

VALUES AND RISK PERCEPTION:
A CROSS-CULTURAL EXAMINATION

A Ph.D. Dissertation

by

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Ankara

February 2008

*To the memory of my beloved father;
Ender Güvenç*

VALUES AND RISK PERCEPTION:
A CROSS-CULTURAL EXAMINATION

The Institute of Economics and Social Sciences
of
Bilkent University

by

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In Partial Fulfilment of the Requirements for the Degree of
DOCTOR OF PHILOSOPHY

in

THE DEPARTMENT OF MANAGEMENT
BİLKENT UNIVERSITY
ANKARA

February 2008

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ABSTRACT

VALUES AND RISK PERCEPTION: A CROSS-CULTURAL EXAMINATION

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February 2008

The purpose of this thesis is to examine the relationship between individual values and risk perception of terror attacks. This relationship is examined via a study employing university students from Turkey ($n = 536$) and Israel ($n = 298$). Those two countries share an ongoing threat of terror attacks, but differ in their socio-cultural backgrounds. Schwartz Value Theory (1992; 1994) is used to conceptualize and measure values. Cognitive and emotional responses about (1) potentially being exposed to a terror attack, and (2) a terror attack potentially occurring in the country are assessed to measure risk perception. Results partly support the hypotheses by showing expected associations of values with risk perception, as well as indicating gender differences and cultural variations. The more importance the Turkish and Israeli participants attribute to self-direction values, the less emotional they feel about the threat of being exposed to a terror attack. However, the greater priority they attribute to security

values, the more negative affect they express about both threats. Furthermore, the more importance they give to hedonism & stimulation values, the less likely they perceive the likelihood of both threats. Current findings are discussed in relation to previous results, theoretical approaches, and practical implications.

Keywords: Terror, Risk Perception, Values, Cross-Cultural Comparisons

ÖZET

DEĞERLER VE RİSK ALGILAMASI: KÜLTÜRLERARASI BİR İNCELEME

Güvenç, Gülbanu

Doktora, İşletme Bölümü

Tez Yöneticisi: Prof. Dr. Dilek Önkal

Şubat 2008

Bu araştırmada temel amacımız değerler ve terör saldırılarına ilişkin risk algılaması arasındaki ilişkiyi incelemektir. Araştırmanın katılımcıları Türk (n = 536) ve İsrail’li (n = 298) üniversite öğrencileridir. Türkiye ve İsrail halen devam eden terör saldırılarına maruz kalan fakat sosyokültürel geçmişleri farklılık gösteren iki ülkedir. Bu araştırmada, değerler Schwartz Değer Kuramı (1992) kullanılarak kavramlaştırılmış ve ölçülmüştür. Risk algılamasını ölçmek için terör saldırısına bireysel olarak maruz kalma ve ülkede terör saldırısı gerçekleşmesi tehditleriyle ilgili bilişsel ve duygusal dışavurumlar kullanılmıştır. Araştırma sonuçları, öngörülen hipotezlerin kısmen gerçekleştiğini, değerler ve risk algılaması arasında anlamlı bir ilişkinin var olduğunu göstermekte, ayrıca cinsiyet farklılıklarını ve kültürel farklılıkları vurgulamaktadır. Türk ve İsrail’li katılımcıların özyönelim değer tipine verdikleri önem arttıkça, terör saldırısına maruz kalma tehditine ilişkin hissettikleri olumsuz duyguların şiddeti

azalmaktadır. Öte yandan, güvenlik değeri tipine verdikleri önem arttıkça her iki tehdite ilişkin hissettikleri duyguların şiddeti artmaktadır. Ayrıca, “hazcılık & uyarılım” değeri tipine verdikleri önem arttıkça her iki tehditin gerçekleşmesine yönelik yaptıkları tahminler azalmaktadır. Araştırmanın bulguları geçmiş çalışmalar, kuramsal yaklaşımlar ve pratik uygulamalarla ilişkilendirilerek tartışılmıştır.

Anahtar Kelimeler: Terör, Risk Algılaması, Değerler, Kültürlerarası Karşılaştırma

ACKNOWLEDGMENTS

First, I would like to express my sincere gratitude to my supervisor, Dilek Önköl for encouraging me to study on risk perception at the beginning stages of my PhD. It has been a great pleasure and privilege working with her throughout all these years. I am grateful to her for her guidance and neverending support. She will always have a special place in my heart. I would also like to thank my core committee member, Deniz Şahin for her invaluable suggestions during various stages of my PhD. She has always been there whenever I need help about my PhD work.

I would like to extend my gratitude to Shoshana Shiloh for helping me to collect data in Israel and for her valuable contributions to various parts of my dissertation. It has been a great opportunity to work with her at the Psychology Department in Tel Aviv University. Her interest in my work and her willingness to help has been very motivating to proceed in my dissertation. I will always remember her as an excellent researcher and as a wonderful host in Israel.

Special thanks to Zahide Karakitapoğlu-Aygün for her help in data collection at Bilkent University, and for her constructive criticisms and comments. She has generously devoted her time to help me to improve this dissertation.

I have to express my gratitude to Sonia Roccas and Yael Benyamini for their useful insights and comments. I will always remember how kindly and promptly they helped me to solve several problems regarding my dissertation.

My sincere thanks also go to Erhan Erkut, Süheyla Pınar and Yaşar Kaptan for their invaluable help in data collection process in Turkey.

Finally I am indebted to my mother, Güzin and my brother, Onur for their support to accomplish my doctoral pursuit.

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CHAPTER 1

INTRODUCTION

The September 11th attacks in the USA and the subsequent terrorist bombings in a number of European cities including Istanbul, Madrid and London have raised people's awareness about terrorism. As a result, individuals feel that they are becoming potential targets of a serious threat. Personal threats that pose a physical danger are likely to be very affectively arousing and to elicit fear to a greater degree (Huddy et al., 2002). In a similar vein, the Social Amplification of Risk Framework (Kasperson et. al., 1988; Kasperson, 1992; Renn et al., 1992) states that certain kinds of hazards and accidents are especially likely to lead to widespread and strong concerns. For example, radiation and nuclear power hazards are claimed to potentially cause ripple effects. Regarding the terror attacks, the ripple effects of public fear produce more costs than the direct losses (Shiloh et al., 2007). For example, many Americans preferred driving to flying after the September 11th attacks in their attempts to avoid the risk of terror. However, their attempts caused a higher death toll by car accidents (Gigerenzer, 2004; 2006).

As a result of its high costs, terrorism has become an important topic for the field of risk analysis. Risk analysis focuses on issues of risk assessment and risk management. Risk assessment is usually located in the domain of natural sciences, and includes the processes of identification, quantification, and characterization. Risk management is often placed in the domain of politics, legislation, and the social sciences, and concentrates on processes of communication, mitigation and decision making. A crucial role of social sciences in risk management is to reflect research regarding how to create and communicate information that meets the needs of those who must deal with risks (Fischhoff, 2006). Therefore, risk communicators must understand the complex factors influencing risk perceptions in order to tailor their messages appropriately to the target groups or individuals.

From the perspective of social sciences, risk is often viewed as being inherently subjective rather than being an abstract expression of uncertainty or loss (Krimsky and Golding, 1992; Slovic, 1999). Thus, risk is a value-laden entity dependent on our minds and cultures. In line with this view, risk perception involves people's beliefs, attitudes, judgments and feelings, as well as the wider social or cultural values and dispositions that people adopt towards hazards and their benefits (Pidgeon et al., 1992). This broad definition implies the multidimensional characteristics of threats that people evaluate in their perceptions.

The Cultural Theory of Risk (Douglas and Wildavsky, 1982; Douglas, 1992; Dake, 1991; 1992) and the Social Amplification of Risk Framework

(Kasperson et. al., 1988; Kasperson, 1992; Renn et al., 1992) have attempted to explain the underlying factors that shape people's risk perceptions. In the former theory, perceived risk is seen as a collective phenomenon in which every cultural group chooses to attend to some risks and ignore others to maintain their particular way of life. In the latter theory, risk is conceived as a socially constructed phenomenon shaped by individuals and groups across different cultural/societal contexts. Although these theories have made important contributions to the literature, they are not without critics as explained in the following chapters of this thesis. More recent studies have suggested affect as an important variable that influences risk perception (eg., Finucane et al., 2000; Lerner and Keltner, 2001; Slovic et al., 2007).

Only a few studies have examined the perceptions of terror threats or the factors affecting these perceptions (Goodwin et al., 2005; Fischhoff et al., 2005; Lavi and Salomon, 2005; Shiloh et al., 2007). One of these studies is a cross-cultural research between Turkey and Israel that explores cognitive and emotional perceptions of terror attacks (Shiloh et al., 2007). Differences are found between the two countries in the perceived salience of specific factors despite a common structure of terror risk perception. Further research is suggested to investigate the effects of social processes on risk perception.

The present thesis aims to examine the relationships between individual values and risk perception of terror attacks in two countries, Turkey and Israel. These two countries share an ongoing threat of terror attacks, but differ in their socio-cultural backgrounds. To the best of my knowledge, Turkish and Israeli

cultures have not been compared yet with regard to the relationship between values and risk perception of terror attacks.

Schwartz Value Theory (1992; 1994) is applied to examine the value structures of Turkish and Israeli participants. According to this theory, values represent the motivational goals that guide individuals to satisfy their needs and societal demands. The four important facets of the theory can be summarized as follows: (1) the value contents are classified according to motivational goals, (2) the motivational goals result from the three universal requirements of all individuals and societies, (3) there are congruent and competing relationships among values that are portrayed in a circular structure, and (4) this circular structure stimulates hypothesizing about the relationships of values to other variables in an integrated manner. The Schwartz Value Theory (1992; 1994) has been empirically assessed among 210 samples from 67 countries located on every inhabited continent. The empirical results have demonstrated a comprehensive and near universal set of values identified by the theory. It was found that values explained approximately twice as much variance in macro worries as in micro worries regarding direct and salient threats because individual differences in coping ability are likely to influence the incidence and intensity of micro values regarding these threats (Schwartz, 2000). Furthermore, several individual and wider group-level factors are likely to underlie how an individual perceives terror threats (Pyszczynski et al., 2003). Therefore, the relationships of values with risk perception are examined at both personal and national level. In particular, both

risk perception about being exposed to a terror attack and about a terror attack that may occur in the country are assessed.

In the present thesis, risk perception is defined as a combination of cognitive and negative emotional responses to perceived threats. Cognitive components of risk perception include perceived likelihood and perceived severity, whereas emotional component consists of eight negative emotions. Risk perceptions about being exposed to a terror attack and about a terror attack that may occur in the country are measured by Terror Risk Perception Survey. This survey is developed for use in current research. The importance attributed to individual values is assessed by using Schwartz Value Survey (1992; 1994).

The organization of this dissertation is as follows: in the next chapter (i.e., Chapter 2) a literature review on risk perception and values is presented along with their implications for the present study. Research hypotheses along with the theoretical link between values and risk perception are introduced in Chapter 3. Chapter 4 reports the methodology of the current research. The results are provided in Chapter 5. The first part of this chapter presents the findings about values. In the second part, the results about risk perception of terror attacks are introduced. The third part reports the findings regarding the relationship between values and risk perception. The last chapter (i.e., Chapter 6) of this dissertation is devoted to a general discussion, conclusions and directions for future research.

CHAPTER 2

LITERATURE REVIEW

ON RISK PERCEPTION AND VALUES

2.1. Risk Perception

The beginning of risk perception research can be traced to the 1970s, when discrepancies were observed between the perceptions of lay people and experts about environmental and technological hazards. Thus, risk perception research was developed to identify the reasons for the gap between expert and lay perceptions.

In the early 1970's, the gap between expert and lay perceptions was attributed to the availability heuristic, which was developed by Tversky and Kahneman (1973). These researchers showed that people do not make valid intuitive judgments of probabilities (as defined and computable by probability calculus), but rather they are influenced by irrelevant factors and the availability of evidence. Thus, vividly described, emotionally charged possibilities will be perceived as being more likely than those that are harder to picture or are difficult to understand, resulting in a corresponding cognitive bias. For example,

Lichtenstein et al. (1978) invoked the concept of availability to explain why the judged frequencies of highly publicized causes of death such as accidents, homicides, or cancer were relatively overestimated and why under-publicized causes such as diabetes, strokes, or asthma were underestimated. As a result, the discrepancy between the perceptions of lay people and experts led to a distinction between objective or statistical risk and subjective or perceived risk. The former refers to risk as defined and measured by experts, whereas the latter refers to non-expert or lay misperceptions of that objective risk. In contrast to this view, Fischhoff et al. (1978) claimed that public risk perception could not simply be attributed to irrationality because of the reliance on a heuristic approach but rather it is much more multidimensional. The psychometric model developed by these researchers is presented in the next section.

2.1.1. The Psychometric Model

Fischhoff et al., (1978) developed a cognitive model that analyzed people's expressed preferences. In particular, they found that two main qualitative features seem to drive risk perceptions: unknown risk and dread risk. The unknown risk factor reflects the extent to which a hazard is unknown, unobservable, unfamiliar, and has delayed consequences. The dread risk factor reflects the extent to which a hazardous activity or technology is seen as dreaded, uncontrollable, fatal, not equitable, a high risk to future generations, not easily reduced, involuntary, and potentially catastrophic. Furthermore, Fischhoff et al. (1982) showed that experts and lay people used different criteria when judging the risk from technological

hazards. Experts based their risk rating on the probability of fatality. On the contrary, lay people's evaluations appeared to be influenced by other perceived characteristics of the hazard, one of which is subjective probability of risk. These studies demonstrate that dread is the major determinant of public perception and acceptance of risk.

Several more extensive studies have expanded on the psychometric model of Fischhoff et al. (1978) both in terms of the scales used and in terms of the number of respondents. These studies led to a taxonomy of hazards, which is useful for understanding and predicting responses to risks. Furthermore, the resulting cognitive maps appear to be quite robust when international groups of lay people as well as experts judge diverse hazards (Peters and Slovic, 1996). The model has also been used as a basis for extensive work on risk communication (Sjoberg, 2000).

While the psychometric studies on risk perception have extended our knowledge of people's responses to risk and provided a new language for analyzing risk perceptions, they have also been subjected to a good deal of critical scrutiny. For example, Sjoberg (2000) argued that the psychometric model in its traditional form explains only a modest share of the variance of perceived risk. Pidgeon et al (1992) indicated that participants in these psychometric studies were not able to say what was really relevant to them about the question under investigation because of the researcher-defined rating scales. Finally, Spicer and Chamberlain (1996) criticized the psychometric model for not going beyond cognitive algebra.

2.1.2. Affect in Risk Perception Research

The way that a person thinks about a hazard and organizes information about it is obviously important for understanding risk perception. However, studies have suggested that how a person feels about a hazard or its risk influences perceived risk of this hazard (Slovic et al, 1991; Alhakami and Slovic, 1994; Peters and Slovic, 1996; Finucane et al., 2000). More recently, Slovic et al. (2007) stated that people make judgments using an affect heuristic, a mental shortcut by which a person judges the risks and benefits of a hazard by accessing their pool of positive and negative feelings associated with that hazard.

“Dual process theory” introduced by Epstein (1994) and the “Risk as feelings hypothesis” postulated by Loewenstein et al. (2001) may explain why affect influences people’s risk perception. Epstein asserted that people comprehend their reality through two interactive, parallel processing systems. One is the rational system, a deliberative analytical system that functions by way of established rules of logic and evidence. The experiential system, however, encodes reality in images, metaphors, and narratives to which affective feelings have become attached. Slovic et al (2004) indicated that most risk analysis is handled quickly and automatically by affect through the experiential mode of thinking.

In congruence with the argument of Epstein (1994), Loewenstein et al., (2001) presented a “risk as feelings” hypothesis and posited that emotional reactions to risky situations often diverge from cognitive assessments of these

risks, because these feelings may be determined by other factors, such as the immediacy of a risk. Interestingly, when such a divergence occurs, emotional reactions often determine the judgment. However, in the traditional models of choice under risk or uncertainty, people are assumed to evaluate risky alternatives at a cognitive level, based largely on the probability and the desirability of associated consequences.

Overall, these studies suggest that risk perception is not a pure cognitive process but rather a combination of affective and cognitive factors. Cognitive factors that contribute to people's risk perception often include perceived likelihood, perceived severity, and other subjective features of the threat, like familiarity and availability. The current study focuses on perceived likelihood and perceived severity, in addition to affect. Therefore, a brief literature review of studies on perceived likelihood and severity is introduced in the next section.

