

# Development and Psychometric Testing of the Perceptions of Terrorism Questionnaire Short-Form (PTQ-SF)

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**Abstract** ~ The September 11, 2001 attacks on the World Trade Center and the Pentagon have had an ongoing impact, transforming daily habits and attitudes in the United States. At the time of the attacks, social scientists had limited understanding of how people in the United States would think about or react to large-scale acts of terrorism in the US. This study contributes to a growing body of knowledge and theory in this area. We developed and psychometrically evaluated the 25-item Perceptions of Terrorism Questionnaire short-form (PTQ-SF), assessing eight constructs identified by the authors as recurrent themes in the general literature on terrorism (literature that is not specific to the US), including Perceived Threat of Terrorism, Faith in Government, and Fear/Impact of Terrorism. Psychometric evaluation of the PTQ demonstrated that it met acceptable standards for item internal

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consistency/convergent validity, item discriminant validity, internal consistency reliability, and floor/ceiling effects. Confirmatory factor analysis generally supported item groupings. Results support the PTQ-SF as a promising new measure of perceptions of terrorism.

## Introduction

The terrorist<sup>1</sup> attacks of September 11, 2001 have altered the lives of people living in the United States, and arguably across the world; the long-term effects of these attacks are still being assessed. In determining a paradigm of study, much of the research examining the effects of 9/11 initially used the existing trauma literature, specifically focusing on diagnoses of Post Traumatic Stress Disorder (PTSD) (Schuster et al., 2001; Galea et al., 2002; Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002; Galea et al., 2003). This research has shown that rates of anxiety and depression specific to 9/11 have returned to baseline after spiking immediately after the attacks. However, there is preliminary research (Kramer, Brown, Spielman, Giosan, and Rothrock, 2004; Sinclair, 2004) and polling evidence (Polling Report, 2005) to suggest that there is still a significant amount of fear related to future terrorism. These fears escalate significantly after large-scale attacks, such as Madrid (March, 2004) and London (July, 2005) (Polling Report, 2005).

Although this framework was appropriate in considering initial effects of the 9/11 attacks, the reported decline in PTSD (Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002) does not mean that all reactions to 9/11 have dissipated. Rather, the longer-term

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1: For our purposes, Jessica Stern's (2003) definition of terrorism is used: "First, terrorism is aimed at non-combatants... Second, terrorists use violence for dramatic purposes: instilling fear in the target audience is often more important than the physical result. This deliberate creation of dread is what distinguishes terrorism from simple murder or assault."

and wide-ranging effects of 9/11 are not likely to be fully explained by any one paradigm of study. According to Fremont (2004), there was at that time a lack of data to help us understand whether reactions to large-scale acts of terrorism are similar to other types of violent events, or about the effects of living in a perpetual state of fear of another terrorist attack as a consequence of past attacks. Terror Management Theory (Pyszczynski, Solomon, & Greenberg, 2003) has recently emerged since 9/11 as a framework to help researchers better understand the complex reactions to terrorists events. The present study seeks to contribute to this body of knowledge through the development and psychometric testing of a new tool assessing people's reactions to terrorism.

The new zeitgeist generated by the attacks of September 11, 2001 includes living in a state of fear and anxiety for many. Our work draws largely on theory and research by Zimbardo (2003a, 2003b) and Pyszczynski, Solomon, and Greenberg (2003) in addressing the effects of the longer-term effects of terrorist attacks, as will be discussed below. Anecdotal evidence, news reports, and some social scientists (Zimbardo, 2003a) suggest that the fear and anxiety may be exacerbated by the color-coded warning system from the Department of Homeland Security, which has been raised to "Orange: High Alert" seven times since its inception in 2002. According to Zimbardo (2003a), these alarms have "worked to create high levels of citizen fear, which over time morphed into generalized anxiety" (p. 1). Zimbardo (2003a, p. 1), drawing on classic social psychology research, claims, "That prolonged state of worry about one's vulnerability without any clear action to alter it can have a profoundly negative impact on our individual and collective mental health. I call it a 'pre-traumatic stress syndrome'."

Since, by definition, the purpose of terrorism is to instill fear and make ordinary people anxious, fearful, and confused, the 9/11

attacks have evidently succeeded to some extent. We set out to clarify just how, and how much. Fear and anxiety, to the extent experienced, would seem to be supported by public testimony of public officials. For example, in testimony provided in March 2004, then director of the Central Intelligence Agency, George Tenet, described the situation as one where the enemy "remains intent on obtaining and using catastrophic weapons" (2004, p. 1). This enemy, as Tenet described, is no longer made up of al Qaeda members exclusively, but rather has expanded to include radical Islamic organizations across the globe that are sympathetic to Osama bin Laden's cause. For many of these groups, Tenet (2004) claimed that "a spectacular attack on the US homeland is the 'brass ring' that many strive for, with or without encouragement by al Qaeda's central leadership" (p. 4). A more recent report by the Department of Homeland Security (2006) indicated continued reason for concern:

...Current catastrophic planning is unsystematic and not linked within a national planning system. This is incompatible with 21st century homeland security challenges, and reflects a systemic problem: outmoded planning processes, products, and tools are primary contributors to the inadequacy of catastrophic planning...(p. viii).

What makes the post-9/11 world so distressing for many in this country is the anticipation of another large-scale terrorist attack. These fears and anxieties are different from PTSD in that it is experienced in anticipation of a future traumatic event, and is what Zimbardo was describing when he labeled this syndrome a "pre-traumatic stress syndrome" (2003b). According to Fremont (2004), "The unpredictable, indefinite threat of terrorist events, the profound effect on adults and communities, and the effect of extensive terrorist-related media coverage exacerbates underlying anxieties and contributes to a continuous state of stress and anxiety" (p. 381). Fremont goes on to say that what makes ter-

rorism unique in its propensity to be traumatic is its ability to be "enduring and omnipresent." Reactions to specific events fade, but the anticipation of new events remain, and is often the cause of severe anxiety.

### Terror Management Theory

Terror Management Theory (TMT) provides a conceptual framework for how people function in controlling the most basic and primitive fear of death (Greenberg, Pyszczynski, & Solomon, 1986). Developed prior to the 9/11 attacks and rooted in existential psychology, the model assumes that all people have an inherent fear of dying, although to varying degrees. Two factors that account for this variability: 1) a connectedness to culture for a source of meaning and permanence in the world; and 2) the belief that self is an important and consequential contributor to this reality. According to Pyszczynski et al. (2003), a connection to culture allows people to allay terror associated with death by assuring them that they are members of a meaningful and enduring reality that will ultimately transcend their death. Actively participating in this meaningful reality generates a sense of purpose, stability, and the belief that part of them will transcend death.

