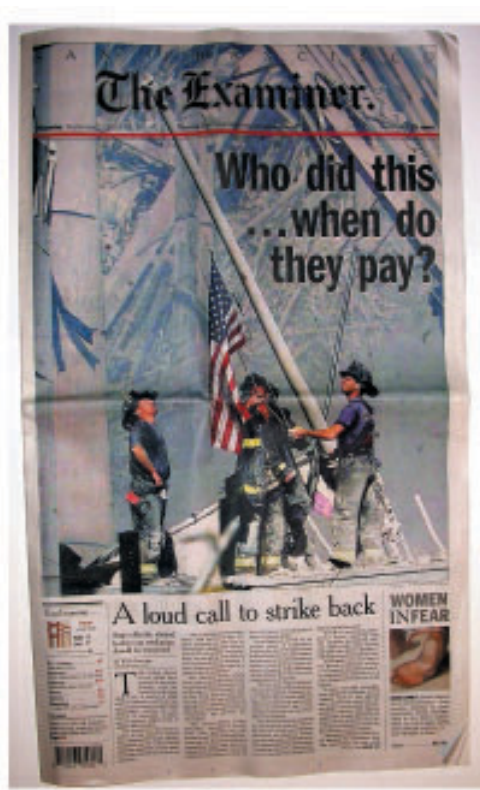


Abstract

While the terrorist attacks on the World Trade Center and the Pentagon on September 11th changed the lives of most Americans, including those who neither lived near the event nor had friends or relatives directly impacted, some people appear to have suffered more extreme and protracted effects from the terrorist attacks than others. Using an instrument measuring Responses to Terrorism with subscales of Emotion, Cognition, and Behavior we found that participants who rated higher in negative emotions were significantly higher in proneness to survivor guilt, broadly defined. Using narratives written by the participants in response to open-ended questions, we found worry about others predicted fear and obsessional thinking. From both quantitative and qualitative data used in this study, and in line with prior studies of Post Traumatic Stress Disorder, we suggest that people who are higher in guilt proneness and in proneness to negative emotionality, prior to a traumatic event, may be more likely to develop PTSD at a later date.



From left, San Francisco Chronicle, 9/12/2001; San Francisco Examiner, 9/12/2001; San Francisco Examiner, 9/13/2001; People, 10/13/2001.

Introduction

The potential for acts of terrorism, carried out in the U.S. was made clear by the attack on 9/11. The longer term effects on people after experiencing acts of terrorism are unknown. Acts of terrorism are equivalent to war, and there is some data, albeit now under question, about the responses to surviving a war situation as an active participant. Following acts of war, the occurrence of PTSD diagnoses are significantly elevated. The US Army Sergeant General reported that 3-4 months after returning from Iraq, 30% of soldiers had developed stress-related mental health disorders, the

most prominent being PTSD. Proneness to PTSD increases when a sense of shame or guilt is driven by the feeling of providing inadequate aid to others during the traumatic period (Johnson, 2005). The effects of PTSD have proven to be widespread. Following a bomb blast in Pakistan 82% of survivors met the full diagnostic criteria for PTSD (Izhar, 2003). A heightened interest on the effects of terrorism has led to further research not only on the effects of war on its participants, but also on its victims.

Methods

Participants

Participants were 163 (42 male and 121 female) college students. Participants received additional credit in their class, for participation in the study.

Instruments

Responses to Terrorism Scale (RTS: O'Connor & Berry, 2001) is a 28-item self report measure. The RTS includes three subscales: Obsession with Terrorism (OT) includes obsessive cognitions related to the events of September 11th and the bioterrorist attack that followed. Emotionality and Terrorism (ET) includes items related to fear and anxiety in the wake of the terrorist attacks. Inhibition due to Terrorism (IT) includes items that describe changes in routine and pleasurable activities since the terrorist attacks.

The Interpersonal Guilt Questionnaire-67 (IGQ-67: O'Connor, Berry, Weiss, Bush & Sampson, 1997) is a 67-item, self-report questionnaire designed to assess guilt related to the fear of harming others, with four subscales, Survivor Guilt, and Omnipotent Responsibility Guilt.

Survivor Guilt is characterized by the belief that pursuing normal goals will harm others. Examples of Survivor Guilt items include: "I

often conceal or minimize my successes"; "It makes me uncomfortable if I am more successful at something than are my friends or family members"; "It makes me uncomfortable to receive better treatment than the people I am with."

Separation Guilt is characterized by the belief that if a person separates from her loved ones, leads their own life, or differs from their loved ones in some way, they will cause their loved ones to suffer. Examples of Separation Guilt items include: "I feel that bad things may happen to my family if I do not stay in close contact with them"; "I prefer to do things the way my parents did them"; "I am reluctant to express an opinion that is different from the opinions held by my family or friends."