2.1.3. The Cognitive Factors: Perceived Likelihood and Perceived Severity

Perceived likelihood, also called perceived vulnerability, perceived susceptibility or perceived risk, denotes the chance of the potential harm occurring. Perceived likelihood plays an important role in people's risk perception, because it shows how likely a person perceives the exposure of herself or others to any threat. Nevertheless, people do not make the same likelihood judgments when they rate the risk to themselves, to their family, or to people in general, because "risk to self" and "risk to others" are not equivalent concepts in their perceptions (Pahl et

al., 2005). Accordingly, measuring perceived likelihood becomes a difficult task for risk perception researchers.

Sjoberg (2000) argued that people often claim to be less subjected to risk than others are. This phenomenon is called unrealistic optimism bias and was first introduced by Weinstein (1980) and then emphasized in several studies of risk perception (eg., Perlof and Fetzer, 1986; Klar et al., 1996; Weinstein et al., 1996).

Perceived severity indicates, if a hazardous outcome occurs, how serious people think it will be (Weinstein, 1999). Severity is mainly perceived through beliefs about consequences. Consequence beliefs include abstract-conceptual knowledge and concrete-perceptual images regarding physical or mental harm, social consequences, and other outcomes of the hazard (Cameron, 2003). Nearly all of the risk perception models contain severity. However, the terminology differs among studies. For example, in the psychometric model, immediate-delayed consequences, catastrophic potential, and fatality indicate perceived severity. In the risk-as-feelings hypothesis, the dimension of anticipated consequences expresses severity.

2.1.4. Cultural Theory of Risk

Including psychological factors in risk perception research is necessary but not sufficient to understand people's perception of risk. A systematic examination into the socio-cultural basis of different risk perceptions is also needed (Finucane and Holup, 2005). Accordingly, risk perception studies have begun to account more explicitly for socio-cultural factors. One outstanding area of empirical development focuses on the idea of worldviews, which is broadly based on cultural theory of risk. Dake (1991) defined worldviews as deeply held beliefs and values regarding society, its functioning and its potential fate. In the cultural theory of risk, perceived risk is seen as a collective phenomenon in which every cultural group chooses to attend to some risks and ignore others to maintain their particular way of life (Douglas and Wildavsky, 1982).

Using Douglas' (1970) "group-grid" typology, the cultural theory is based on a model that identifies several cosmological features of a society, including individualism, solidarism, hierarchy and egalitarianism. The group dimension in the grid-group model represents the degree to which a person's life is engaged in and sustained by group membership. Those with an individualistic or a low group orientation expect people to fend for themselves, and therefore tend to be competitive; those with a high group or individualistic orientation expect individuals to fend for themselves and therefore tend to be competitive; those with a high group or solidaristic worldview assume that people will interact frequently, in a wide range of activities for which they must depend on one another. The grid dimension measures the pervasiveness and significance of social differentiation

within a worldview. People who have a high-grid or hierarchical orientation justify inequality on the grounds that specialization and division of labor enable them to live together with greater harmony and effectiveness. Low grid orientations indicate an egalitarian state of affairs in which differences are opposed between races, income levels, men and women, and citizens (Wildavsky, 1987).

According to the cultural theory of risk, hierarchists would express great concern about behaviors such as demonstrations and civil disobedience because they see these acts as disrespectful to the authority they wish to maintain. They are also predicted to express concern about social deviance. Egalitarians would reject the prescriptions associated with hierarchy because they are against inequality. They are predicted to perceive the dangers associated with technology to be great. Individualists support self-regulation, in particular, the freedom to bid and bargain. They would be concerned about issues like the stability of the investment climate, the national debt, and government overregulation.

Building on the works of Douglas and Wildavsky, Dake (1991, 1992) measured worldviews using attitudinal survey techniques and correlated these findings to risk perception. Peters and Slovic (1996) incorporated Dake's worldview scales into an integrated model of the influences on risk perception. Their findings broadly followed the pattern observed by Dake. Similarly, other empirical studies showed that worldviews explain variance in lay and expert perceptions of various types of environmental and technological hazards (Palmer, 1996; Marris et al, 1998; Slovic et al, 1999).

The cultural theory of risk has also been subjected to several criticisms. For example, Bellaby (1990) questioned the theory's ability to account for group transitions and the context dependence of socio-cultural views and values. Boholm (1996) argued that the theory has not been adequately operationalized to measure worldviews. Similarly, Sjoberg (1998) demonstrated that the worldview scales do not seem particularly well suited for the task of explaining technological and environmental concerns and perceived risks. However, cultural theory of risk has been particularly interesting to some practitioners for the reason that it can allegedly explain the risk perceptions of technology and of environmental issues. In addition, Sjoberg (1997) found little support for cultural theory in research conducted in Brazil and Sweden and concluded that the theory explained only a minor share of variance in perceived risk ratings.

The cultural theory of risk denotes that risk perception does not occur in a social vacuum. Accordingly, risk perception is not solely a matter of individual cognition and affect but also corresponds to the social processes. However, the major problem of cultural theory is its operationalization. Furthermore, the theory was developed to demonstrate the systematic relationship between worldviews and societal threats. Thus, it may not apply to personal threats.

2.1.5. Social Amplification of Risk Framework

The Social Amplification of Risk Framework denotes the phenomenon by which information processes, institutional structures, social-group behavior, and individual responses shape the social experience of risk, thereby contributing the

risk consequences (Kasperson et. al., 1988; Kasperson, 1992; Renn et al., 1992). Accordingly, this framework has attempted to integrate psychological, social and cultural approaches to risk perception.

Social amplification is triggered by the occurrence of an adverse event such as an outbreak of a disease, or a terrorist bombing. This event must be an unknown risk and have potential consequences for a wide range of people. The detrimental impact of such an event sometimes extends far beyond the direct damages to victims and property through the process of risk amplification (eg., group of scientists, the mass media, government agencies and politicians) and may result in massive indirect impacts. For example, fat used in animal feed in Belgium was inadvertently contaminated with cancer-causing dioxin in 1999. The feed was later fed to chickens, swine, and other food animals and potentially contaminated these food products. As a result, countries around the world issued different combinations of temporary consumer advisories, import bans, and import alerts about potentially contaminated foods and animals from Belgium. The estimated cost of this food safety incident to the Belgian economy was about \$750 million (Buzby, 2000).

One drawback of the social amplification framework is that it may be too general to subject to empirical test (Pidgeon et al., 1992). Furthermore, it is not always clear what the risk consequences of risk amplification might be because the link between perception and action may be more complex than implied in the framework (Renn, 1991).

Consequently, it may be argued that both Cultural Theory of Risk and Social Amplification of Risk Framework have made important contributions to risk perception literature by emphasizing the role of social/cultural processes. However, the operationalization of these two approaches appears problematic. The current research suggests another approach—the Schwartz Value Theory—to examine the effects of social context on risk perception. For this reason, a literature review on values and the Schwartz Value Theory (1992) are provided in the following section.

2.2. Values

Values represent the motivational goals that serve as guiding principles in people's lives (Rokeach, 1973). Relationships among different values reflect the psychological dynamics of conflict and compatibility that people experience in everyday life. When values are used to characterize cultures, what is sought are the socially shared, abstract ideas about what is good, right, and desirable in a society or other bounded cultural group (Smith and Schwartz, 1980).

The present research aims to investigate the effects of individual differences in value priorities on individual attributes of risk perception. Therefore, the literature review on values will focus on individual values. In the first section, Rokeach's approach regarding values is introduced. In the other sections, the Schwartz Value Theory (1992) and research regarding this theory are presented.

2.2.1. The Rokeach Value Survey

We all live in societies, in which we have to cope both with our own needs and societal demands. Rokeach (1979) argued that when individual needs and societal goals somehow combine, they become cognitively presented values. Values, in turn, guide us to satisfy these needs. Rokeach (1973) aimed to classify values according to the social institutions that specialize in maintaining, enhancing, and mainly transmitting them. Therefore, he developed a survey by screening the large number of values in the literature. The Rokeach Value Survey consists of 36 values, 18 of which are terminal, and the remainder consists of instrumental or means values. The former refer to beliefs or conceptions about ultimate goals or desirable end states of existence (such as happiness and wisdom); the latter refer to beliefs or conceptions about desirable modes of behavior to attain the desirable end states (such as behaving honestly or responsibly). Rokeach succeeded in the conceptualization of values. However, he could not elaborate on value classification, because he did not have a theory-based approach.

2.2.2. The Schwartz Value Theory

Schwartz (1992) developed a theoretical framework in order to classify value contents. According to this framework, the type of motivational goals expressed by values is the means for the distinction. Furthermore, he stated that these motivational goals are the results of three universal requirements with which all individuals and societies must cope: the needs of people as biological organisms, the requisites of coordinated social interaction, and the requirements for the

smooth functioning and survival of groups. The ten motivationally distinct value types are defined in Table 1.

Table 1. Definition of Value Types (Schwartz, 1992)

<i>Power:</i> Social status and prestige, control or dominance over people and resources (authority, social power, wealth, preserving my public image)
<i>Achievement:</i> Personal success through demonstrating competence according to social standards (ambitious, successful, capable, influential)
<i>Hedonism:</i> Pleasure or sensuous gratification for oneself (pleasure, enjoying life, self-indulgent)
<i>Stimulation:</i> excitement, novelty, and challenge in life (daring a varied life, an exciting life)
<i>Self-Direction:</i> Independent thought and action, choosing, creating, exploring (creativity, freedom, independent, choosing own goals, curious)
<i>Universalism:</i> Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature (equality, social justice, wisdom, broad-minded, protecting the environment, unity with nature, a world of beauty)
<i>Benevolence:</i> Preservation and enhancement of the welfare of people with whom one is in frequent personal contact (helpful, honest, forgiving, loyal, responsible)
<i>Tradition:</i> Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide (devout, respect for tradition, humble, moderate)
<i>Conformity:</i> Restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations and norms (self-discipline, politeness, honoring parents and elders, obedience)
<i>Security:</i> Safety, harmony and stability of society, of relationships and of self (family security, national security, social order, clean, reciprocation of favors)

Schwartz (1992; 1994) also specified a set of dynamic relationships among values. Rokeach (1973) first emphasized a similar view that at least some type of values might be interdependent. However, other researchers following Rokeach

assumed value independence while making empirical classifications among values (eg., Braithwaite and Law, 1985; Feather and Peay, 1975; Hofstede, 1980; Maloney and Katz, 1976). The key to identifying the structure of value relationships is the assumption that actions in the pursuit of each type of value have psychological, practical, and social consequences that may conflict or may be compatible with the pursuit of other value types (Schwartz, 1994). Figure 1 illustrates the pattern of conflicting and competing relationships among values. While competing values are in close proximity, conflicting ones lie at the opposite point on the circle. The circular structure presents a continuum of related motivations. Therefore, Schwartz (1994) argues that the whole set of ten values relates to any other variable in an integrated manner.

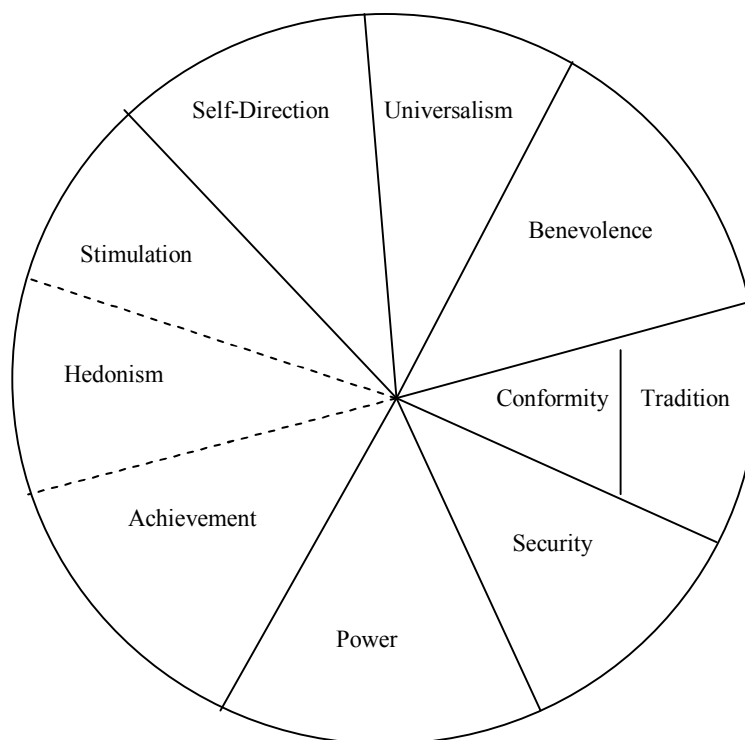


Figure 1. Theoretical model of relations among motivational types of values (Source: Schwartz, S.H. 1992. "Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries", In M. Zanna, eds., *Advances in Experimental Social Psychology* 25. Orlando, FL: Academic.

The pattern of values implies two orthogonal higher-order dimensions: self-enhancement versus self-transcendence and openness to change versus conservatism. The former opposes values that emphasize the pursuit of one's relative success and dominance over others (power and achievement) to those that stress acceptance of others as equals and concern for their welfare (universalism and benevolence). The latter contrasts values that emphasize one's own independent thought and action favoring change with those that stress submissive self-restriction, preservation of traditional practices and protection of stability.

In conclusion, Schwartz's (1992; 1994) theoretical framework has four important facets:

- 1) The value contents are classified according to motivational goals.
- 2) The motivational goals result from the three universal requirements of all individuals and societies.
- 3) There are congruent and competing relationships among values. These relationships are portrayed in a circular structure (a motivational continuum).
- 4) The motivational continuum stimulates hypothesizing about the relationship of values to other variables in an integrated manner.

2.2.3. The Schwartz Value Survey

Schwartz (1992, 1994) empirically assessed his theory by conceptualizing the values offered by Rokeach and by building on his methodology. The revised version of the Schwartz Value Survey (SVS) includes 57 items and asks

respondents to rate the importance of each value item “as a guiding principle in *my* life” on a nine-point scale (Schwartz, 1994). The analysis of the scale is performed by using Similarity Structure Analysis (SSA) (Borg and Shye, 1995; Guttman, 1968). SSA is a multidimensional scaling technique that gives two-dimensional spatial representations of the correlations among variables. The match between the observed and the theorized content and structure of value types are assessed by examining the correlations on the map. The Schwartz Value Theory was empirically assessed among 210 samples from 67 countries located on every inhabited continent. The total number of respondents was 64,271. The empirical results demonstrated a comprehensive and near universal set of values identified by the theory. In addition, the values theory holds, independent of the method of measurement (Schwartz et al., 2001). Furthermore, Schwartz and Bardi (2001) showed that there is a widespread consensus regarding the hierarchical order of values, whereas many studies reveal a great deal of variation in the value priorities of individuals within societies as well as groups across societies.

2.2.4. Relationships of Values to other Variables

The continuous pattern of motivational differences led researchers to examine the relationships of values to behavior, attitudes, and personality. For example, Bardi and Schwartz (2003) demonstrated that stimulation and tradition values relate strongly to the behaviors that express them, such as doing unconventional things and following traditional customs, respectively. Hedonism, power, universalism, and self-direction values relate moderately to the behaviors that express them,

such as being relaxed, choosing friends based on how much money they have, using environmentally friendly products, and examining the ideas behind rules before obeying them, respectively. Security, conformity, achievement, and benevolence values relate only marginally to the behaviors that express them like buying products that were made in the home country, obeying one's parents, taking on many commitments, and agreeing easily to lend things to neighbors, respectively.

Devos et al. (2002) studied the relationship of values to an attitudinal variable—trust—in various institutions. The authors claimed that the level of trust in these institutions correlated positively with values that stress stability, protection, and preservation of traditional practices and negatively with values that emphasize independent thought and action and favor change.

Schwartz et al., (2000) investigated the relationship of values to worry, which is a personality variable. The authors broadly defined worry as an emotionally disturbing cognition that a state of an object in some domain of life will become discrepant from its desired state. Object domain represents micro worries that have the self or those with whom one identifies as their object and macro worries that have entities external to the self as their object. For example, “my getting cancer” corresponds to a micro worry, whereas “starvation in the world” stands for a macro worry. Furthermore, domain of life represents safety, environment, social relationships, meaning in life, achievement in work and studies, and economics.