In their book, *In the Wake of 9/11: The Psychology of Terror*, Pyszczynski et al. (2003) apply their theoretical model to the experience of terrorism for purposes of better understanding the reactions to 9/11 specifically and to anticipating more attacks. Following the 9/11 attacks, Pyszczynski et al. (2003) report a November 2001 Gallup poll, where 40% of people in the United States believed that they or a family member would be the victim of a terrorist attack, and 75% thought another terrorist attack was imminent. Similarly, a December 2003 poll reported that 85% of the American public believed the United States would experience another terrorist attack in the "near future" (Widemeyer Research & Polling, 2003). Sixty-two percent believed the attack would occur within one year and "fear of the unknown" was the most

reported source of fear. A 2003 Washington Post poll reported that half of Washington, D.C. residents feared they would be the victim of a terrorist attack (Morin, 2003). An April 2004 Associated Press poll reported that 66% of the American public believed terrorists would strike the United States before the Presidential elections. Thirty-three percent of respondents believed one of the political conventions in the summer of 2004 would be a target, either in Boston or New York City. A CNN/Gallup poll taken immediately after the first London transit terrorist attacks on July 7, 2005, reported that 55% of Americans said they believed a terrorist attack within the United States was very or somewhat likely in the following couple of weeks.

Pyszczynski et al. (2003) argue that from a TMT perspective these fears reflect the realization that death is omnipresent and inevitable, and that terrorism is a viable and even likely way for this to happen. They go on to argue that "PTSD is the result of a general breakdown in the terror management system that leaves the person unable to cope with the fears to which the traumatic event has given rise" (p. 126). When an individual's core beliefs about their safety and security are challenged along the lines of the September 11, 2001 attacks, pathological fear results. Bonanno (2004) has argued that three factors help to buffer people against severe traumatic response, and terms these factors traits of "hardiness." They include a desire to attain purpose in life, a belief in one's self to effectively manipulate one's environment, and a belief that one can change and evolve in healthy and adaptive ways after experiencing traumatic events. Hardy people, Bonanno argues, are able to better adapt to traumatic life events because they are more confident, connected to others for support, and able to cope with distress. As a result, traumatic events are experienced as less threatening.

Since 9/11, researchers have begun to examine both how people are thinking about issues related to terrorism, and how fear of ter-

rorism impacts them. Questions studied include whether terrorists are perceived as being mentally ill and skillful/capable in their enterprise (Beck, 2002; McCauley, 2002); the extent to which people perceive themselves to be personally threatened by terrorism (Huddy, Feldman, Capelos, & Provost, 2002; Piotrkowski & Brannen, 2002; Pyszczynski, Solomon, & Greenberg, 2003); how much people have faith in their government for protection from terrorism (Chanley, 2002; Murphy, Wismar, & Freeman, 2003; Pyszczynski et al., 2003); the extent to which people are angry and lack tolerance for other people from different cultural backgrounds as a result of terrorism (Lerner & Dacher, 2001; Lerner, Gonzalez, Small, & Fischhoff, 2003; Pyszczynski et al., 2003); how much people are fearful of more terrorism (Lerner & Dacher, 2001; Lerner, Gonzalez, Small, & Fischhoff, 2003; Pyszczynski et al., 2003; Zimbardo, 2003a, 2003b); and the extent to which government-issued terror alerts have generated more fear (Zimbardo, 2003a, 2003b). As very little has been done to study the effects of living in a new reality of terrorism, there are few instruments available to assess these constructs that have been tested in terms of their psychometric properties.

The purpose of this study was to develop and psychometrically evaluate a measure assessing constructs identified by the authors as appearing frequently in the literature on terrorism. It is hypothesized that a Perceptions of Terrorism Questionnaire short-form (PTQ-SF) measuring 8 constructs will satisfy minimum psychometric standards for group-level comparisons, following the logic of Cronbach (1951), Campbell and Fiske (1959), Nunnally and Bernstein (1994), and Ware, Harris, Gandek, Rogers, and Reese (1997). This will include examination of item internal consistency (item convergent validity), item discriminant validity, internal consistency reliability (Cronbach alpha), floor and ceiling effects, and the underlying factor structure of both the PTQ-SF items and scales. The ultimate goal of this study is to con-

struct a standard instrument for assessing people's reactions to terrorism and the general impact of living in a post-September 11, 2001 world.

## Method

### Participants

One hundred and forty-six university undergraduate students in the greater Boston area participated in this study in the spring and fall of 2003, and each received research credit required of their general psychology courses. Participants were also entered into a raffle for a \$30 gift certificate at Barnes and Noble Bookstore. At the time the study was conducted, the government's color-coded terrorism alert system was at "Yellow - Elevated" prior to the Madrid train bombings in March 2004.

Table 1 presents descriptive statistics for the study sample. The mean age of the participants was 20.6 ( $SD = 4.0$ ), although the range was large (18-53). There was a greater proportion of females (61%), Caucasians (78.1%), Democrats (45.9%), and those with moderate political ideologies (53.2%); and the majority reported they belonged to Christian religions (52.7%). Interestingly, there were very few Conservatives (10.8%) and Republicans (15.1%), and many (36.3%) reported "Not Applicable" when asked to report their religious group affiliation. A small number of participants were married (5.5%), and reported they had children (2.1%), and the majority reported working either part-time (46.6%) or not at all (40.4%). More than 4 out of 5 respondents reported they watched at least some television coverage related to terrorism each week (83.9%).