Omnipotent Responsibility Guilt is characterized by the belief that one is responsible for the happiness and well-being of others. Example of Omnipotent Responsibility Guilt in clued: "It is hard for me to cancel plans if I know the other person is looking forward to seeing me"; "I often find myself doing what others want me to do rather than doing what I would most enjoy"; "I feel responsible at social gatherings for people who are not able to enter into conversations with others." People who feel survivor and/or separation guilt invariably feel omnipotent responsibility guilt. However, there are instances where people may feel omnipotently responsible for

others without specifically feeling survivor or separation guilt.

Brief Big Five Inventory (BFI: John, Donahue & Kentle, 1991) is a 45-item self-report inventory for assessing the big five personality traits: extraversion, agreeableness, openness, neuroticism and conscientiousness.

The Social Support Survey is an 8-item inventory assessing a person's social support network. It includes items such as "If I needed an emergency loan of \$100, there is someone I could get it from" and "If I needed an early morning ride to the airport, there is no one I would feel comfortable asking to take me."

Procedure

We administered the RTS, the IGQ, the BFI, and the SS, along with demographic information including religion and ethnicity. In addition, participants responded to open-ended questions including "how did you first hear about the terrorist attacks", "what were your first feelings after the attacks", "what were your first thoughts after the attacks" and "what has been the hardest thing for you since the attacks". These narratives were later rated by 3 individuals, first independently, then again as a group. We coded the responses and found that participants primarily initially felt fearful, shocked/disbelieving, angry, or sad.

Empathy-Based Guilt and Responses to Terrorism: Memories Two Months Later

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Figure 1. Affects of Terrorist Attacks on Everyday Life