The authors proposed that worries should be a function of values, because values define the desired states a person pursues, and worries entail perceived discrepancies from these desired states. Accordingly, relationships of people's value priorities to their micro and macro worries for seven life domains were investigated in seven samples from four cultural groups.

The results demonstrated that self-enhancement versus self-transcendence value dimensions are able to predict worries. The underlying argument for this finding is that the greater the importance a person attributes to a value, the more consequential it is to her to attain the goals to which the value is directed, and therefore, the more she will worry about any perceived threat to these valued goals.

Because Schwartz Value Theory (1992; 1994) was empirically assessed so thoroughly there is no problem regarding the operationalization of the theory. Furthermore, several studies examined the relationships of value types to other variables. However, to the best of my knowledge, no other study assessed the associations of individual values to risk perception consisting of emotional and cognitive components.

CHAPTER 3

RESEARCH HYPOTHESES

The theoretical link between values and risk perception of terror attacks is postulated before presenting the research hypotheses regarding the associations of values with risk perception of terror attacks.

Values in the form of conscious goals are responses to three universal requirements with which all individuals and societies must cope: needs of individuals as biological organisms, requisites of coordinated social interaction and requirements for the smooth functioning and survival of groups. Attaining the goals to which the values are directed is crucial to satisfy these requirements (Schwartz, 1994).

The risk of being exposed to a terror attack and that of a terror attack that may occur in the country may be perceived as threats to the fulfillment of these three requirements. For example, the personal threat “being exposed to a terror attack” may prevent an individual from getting enough pleasure from life, which is a threat to her own needs. Preserving her position at work may be impossible, which is a threat to the functioning of the society. She may not restraint her

actions or inclinations not to upset others because of the negative mental effects caused by the risk of being exposed to a terror attack, which is a threat to the interaction between her and the society. As a result, she may feel that there is a possibility of failure to attain her goals, to which the values are directed. Similarly, the risk of “a terror attack that may occur in the country” can be considered as a threat to the needs of the individuals, to the functioning of the society and to the social interaction. Consequently, individual values may exhibit relationships with risk perception of terror attacks.

In the following parts, the hypotheses regarding the associations of values with risk perception about being exposed to a terror attack and about a terror attack that may occur in the country are postulated. The first three sections provide the hypotheses regarding the relationship between values and negative affect, perceived likelihood, and perceived severity. The last section summarizes these compatible and conflicting relationships between values and risk perception.

3.1. The Relationship between Values and Negative Affect

Appraisal theories of emotion suggest that emotions are elicited and shaped by people’s subjective evaluation of an antecedent or event (Scherer, 1997). This explanation may explain why the same event can provoke different emotions in different people. Given the subjective nature of the evaluation of an event or situation, one might expect value-driven differences in the process of emotion appraisal.

Sagiv and Schwartz (2000) examined the relationships of individual values to positive affect in six samples from three cultures. Although some systematic correlations were found, all ranged from moderate to low. The authors claimed that causal relations of values with positive affect are likely to depend on whether people's value priorities are congruent with situational opportunities to pursue and attain valued goals.

Takeuchi and Lau (2001) examined the influences of value orientations and affective responding on help-seeking behavior problems among Chinese-American parents. In their context, help-seeking behavior is defined as the likelihood that parents will choose to refer their children for professional mental health-care to solve certain types of problems. The authors found an indirect effect of value orientations on help-seeking intentions through its influence on affective responding. Those parents who had more traditional Chinese values responded with more feelings of shame to child behavior problems and, in turn, reported lower intentions to seek help. Thus, the value orientation has a significant effect on affect, in particular the feeling of shame. In congruence to this finding, shame, guilt and pride were found to be differently perceived across cultures (Eid and Diener, 2001).

Scherer (1997) conducted a cross-cultural study of 37 countries from six geopolitically different regions to investigate the role of culture in emotion-antecedent appraisal. This study, which included seven emotions and seven appraisals, examined whether similar appraisal profiles lead to similar emotions across cultures. Administered emotions were joy, anger fear, sadness, disgust,

shame and guilt; whereas the appraisals were novelty/expectation, intrinsic pleasantness, goal conduciveness, fairness, coping potential, control/power, and norms and self-ideal. The findings of this study indicated a high convergence of all appraisal profiles across geopolitical regions except for immorality, unfairness and external causation by African respondents. Shame and guilt were found to be the most culturally affected emotions. Furthermore, cross-cultural differences in unfairness affected sadness. Scherer (1997) suggested that unfairness is likely to affect other emotions. In support to this view, Mikula et al., (1998) found that anger was affected by the cross-cultural differences in unfairness.

In another study, several alternative appraisal theories were compared and tested to approach a more accurate, complete and integrative theory of the causes of emotions (Roseman et al., 1996). It was claimed that cognitive appraisals can have causal impact on emotions.

Heine and Lehman (1995) explained the concept of independent self as feeling oneself sufficient and worthy. Schwartz et al (1994) stated that self-direction derives from organismic needs for control and mastery. Therefore, it may be postulated that attributing more importance to self-direction values may cause a person to believe that she has sufficient control to prevent herself from a personal threat. Regarding these arguments, it may be predicted that self-direction values impede emotional responses. The more priority people attribute to these values, the less emotional they feel about the threat of being exposed to a terror attack. Although the literature findings point out a relationship between values

and emotions, this association was not clear to postulate any other specific hypotheses.

3.2. The Relationship between Values and Perceived Likelihood

Heine and Lehman (1995) found differences between the Japanese and Canadian respondents' perceived vulnerabilities, when the participants were asked to make risk judgments on negative future life events such as becoming an alcoholic, having a nervous breakdown and getting AIDS. The findings of this study demonstrated that Canadian participants were more optimistically biased than the Japanese respondents. Compared to their Japanese counterparts, Canadians perceived themselves as less vulnerable than others to negative future life events. The lower perceived vulnerability among Canadians was explained by referring to the concept of independent self. The independent self of a person is motivated to maintain the autonomy of her inviolable self, thereby confirming that she is a self-sufficient and worthy person. Therefore, the more a person perceives herself sufficient and worthy, the more invulnerable she feels about threats, and hence the more optimistic bias she exhibits. Although these findings provided some evidence of a relationship between values and perceived likelihood, there are many methodological shortcomings in the study. For example, the design of the questionnaires and the significant gender differences between the two samples that might have affected participants' likelihood judgments.

Sagiv and Schwartz (2000) claimed that conformity, tradition and security values are classified as representing deficiency needs. An emphasis on these values expresses the desire to compensate for deprivation. Giving priority to these values is therefore more likely among people who feel unsafe, lacking in control over their lives, and threatened in their relationships with others.

These arguments may suggest a negative relationship between self-direction, and stimulation values and perceived likelihood of being exposed to a terror attack. These two value types derive from organismic needs for control, mastery, and stimulation. They have an emphasis on one's own independent thought and action and favoring change (Schwartz, 1994). Therefore, identifying with one's independent self may cause people to feel less vulnerable to threats. Conversely, the more importance attributed to tradition, conformity and security values, the more attention is paid to feeling unsafe and lacking control over one's life. This perception may lead people to perceive being exposed to a terror attack more likely.

Tradition, conformity and security values emphasize devotion to one's in-group on contrary to the self-direction and stimulation value types that emphasize large distance between the self and others. Regarding a terror attack that may occur in the country, tradition, conformity and security value types may correlate positively with the perceived likelihood of this risk. Therefore, people giving priority to these values may perceive the risk for their country more likely. Stimulation value type may exhibit a negative correlation with the perceived likelihood of the risk for the country because this value type has the goal of

attendant lack of interest in others (Schwartz et al., 2000). Therefore, people giving priority to this value type may perceive this risk less likely. In addition, the association of self-direction value type with perceived likelihood of this risk cannot be predicted.

3.3. The Relationship between Values and Perceived Severity

Schwartz et al (2000) investigated the relationships of people's value priorities to their micro (e.g., getting cancer or being a victim of a traffic accident) and macro worries (e.g., people in the world dying of hunger or the outbreak of a nuclear war) in seven samples from four cultural groups. The results of the study showed that the more important power values are the more attention is paid to threats to self-interests. Thus, the more frequent and intense are the cognitive awareness and affective experience of micro worry associated with such threats because power values are the most self-centered of the self-enhancement values.

It may be postulated that the more importance a person attributes to power values, the more severe she perceives the consequences of the threat of being exposed to a terror attack because she feels that she cannot attain her goals to which these values are directed. Hypotheses regarding the relationship of achievement and security values to perceived severity are not postulated because self interest is not the main emphasis of these two values. Similar to power values, achievement values express self-interest, but in the service of meeting social standards and gaining social approval (Schwartz, 1992). Hence, achievement

values include both self interest and interest in others. Hedonism values express self interest besides sharing elements of favoring change and sensuous gratification for oneself.

Universalism and benevolence values emphasize concern for the welfare of all and for the nature rather than self-interested outcomes (Schwartz, 2005). Giving priority to these two values may promote the pursuit of other enhancing goals, which, in turn, results in the development of perceived severity about a threat to one's country. Conversely these values may inhibit the development of the perceived severity about a threat to oneself.

It may be postulated that the greater priority a person attributes to universalism and benevolence values, the more severe she perceives the consequences of a terror attack that may occur in her country because *others* cannot attain their goals to which these values are directed. Furthermore, universalism and benevolence value types may have a negative relationship with the perceived severity of being exposed to a terror attack because these values may inhibit the development of perceived severity, when the threat is to oneself.

Stimulation and self-direction versus the conformity and tradition value types might have any pattern of associations with being exposed to a terror attack versus a terror attack that may occur in the country. Therefore, the hypotheses regarding the associations of these value types to perceived severity are not postulated. However, it is postulated that security values exhibit a positive relationship with the perceived severity of a terror attack. Perceived severity about

the consequences of a terror attack relates to loss of control over personal and national outcomes that assure security and certainty. Security values express the importance people place on personal security, national security, certainty and structure in order to avert physical, psychological ambiguity, danger and risk (Bilsky and Schwartz, 1994). Thus, the more importance attributed to security values, the more attention is paid to the perceived severity about being exposed to a terror attack and about a terror attack that may occur in the country.

3.4. The Compatible and Conflicting Relationships between Values and Risk Perception

Table 2 lists all the proposed relationships between values and risk perception that were presented in the previous sections. Compatible values have positive relationships with perceived likelihood, severity and negative affect, whereas conflicting values have negative relationships with these components of risk perception.

Table 2. Proposed Compatibility and Conflict of Value Emphases with Risk Perception

Risk Perception	Value emphases on being exposed to a terror attack		Value emphases on a terror attack in the country	
	Compatible	Conflicting	Compatible	Conflicting
Negative Affect	___	Self-direction	___	___
Likelihood	Tradition	Self-direction	Tradition	Stimulation
	Conformity Security	Stimulation	Conformity Security	
Severity	Power	Universalism	Universalism	___
	Security	Benevolence	Benevolence Security	

Table 2 indicates that the greater the importance is attributed to compatible values, the higher the risk perception is expressed. Conversely, the greater the priority is given to conflicting values, the lower the risk perception is exhibited. Accordingly, the research hypotheses are listed as follows:

H1: Self-direction values correlate negatively with negative affect about being exposed to a terror attack.

H2: Tradition, conformity, and security values correlate positively with perceived likelihood of being exposed to a terror attack, whereas stimulation and self-direction values correlate negatively with perceived likelihood of this risk.

H3: Tradition, conformity and security values correlate positively with perceived likelihood of a terror attack that may occur in the country,

whereas stimulation values correlate negatively with perceived likelihood of this risk.

H4: Power and security values correlate positively with perceived severity of being exposed to a terror attack, whereas universalism and benevolence values correlate negatively with perceived severity of this risk.

H5: Universalism, benevolence and security values correlate positively with perceived severity of a terror attack that may occur in the country.

The first research hypothesis postulates that the more importance people attribute to self-direction values, the less emotional they feel about being exposed to a terror attack. The second research hypothesis predicts that the greater priority people attribute to tradition, conformity, and security values, the more likely they perceive being exposed to a terror attack. However, the more priority they attribute to stimulation and self-direction values, the less likely they perceive this risk. The third research hypothesis postulates that the more importance people give to tradition, conformity and security values, the more likely they perceive the risk of a terror attack that may occur in their country. However, the greater priority they attribute to stimulation values, the less likely they perceive this risk. The fourth research hypothesis posits that the more importance people attribute to power and security values, the more severe they perceive the risk of being exposed to a terror attack. Conversely, the greater priority they attribute to universalism, and benevolence values, the less severe they perceive this risk. The last research hypothesis predicts that the more importance people attribute to

universalism, benevolence, and security values, the more severe they perceive the risk of a terror attack that may occur in their country.

CHAPTER 4

METHODOLOGY

4.1. Participants

A total of 650 students at Bilkent University (Turkey) and Hacettepe University (Turkey) and 317 students at Tel Aviv University (Israel) volunteered to participate in the study. The surveys were conducted at Bilkent and Hacettepe universities between October 2006 and January 2006 and at Tel Aviv University between March 2007 and June 2007. A total of 114 Turkish students and 19 Israeli students were dropped before the analysis in compliance with the elimination criteria of Schwartz (2005a). As a result, the final sample consisted of 536 Turkish and 298 Israeli students.

The Turkish sample composed of 480 social sciences and 56 natural sciences and engineering students; the Israeli sample composed of 226 social sciences, and 72 natural sciences and engineering students. The Turkish sample consisted of 195 male and 341 female respondents, aged 17-35 years ($M = 20.74$, $SD = 2.90$); the Israeli sample consisted of 105 male and 193 female respondents, aged 17-40 years ($M = 24.73$, $SD = 3.48$).

4.2. Instruments

Two instruments were used in the current research. The Schwartz (1994) Value Survey (SVS) was administered to measure the importance ratings of specific values representative of ten universal value types. The Terror Attack Risk Perception Survey (TRPS) was administered to measure the emotional and cognitive perceptions of terror attacks.

4.2.1. The Schwartz Value Survey

The participants completed the 57-item SVS. They rated the importance of each value item (e.g., equality, respect for tradition, successful and curious) “as a guiding principle in my life” on a nine-point scale ranging from –1 (opposed to my principles) to 0 (not important) to 3 (important) to 7 (of supreme importance). The SVS presents value items in two sections. The first contains 30 items that describe potentially desirable end-states in a noun form (e.g., respect for tradition, wealth or freedom). The second includes 27 items that describe potentially desirable ways of acting in an adjective form (e.g., moderate, daring or protecting environment). Items that index different values are intermixed throughout the SVS. Prior to rating the items on each list, respondents were asked to read the whole list, to choose and rate the value item most important to them, and then to choose and rate the item least important to them.

Schwartz (2005a) suggests that respondents are dropped before analyses, if they use response “7” more than 21 times or any other response more than 35 times, because those who concentrate their responses to such a degree have

probably not made a serious effort to differentiate among their values. In addition, those who respond to fewer than 41 values are excluded. The same procedure was applied before the analyses of the present study. Accordingly, 17.54 % of the Turkish respondents ($n = 114$) and 5.99 % of the Israeli participants ($n = 19$) were dropped before the analyses.

Furthermore, Schwartz (2005a) suggests using only 46 out of 57 value items because these 46 items emerged in their postulated region in at least 75% of 210 samples, in this or adjacent regions in at least 95% of the samples and in this region in at least 55% of the samples. Accordingly, 46 value items were used in the current research. The importance score for each value index is the mean of the ratings of the items that index it. The value items that index each of the ten values are listed in Table 3.

Table 3. Value items that index each of the ten values

<i>Power</i> : Social power, wealth, authority, preserving public image
<i>Achievement</i> : Ambitious, influential, capable, successful
<i>Hedonism</i> : Pleasure, enjoying life, self indulgent
<i>Stimulation</i> : Exciting life, varied life, daring
<i>Self-direction</i> : Freedom, creativity, independent, choosing own goals, curious
<i>Universalism</i> : Equality, world at peace, unity with nature, wisdom, world of beauty, social justice, broadminded, protecting environment
<i>Benevolence</i> : Loyal, honest, helpful, responsible, forgiving
<i>Conformity</i> : Politeness, self discipline, honoring parents and elders, obedient
<i>Tradition</i> : Respect for tradition, moderate, humble, accepting my portion in life, devout
<i>Security</i> : Social order, national security, reciprocation of favors, family security, clean

Individuals and cultural groups differ in their use of the response scale (Schwartz et al, 1997; Smith, 2004). Therefore, scale use correction was applied for the 46-item SVS when treating value indexes as either independent or dependent variables. Accordingly, each individual's total score on all value items was divided by the total number of items. This mean score was used as a covariate to control for individual differences in the use of the response scale.