### The Construction of the Perceptions of Terrorism Questionnaire (PTQ)

The Perceptions of Terrorism Questionnaire long-form (see Appendix A) is a 71-item survey developed by Sinclair and

Table 1

*Descriptive Statistics for the Suffolk Undergraduate Sample (N=146)*

Mean Age (SD)	20.6 (4.0)
	%
Female	61.0
Married	5.5
<b>Race/Ethnicity</b>	
White	78.1
African-American	4.1
Hispanic	6.2
Asian	7.5
Other	4.1
<b>Political Party Affiliation</b>	
Democrat	45.9
Republican	15.1
Independent	24.0
Other (e.g., Green, Natural Law)	15.1
<b>Political Ideology</b>	
Conservative	10.8
Liberal	36.0
Moderate	53.2
<b>Work Status</b>	
Full Time Paid	13.0
Part Time Paid	46.6
Not Working	40.4
<b>Religious Affiliation</b>	
Christian	52.7
Jewish	6.2
Atheist	1.4
NA	36.3
Other (e.g., Buddhism, Hindu, Islam)	3.4
<b># Of Close Friends - Total</b>	
0-4	25.7
5-8	42.4
9+	31.9
<b># Hrs TV Per Week Watched- Terrorism Coverage</b>	
0	16.1
1	35.7
2	18.2
3+	30.1

LoCicero (2004) to assess people's general reactions to terrorism, and perceptions about terrorists. It includes eight open-ended questions, where people are asked to give their opinions on why people become terrorists, why certain groups of people are targets of terrorism, and what sort of terrorism is feared the most, for example. The PTQ also contains items assessing the extent to which people have changed their lives since the terrorist attacks of September 11, 2001, including how their physical and mental health, consumption of food and alcohol, and exercise routines have changed.

From a large item pool comprising the PTQ, a subset of 25 items (comprising the Perceptions of Terrorism Questionnaire short-form [PTQ-SF]) was conceptualized to measure specific constructs (scales), and are shaded in grey in Appendix A. These constructs were identified after an extensive literature review on terrorism, which included databases such as Medline, PsycLIT, and PsycINFO, and are those constructs being tested in the present study. In some of the studies that were identified, researchers had designed their own items and scales (e.g., Perceived Threat and Anger), while in other studies researchers discussed these concepts on a theoretical level (e.g., Impact of Terror Alerts and Perceived Mental Illness of Terrorists).

Once the construct was identified and selected for scaling, PTQ-SF items were written to reflect the content of each construct. Existing items were used to identify content, and were modified so that all items/scales would be on a common metric (discussed below). The constructs include the extent to which people think they will be a target of a future terrorist attack ( $k = 2$ ; PTQ-SF items 40, 48); fear/worry about another terrorist attack ( $k = 6$ ; PTQ-SF items 18, 35, 42, 43, 45, 71); are impacted when terror alerts are issued by the government ( $k = 3$ ; PTQ-SF items 14, 37, 44); are angry about terrorism and less tolerant of others from different cultural backgrounds ( $k = 4$ ; PTQ-SF items 27, 67, 68, 69);

want to understand the reasons for terrorism ( $k = 2$ ; PTQ-SF items 25, 46); have faith in the government to protect them from terrorism ( $k = 2$ ; PTQ-SF items 12, 32); and perceive terrorists as being mentally ill ( $k = 4$ ; PTQ-SF items 10, 24, 26, 30) and skillful/capable ( $k = 2$ ; PTQ-SF items 16, 22).

With the exception of one construct, all of the PTQ-SF constructs were identified in the literature on terrorism and selected for scaling. These include perceived mental illness among terrorists and perceived capability of terrorists (Beck, 2002; McCauley, 2002); perceived threat (Huddy, Feldman, Capelos, & Provost, 2002; Piotrkowski & Brannen, 2002; Pyszczynski et al., 2003); faith in government for protection (Chanley, 2002; Murphy et al., 2003; Pyszczynski et al., 2003); anger and general fear (Lerner & Dacher, 2001; Lerner, Gonzalez, Small, & Fischhoff, 2003; Pyszczynski et al., 2003); and fear generated by the government-issued terror alerts (Zimbardo, 2003a, 2003b). A final construct, the desire to understand the reasons for terrorism, was also selected for scaling by the authors for purposes of better understanding the degree to which people are engaged in determining why terrorism is occurring. See Table 2a for a complete summary of content for all 8 constructs.

For those items that were scaled, two experts in the field of terrorism and measurement, respectively, were consulted for advice in scale construction. One expert from Bryn Mawr College and The University of Pennsylvania was consulted for his terrorism expertise, and another expert from Harvard University was consulted for his expertise in measurement. Based on their suggestions, participants were asked to respond to the PTQ items using a Likert-type scale ranging from "1-Not at All" to "6-Extremely." Prior to using the PTQ-SF in this study, it was first pilot tested on a separate sample ( $N=10$ ) of participants to assure the items were clear and conveyed the intended meaning, and assess the length of time it took to complete. Feedback obtained from the pilot test-

Table 2a

*PTQ-SF Concepts, Number of Items, and Summary of Content*

<b>Concepts</b>	<b>Number of Items</b>	<b>Summary of Content</b>
Terrorist Mental Illness	4	Measures the extent to which people perceive terrorists as mentally ill or insane
Terrorist Skill/ Capability	2	Measures the extent to which people perceive terrorists as capable and skillful
Fear/Impact of Terrorism	6	Measures the extent to which people are fearful and worried about terrorism
Impact of Terror Alerts	3	Measures the extent to which people are impacted by terror alerts
Anger/Lack of Tolerance	4	Measures the extent to which people are angry, want revenge, and lack tolerance for others from different cultural backgrounds as a result of terrorism
Perceived Threat	2	Measures the extent to which people perceive themselves as vulnerable to another terrorist attack
Desire to Understand Reasons for Terrorism	2	Measures the extent to which people want to understand the reasons for terrorism
Faith in Government For Protection	2	Measures the extent to which people have faith in the government for protection against terrorism

ing indicated that some of the items were redundant, although this was done purposefully to improve internal consistency reliability.

PTQ-SF Scales are scored by (a) recoding those items that are reversed-scored; (b) summing all items within a particular scale (deriving the "raw score"); and (c) transforming these scores to a 0-100 metric so that all scales would be on a common metric irrespective of the number of items. Scores between these values represent the percentage of the total possible score achieved, where

higher values indicate a greater degree of the construct (e.g., greater Anger or Fear). See Formula 1 for the 0-100 transformation, and Table 2b for scoring all 8 PTQ scales.