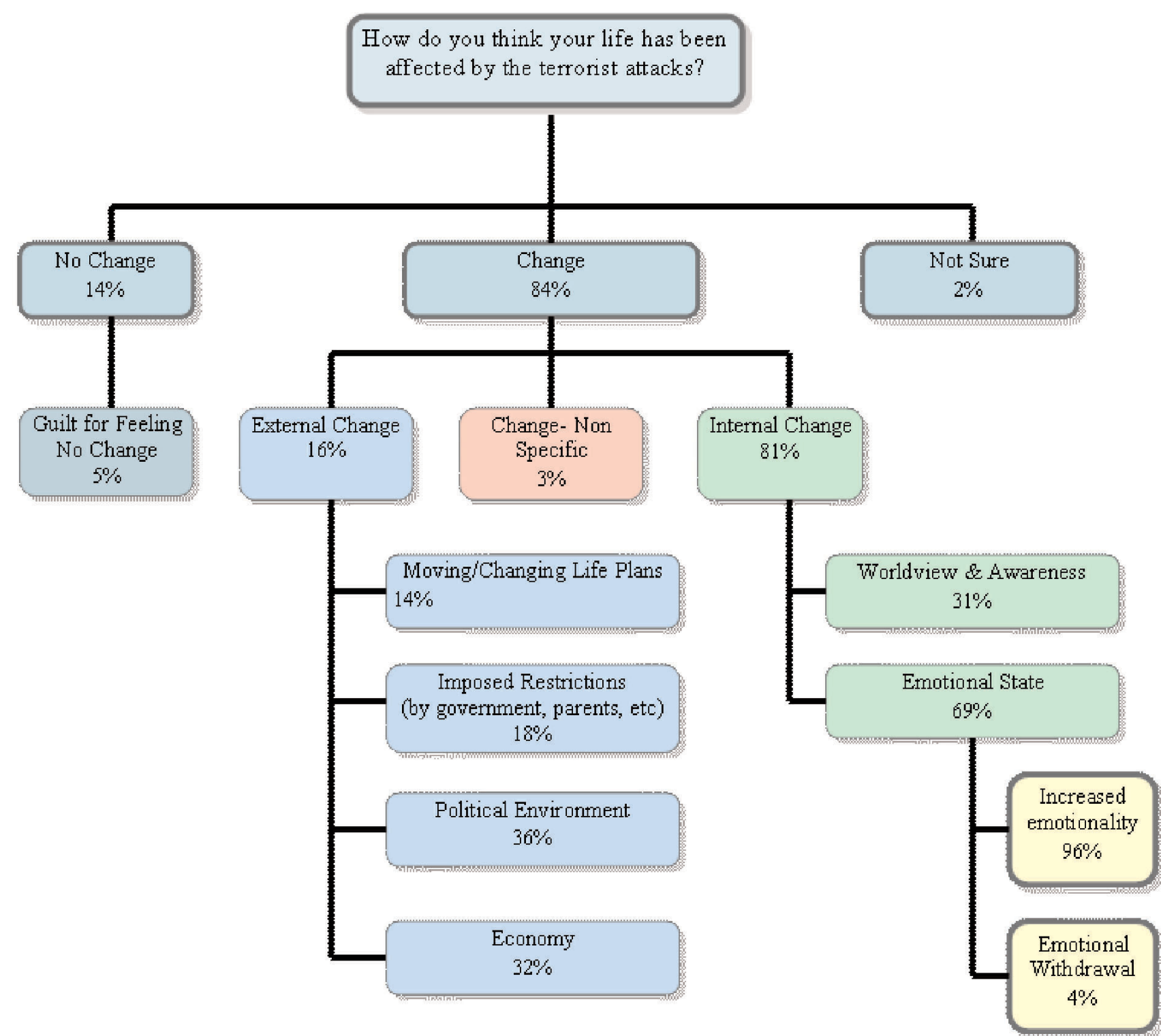


Table 1. Interpersonal Guilt and Responses to Terrorism Controlling

Predictors	Inhibitions (Behavior)	Obsession (Cognition)	Fear (Emotionality)
Survivor Guilt	.29***	.12	.06
Neuroticism	.16	.19*	.33***
Omnipotent Guilt	.29***	.35***	.38***
Neuroticism	.02	.02	.05
Separation Guilt	.38***	.38***	.45***
Neuroticism	.17*	.14*	.25**

Terrorism Narrative Excerpts

"My heart fell and I couldn't believe what had happened. I can't really explain it, but all I knew was that many people lost their lives that day and I was shocked and sad at the same time."

"I thought the world was going to end. I thought immediately that San Francisco was going to be bombed so I didn't go to school for a couple of days. I also thought my boyfriend was going to be drafted into another war."

"I thought that WWII would break out for sure! I knew that something had

changed forever. I knew that this world was given a taste of some unhealthy medicine. And, I honestly thought there won't ever be a way to completely recover or heal from this pain."

"The hardest thing for me has been trying to live my life day by day, trying not to think about Sept. 11 and trying not to go on with life as if nothing has happened."

"The hardest thing for me has been the decrease in motivation and energy of life in general. People at school being slow with energy and the depressed nation as a whole."

Results

The internal consistencies of the three subscales of the RTS were acceptable; IT, alpha = .73; OT, alpha = .78; ET, alpha = .87. Of the five personality factors, only neuroticism was significantly correlated with the responses to terrorism subscales (Table 1). We found a significant correlation between survivor guilt and inhibition of routine or pleasurable behaviors, even when controlling for neuroticism. We found significant correlations between omnipotent responsibility guilt and all three subscales of responses to terrorism while controlling for neuroticism. Finally, we found significant correlations between separation guilt and all three subscales of responses to terrorism, even when controlling for neuroticism. There were no significant differences between religious or ethnic groups. Females were significantly higher than males in the obsession and emotionality subscales. In coding open ended questions we found that of 134 subjects who responded, 58 described feeling shock; 30 felt disbelief; 20 described feeling sad, depressed or bad; 14 said they felt fearful, "scared", or panicked; 4 described confusion as their primary initial feeling; 3 felt anger; and 4 students described feeling indifferent.

Four one-way ANOVAs were conducted, regressing the different emotion narratives on Inhibition Responses to Terrorism, Obsessive Responses to Terrorism, Fear Responses to Terrorism and Total Responses to Terrorism. Only under the Fear

Responses to Terrorism did we reach significance (alpha=.021). Responses to answers on the Responses to Terrorism- Fear scale and different cognition narrative responses differed significantly. Specifically, the categories of sadness and fear and sadness and shock/disbelief proved significantly different, with alpha=.010 and alpha=.011, respectively.

After rating the narratives in random segments, each participant's responses to multiple questions were rated as a whole, from which the following three groups were derived: 1) Those who were primarily worried about others; 2) those who were primarily worried about the self, and 3) those who failed to express worry. An ANOVA was conducted comparing these three groups on the subscales of the RT. The group who primarily worried about others were significantly higher in fearful emotionality than the non-worried group (p=.009), and those who were worried about the self were significantly higher in fearful emotionality than the non-worried group. The group that worried about others was significantly higher in Obsessional Cognitions, when compared to the non-worried group (p=-.14). Thus the results of the analysis of the narratives supported the finding that higher levels of concern about others, like guilt-proneness, was associated with significantly higher levels of cognitive and emotional distress, as measured by the RT.

Discussion

These results may have clinical significance. As an increasing number of people sought mental health care in the wake of the terrorist attacks, we predicted that people who are more highly prone to a dispositional tendency to take responsibility for others, that is who are significantly higher in guilt proneness, are more likely to present with PTSD-like symptoms. People who are prone to broadly defined survivor guilt are more likely to present with increased depression and inhibition of normal activities. Finally, these results suggest that women may be more likely to present with PTSD-like symptoms.