4.2.2. Risk Perception Survey on Terror Attacks

In the risk perception survey, variables that were thought to have potential impact on terror risk perception were measured. The survey began with an

introductory paragraph that provided brief information on terror attacks. Following the introductory paragraph, a section on demographics and background data was included. The risk perception scales about terror attacks were presented next.

Demographic and background data: Age, gender and university major were recorded. The individual's or a relatives' direct involvement in a terror attack was reported, and respondents were asked about their perceived knowledge about terror attacks in their own country and in other countries (1 = no information at all, 2 = some information, and 3 = a lot of information).

There were significant differences between the two groups with respect to age ($t = 16.82$, $p < 0.001$) and experience with terror attacks ($\chi^2 = 26.08$, $p < 0.001$). Israeli participants were significantly older and reported more experience with terror attacks than their Turkish counterparts. There were no significant differences between the two samples regarding gender ($\chi^2 = .01$, $p = 0.74$) and perceived knowledge of terror attacks that occur in the country and in other countries ($t = 1.83$, $p = 0.07$ and $t = 0.71$, $p = 0.48$, respectively). These differences were considered in data analyses.

Risk perception of terror attacks: The risk perception parts of the survey aimed to measure cognitive and emotional perceptions and consisted of three sections. The first section included emotional items, whereas the second and third sections included cognitive ones.

Emotional perceptions were measured by asking respondents about the intensity of their feelings about being exposed to a terror attack. In addition, respondents were asked about their intensity of feelings about terror attacks that may occur in their country within a year. Accordingly, emotional perceptions were recorded at both individual and national levels. The emotion items were fear, helplessness, anger, distress, insecurity, hopelessness, sadness and anxiety. The participants reported the intensity of their feelings on a 7-point scale (1 = “I do not feel at all”, and 7 = “I strongly feel”).

Cognitive perceptions were measured by asking respondents about their perceived probability and severity regarding terror attacks, and their perceived likelihood about possible consequences of terror attacks. The participants reported their perceived probabilities by using likelihood and probability in percentages scales. In the 7-point likelihood scale (1 = extremely unlikely, and 7 = extremely likely), respondents indicated how likely they thought they would be exposed to a terror attack within a year. In the probability in percentages scale, they expressed a percentage between 0% and 100% (0% indicates “impossible to happen”, and 100% indicates “certain to happen”). In addition, they reported their perceived likelihood and probability in percentages about a terror attack that may occur in their country within a year.

Perceived severity was measured by asking about the severity of consequences about being exposed to a terror attack within a year. Respondents indicated their perceptions on a 7-point scale ranging from 1 (“not serious at

all”) to 7 (“extremely serious”). They followed a similar scale for the severity of a terror attack that may occur in their country within a year.

Lastly, respondents indicated their perceived likelihood of possible consequences of a terror attack. They reported their perceptions both for themselves and for their country on a 7-point scale ranging from 1 (“extremely unlikely”) to 7 (“extremely likely”). The consequences section in the terror risk perception survey included 16 items like “I would face psychological problems, if exposed to a terror attack” and “there might be public panic in our country, if a terror attack occurred.” The former item represents a consequence for oneself, whereas the latter represents a consequence for one’s country. Of the 16 items regarding consequences of a terror attack that may occur within a year, eight were taken from the Terror Risk Perception Questionnaire (TRPQ) developed by Shiloh et al (2007). These items represent the consequences for oneself. The remaining eight items were generated by 20 Business Administration students at Bilkent University in June 2006. These items represent consequences for one’s country. The survey excluding this last section was entitled as Terror Risk Perception Survey (TRPS). Whenever the term “TRPS” is used in this dissertation, it indicates the survey including the beforementioned parts of the survey except for the likelihood of consequences section.

4.3. Procedure

Survey participants were recruited from Bilkent and Hacettepe universities in Turkey and from Tel Aviv University in Israel in response to announcements

inviting students to participate in a 20-minute survey about values and risk perception. The surveys were conducted on a volunteer basis. Oral debriefing that explained the purpose of the study and the names and contact details of the researchers were given to the volunteered Turkish participants, before taking the surveys. A similar debriefing was given to the volunteered Israeli participants, in a written format. The risk perception survey was initially constructed in Turkish and translated into English and Hebrew. Translations were checked by backward procedures using people fluent in the relevant languages. The participants filled out the SVS and risk perception survey in their native language, which took about 20 minutes.

CHAPTER 5

RESULTS

The findings are presented in three sections. The first section includes the results regarding values where the findings about values of the Turkish and Israeli samples are provided and compared. The second section introduces the findings regarding risk perception of terror attacks. In this section, risk perception findings from the Turkish and Israeli participants are demonstrated and compared. The third section presents the relationship between values and risk perception for the Turkish and Israeli samples.

5.1. Values

Results regarding values begin with findings from the Turkish sample, continue with findings from the Israeli sample, and end with a comparison between the two groups.

5.1.1. Values of the Turkish Participants

The total pattern of relations among Turkish individuals' values was assessed to examine its correspondence with the theoretical structure presented in Figure 1. Accordingly, a matrix of Pearson correlations between the 46 value items was prepared. Similarity Structure Analysis (SSA) (Borg and Shye, 1995; Guttman, 1968) was applied to the correlation matrix in order to map items as points in a multi-dimensional space such that the distances between the points reflect the interrelations among the items. The coefficient of alienation was computed as 0.19. This coefficient is a measure of goodness-of-fit between the obtained solution and the original data. The coefficient ranges between 0 and 1, with zero indicating perfect fit of the geometrical representation to the input similarity data. A value of 0.20 or less indicates a good fit (Ben-Shalom and Horenczyk, 2003). Thus, the coefficient computed in this study can be considered adequate. The SSA provided a two-dimensional spatial map of relations among values without partition lines.

Schwartz (2005a) suggested three criteria to partition the space into distinct regions containing the items that represent each of the values in the Schwartz Values Theory. Those criteria are as follows:

- 1) A bounded region must include the following attributes: (a) at least 60% of the items must be postulated a priori to index that value; (b) at least 70% of all items in the region must have been judged a priori as potentially reflecting the goals of the appropriate value as one of their

meanings; and (c) the region must include no more than 33% of the items postulated to index any other value.

- 2) If the above criteria are not met, it must be assessed whether two different values are intermixed in a joint region, using the following criteria: (a) the region contains at least 50% of the items that index each value and (b) at least 70% of the items in the region potentially reflect the goals of these two values.
- 3) If neither set of criteria is met, one can conclude that the value is not discriminated in the sample.

Accordingly, the space of the SSA map in the current research was partitioned in accordance with the above criteria of Schwartz (2005a). Figure 2 presents the partitioned SSA map for the Turkish sample.

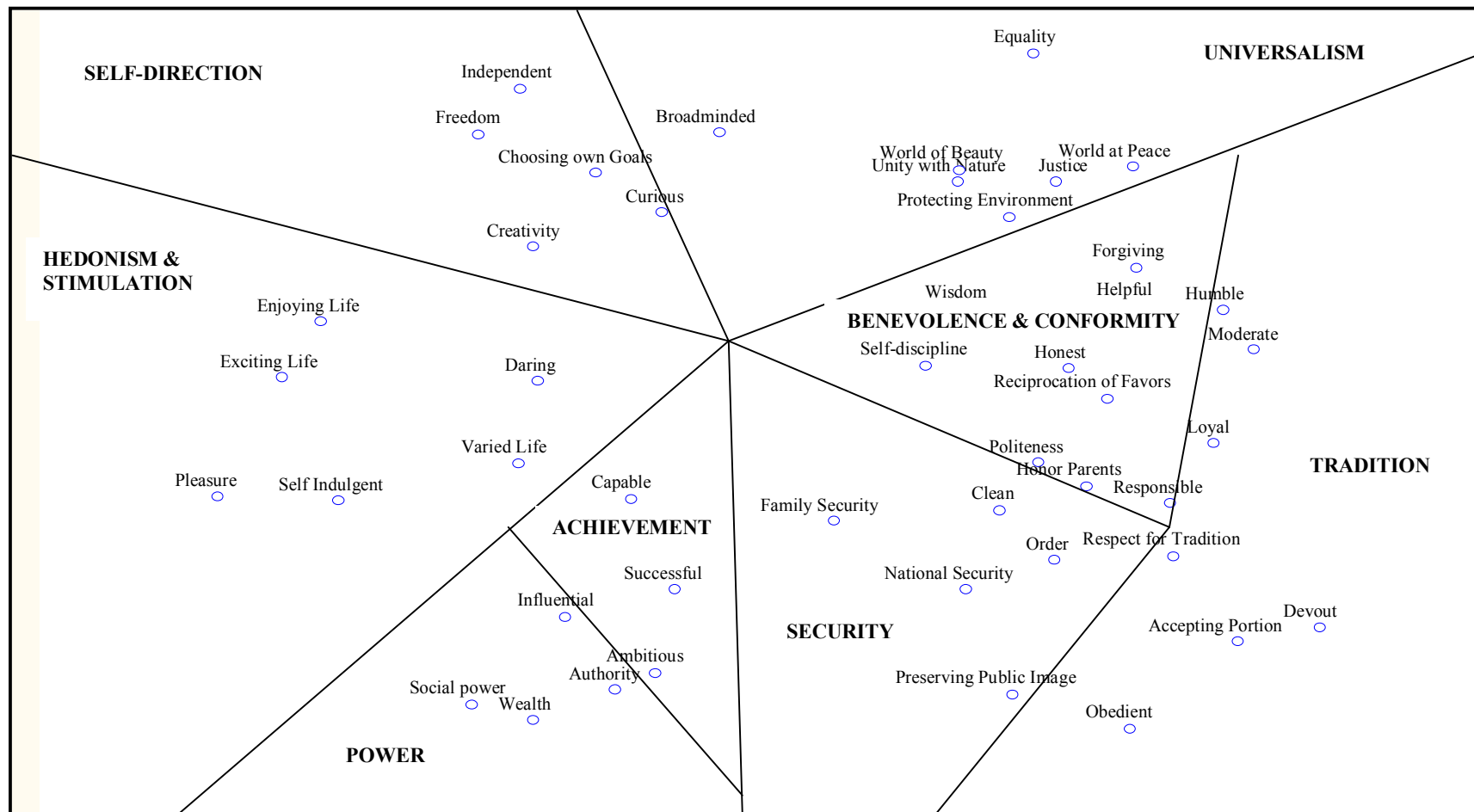


Figure 2. SSA map of the observed relations among values in the Turkish sample (n = 536, coefficient alienation = .19)

Figure 2 shows that bounded regions of tradition, universalism, self-direction and achievement values included 100% of the items postulated a priori to index those values. The security value type included 80% of the items, and the power value type included 75 % of them. “Preserving public image,” which was postulated a priori as a power item appeared in security. Similarly, “reciprocation of favors” postulated a priori as a security item, appeared in the combined values of benevolence and conformity values. The first criterion of Schwartz (2005a) was satisfied for tradition, universalism, self-direction, achievement, security and power value types. Power values appeared behind achievement values, in addition to tradition values that appeared behind benevolence & conformity and security values. Stimulation, hedonism, conformity, and benevolence values were in compliance with the second criterion of Schwartz. Stimulation values formed a joint region with hedonism values, whereas conformity values mixed together with benevolence values. In addition, “obedient”, which was postulated as a conformity item, belonged to tradition values. As a result, the organization of specific items and basic values is similar but not identical to the theoretical prototype.

After identifying the organization of specific items and basic values, mean ratings, standard deviations, ranks and reliabilities of values were calculated. Table 4 presents the means, standard deviations, ranks and Cronbach coefficients of reliabilities for the value types.

Table 4. Mean ratings, standard deviations, ranks and reliabilities of values in the Turkish sample (n = 536).

	Mean Rating	Standard Deviation	Rank	Reliability
Power	3.65	1.60	7	0.76
Achievement	4.47	1.19	5	0.71
Hedonism & Stimulation	4.14	1.13	6	0.73
Self-direction	5.27	0.85	1	0.61
Universalism	4.74	1.00	4	0.80
Benevolence & Conformity	4.98	0.87	3	0.76
Tradition	3.33	1.25	8	0.72
Security	5.01	1.00	2	0.63

Table 4 demonstrates that self-direction, security and benevolence values were among the three most highly rated value types, whereas hedonism & stimulation, power and tradition were among the three lowest-rated value types. Given the generally accepted benchmarks around 0.70 (McIntire and Miller, 2000), measurements of all values except self-direction and security can be considered reliable. However, even the reliabilities of these values were within the ranges commonly observed for these specific values (Schwartz et al., 2000; Schmitt et al., 1993).

The demographic differences in mean ratings of values were assessed by MANOVA. The mean of all value items was used as a covariate to control for individual differences in using the response scale. No significant age differences

in value scores were found. However, significant gender differences were obtained in all values except for self-direction and security. Table 5 presents gender differences in mean ratings of value scores in the Turkish sample.

Table 5. Gender differences in mean ratings of value scores in the Turkish sample.

	Male (n = 195)	Female (n = 341)	<i>F</i> -statistic	<i>p</i> -value
Power	4.03	3.42	24.89	.000
Achievement	4.60	4.40	7.38	.007
Hedonism & Stimulation	4.28	4.06	7.55	.006
Self-direction	5.18	5.31	3.04	.082
Universalism	4.60	4.82	7.52	.006
Benevolence & Conformity	4.90	5.03	4.21	.041
Tradition	3.46	3.26	7.11	.008
Security	5.01	5.02	0.20	.653

Table 5 demonstrates that the Turkish male respondents attributed greater priority to power, achievement, hedonism & stimulation and tradition values compared to their female counterparts. However, they gave less importance to universalism and benevolence & conformity values than the female respondents.

5.1.2. Values of the Israeli Participants

A matrix of Pearson correlations between the 46 value items was prepared. Similarity Structure Analysis (SSA) (Borg and Shye, 1995; Guttman, 1968) applied to the correlation matrix resulted in a coefficient of alienation of 0.28. The criteria of (2005a) were used to partition the space into distinct regions that contained the items representing each of the values in the Schwartz Values Theory. Figure 3 presents the partitioned SSA map for the Israeli sample.