Formula 1:

$$\text{Transformed Scale} = \frac{(\text{Actual Raw Score} - \text{Lowest Possible Raw Score})}{\text{Possible Raw Score Range}}$$

Table 2b

*Scoring the PTQ-SF Scales*

<b>Scale</b>	<b>Sum final item values (after recoding)</b>	<b>Lowest, highest possible raw score</b>	<b>Possible raw score range</b>
Terrorist Mental Illness	PTQ10+PTQ24 +PTQ26+PTQ30	4,24	20
Terrorist Skill/ Capability	PTQ16+PTQ22	2,12	10
Fear/Impact of Terrorism	PTQ18+PTQ43+PTQ42 +PTQ45+PTQ71+PTQ35	6,36	30
Impact of Terror Alerts	PTQ14+PTQ44+PTQ37	3,18	15
Anger/Lack of Tolerance	PTQ67+PTQ68 +PTQ69+PTQ27	4,24	20
Perceived Threat	PTQ40+PTQ48	2,12	10
Desire to Understand Reasons for Terrorism	PTQ25+PTQ46	2,12	10
Faith in Government For Protection	PTQ12+PTQ32	2,12	10

Procedure

Prior to completing the PTQ, study participants first read and signed a consent form informing them of the purpose of the study, and advising them that they could terminate their partici-

pation at any time without consequence (i.e., they still received credit for their general psychology course). The questionnaire took approximately 45 minutes to complete ( $M = 44.3$ , range = 20-82), and participants were given the choice to complete it at the University or take it home and return it to the primary investigator the following day. Analyses were conducted using SAS version 6.08 to 6.12, SPSS for Windows (version 11.5), and the Multitrait Analysis Program-Revised (MAP-R) for Windows.

## **Analysis and Results**

### Descriptive

Table 3 presents average scores for the PTQ-SF scales for the total sample, and by gender. With the exception of three PTQ-SF scales, there were no significant gender differences on the PTQ-SF scales. Women did perceive terrorists as being more mentally ill ( $M = 71.80$ ;  $SD = 21.72$ ) compared to men ( $M = 62.72$ ;  $SD = 26.78$ ), were more fearful about terrorism in general ( $M = 47.00$ ;  $SD = 21.50$ ) compared to men ( $M = 35.85$ ;  $SD = 21.58$ ), and were more impacted by terror alerts ( $M = 37.38$ ;  $SD = 22.03$ ) compared to men ( $M = 24.21$ ;  $SD = 19.54$ ). If type I error was taken into consideration using a Bonferroni correction, men and women would have differed significantly ( $p < 0.05$ ) on only two of the PTQ scales (Fear/Impact of Terrorism, and Impact of Terror Alerts).

Table 3

*PTQ-SF Scale Score Means and Standard Deviations*

<i>PTQ Scale<sup>a</sup></i>	Total Sample (N=146)		Men (N=57)		Women (N=89)		Men-Women Comparisons	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Terrorist Mental Illness	68.25	24.14	62.72	26.78	71.80	21.72	-2.147	0.034
Terrorist Skill/ Capability	78.15	16.86	75.79	17.21	79.66	16.54	-1.358	0.176
Fear/Impact of Terrorism	42.65	22.14	35.85	21.58	47.00	21.50	-3.054	0.003
Impact/Fear of Terror Alert	32.24	21.99	24.21	19.54	37.38	22.03	-3.679	0.000
Anger/Lack of Tolerance	51.82	22.70	52.98	24.03	51.07	21.92	0.496	0.621
Perceived Terrorist Threat	34.18	22.46	32.28	23.45	35.39	21.85	-0.816	0.416
Want to Understand Terrorism	70.55	25.21	70.70	25.13	70.45	25.40	0.059	0.953
Faith in Government	50.96	21.60	50.35	24.35	51.35	19.78	-0.259	0.796

<sup>a</sup> PTQ-SF scales are scored using a 0-100 metric, where 100 indicates the highest degree of each construct

### Psychometric Evaluation

Tables 4 and 5 present results from the psychometric evaluation of the PTQ-SF. A detailed analysis following the logic of Campbell and Fiske (1959), and Ware et al. (1997) was conducted to ensure the validity and reliability of the instrument. The PTQ-SF scales are constructed by summing their component questions, or items. This method of scale construction is known as summated ratings, or Likert-type scale construction. Several assumptions about items that are hypothesized to measure a given concept (e.g., Fear of Terrorism, Anger/Lack of Tolerance) and their hypothesized scales must first be satisfied when constructing Likert-type scales (Ware et al., 1997).

First, an item should be considerably linearly related to the

Table 4

*Psychometric Evaluation of the PTQ-SF*

Scale	Range of Item-Scale Correlations		% Scaling Success <sup>c</sup>	Reliability <sup>d</sup>	% Floor	% Ceiling
	Item-Internal Consistency <sup>a</sup>	Item-Discriminant Validity <sup>b</sup>				
Terrorist Mental Illness	0.65-0.72	-0.02-0.39	100.0	0.85	0.0	15.1
Terrorist Skill/Capability	0.54-0.54	-0.01-0.10	100.0	0.70	0.0	17.1
Fear/Impact of Terrorism	0.62-0.78	-0.00-0.66	100.0	0.88	2.7	0.0
Fear/Impact of Terror Alerts	0.59-0.69	-0.01-0.69	95.2	0.80	13.0	0.0
Anger/Lack of Tolerance	0.46-0.63	0.05-0.48	100.0	0.73	0.7	0.0
Perceived Terrorism Threat	0.65-0.65	-0.00-0.52	100.0	0.79	10.3	0.7
Desire to Understand Terrorism	0.62-0.62	-0.01-0.32	100.0	0.76	2.1	21.9
Faith in Government	0.67-0.67	0.02-0.45	100.0	0.81	2.1	1.4

<sup>a</sup> Range of correlations between items and hypothesized scale, corrected for overlap.

<sup>b</sup> Range of correlations between items and all other hypothesized scales.

<sup>c</sup> Percent of items correlating higher with their hypothesized scale than other scales

<sup>d</sup> Internal-consistency reliability (Cronbach's coefficient alpha).

underlying construct being measured (test of item internal consistency, or item convergent validity). To test this assumption, a Pearson correlation between an item and the scale it is hypothesized to measure is calculated to determine whether the item is linearly related to the total scale score. Because including the item in the scale score would inflate the item-scale correlation coefficient, the item in question is removed from the total scale score (using a method developed by Howard & Forehand, 1962). Item internal consistency generally is considered ample if an item