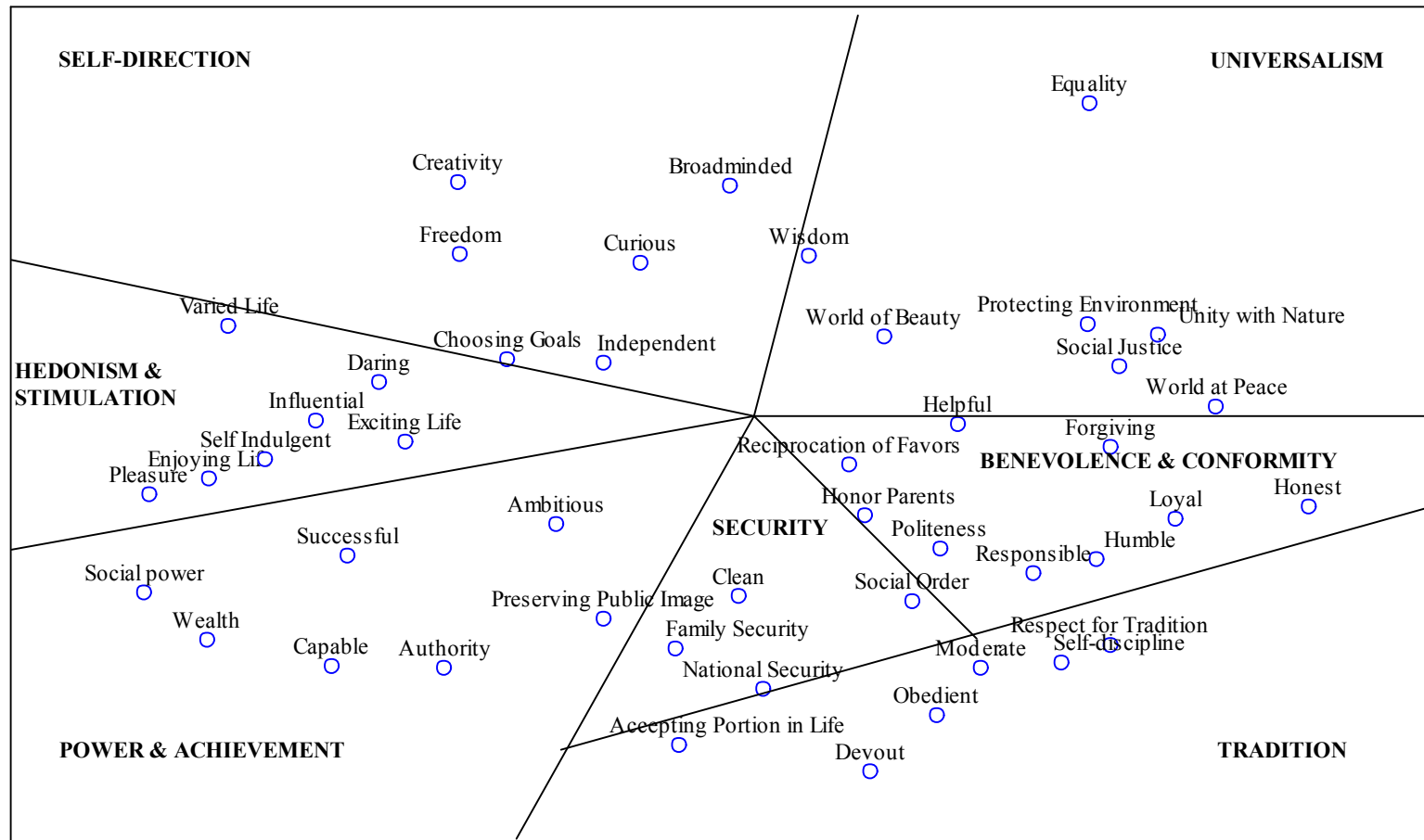


Figure 3. SSA map of observed relations among values in the Israeli sample ($n = 298$, coefficient of alienation = .28)

Figure 3 shows that the bounded regions of the universalism and self-direction values included 100% of the items postulated a priori to index those values, whereas the security value type included 80% of the items. “Reciprocation of favors”, which was postulated a priori as a security item appeared in benevolence & conformity. Tradition values included 67% of the items postulated a priori to index that value and 30 % of the items postulated to index conformity values. “Self-discipline” and “Obedient”, which were postulated a priori as conformity items appeared in tradition. In addition, “Humble”, which was postulated a priori as tradition item appeared in benevolence & conformity. Accordingly, the first criterion of Schwartz (2005a) was satisfied for the universalism, self-direction, security and tradition value types. Tradition values appeared behind security and benevolence & conformity values.

Stimulation, hedonism, achievement, power, benevolence and conformity values were in compliance with the second criterion of Schwartz. Stimulation with hedonism values, power with achievement values and benevolence with conformity values formed joint regions. Hedonism & stimulation values contained 100% of the items that indexed each value and 86% of the items in the region potentially reflected the goals of these two values. “Influential,” which was postulated a priori as achievement item appeared in hedonism & stimulation. Power & achievement contained 100% of the items that indexed power values and 75% of the items that indexed achievement values. Of the items in the region, 100% potentially reflected the goals of these two values. Benevolence & conformity values included 50% of the items that indexed benevolence values and

100 % of the items that indexed conformity. Of the items in the region, 78% potentially reflected the goals of these values. As a result, the organization of specific items and basic values is similar to the theoretical prototype, although not identical.

After identifying the organization of specific items and basic values, mean ratings, standard deviations, ranks, and reliabilities of values were calculated. Table 6 provides the means, standard deviations, ranks, and Cronbach coefficients of reliabilities for the value types.

Table 6. Mean ratings, standard deviations, ranks and reliabilities of values in the Israeli sample (n = 298)

	Mean Rating	Standard Deviation	Rank	Reliability
Power & Achievement	3.71	1.00	6	0.74
Hedonism & Stimulation	3.95	1.01	5	0.77
Self-direction	5.06	0.87	1	0.62
Universalism	4.32	0.88	4	0.70
Benevolence & Conformity	4.57	0.90	2	0.79
Tradition	2.91	1.16	7	0.68
Security	4.43	1.04	3	0.58

Table 6 indicates that self-direction, benevolence & conformity and security values were among the three most highly rated value types, whereas hedonism & stimulation, power & achievement and tradition were among the three most lowly rated value types. Measurements of all values except self-

direction, tradition and security can be considered reliable because they are within the range of the generally accepted benchmark of 0.70 (McIntire and Miller, 2000). However, even the reliabilities of self-direction, tradition, and security were within the ranges commonly observed for these values (Schwartz et al., 2000; Schmitt et al., 1993).

The demographic differences in mean ratings of values were assessed by MANOVA. The mean of all value items was used as a covariate to control for individual differences in using the response scale. No significant age differences in value scores were found. However, significant gender differences were obtained in self-direction and tradition values. Table 7 presents gender differences in mean ratings of value scores in the Israeli sample.

Table 7. Gender differences in mean ratings of value scores in the Israeli sample.

	Male (n = 195)	Female (n = 341)	<i>F</i> -statistic	<i>p</i> -value
Power & Achievement	3.69	3.72	2.64	.105
Hedonism & Stimulation	3.86	4.00	.05	.825
Self-direction	5.11	5.03	5.77	.017
Universalism	4.20	4.38	.21	.649
Benevolence & Conformity	4.43	4.65	.46	.499
Tradition	2.97	2.87	9.06	.003
Security	4.31	4.49	0.01	.968

Table 7 demonstrates that the Israeli male respondents attributed significantly more importance to self-direction and tradition values compared to their female counterparts.

5.1.3. Comparison of the Turkish and Israeli Samples on Values

The structural examination of the SSA maps of the two samples indicate that the first criterion of Schwartz (2005a) was satisfied for the values of tradition, universalism, self-direction, achievement, security, and power in the Turkish sample whereas this criterion was satisfied for the values of tradition, universalism, self-direction, and in the Israeli sample. Accordingly, the bounded

regions included 100% of the items postulated a priori to index those values. In the Turkish sample power values appeared behind achievement values. In both samples, tradition values appeared behind benevolence & conformity and security values.

The second criterion of Schwartz (2005a) was satisfied for stimulation, hedonism, conformity and benevolence values of the Turkish sample, whereas this criterion was satisfied for stimulation, hedonism, achievement, power, benevolence and conformity values of the Israeli sample. Accordingly, stimulation values with hedonism values and conformity values with benevolence values formed joint regions in both samples. Additionally, power values mixed together with achievement values in the Israeli sample.

As a result, the organization of specific items and basic values in both samples is similar to the theoretical prototype but not identical. The analysis yielded eight basic values for the Turkish sample and seven values for the Israeli sample, although the theoretical prototype contained ten basic values.

When the ranks of values for the two samples were compared, self-direction, security and benevolence & conformity were among the three most highly rated value types in both samples with self-direction being the most highly rated. Security was the second most highly rated value type in the Turkish sample and the third in the Israeli sample. Benevolence & conformity was the third in the Turkish sample, although it was the second in the Israeli sample. The most lowly rated value type was tradition in both samples.

When the reliabilities of values for the two samples were compared, measurements of self-direction and security values were below 0.70, which is the generally accepted benchmark for reliability. However, these reliabilities were within the ranges commonly observed for these values (Schwartz et al., 2000; Schmitt et al., 1993).

In both samples, significant gender differences but no significant age differences in value scores were found. In the Turkish sample, significant gender differences in power, achievement, hedonism & stimulation, universalism, benevolence & conformity and tradition values were obtained whereas in the Israeli sample significant gender differences in self-direction and tradition values were found. In both samples, males attributed greater priority to tradition values compared to their female counterparts.

5.3. Risk Perception of Terror Attacks

Results regarding terror risk perception begin with the findings from the Turkish sample, continue with those from the Israeli sample, and end with a comparison between the two groups.

5.3.1. Risk Perceptions of Terror Attacks in the Turkish Sample

Internal structure of the affect scales: The first affect scale in the TRPS aims to measure the intensity of negative feelings about being exposed to a terror attack, whereas the second aims to measure the intensity of negative feelings about a

terror attack that may occur in the country. The reliabilities of these two scales were found as 0.90 and 0.89, respectively. The item-total correlations of the two affect scales ranged from 0.66 to 0.78 and 0.48 and 0.74, respectively. The measurement of each of the affect scales can be considered reliable, because tests with reliabilities above 0.70 are considered adequate (McIntire and Miller, 2000). Furthermore, item-total correlations of the affect scales demonstrated adequate item effectivity because correlations were above 0.21 (Aiken, 1994).

The overall mean ratings and standard deviations of each of the affect scales were computed. In addition, the items of perceived likelihood and probability were combined as a single item. The difference in mean ratings between being exposed to a terror attack and a terror attack that may occur in the country were assessed by repeated measures MANOVA. The demographic and background variables; gender, and perceived knowledge of terror attacks in the country were controlled during the analysis. Main effect for threat, $F(3, 530) = 11.06$, $p < .001$, reached significance. Table 8 presents the results of univariate F tests for negative affect, perceived likelihood and perceived severity for each threat (being exposed to a terror attack and a terror attack that may occur in the country).

Table 8. Mean ratings and standard deviations (in parentheses) of negative affect scales, perceived likelihood and severity items, and univariate *F*s for being exposed to a terror attack and a terror attack that may occur in Turkey (n = 536).

	Being exposed to a terror attack	A terror attack in Turkey	<i>F</i> -statistic	<i>p</i> -value
Negative Affect	3.99 (1.40)	4.66 (1.31)	2.36	.125
Likelihood	3.15 (1.35)	5.52 (1.71)	33.13	.000
Severity	6.10 (1.17)	6.04 (1.31)	0.45	.502

The findings presented in Table 8 demonstrate that the Turkish participants perceived the risk of a terror attack that may occur in their country more likely than the risk of being exposed to a terror attack. No significant differences were found in negative affect and perceived severity ratings between the two risks.

Correlations between emotions and cognitions: Pearson correlations between the negative affect scores and the perceived likelihood, and perceived severity scores about being exposed to a terror attack and about a terror attack that may occur in the country were computed. The demographic and background variables; gender, and perceived knowledge of terror attacks in the country were controlled during the analysis. Pearson correlations between emotions and cognitions about the risk of terror attacks are provided in Table 9.

Table 9. Pearson correlations between emotions and cognitions regarding the risk of terror attacks (n = 536).

	Being exposed to a terror attack	A terror attack in Turkey
Cognitions	r	r
Likelihood	.39	.27
Severity	.21	.18

*p < .001 for all Pearson correlations

The findings presented in Table 9 demonstrate that the more negative emotions Turkish participants expressed, the stronger they perceived the likelihood, and severity of being exposed to a terror attack and of a terror attack that may occur in their country. These correlations were significant ($p < .001$). Fisher r-to-z transformation was applied to find out significant differences between the correlations for being exposed to a terror attack and for a terror attack that may occur in the country. The analyses suggested a significant difference in the negative affect-perceived likelihood relationship ($z = 2.20$, $p = .03$) but not a significant difference in the negative affect-perceived severity ($z = .51$, $p = .61$). The association between Turkish respondents' emotions and their perceived likelihood of being exposed to a terror attack is stronger than that of a terror attack that may occur in their country.

Demographic and background differences in mean ratings of TRPS scores: Significant differences of age, experience with terror attacks and perceived knowledge of terror attacks (in other countries) in mean ratings of

TRPS scores were not found. However, significant differences were obtained for perceived knowledge of terror attacks *in Turkey*. The Turkish participants who presented themselves as having greater knowledge of terror attacks in Turkey perceived the risk of a terror attack that may occur in their country more likely ($M = 5.80$, $SD = 1.72$) than those with less perceived knowledge ($M = 5.03$, $SD = 1.58$, $F = 18.26$, $p < .001$). The analysis yielded significant gender differences in all TRPS scores, except for the perceived likelihood of a terror attack in the country. Gender differences in mean ratings of TRPS scores are presented in Table 10.

Table 10. Gender differences in mean ratings of TRPS scores in the Turkish sample (n = 536).

	Being exposed to a <u>terror attack</u>			A terror attack <u>in the country</u>		
	Male (n=195)	Female (n=341)	F- statistic	Male (n=195)	Female (n=341)	F- statistic
Negative affect	3.43	4.32	53.68**	4.12	4.97	57.53**
Likelihood	2.79	3.35	22.06**	5.74	5.40	0.89
Severity	5.79	6.28	22.26**	5.52	6.34	52.81**

** $p < .001$

Table 10 demonstrates that Turkish female respondents were more emotional about being exposed to a terror attack and about a terror attack that may occur in their country compared to their male counterparts. Similarly, they

perceived more severe consequences about these two risks than the male respondents. The females perceived the risk of being exposed to a terror attack more likely than the males, however no significant association was found between gender and perceived likelihood of a terror attack that may occur in the country.

Perception of the consequences scales: Exploratory principal-components factor analysis with varimax rotation was conducted on the 16 items of the consequences scale in the TRPS. Half of the items were possible consequences of being exposed to a terror attack, whereas the other half involved a terror attack that may occur in the country. Therefore, it was predicted that those two groups of consequences would represent two factors. Based on Cattell's scree test, a two factor solution appeared to be the best choice for the factorial structure in both surveys. The factor loadings and item-total correlations of the 16-item scale are shown in Table 11.

Table 11. Factor loadings and item-total correlations of the consequences scale in the Turkish sample (n = 536).

Item	<u>Factor loadings</u>		Item-total correlations
	I	II	
My life wouldn't be the same as it was before	.72		.61
My position at work would be endangered	.63		.58
I would face psychological problems	.80		.68
I would need help from close others to cope with this trauma	.73		.62
I would very often catch myself thinking about my terrorist attack experience	.76		.61
My relationship with close others would be threatened	.54		.48
I would be physically disabled	.67		.51
My financial situation would get worse	.53		.46
Public panic in our country		.69	.59
Decrease or pause in investments of foreign or local investors		.69	.59
Loss of trust in government institutions		.71	.60
War against another country		.58	.48
War in our country		.62	.53
An earlier election in our country		.72	.59
Decrease in the earnings of tourism		.56	.46
Economic crisis in our country		.76	.67

Table 11 demonstrates that the ranges of factor loadings were 0.53-0.80 for being exposed to a terror attack and 0.56-0.76 for a terror attack that may occur in the country. Because these items having factor loadings above 0.32 are considered as statistically meaningful in representing a particular factor (Tabachnik & Fidell, 1996), the ranges of factor loadings presented in Table 9 indicate that the two factors represent consequences for oneself and for one's country. The ranges of item-total correlations of the consequences scales about being exposed to a terror attack and a terror attack in the country were 0.46-0.68, and 0.46-0.67, respectively. Aiken (1994) proposed item total correlation above

0.21 as suggesting adequate item effectivity. Therefore, item-total correlations of the two consequences scales in TRPS demonstrate adequate item effectivity. The reliabilities of each of the consequences scales were found to be 0.83. Both scales may be considered as reliable given the generally accepted benchmark of 0.70.

The difference in mean ratings between the risk of being exposed to a terror attack ($M = 4.88$, $SD = 1.10$) and a terror attack that may occur in the country ($M = 5.09$, $SD = 1.08$) were assessed by repeated measures MANOVA. However, no significant difference was found between these two risks in the “perceived likelihood of consequences” ($F = .01$, $p = .95$).

5.3.2. Risk Perception of Terror Attacks in the Israeli Sample

Internal structure of the affect scales: The item-total correlations of the affect scale measuring the intensity of negative feelings about being exposed to a terror attack ranged from 0.63 to 0.85 and the reliability of the scale was found as 0.92. The item-total correlations of the affect scale measuring the intensity of negative feelings about a terror attack that may occur in the country ranged from 0.67 to 0.82 and the reliability of the scale was found as 0.92. The item-total correlations of the affect scales demonstrated adequate item effectivity because correlations were above 0.21. In addition, the measurement of the affect scales can be considered reliable because tests with reliabilities were above 0.70.

The mean ratings and standard deviations of each of the affect scales were computed. In addition, the items of perceived likelihood and probability in

percentages were combined. The significance of the difference in mean ratings between the risk of being exposed to a terror attack and a terror attack in the country were assessed by repeated measures ANOVA. The demographic and background variables; gender, experience with terror attacks and perceived knowledge of terror attacks in the country were controlled during the analysis. Main effect for threat, $F(3, 291) = 12.43$, $p < .001$, reached significance. Table 12 presents the results of univariate F tests for negative affect, perceived likelihood and perceived severity for each threat (being exposed to a terror attack and a terror attack that may occur in the country).

Table 12. Mean ratings and standard deviations (in parentheses) of the negative affect scales, perceived likelihood and severity items, and univariate F s for being exposed to a terror attack and a terror attack that may occur in Israel ($n = 298$).

	Being exposed to a terror attack	A terror attack in Israel	F -statistic	p -value
Negative affect	3.59 (1.49)	3.92 (1.44)	.38	.540
Likelihood	2.94 (1.19)	5.81 (1.37)	37.50	.000
Severity	5.81 (1.28)	4.68 (1.59)	3.08	.080

The findings presented in Table 12 indicate that the Israeli participants perceived the risk of a terror attack that may occur in their country more likely than that of personally being exposed to a terror attack. No significant differences were found between these two risks in the mean ratings of the negative affect and perceived severity.

Correlations between emotions and cognitions: Pearson correlations between the negative affect scores and the perceived likelihood, and perceived severity scores about being exposed to a terror attack and about a terror attack that may occur in the country were computed. The demographic and background variables; gender, experience with terror attacks and perceived knowledge of terror attacks in the country were controlled during the analysis. Table 13 provides Pearson correlations between emotions and cognitions about the risk of terror attacks.

Table 13. Pearson correlations between emotions and cognitions (n = 298).

	Being exposed to a <u>terror attack</u>	A terror attack <u>in Israel</u>
Cognitions	r	r
Likelihood	.36	.24
Severity	.35	.33

*p < .001 for all Pearson correlations

Findings in Table 13 show that the more negative emotions Israeli participants expressed, the stronger they perceived the likelihood and severity of being exposed to a terror attack and of a terror attack that may occur in their country. These correlations were found to be significant ($p < .001$). Fisher r-to-z transformation was applied to find out significant differences between the correlations for being exposed to a terror attack and a terror attack that may occur in the country. No significant differences were found between the correlations in

the negative affect-likelihood, and negative affect- severity relationships ($z = 1.60, p = .11$ and $z = .27, p = .79$, respectively).

Demographic and background differences in mean ratings of TRPS scores: No significant age differences in mean ratings of TRPS scores were found. However, significant differences were obtained for terror experience, perceived knowledge of terror attacks in Israel, and gender. The participants with terror experiences perceived the risk of a terror attack more likely ($M = 6.19, SD = 1.08$) than those without terror experiences ($M = 5.65, SD = 1.45, F = 9.65, p < .01$). Israeli participants who presented themselves as having greater knowledge of terror attacks in Israel perceived the risk of a terror attack that may occur in their country less severe ($M = 4.56, SD = 1.56$) compared to those with less perceived knowledge ($M = 4.97, SD = 1.63, F = 4.17, p < .05$). Gender differences were found in all TRPS scores except for the perceived likelihood of a terror attack that may occur in the country. Gender differences in mean ratings of TRPS scores are presented in Table 14.

Table 14. Gender differences in mean ratings of TRPS scores in the Israeli sample (n = 298).

	<u>Being exposed to a terror attack</u>			<u>A terror attack in Israel</u>		
	Male (n=105)	Female (n=193)	F- statistic	Male (n=105)	Female (n=193)	F- statistic
Affect	2.95	3.94	33.72**	3.41	4.19	21.80**
Likelihood	2.54	3.15	18.98**	5.81	5.80	0.02
Severity	5.51	5.97	8.81*	3.90	5.11	45.24**

* p < .01, ** p < .001

Table 14 indicates that Israeli female participants were more emotional about being exposed to a terror attack and about a terror attack that may occur in their country compared to their male counterparts. Similarly, the females perceived the severity of consequences stronger for both risks than the males. Furthermore, the female respondents perceived the risk of being exposed to a terror attack more likely than the male respondents. No significant association was found between gender and perceived likelihood of a terror attack that may occur in the country.

Perception of the consequences scales: Exploratory principal-components factor analysis with varimax rotation was conducted on the 16 items of the consequences scale in the TRPS. Based on Cattell's scree test, a two factor solution appeared to be the best choice for the factorial structure. Table 15

provides the factor loadings and item-total correlations of the 16-item scale in the Israeli sample.

Table 15. Factor loadings and item-total correlations of the consequences scale in the Israeli sample (n = 298).

Item	Factor loadings		Item-total correlations
	I	II	
My life wouldn't be the same as it was before	.82		.74
My position at work would be endangered	.66		.59
I would face psychological problems	.82		.74
I would need help from close others to cope with this trauma	.75		.67
I would very often catch myself thinking about my terrorist attack experience	.80		.73
My relationship with close others would be threatened	.56		.50
I would be physically disabled	.76		.66
My financial situation would get worse	.70		.63
Public panic in our country		.73	.64
Decrease or pause in investments of foreign or local investors		.77	.68
Loss of trust in government institutions		.78	.72
War against another country		.63	.54
War in our country		.65	.56
An earlier election in our country		.70	.61
Decrease in the earnings of tourism		.63	.54
Economic crisis in our country		.83	.76

Table 15 demonstrates that the ranges of factor loadings were 0.56-0.82 for being exposed to a terror attack and 0.63-0.83 for a terror attack in the country. The loadings can be considered as statistically meaningful in representing a particular factor. Accordingly, the two factors represented consequences for oneself and for the country. The ranges of item-total correlations of the consequences scales about being exposed to a terror attack and a terror attack in

the country were 0.50-0.74, and 0.54-0.76, respectively. These correlations indicated adequate item effectivity since they were above 0.21. The reliabilities of the consequences scales were found to be 0.88 and 0.77, respectively. Both scales may be considered as reliable given the generally accepted benchmark of 0.70.

The difference in mean ratings between the risk of being exposed to a terror attack ($M = 4.53$, $SD = 1.22$) and a terror attack that may occur in the country ($M = 4.49$, $SD = 1.13$) were assessed by repeated measures MANOVA. However, no significant difference was found between these two risks in the “perceived likelihood of consequences” ($F = .95$, $p = .330$).

5.3.3. Comparison of the Turkish and Israeli Samples on Risk Perception of Terror Attacks

Internal structure of the affect scales. The measurement of each of the affect scales in TRPS can be considered reliable because reliabilities were above 0.70 in the Turkish and Israeli samples.

Comparison of the mean ratings for being exposed to a terror attack with those for a terror attack that may occur in the country: Both the Turkish and Israeli participants perceived the risk of a terror attack that may occur in their countries more likely than the risk of being exposed to a terror attack. Furthermore, no significant differences were found in negative affect and perceived severity ratings between the two risks.

MANOVA was applied to compare the TRPS scores of the Turkish and Israeli samples. Because of the significant differences in age and experience with terror attacks between the two samples, the analyses were controlled for the effects of these variables. The mean ratings of TRPS scores and the difference in mean ratings between the Turkish and Israeli samples for being exposed to a terror attack are reported in Table 16.

Table 16. Mean ratings of TRPS scores and the difference in mean ratings between the Turkish and Israeli samples about being exposed to a terror attack

	Turkey (n = 536)	Israel (n = 298)	<i>F</i> -statistic	<i>p</i> -value
Negative affect	3.99	3.59	5.33*	.021
Likelihood	3.14	2.94	3.30	.070
Severity	6.10	5.81	9.84*	.002

MANOVA analysis identified significant differences between the Turkish and Israeli samples on negative affect and perceived severity about being exposed to a terror attack. Table 16 shows that the Turkish participants were more emotional ($F = 5.33, p < 0.05$) and perceived this risk more severe ($F = 9.84, p < 0.01$) than the Israeli respondents. No significant difference between the two samples was obtained in perceived likelihood of being exposed to a terror attack.

Table 17 provides the mean ratings of TRPS scores and the difference in mean ratings between the Turkish and Israeli samples about a terror attack that may occur in the country.

Table 17. Mean ratings of TRPS scores and the difference in mean ratings between the Turkish and Israeli samples about a terror attack that may occur in the country.

	Turkey (n = 536)	Israel (n = 298)	<i>F</i> -statistic	<i>p</i> -value
Negative affect	4.66	3.92	33.49**	.000
Likelihood	5.52	5.81	1.21	.272
Severity	6.04	4.68	98.00**	.000

MANOVA analysis yielded significant differences between the Turkish and Israeli samples on negative affect and perceived severity about a terror attack that may occur in the country. Table 17 indicates that the Turkish participants were more emotional ($F = 33.49, p < 0.001$) and perceived this risk more severe ($F = 98.00, p < 0.001$) than the Israeli respondents. No significant differences between the two samples were found in the perceived likelihood of a terror attack that may occur in the country.

Correlations between emotions and cognitions: The more negative emotions the Turkish and Israeli participants expressed the more likely and severe they perceived the risk of being exposed to a terror attack and that of a terror attack that may occur in the country. These correlations were found to be

significant in both samples. The differences between the two samples on emotion-cognition correlations were assessed by Fisher r-to-z transformation. Significant differences between the two samples were found in the negative affect-perceived severity correlations for being exposed to a terror attack ($z = 2.10$, $p = .03$) and a terror attack that may occur in the country ($z = 2.22$, $p = .02$). However, no significant differences between the two samples were obtained in the correlations of negative affect-likelihood correlations. Compared to the Turkish participants, the Israeli respondents' emotions were more strongly related to their severity perceptions about terrorism risk.

Relationships between TRPS scores and demographic, and background variables: Age was not related to the TRPS scores in both samples, whereas gender was significantly related to all TRPS scores except for the perceived likelihood of a terror attack that may occur in the country. The Turkish and Israeli female respondents were more emotional about the both risks compared to their male counterparts. The females in both samples perceived the severity of these risks stronger than the males. Furthermore, they perceived the risk of being exposed to a terror attack significantly more likely than the males. No significant association was found between gender and perceived likelihood of a terror attack that may occur in the country in both samples.

The reported experiences and perceived knowledge of terror attacks of the Turkish and Israeli respondents were not related to the TRPS scores about being exposed to a terror attack. Furthermore, their perceived knowledge of terror

attacks in other countries was not related to the TRPS scores of a terror attack that may occur in the country.

Perceptions of the likelihood of consequences: Exploratory principal-components factor analysis with varimax rotation was conducted on the 16-item consequence scale. Based on Cattell' scree test, a two factor solution appeared to be the best choice for the factorial structure in both samples. Half of the items were possible consequences of being exposed to a terror attack, whereas the other half involved a terror attack that may occur in the country. Nonetheless, no significant differences were found between these two risks in the Turkish and Israeli samples.

MANOVA was applied to compare the perceived likelihood of consequences scores of the Turkish and Israeli samples. Because of the significant differences in age and experience with terror attacks between the two samples, the analyses were controlled for the effects of these variables. MANOVA analysis identified significant differences between the two samples on perceived likelihood of the consequences about being exposed to a terror attack ($F = 11.48, p < 0.01$) and about a terror attack that may occur in the country ($F = 14.31, p < 0.001$). Turkish participants perceived the consequences about being exposed to a terror attack and about a terror attack that may occur in the country more likely than the Israeli respondents.

5.4. The Relationship between Values and Risk Perception

The findings regarding the relationship between values and risk perception are outlined in three sections. In the first, the relationships between the Turkish respondents' values and risk perceptions are introduced. In the second, the relationships between the Israeli respondents' values and risk perceptions are presented. In the last, the findings about the two samples are compared.

5.4.1. The Relationship between Values and Risk Perception in the Turkish Sample

Pearson correlations between eight value types and risk perception were computed. The mean of all value items was used as a covariate to control for individual differences in using the response scale. In addition, the demographic and background variables were used as covariates to hold their effects constant on values and risk perception. Table 18 presents the partial correlations of the Turkish participants' values with negative affect, perceived likelihood, and perceived severity about being exposed to a terror attack and a terror attack that may occur in the country.

Table 18. Correlations between Turkish respondents' values and risk perceptions about being exposed to a terror attack and a terror attack that may occur in the country (n = 536).

	<u>Being exposed to a terror attack</u>			<u>A terror attack in Turkey</u>		
	Negative Affect	Likelihood	Severity	Negative Affect	Likelihood	Severity
Power	-.02	-.04	.01	-.01	-.05	.00
Achievement	.00	-.01	.02	.02	.06	.02
Stimulation & Hedonism	-.08	-.09*	-.01	-.11**	-.10*	-.04
Self-Direction	-.11**	.03	-.04	-.12**	.08	-.13**
Universalism	-.00	.08	.02	.04	.04	-.03
Benevolence & Conformity	-.01	.02	-.01	.05	-.03	.10*
Tradition	.09*	.02	-.02	-.06	-.05	.02
Security	.09*	.02	.11**	.11**	-.03	.15**

Hypothesized correlations are emphasized in bold. ** $p < .01$, * $p < .05$, one tailed for predicted associations, two tailed for nonpredicted associations.

The first research hypothesis predicted a negative relationship between self-direction value type and negative affect about being exposed to a terror attack. The findings presented in Table 18 supported this hypothesis. The more importance Turkish respondents attributed to self-direction values, the less emotional they felt about the risk for oneself ($r = -.11$, $p < .05$).

The second research hypothesis predicted negative correlations of self-direction and stimulation values with perceived likelihood of being exposed to a terror attack. Conversely, positive correlations were expected between tradition,

conformity, and security values and perceived likelihood. The findings provided in Table 18 partly support this hypothesis. Hedonism & stimulation values had significant negative correlations with perceived likelihood ($r = -.09$, $p < .05$), whereas the correlation for self-direction values was not significant. The more priority Turkish participants gave to hedonism & stimulation values, the less likely they perceived the risk of being exposed to a terror attack. The correlations of benevolence & conformity, tradition and security values with perceived likelihood were not significant.

The third research hypothesis predicted negative correlations of stimulation values with perceived likelihood of a terror attack that may occur in the country. However, positive correlations were hypothesized for tradition, conformity and security values. The findings indicate that hedonism & stimulation values significantly correlated with the perceived likelihood of the risk for the country ($r = -.10$, $p < .05$). The more importance Turkish respondents attributed to hedonism & stimulation values, the less likely they perceived the risk of a terror attack that may occur in their country. In contrast to the hypothesized relationships, self-direction, benevolence & conformity, tradition and security values did not have significant correlations with perceived likelihood of a terror attack that may occur in the country.

The fourth research hypothesis predicted positive correlations of power and security values with perceived severity about being exposed to a terror attack. Conversely, negative correlations were predicted for universalism, and benevolence values. The findings in Table 18 partly support this hypothesis.

Security value type exhibited a significant correlation with perceived severity ($r = .11$, $p < .01$). The greater importance Turkish respondents attributed to security values, the more severe they perceived the risk of being exposed to a terror attack. No significant correlations were found between power, universalism, and benevolence & conformity value types and perceived severity about being exposed to a terror attack.

The last research hypothesis predicted positive correlations of universalism, benevolence, and security values with perceived severity of a terror attack that may occur in the country. The findings showed that benevolence & conformity and security values exhibited significant positive correlations with perceived severity about a terror attack that may occur in the country ($r = .10$, $p < .05$ and $r = .15$, $p < .01$, respectively). The greater importance Turkish respondents attributed to benevolence & conformity and security values, the more severe they perceived the risk of a terror attack that may occur in their country. No significant correlation was found between universalism values and perceived severity.

The findings regarding the relationship of values with risk perception yielded several unpredicted results: Security values exhibited significant correlations with negative affect about being exposed to a terror attack ($r = .09$, $p < .05$) and about a terror attack that may occur in the country ($r = .11$, $p < .01$). The more importance the Turkish respondents gave to security values, the more emotional they felt about these two risks. Furthermore, hedonism & stimulation and self-direction values demonstrated significant correlations with negative affect about a terror attack that may occur in the country ($r = -.11$ and $r = -.12$, $p <$

.01, respectively). The greater priority the Turkish participants attributed to hedonism & stimulation and self-direction values, the less emotional they felt about the risk for their country. Additionally, self-direction value type exhibited a significant negative correlation with perceived severity about a terror that may occur in the country ($r = -.13, p < .01$). The more importance Turkish participants attributed to self-direction values, the more severe they perceived the risk of a terror attack that may occur in their country.