Table 5

*PTQ-SF Item-Scale Correlations*

Item	Abbreviated Content	Item-Scale Correlation <sup>a</sup>							
		1	2	3	4	5	6	7	8
<b>1. Terrorist Mental Illness</b>									
PTQ10	Mentally ill	0.72	0.08	0.39	0.34	0.32	0.21	-0.30	0.17
PTQ24	Sane	0.69	-0.02	0.25	0.20	0.26	0.07	-0.30	0.22
PTQ26	Deranged	0.72	0.12	0.31	0.34	0.30	0.09	-0.24	0.22
PTQ30	Demented	0.65	0.19	0.25	0.21	0.29	0.10	-0.20	0.22
<b>2. Terrorist Skill/Capability</b>									
PTQ16	Skillful	0.09	0.54	-0.01	0.03	-0.02	-0.11	0.03	-0.13
PTQ22	Capable	0.10	0.54	0.02	0.07	-0.06	0.06	0.04	0.04
<b>3. Fear/Impact of Terrorism</b>									
PTQ18	Scared	0.23	0.05	0.64	0.54	0.27	0.32	-0.14	0.16
PTQ43	Worried	0.27	-0.07	0.78	0.66	0.33	0.52	-0.07	0.30
PTQ42	Hyper-Aware	0.30	0.01	0.74	0.57	0.29	0.50	-0.05	0.26
PTQ45	More Vigilant	0.34	-0.04	0.69	0.63	0.44	0.51	-0.02	0.33
PTQ71	Fear Dying	0.29	0.05	0.66	0.60	0.27	0.41	-0.08	0.25
PTQ35	Altered Activities	0.31	-0.00	0.62	0.54	0.25	0.48	-0.18	0.18
<b>4. Fear/Impact of Terr. Alert</b>									
PTQ14	Alert Scares You	0.37	0.07	0.67	0.68	0.28	0.38	-0.03	0.28
PTQ44	Heed Alerts	0.32	-0.01	0.69	0.69	0.41	0.51	0.02	0.38
PTQ37	Alter Activities	0.13	0.09	0.53	0.59	0.21	0.43	-0.08	0.21
<b>5. Anger/Lack of Tolerance</b>									
PTQ67	Want Revenge	0.30	-0.06	0.32	0.28	0.63	0.16	-0.15	0.48
PTQ68	Anger	0.36	0.05	0.45	0.39	0.49	0.17	-0.09	0.34
PTQ69	Less Tolerant	0.20	-0.08	0.24	0.22	0.46	0.19	-0.08	0.25
PTQ27	Support Profiling	0.21	-0.05	0.17	0.20	0.52	0.09	-0.07	0.25
<b>6. Perceived Terrorist Threat</b>									
PTQ40	Personal Threat	0.09	-0.09	0.51	0.48	0.25	0.65	-0.00	0.10
PTQ48	Personal Vulner.	0.18	0.02	0.52	0.45	0.13	0.65	-0.04	0.12
<b>7. Desire to Understand Terrorism</b>									
PTQ25	Motivations	-0.25	0.03	-0.18	-0.03	-0.11	-0.10	0.62	-0.14
PTQ46	Reasons	-0.32	0.04	-0.01	-0.03	-0.13	0.07	0.62	-0.13
<b>8. Faith in Government</b>									
PTQ12	Trust Government for Protection	0.21	0.02	0.19	0.25	0.37	0.07	-0.10	0.67
PTQ32	Government Success Against Terrorism	0.24	-0.12	0.38	0.38	0.45	0.14	-0.17	0.67

<sup>a</sup> Corrected for item-scale overlap

correlates 0.40 or more with its hypothesized scale, after correction for overlap (i.e., an item is removed from the scale score when calculating the item-scale correlation) (Ware et al., 1997). Psychometric analysis of the PTQ-SF demonstrated sound item internal consistency/item convergent validity. All items correlated  $r = 0.40$  or higher with their hypothesized scales, supporting the linear relationship between each item and the scale it was hypothesized to measure, and satisfying the first scaling assumption.

Second, an item should have a significantly higher correlation with its hypothesized scale than with other scales measuring different constructs (test of item discriminant validity). Assumptions of item discriminant validity are generally considered to be met if the correlation between an item and its hypothesized scale is significantly greater than the correlations between that item and all other scales (Campbell & Fiske, 1959; Ware et al., 1997). For purposes of testing the statistical significance of the difference between two item-scale correlations, Steiger's  $t$ -test for dependent correlations was used.

In performing tests of item discriminant validity, it is important to consider the standard error of the sample. The standard error of a correlation coefficient is approximately equal to 1 divided by the square root of the sample size. Because of the relatively small sample size used in the present study ( $N=146$ ), the standard error is somewhat high ( $SE = 0.08$ ), and therefore the focus will be on all item-scale correlations that are greater than the correlations of that item with other scales. That is to say, the comparisons between correlations were made without regard to statistical significance, as the small sample size (and higher error) makes the significance standard difficult to attain. As has been reported in other studies, a scaling success rate was computed as the ratio of the number of scaling successes relative to the total number of item scaling tests for each scale (McHorney, Ware, & Raczek,

1993; Ware et al., 1997).

Tests of item discriminant validity supported hypothesized item groupings, with 99% of items correlating more with their hypothesized scales than with other scales. When taking statistical significance into consideration, 90% of items correlated significantly more with their hypothesized scales. Only one item measuring the impact of terror alerts (PTQ44 - "To what extent do you pay attention to or heed terror alerts issued by the government") failed this test, correlating the same ( $r = 0.69$ ) with the Fear/Impact of Terrorism scale as it did with its own scale (Impact of Terror Alerts). This item was retained in the scale despite the failure for conceptual reasons. Overall, the second scaling assumption was satisfied.

Third, scale scores should be reproducible and interpretable (tests of reliability and inter-scale correlations). Internal consistency reliability was estimated using Cronbach's coefficient alpha (Cronbach, 1951). Reliability of measurement indicates how much the variation in a multi-item scale is indicative of true score as opposed to random error (e.g., a reliability of 0.70 indicates that 70% of the measured variance is reliable). A minimum reliability coefficient of 0.70 has been suggested for group-level analyses (Nunnally & Bernstein, 1994). Scale-level correlations were also evaluated relative to their internal consistency reliabilities. To support the distinctiveness of each scale, correlations between scales should be less than their reliability coefficients. The extent to which the correlation between two scales is less than each of their respective reliability coefficients is evidence of unique reliable variance measured by each scale. Evaluation of inter-scale correlations helps determine how interpretable the scale scores are, and thus is a secondary test of the third assumption (reproducible and interpretable scale scores).

Table 4 presents tests of reliability for the 8 PTQ-SF scales.

Internal consistency reliability (Cronbach alpha) statistics either met or exceeded (*range*=0.70 to 0.88; *Mdn*=0.80 for the eight PTQ scales) the 0.70 standard for group-level comparisons put forth by Nunnally and Bernstein (1994) and Ware et al. (1997). Table 6 presents scale-level correlations relative to each scale's reliability estimates (Cronbach alpha in parentheses). As hypothesized, scale-level correlations were generally low with the exception of the relationship between Fear/Impact of Terrorism and Fear/Impact of Terror Alerts, satisfying the third scaling assumption. Because both of these scales are conceptually similar, the observed correlation was expected.