The relationship between Turkish respondents' values and risk perceptions was further investigated via canonical correlation analysis. The results of this analysis indicate that the first canonical correlation linking values and risk perception was significant for the risk of a terror attack that may occur in the country ($\text{Chi-sq}_{24} = 81.74, p < 0.001$) but not significant for the risk of being exposed to a terror attack ($\text{Chi-sq}_{24} = 30.01, p = 0.027$). The variability that values can accommodate in risk perception (i.e., redundancy) was 2.65% for the risk of a terror attack that may occur in the country and 1.05% for the risk of being exposed to a terror attack, while the redundancy of risk perception on values was 5.58% for the threat to one's country and 2.87% for the threat to oneself.

5.4.2. The Relationship between Values and Risk Perception in the Israeli Sample

Pearson correlations between seven value types and risk perception were computed. The mean of all value items was used as a covariate to control for individual differences in using the response scale. In addition, the demographic

and background variables were used as covariates to hold their effects constant on values and risk perception. Table 19 presents the partial correlations of the Israeli respondents' values with negative affect, perceived likelihood, and perceived severity about being exposed to a terror attack and a terror attack that may occur in the country.

Table 19. Correlations between Israeli respondents' values and risk perceptions about being exposed to a terror attack and a terror attack that may occur in the country (n = 298).

	<u>Being exposed to a terror attack</u>			<u>A terror attack in the country</u>		
	Negative Affect	Likelihood	Severity	Negative Affect	Likelihood	Severity
Power & Achievement	.06	-.04	.08	.02	-.18*	.03
Stimulation & Hedonism	-.11	-.15**	.01	-.09	-.20**	-.02
Self-Direction	-.14**	-.01	.07	-.12*	.04	-.12*
Universalism	-.06	-.09	-.16**	-.02	.09	-.00
Benevolence & Conformity	-.04	.09	-.05	-.01	.14**	-.00
Tradition	-.09	.24**	-.18*	.09	-.06	.07
Security	.18*	.17**	.03	.19**	.14**	.07

Hypothesized correlations are emphasized in bold. ** $p < .01$, * $p < .05$, one tailed for predicted associations, two tailed for nonpredicted associations.

The first research hypothesis predicted a negative relationship between self-direction value type and negative affect about being exposed to a terror attack. The findings presented in Table 19 support this hypothesis. The more importance the Israeli respondents attributed to self-direction values, the less

emotional they felt about the risk of being exposed to a terror attack ($r = -.14$, $p < .01$).

The second research hypothesis predicted negative correlations of self-direction and stimulation values with the perceived likelihood of being exposed to a terror attack. Conversely, positive correlations were expected for tradition, conformity, and security values. The findings presented in Table 18 partly support this hypothesis. The results suggest a significant negative correlation for hedonism & stimulation values ($r = -.15$, $p < .01$) but positive correlations for tradition and security values ($r = .23$, $p < .001$ and $r = .16$, $p < .01$, respectively). The greater importance the Israeli respondents attributed to hedonism & stimulation values, the less likely they perceived the risk of being exposed to a terror attack. However, the more priority they gave to tradition and security values, the more likely they perceived the risk for themselves. No significant correlations were found between self-direction, and benevolence & conformity value types and perceived likelihood.

The third research hypothesis predicted negative correlations of stimulation values with the perceived likelihood of a terror attack that may occur in the country. Conversely, positive correlations were postulated between tradition, conformity, and security value types and perceived likelihood of this risk. The findings in Table 19 demonstrate a significant negative correlation between hedonism & stimulation values and perceived likelihood ($r = -.20$, $p < .01$) of a terror attack that may occur in the country. Conversely, positive correlations were found between benevolence & conformity, and security value

types and perceived likelihood of this risk ($r = .14$ and $r = .11$, $p < .05$, respectively). The greater priority Israeli participants gave to hedonism & stimulation values, the less likely they perceived the risk of terror attacks that may occur in their country. However, the more importance they attributed to benevolence & conformity and security values, the more likely they perceived the risk for their country. No significant results were found for the relationship between the self-direction, and tradition value types and perceived likelihood of the risk for the country.

The fourth research hypothesis predicted positive correlations of power, and security values with perceived severity of being exposed to a terror attack. Conversely, negative correlations were predicted between the universalism and benevolence values and perceived severity. The findings presented in Table 19 indicate that universalism values significantly correlated with perceived severity about being exposed to a terror attack ($r = -.16$, $p < .01$). The more importance the Israeli participants attributed to universalism values, the less severe they perceived the risk for oneself. No significant associations were found between power, security, and benevolence & conformity value types and perceived severity about being exposed to a terror attack.

The last research hypothesis predicted positive correlations of universalism, benevolence, and security values with perceived severity of a terror attack that may occur in the country. The findings presented in Table 19 show that this hypothesis was not supported.

The findings regarding the relationship of the Israeli respondents' values with their risk perceptions yielded several unpredicted results: Self-direction values showed a significant correlation with negative affect about a terror attack that may occur in the country ($r = -.12$, $p < .05$). The Israeli participants attributing more importance to self-direction values felt themselves less emotional about this risk. Security values exhibited significant correlations with negative affect about being exposed to a terror attack and about a terror attack that may occur in the country ($r = .18$, $p < .05$ and $r = .19$, $p < .01$, respectively). The greater priority the Israeli respondents attributed to security values, the more emotional they felt about both risks. Power & achievement values exhibited significant negative correlation with perceived likelihood of a terror attack that may occur in the country ($r = -.18$, $p < .01$). The more priority Israeli participants gave to power & achievement values, the less likely they perceived this risk. The results presented in Table 18 demonstrate a significant correlation between tradition values and perceived severity of being exposed to a terror attack ($r = -.18$, $p < .01$). The more priority Israeli participants gave to tradition values, the less severe they perceived risk for themselves. Furthermore, a negative correlation was found between self-direction values and perceived severity of a terror attack that may occur in the country ($r = -.12$, $p < .05$). This unpredicted finding indicates that the greater importance the Israeli respondents gave to self-direction values, the less severe they perceived the risk for their country.

The relationship between the Israeli participants' values and risk perceptions was further investigated via canonical correlation analysis. The results

of this analysis indicate that the first canonical correlations linking values and risk perception about being exposed to a terror attack and about a terror attack that may occur in the country were significant ($\text{Chi-sq}_{21} = 76.13$, $\text{Chi-sq}_{21} = 59.03$, $p < .001$, respectively). The variability that values can accommodate in risk perception (i.e., redundancy) was 5.00% for the risk of being exposed to a terror attack and 3.78% for the risk of a terror attack that may occur in the country, while the redundancy of risk perception on values was 7.86% for the threat to one's country and 7.36% for the threat to oneself.

5.4.3. Comparison of the Turkish and Israeli Samples on the Relationship between Values and Risk Perception

Significant associations between values and risk perception were found in both samples. These relationships can be summarized as follows: (1) hedonism & stimulation values and perceived likelihood about being exposed to a terror attack/a terror attack that may occur in the country; the more priority the Turkish and Israeli participants gave to hedonism & stimulation values, the less likely they perceived the risk for themselves and for their country. (2) Self-direction values and negative affect about being exposed to a terror attack; the greater importance the Turkish and Israeli respondents attributed to self-direction values, the less emotional they felt about this risk. (3) Security values and negative affect about being exposed to a terror attack/a terror attack in the country; the more priority the Turkish and Israeli participants gave to security values, the more emotional they felt about these two risks. (4) Self-direction values and perceived severity of a terror attack that may occur in the country; the greater importance Turkish and

Israeli respondents attributed to self-direction values, the more severe they perceived the risk for their country. The findings (1) and (2) are in compliance with the research hypotheses, whereas (3) and (4) are unpredicted results.

CHAPTER 6

GENERAL DISCUSSION, CONCLUSIONS AND IMPLICATIONS

In this dissertation, the relationship between values and risk perception of terror attacks were examined in two countries, Turkey and Israel. These countries share an ongoing threat of terror attacks but differ in their socio-cultural-backgrounds. The research composed of three parts. In the first part, the organization of the specific items and basic values was compared with the theoretical prototype. The risk perceptions of terror attacks for oneself and for the country were assessed in the second part. Finally, the relationship between values and risk perception was examined in the last part.

The organization of this chapter is as follows: in the first part a general discussion about the major findings on values, risk perception and the associations of values with risk perception is provided. In addition, the limitations of the current research are presented. Conclusions and implications are introduced in the second part.

6.1. General Discussion

6.1.1. Values

SSA analyses yielded six distinct and two joint value regions in the Turkish sample. Tradition, universalism, self-direction, achievement, power, and security values formed distinct regions in the SSA map of the Turkish sample. However, stimulation values with hedonism values and conformity values with benevolence values formed joint regions.

The defining goal of the hedonism value type is the pleasure or sensuous gratification for oneself. It shares elements of both openness to change (independent action, thought and feeling) and self-enhancement (pursuit of self-interests) (Schwartz, 1994). Current research yields hedonism as closer to openness to change since it forms a joint region with stimulation. This joint value type, labeled hedonism & stimulation entails a desire for affectively pleasant arousal. Benevolence values emphasize voluntary concern for others' welfare; whereas conformity values stress self-restraint in everyday interaction, usually with close others. These two values that formed a joint region in the current research are labeled "benevolence & conformity." This value type promotes cooperative and supportive social relationships (Schwartz, 2005a).

The space of the SSA map in the Israeli sample was partitioned into four distinct and three joint regions. The values of tradition, universalism, self-direction, and security formed distinct regions whereas stimulation values with

hedonism values, conformity values with benevolence values, and power values with achievement values mixed to form joint regions. Power and achievement values are grouped in the self-enhancement value priority. Power values emphasize the attainment or preservation of a dominant position within the more general social system whereas achievement values stress the active demonstration of successful performance in concrete interaction. The joint value type, containing power and achievement values was labeled “power & achievement.” This value type focuses on social superiority and esteem (Schwartz, 1994).

All the value regions in the Turkish and Israeli samples were formed in accordance with the partitioning criteria of Schwartz (2005a). When a value did not form a distinct region, it almost always formed a joint region with one of the two values with which it is adjacent in the prototypical circle and with which it shares much of its motivational significance. For example, benevolence values did not form a distinct region in the Turkish and Israeli samples. However, these values formed a joint region with conformity values to which they are adjacent. Schwartz (2005a) reported that benevolence values formed distinct regions in 67% of the 210 samples and joint regions in 33% of these samples. Stimulation values formed distinct regions in 70% of the 210 samples and joint regions in 29% of these samples. Power values formed distinct regions in 91% of the 210 samples and joint regions in 8% of these samples. The current findings of this research thus support the claim that in most of the cultures studied, people responded to ten types of values as distinct and that the broader value orientations captured by adjacent values were distinguished nearly universally (Schwartz,

2005a). In the present study, tradition values in both samples and power values in the Turkish sample were located toward the periphery of the two-dimensional space rather than extending into the common origin. This result is in line with the finding that tradition values emerged outside conformity values in 29 of the 36 samples and power values appeared behind the achievement values in 26 of the 37 samples (Schwartz, 1992). Consequently, the organization of specific items and basic values in both samples is similar but not identical to the theoretical prototype. This finding demonstrates a comprehensive and near universal set of values identified by the theory. Therefore, the hypothesized relationships between values and risk perception can be examined.

The results about the ranks of values of the two samples demonstrated that self-direction, security, and benevolence & conformity were among the three most highly rated value types in both samples with self-direction being the most highly rated. Security was the second most highly rated value type in the Turkish sample and the third in the Israeli sample. Benevolence & conformity was the third in the Turkish sample, although it was the second in the Israeli sample. The lowest rated value type in both samples was tradition.

Self-determination theory (Deci & Ryan, 1985; Ryan, 1995) may shed some light on the high importance of benevolence and self-direction values across the Turkish and Israeli samples. This theory argues that relatedness, community, autonomy, and personal growth are major psychological needs whose fulfillment is intrinsically satisfying. Consequently, the goals to which these needs direct us are salient and central to most people. Benevolence and self-direction values,

respectively, express goals based on relatedness and community and on autonomy and personal growth. Furthermore, security and conformity values are important in both samples, probably in order to ensure harmonious relationships among group members by avoiding conflict and the violation of group norms. Similarly, accepting and acting on tradition values contribute to group solidarity and thus to smooth group functioning and survival (Schwartz and Bardi, 2001). However, tradition values largely concern individuals' commitments to the abstract beliefs and symbols that represent groups (Schwartz, 1992). These values find little expression in everyday social behavior. Hence, the Turkish and Israeli respondents attributed relatively low importance to tradition values as guiding principles in their lives.

The pattern of the lowest and highest rated value types in the current research are similar but not identical to those observed around the world. Schwartz and Bardi (2001) found that average value hierarchies of representative and near representative samples from 13 nations exhibit a similar pattern, which they replicated with schoolteachers in 56 nations and college students in 54 nations. Benevolence, self-direction, and universalism values were most important; stimulation, tradition, and power values were least important; and security, conformity, achievement, and hedonism were in between. It should be noted that the values hierarchy that Schwartz and Bardi (2001) used contained distinct values (eg., benevolence, conformity) rather than joint values (e.g., benevolence & conformity). In the current research, the existence of joint values may cause differences in the value hierarchies of both samples. For example,

benevolence was found to be the most highly rated value type (Schwartz and Bardi, 2001). However, it was combined with conformity values in the current research and became the second highest rated value type.

The main difference between the current findings and the previous ones (Schwartz and Bardi, 2001) is the location of the security value type. It is among the most highly rated value types in the current research, whereas it is located in the middle of the values hierarchy in the former study. The debriefings provided to the Turkish and Israeli respondents prior to the survey research may have led them to attribute more importance to security values and, in turn, have made this value type rate among the highest in the current research.

An interesting finding in this research is the close location of the self-direction and security values in the values hierarchy of the Turkish sample. Schwartz and Bardi (2001) argued that it is unlikely that the security value type is located very close to the self-direction value type in the values hierarchy. The authors proposed three requirements by considering human nature and societal functioning. The most important requirement is to preserve, and supporting relationships among members of primary groups. For example, the security value type is acquired for self-restriction, avoiding risks, and maintaining the status quo, because harmonious relationships among group members depend on avoiding conflict and violations of group norms. The second requirement is spending the time and the physical and intellectual effort needed to perform productive work. For example, self-direction values promote independence of thought and action, exploration, and creativity to find the best ways to achieve group tasks. The last

requirement is the gratification of the self-oriented needs and desires of group members. For example, hedonism is a social transformation of the needs of the individual, as a biological organism for physical gratification and optimal arousal. These propositions demonstrate that security value type may weaken motivation for the second requirement, “performing productive work.” Therefore, it may not locate very close to the self-direction value type in the values hierarchy. However, Kağıtçıbaşı (2005) asserted that relatedness (first requirement) and autonomy (second requirement) can coexist and pointed to the autonomous-related self as a healthy developmental model. In congruence with this view, several studies conducted in Turkey demonstrated the coexistence of traditional collectivist values with newly arising individualistic values (Aygün and İmamoğlu, 2002; İmamoğlu and Aygün, 1999; İmamoğlu, 1998). Accordingly, the close location of the self-direction and security value types in the value hierarchy of the Turkish sample supports claims of other studies conducted in Turkey.

The findings regarding the associations of other values with gender indicated that the Turkish male respondents attributed greater priority to power, achievement, hedonism & stimulation and tradition values than their female counterparts. However, they gave less importance to universalism and benevolence & conformity values than did the female respondents. No significant relationships were found between gender and the self-direction and security value types in the Turkish sample. Furthermore, Israeli male participants gave more importance to self-direction and tradition values than their female counterparts. In the Israeli sample, no significant relationships were found between gender and

power & achievement, hedonism & stimulation, universalism, and benevolence & conformity and security value types. The results suggest that the gender-specific attribution of importance to values is more striking in the Turkish sample than in the Israeli sample.

Past studies have yielded mixed results regarding gender differences in value priorities. One group of studies found significant differences for gender (eg., Schwartz and Rubel, 2005; Feather, 2004 and Ryckman and Houston, 2003); whereas other studies reported no significant gender differences (eg., Aygün and Imamoğlu and Prince-Gibson and Schwartz, 1998). In one of these studies, it was found that men attributed more importance than women to self-enhancement values (power, achievement) and openness values (self-direction, stimulation and hedonism); women attributed more importance to self-transcendence values (universalism, benevolence); and men and women differed less regarding conservation values (security, tradition, conformity), although women favored security and tradition somewhat more (Schwartz and Rubel, 2005). In this study, the data from 127 adult and student samples in 70 countries were analyzed to assess gender differences in the importance of 10 basic values.