Table 6

*Reliability Coefficients (in Parentheses) and Inter-Scale Correlations*

PTQ-SF Scale	1	2	3	4	5	6	7	8
1. Terrorist Mental Illness	(0.85)							
2. Terrorist Skill/Capability	0.11	(0.70)						
3. Fear/Impact of Terrorism	0.36	0.00	(0.88)					
4. Impact/Fear of Terror Alerts	0.33	0.06	0.75	(0.80)				
5. Anger/Lack of Tolerance	0.35	-0.00	0.39	0.36	(0.73)			
6. Perceived Terrorist Threat	0.15	-0.00	0.57	0.51	0.21	(0.79)		
7. Desire to Understand Terrorism	-0.30	0.04	-0.10	-0.00	-0.10	-0.00	(0.76)	
8. Faith in Government	0.25	-0.10	0.31	0.34	0.45	0.12	-0.10	(0.81)

The percentage of respondents achieving either the highest score (ceiling) or lowest score (floor) was also evaluated for purposes of determining whether the scales were appropriate for this pop-

ulation. If a high proportion of respondents score at either the ceiling or floor, this would indicate that the items do not adequately assess the construct of interest in this particular population. Ideally, scales should cover all of the important levels of the construct it purports to measure. That is, the full range of the scale should be used, and the score distribution should vary considerably even when distributions are skewed. Examination of floor and ceiling effects revealed no significant clustering at either end for any of the PTQ-SF scales; 22% of the sample did score at the ceiling for wanting to understand the reasons for terrorism, and only 13% scored at the floor in terms of Fear/Impact of Terrorism.

Confirmatory factor analysis of categorical data was used to examine the unidimensionality of each scale, as standard factor analysis assumes continuous data. When this method is used with categorical items, the number of factors may be overestimated and the factor loadings may be underestimated. The model was estimated using weighted least squares estimation with robust standard errors and mean- and variance-adjusted chi square statistics as implemented in the MPlus software (Muthen & Muthen, 1998). Model fit was evaluated using the root mean square error of approximation (RMSEA) as implemented for categorical data. A RMSEA value below 0.06 is usually considered good fit and a value below 0.08 adequate fit (Hu & Bentler, 1999). Goodness-of-fit was also evaluated with the comparative fit index (CFI); values greater than 0.95 indicate good fit and those greater than 0.90 indicate adequate fit (Hu & Bentler, 1999).

Confirmatory factor analysis indicated that the data generally fit a model that included eight domains as hypothesized: Terrorist Mental Illness; Terrorist Skill/Capability; Fear/Impact of Terrorism; Impact of Terror Alerts; Anger/Lack of Tolerance; Perceived Threat; Desire to Understand Reasons for Terrorism;

and Faith in Government for Protection from Terrorism. The model had a CFI of 0.943 and RMSEA of 0.091. Standardized factor loadings for the model ranged from 0.75-0.90 (Terrorist Mental Illness); 0.55-1.00 (Terrorist Skill/Capability); 0.71-0.86 (Fear/Impact of Terrorism); 0.73-0.89 (Impact of Terror Alerts); 0.53-0.84 (Anger/Lack of Tolerance); 0.83-0.83 (Perceived Threat); 0.82-0.83 (Desire to Understand Reasons for Terrorism); and 0.70-1.00 (Faith in Government for Protection from Terrorism). Residual correlations generally were below 0.10, but were above 0.20 for 2 items.

Exploratory factor analysis was implemented to examine whether there were higher-level components underlying the PTQ-SF scales. Three principal components were extracted from the correlations among the scales, and were rotated to orthogonal simple structure using the varimax method for purposes of facilitating interpretation. Criteria commonly used to evaluate factor analyses using the principal components method were applied in selecting the number of components for extraction (Harman, 1976). Principal components analysis was selected over other methods of factor extraction and rotation to achieve a simple additive model of factor content (thus facilitating the interpretation of each scale) and to explain as much of the variance in each scale as possible. The pattern of correlations between the scales and rotated components was examined to determine the basis for their interpretation.

Table 7 presents results for the scale-level principal components analysis. Results supported the extraction of three factors, with eigenvalues of 2.93, 1.26, and 1.07, and which explained 37%, 16%, and 13% of the total variance respectively. Correlations for three scales (Fear/Impact of Terrorism; Impact of Terror Alerts; and Perceived Threat) were high on the first factor and low on the second and third factors. Conversely, correlations for four other scales (Faith in Government; Desire to Understand Terrorism;

Table 7

*Summary of Principal Components Analysis Results*

	Correlation Between Scale and Rotated Principal Component			Variance in Scale Explained by Three Components
	Component 1	Component 2	Component 3	
<b>PTQ-SF Scale</b>				
Terrorist Mental Illness	0.234	0.697	0.302	0.632
Terrorist Skill/Capability	0.032	-0.003	0.922	0.850
Fear/Impact of Terrorism	0.854	0.256	0.017	0.795
Impact of Terror Alerts	0.853	0.212	0.062	0.776
Anger/Lack of Tolerance	0.370	0.597	-0.200	0.534
Perceived Threat	0.801	-0.071	-0.036	0.647
Desire to Understand Terrorism	0.166	-0.694	-0.052	0.512
Faith in Government for Protection	0.278	0.590	-0.282	0.505

Anger/Lack of Tolerance; and Terrorist Mental Illness) were high

on the second factor and low on the first and third factors. Finally, the correlation for one scale (Terrorist Skill/Capability) was high on the third factor, and low on the first two.

### Discussion

To the best of our knowledge, the results of this study present the first psychometric evaluation of data quality and tests of scaling assumptions for a measure assessing people's perceptions of terrorism (the PTQ-SF). Overall, data quality was satisfactory and scaling assumptions were met. All correlations between items and hypothesized scales were greater than 0.40, satisfying assumptions of convergent validity, and tests of discriminant validity generally supported hypothesized items groupings. As hypothesized, two scales (Fear/Impact of Terrorism and Impact of Terror Alerts) were highly interrelated, although scaled separately for conceptual reasons; mean scores for these two scales were different enough (around a 20-point difference between the

two) in this sample of university students as to support their respective distinctiveness. Internal consistency reliability of the eight PTQ-SF scales was above 0.70 for all scales in each subgroup. Evaluation of floor and ceiling effects revealed no significant clustering for any scale.

Confirmatory factor analysis generally indicated that the data fit the 8-scale model that was hypothesized, although the RMSEA was high, indicating the model fit was not ideal. Given the interrelationships among some of the PTQ scales, a model that combined these constructs may have been a better approach. Finally, a principal components analysis extracting 3 factors indicated that three scales (Fear/Impact of Terrorism, Impact of Terror Alerts, and Perceived Threat) clustered together strongly on the first factor. It was hypothesized that this factor was a measure of Zimbardo's (2003a) Pre-Traumatic Stress Syndrome, specifically assessing the degree to which people were anticipating new terrorist attacks and the impact this anticipation had on their lives. The second factor was hypothesized to be a measure of coping, where increased levels of anger and faith in government coupled with a lack of desire to understand terrorism and a propensity to view terrorists as being mentally ill was conceptualized as being a way of managing this reality. The third factor was hypothesized to be a Terrorist Skill/Capability factor.

Other analyses could be conducted to further examine the scaling properties of the PTQ-SF that were not reported in this study. Frequency distributions for items could be inspected within various subgroups to determine whether respondents used the complete response continuum for each item, and scale-level descriptive statistics, including means and standard deviations, could be examined to determine if each scale score distribution has substantial variability. This latter examination would provide some evidence for whether the scale covers all important levels of the concept that it measures.

### Implications

The PTQ-SF is promising as a measure of the longer-term impact of living with the long-term effects of the terror attacks of 9/11. The events have had a strong impact on people in the United States. New measures to assess the effects and perceptions of terrorism resulting from these events will enable researchers to describe the overall impact on society, and also to differentiate among various groups within society regarding which groups are most vulnerable to severe long-term effects. Ultimately, some vulnerable groups and individuals may be seen as needing intervention to reduce the fear to more manageable levels. As Fremont (2004) noted, there was initially a lack of data on the long-term effects of large-scale acts of terrorism, such as those on September 11, 2001. Although the majority of research since 9/11 has suggested declining rates of PTSD, many polls have consistently found that there is an ongoing heightened sense of alarm for another terrorist attack. Even though people may not be satisfying criteria for DSM-IV-TR (American Psychological Association, 2000) diagnoses for disorders such as PTSD, there is still a significant impact on day to day functioning. Philip Zimbardo (2003a) classified this condition as Pre-Traumatic Stress Syndrome, which is rooted in the anticipation and fear of another terrorist attack.

The aim of this study was to develop and psychometrically evaluate a measure (the PTQ-SF) assessing people's perceptions of terrorism, thus contributing to a growing body of research on the impact of terrorism and of the fear of terrorism in the future. The Fear/Impact of Terrorism scale included in the PTQ-SF was hypothesized to measure Zimbardo's (2003a) Pre-Traumatic Stress Syndrome, although results from the principal components analysis of the eight PTQ-SF scales would suggest that three scales (Fear/Impact of Terrorism, Impact of Terror Alerts, and Perceived Threat) scored as a summary measure might be a more

appropriate and comprehensive scale. Further analysis of these scales, as well as testing of the measure on a larger, community sample is needed.

### Limitations

Meaningful definitions of words like "terrorist" and "terrorism" have been the subject of much debate. Commenting on the study by Bleich et al. (2003), Lipton, Ghannam, and Beinlin (2003) argued that using these terms "is prejudicial to scientific inquiry" (p. 2254) because underlying these terms is a specific political point of view biased in one direction. This relates to the saying that one person's terrorist is another person's freedom fighter. Bleich et al. (2003) responded to this comment by saying that even though "terrorism is a legitimate cause for some," it is a "curse for others" (p. 2254). Because it was hypothesized that most people living in the United States experienced the 9/11 attacks as having been committed by "terrorists," and fear future "terrorism" attacks, these terms were retained in this study. In retrospect, while we used Stern's definition of terrorism (2003) we realize it might have been helpful to know more about how participants were defining these terms.

The sensitivity of the scales to measure what they purport is also an issue to consider in the present study. Initial psychometric results presented in this study do indicate the scales performed as hypothesized, although more work is necessary on different samples to ensure the instrument's validity and reliability. This would include samples coming from the general population, as opposed to a university sample in an urban area. Efforts are now underway to collect normative data for the PTQ-SF in the general US population.

### Future Directions

This study presented preliminary findings on the psychometric properties of a new measure of perceptions of terrorism.

Identifying normal reactions to living with fear and anticipation, and determining whether current models of trauma and functioning account for this new, very different quality of experience should be a future course of research. The magnitude of the September 11, 2001 attacks, both in terms of destruction and number of casualties, was qualitatively different in scale than other recent terrorist attacks committed in other countries (e.g., Israel and Ireland.). Thus, understanding the ways that common reactions to these large scale attacks are both consistent with and divergent from other reactions to living with terrorism will provide better understanding as to what we should expect. In the future, this questionnaire may be used to assist in screening for those severely affected by fears of terrorism. Efforts are now underway to collect normative data in the US general population to again test the psychometric characteristics of the tool, as well as whether fearing terrorism predicts emotional distress and behavioral change (e.g., avoiding public transportation, flying, etc.).

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APPENDIX A: THE PERCEPTIONS OF TERRORISM QUESTIONNAIRE

**Please answer the following questions in your own words on the lines provided.**

1. Were terrorists to strike the United States again, where do you think they would attack? Why?

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2. Why do you think people become terrorists?

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3. Why do you think terrorists commit violent acts against others?

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4. Why do you think certain groups of people are targeted by terrorists, while others are not?

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5. Who do you think the targets of terrorism are (what characterizes these people)?

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6. Where were you specifically (city, state, and setting) on September 11, 2001, and what were you doing?

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7. Are you a victim of terrorism, or do you know someone who is a victim of terrorism? If so, please describe.

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8. What sort of terrorism do you fear the most? Why?

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This survey asks for your opinions on terrorism. Because many points of view about terrorists have been expressed in recent years, we are interested in knowing your point of view. Please answer all questions as best you can. If you would like to comment about any of the questions, or provide general feedback, space is provided at the end of the survey. Thank you very much.

*(Please circle one number on each line)*

	Not at All.....Extremely
9. How intelligent do you think terrorists are?	1 2 3 4 5 6
10. Do you think terrorists are mentally ill?	1 2 3 4 5 6
11. How much do you think terrorists feel a sense of purpose in what they do?	1 2 3 4 5 6
12. How much do you trust the United States government to protect you from terrorism?	1 2 3 4 5 6
13. How patient do you think terrorists are in planning their attacks?	1 2 3 4 5 6
14. How much do the terror alerts issued by United States government scare you?	1 2 3 4 5 6
15. How educated do you think terrorists are?	1 2 3 4 5 6
16. How skillful do you think terrorists are in what they do?	1 2 3 4 5 6
17. How ignorant do you think terrorists are?	1 2 3 4 5 6
18. How much does terrorism scare you?	1 2 3 4 5 6
19. How rational do you think terrorists are?	1 2 3 4 5 6
20. How suicidal do you think terrorists are?	1 2 3 4 5 6
21. How calm and collected do you think terrorists are?	1 2 3 4 5 6
22. How capable do you think terrorists are in carrying out attacks?	1 2 3 4 5 6
23. How much control do you think you have in protecting yourself against terrorism?	1 2 3 4 5 6
24. How sane do you think terrorists are?	1 2 3 4 5 6
25. To what extent do you think it would be helpful to really understand what motivates terrorists?	1 2 3 4 5 6

	<b>Not at All.....Extremely</b>					
26. To what extent do you think terrorists are deranged?	1	2	3	4	5	6
27. To what extent do you believe that racial profiling is an effective strategy in combating terrorism, even if it means detaining innocent people?	1	2	3	4	5	6
28. To what extent do you think terrorists are clear-headed?	1	2	3	4	5	6
29. How vulnerable do you feel you are to terrorism?	1	2	3	4	5	6
30. How demented do you think terrorists are?	1	2	3	4	5	6
31. How much has your life changed as a result of terrorism?	1	2	3	4	5	6
32. How successful has the United States government been in fighting terrorism?	1	2	3	4	5	6
33. How immoral do you think terrorists are?	1	2	3	4	5	6
34. How much of a threat do you think terrorists are to the United States?	1	2	3	4	5	6
35. To what extent have you altered your regular daily life activities as a result of terrorism?	1	2	3	4	5	6
36. To what extent do you think terrorists are decent people mixed up in bad groups?	1	2	3	4	5	6
37. When terror alerts are issued, how much do you alter your regular daily activities in order to feel safe?	1	2	3	4	5	6
38. How impulsive do you think terrorists are?	1	2	3	4	5	6
39. To what extent do you think the United States is vulnerable to another terrorist attack?	1	2	3	4	5	6
40. How much of a threat do you think terrorists are to you personally?	1	2	3	4	5	6
41. To what extent do you think terrorists have a reason for what they do?	1	2	3	4	5	6
42. To what extent has terrorism caused you to be hyper-aware of your surroundings?	1	2	3	4	5	6
43. How worried are you about future terrorism?	1	2	3	4	5	6
44. To what extent do you pay attention to or heed terror alerts issued by the government?	1	2	3	4	5	6

	<b>Not at All.....Extremely</b>					
45. How much more vigilant have you become as a result of terrorism?	1	2	3	4	5	6
46. How important do you think it is to understand the reasons for terrorism?	1	2	3	4	5	6
47. How much do you think terrorists try to kill themselves as part of their mission?	1	2	3	4	5	6
48. To what extent do you think you personally are vulnerable to another terrorist attack?	1	2	3	4	5	6

Some of these statements may reflect your point of view well, partially, or not at all. Please read each question and select the answer choice that best represent your opinion.

49-56. How much do you agree with the following statements?

*(Please circle one number on each line)*

	<b>Not at All.....Extremely</b>					
49. At times I try to put myself in the terrorists' shoes just to see if I can understand why they do what they do.	1	2	3	4	5	6
50. There is no point in trying to understand terrorists; their beliefs are too different from ours.	1	2	3	4	5	6
51. At times I believe actions or statements made by the Bush administration are causing others to see the United States as "terrorists".	1	2	3	4	5	6
52. People become terrorists because of traumatic events early in their lives	1	2	3	4	5	6
53. People become terrorists because they are frustrated in their attempts to use nonviolent methods to impact their world	1	2	3	4	5	6
54. People become terrorists because the leader of their religious or political group declares that terrorism is a noble action, and they are not mature enough or are afraid to question the leader's judgment	1	2	3	4	5	6
55. People become terrorists because the groups to which they belong are terrorist and they want membership within the group	1	2	3	4	5	6
56. People become terrorists because of the extreme ways they think about and make sense of the world.	1	2	3	4	5	6

57. In the past week, how many total hours of terrorism-related news coverage have you viewed on television, listened to on the radio, or read in the newspaper or on the internet?  
 \_\_\_\_\_ (Please specify number of hours in last week)

58-60. Since September 11, 2001...

(Please circle

one number on each line)

	<b>It has Decreased</b>	<b>It has Remained the Same</b>	<b>It has Increased</b>
58. how has your weekly consumption of alcohol changed?	1	2	3
59. how has your weekly exercise routine changed?	1	2	3
60. how has your weekly food consumption changed?	1	2	3

61. Do you believe the United States will ever be safe again from terrorism?  
 (Please circle a Letter)

- A. Yes – we are currently safe.
- B. Yes – we will eventually return to being safe.
- C. No – there will always be a minor, lingering danger of terrorism.
- D. No – more terrorism is imminent and inevitable

62-63. Since September 11, 2001 ...

(Please circle one

number on each line)

	<b>It has gotten worse</b>	<b>It has remained the same</b>	<b>It has gotten better</b>
62. how has your physical health changed?	1	2	3
63. how has your emotional/mental health changed?	1	2	3
64. how has your social life changed?	1	2	3

65. Since September 11, 2001, how has your smoking routine changed?  
 (Please circle a Letter)

- A. I don't smoke
- B. I have been smoking less
- C. I have been smoking about the same
- D. I have been smoking more

*(Please circle one number on each line)*

	<b>Not at</b>					
	<b>All.....Extremely</b>					
66. How optimistic are you that there will not be another terrorist attack?	1	2	3	4	5	6
67. To what extent do you want revenge against terrorists who attack the United States?	1	2	3	4	5	6
68. How angry does terrorism make you?	1	2	3	4	5	6
69. As a result of terrorism, are you less tolerant of people from different cultural backgrounds, especially those of Arab descent?	1	2	3	4	5	6
70. As a result of terrorism, have you become more patriotic?	1	2	3	4	5	6
71. How afraid are you of dying in a terrorist attack?	1	2	3	4	5	6

**Has this survey asked about all of the important areas related to terrorism? Do you have any comments, or ideas about how this survey could have been improved? Please share your ideas.**

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**Thank You Very Much...**

**Please Proceed to the next part of the survey**