The current findings regarding the Israeli sample confirm the trends in the past research that reported gender similarities rather than differences in the importance of values. However, findings about the Turkish sample support previous research that found significant gender differences.

The gender similarities reported in the previous studies were attributed to several factors, in particular, working with small sample sizes, homogenous

samples and student samples applying different instruments; and cultural differences among the samples. Furthermore, working with students samples was suggested to be the main source of the similarity because gender effects in student samples were smaller than those in adult samples (Schwartz and Rubel, 2005).

The current findings about the Israeli sample indicated gender similarity in the importance of values. It may be argued that studying a sample of Israeli students would lead to gender similarity in values. However, the findings about the Turkish student sample do not support this argument, because of the revealed gender differences in the importance of values. Additionally, the findings about the Turkish sample are highly consistent with those reported by Schwartz and Rubel (2005). Therefore, generating and testing further explanations for the inconsistent pattern of variation in gender differences in values is a challenge for future research.

6.1.2. Risk Perception of Terror Attacks

Risk perception of terror attacks was measured by asking respondents about the intensity of their negative feelings, perceived likelihood, and perceived severity about being exposed to a terror attack and about a terror attack that may occur in their country. The Turkish and Israeli participants perceived the risk for their country significantly more likely than the risk for themselves. However, no significant differences were found between these risks in the negative affect and perceived severity ratings.

The difference in the perceived likelihood ratings may be explained by the “realism” of the Turkish and Israeli respondents. A subjective judgment is called realistic if it relies on a rational account of the external stimulus information available (Peeters et al., 1997). Furthermore, judgments based on negative information are said to be more realistic than judgments based on positive information (Lewicka, 1988). The Turkish and Israeli respondents are exposed to an ongoing threat of terror attacks and hence are subject to external information about terror events in their countries. Therefore, they can make realistic judgments about the likelihood of terror attacks that may occur in their countries and realistically predict that their likelihood of being exposed to a terror attack is significantly less than a terror attack that may occur in the country.

The findings of the unrealistic optimism literature may also explain the difference in the perceived likelihood ratings regarding the two risks. Unrealistic optimism (Weinstein, 1980) is the tendency for people to report that they are less likely than others to experience negative events. Unrealistic optimism has been indicated for a variety of events (Helweg-Larsen and Shepperd, 2001), and across a wide variety of samples (Perloff, 1987) and cultures (Peeters et. al., 1997). Two main explanations are suggested for unrealistic optimism. The first describes unrealistic optimism as a self-enhancing motivational bias to protect self-esteem, to enhance a positive social image, or to reduce anxiety (Joffe, 1999; Weinstein, 1980, 1984). The second links unrealistic optimism with unmotivated cognitive processes and judgmental biases (Weinstein, 1982) such as the illusion of control (Harris, 1996).

The literature on unrealistic optimism has mainly focused on vulnerability perceptions rather than severity, although researchers in this field define risk perception as comprising both vulnerability and severity. One exception is a study conducted by Rimal and Morrison (2006). These authors examined how perceived vulnerability and perceived severity differed in terms of how individuals gauge their personal risk relative to others. It was found that vulnerability ratings increased as levels of dissimilarity between oneself and a referent increased but this monotonic pattern was not observed for severity ratings. In line with this finding, it may be argued that unrealistic optimism holds for probability judgments but does not hold for severity judgments. Therefore, the Turkish and Israeli respondents perceived the risk of a terror attack that may occur in their country significantly more likely than the risk of being exposed to a terror attack because they are optimistically biased. However, no significant difference was found between the two risks in the ratings of perceived severity and negative affect, because unrealistic optimism may not hold for severity and negative affect.

Comparison of the Turkish and Israeli samples on terror risk perception showed similarities and differences between the two cultures. Figure 4 provides the comparison of the Turkish and Israeli samples on negative affect.

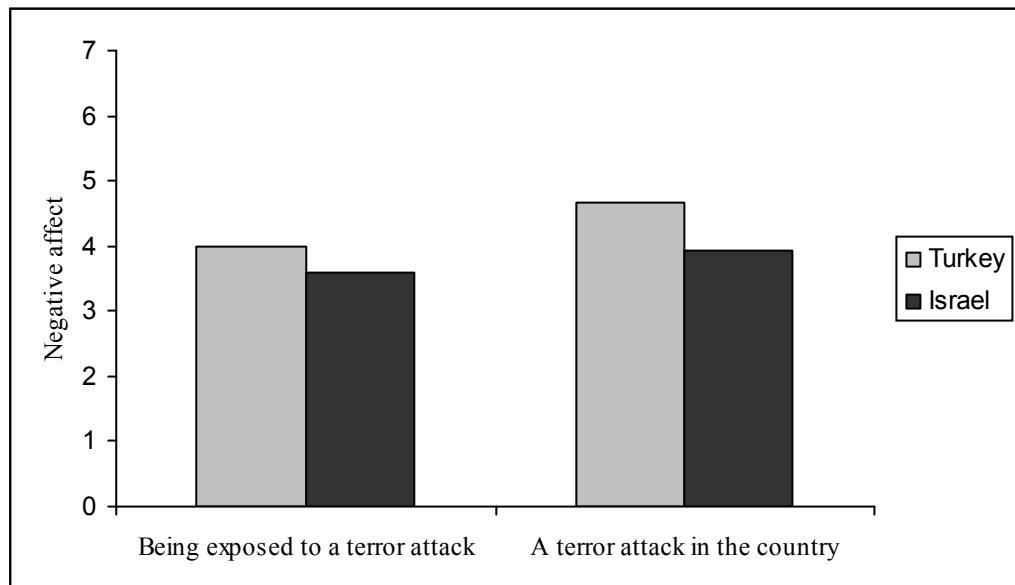


Figure 4. Comparison of the Turkish and Israeli samples on negative affect

Figure 4 indicates that the Turkish participants were more emotional than the Israeli respondents about being exposed to a terror attack and a terror attack that may occur in the country. This result replicates a previous finding that Turkish people expressed more negative affect about terror risk than Israeli individuals (Shiloh, et al., 2007). Value priorities were found to influence worries by increasing the attention to and perception of threats to valued goals (Schwartz, et al., 2000). Accordingly, the importance given to these values may influence the intensity of the feelings about terror attacks and one group may feel more emotional than the other. Figure 5 presents the comparison of the Turkish and Israeli samples on perceived likelihood.

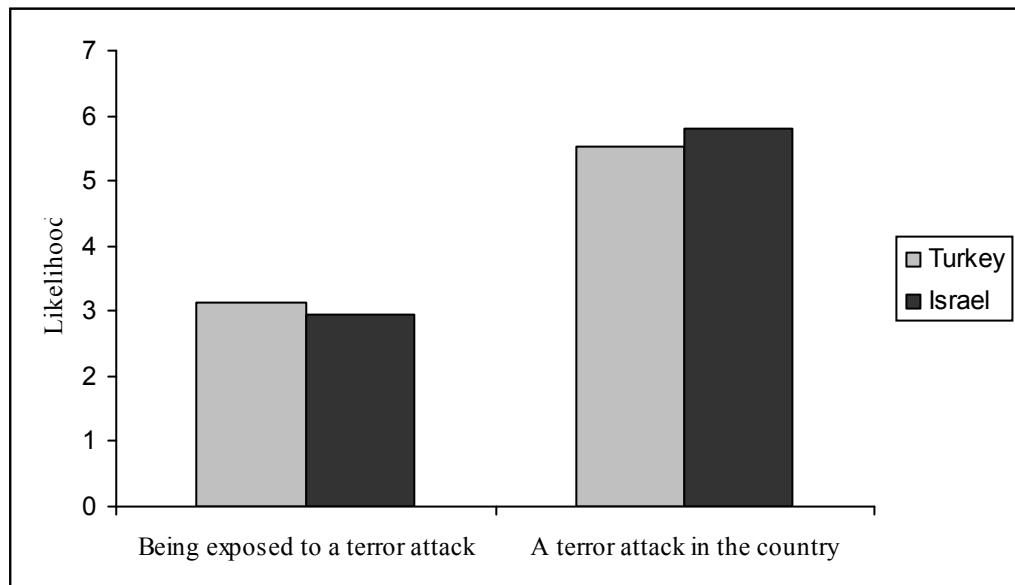


Figure 5. Comparison of the Turkish and Israeli samples on perceived likelihood

Figure 5 demonstrates that there is no significant difference between the two samples in perceived likelihood of these risks. This result supports the view that risks have a common universal dimensional structure, although the cultures may differ with regard to the salience of associated factors (Slovic, 1992; Shiloh et al., 2007). Figure 6 provides a comparison of the Turkish and Israeli samples on perceived severity.

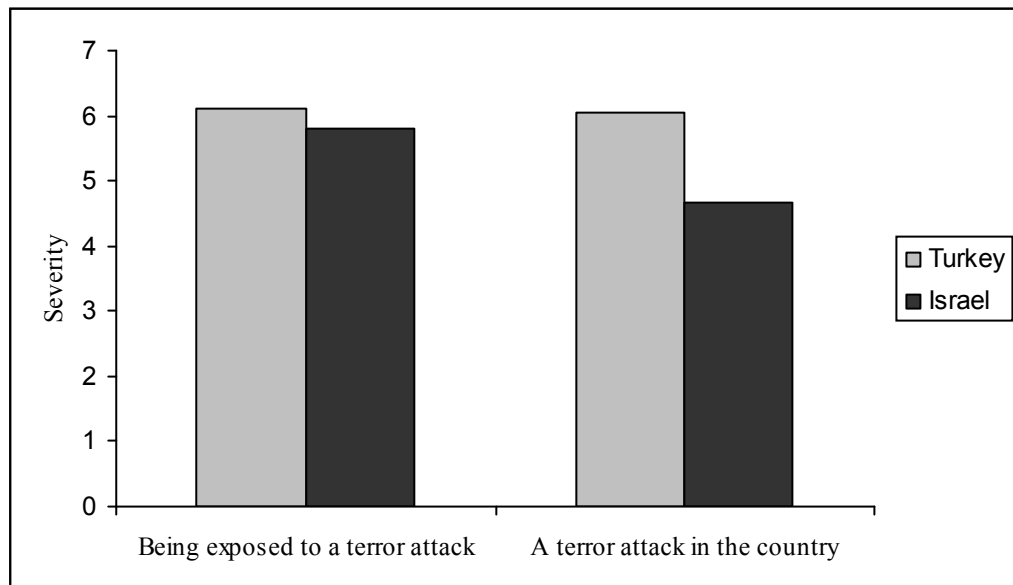


Figure 6. Comparison of the Turkish and Israeli samples on perceived severity

Figure 6 shows that the Turkish respondents perceived both risks as more severe, compared to their Israeli counterparts. This result contradicts the previous finding of no significant difference between the Turkish and Israeli samples in perceived severity of terror attacks (Shiloh et al., 2007). In this previous study, a more concrete scale consisting of eight items was used to measure the severity perceptions of the respondents. Furthermore, the sample size was smaller than the one in the current research. Differences in the measurement scale, sample size and composition may account for the different results in the two studies on terror risk perception. Overall, the present findings about terror risk perception support the views presented by the Social Amplification of Risk Framework (Kasperson et al. 1988) about social processes that affect representations of risks by individuals and groups across different cultural/societal contexts.

Figures 4 and 5 show that the differences between the two samples in negative affect and perceived severity are more salient for a terror attack that may occur in the country than for being exposed to a terror attack. Therefore, cultural/social differences in risk perception may be more striking when the risk is for one's country than when it is for oneself.

Significant associations were found between gender and terror risk perception. In both samples, females reported more negative emotions and severity than their male counterparts about the risk of being exposed to a terror attack and a terror attack that may occur in the country. In addition, the females perceived the risk of being exposed to a terror attack to be more likely than did the males. These results are consistent with gender differences in terror risk perception reported in previous research. Turkish and Israeli females perceived more costs and vulnerability, as well as expressing more negative affect about the risk of terror attacks (Shiloh et al., 2007). Higher perceived risk of terror attacks was associated with the female gender in Britain (Goodwin, et al., 2005), and in the United States, gender differences in emotions associated with gender differences in perceived terror risk (Lerner, et al., 2003).

One interesting finding of the current research is that gender in the Turkish and Israeli respondents was not related to the perceived likelihood of the risk for one's country, whereas it was related to the perceived likelihood of the risk for oneself. In congruence with this finding, Goodwin, et al., (2005) found significant correlation between gender and the perceived probability of a terror threat to oneself but no significant correlation about a terror threat to Britain. Individual

actions can rarely affect the perceived threats that give rise to societal or global problems (Schwartz, et al., 2000). Turkish and Israeli people share an ongoing threat of terror attacks. In addition, the perceived risk of British people about a major terror attack that may occur in Britain was raised significantly after the 9/11 attacks and the US invasion of Iraq (Goodwin et al., 2005). Therefore, it may be argued that gender difference in the perceived likelihood of the threat to one's country may not exist in cultures that live under the threat of terror attacks. However, more cross-cultural research is needed to generate and test explanations for the non-significant association of gender with the perceived likelihood of a threat to one's country.

6.1.3. The Relationship between Values and Risk Perception

Five hypotheses were postulated to investigate the relationship between values and the risk perception of terror attacks. Pearson correlations were computed to discover if these hypotheses were supported. The major findings, inferences from these findings, and additional approaches that might explain them are presented in three groups: predicted associations that revealed a consistent pattern in both samples, unpredicted associations that revealed a consistent pattern in both samples, and predicted associations that were supported in either one of the samples. Finally, limitations of the present study and ideas for future research are presented.

Predicted associations that revealed a consistent pattern in both samples:

Self-direction and hedonism & stimulation value types exhibited significant

relationships with risk perception in both samples. It was found that the greater priority the Turkish and Israeli participants attributed to self-direction values, the less emotional they felt about being exposed to a terror attack. Furthermore, the more importance they attributed to hedonism & stimulation values, the less likely they perceived the risk of being exposed to a terror attack and that of a terror attack that may occur in the country. Self-direction values did not demonstrate significant correlations with perceived likelihood about these risks in the Turkish and Israeli samples.

Self-direction values together with stimulation and hedonism values express people's readiness to accept and desire to pursue new, challenging, and uncertain outcomes (Schwartz et al., 2000). Although these values together emphasize openness to change, the organismic needs from which they are derived different. Self-direction values stem from organismic needs for control and mastery, however, hedonism & stimulation values originate from organismic needs for variety, stimulation, and pleasure (Schwartz, 1994). The emphasis of self-direction values on control and mastery may impede a negative affect whereas the focus of hedonism & stimulation values on affective pleasure may reduce the perceived likelihood of a terror attack.

The former argument supports the claim that self-control traits are negatively related to negative affect (Olson, 2005). Self-control is a higher-order personality trait dimension that was obtained from the factor analysis of the big five personality traits (Digman, 1997; Carrol, 2002). Self-control reflects interpersonal self-control (agreeableness), emotional self-control (emotional

stability), and task-oriented self-control (conscientiousness). Emotional self-control helps one to be adaptive to external threat, imminent danger, and potential loss and control distressing emotions. Thus, self-control minimizes the experience of negative emotions.

The latter argument that the emphasis of hedonism & stimulation values on affective pleasure may reduce the perceived likelihood of a terror attack supports the view that sensation seeking is negatively correlated with the perceived likelihood of threats. Sensation seeking is “a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience” (Zuckerman, 1994). Strong correlations were found between sensation seeking and risk taking (Johnson et al., 2002; Rolison, et al., 2003; VanZile et al., 2006). High sensation seekers interpreted the world differently than non-sensation seekers. Low sensation seekers appraised risky or stressful situations as threatening and as leading to negative consequences, whereas high-sensation seekers appraised the environment as less threatening (Roberti, 2004). For example, in one study high sensation seekers rated their risk of being a victim of a crime or a violent act as low compared to low sensation seekers (Horvath and Zuckerman, 1993).

Unpredicted associations that revealed a consistent pattern in both samples: Security values correlated positively with negative affect about being exposed to a terror attack and a terror attack that may occur in the country. The greater priority the Turkish and Israeli respondents attributed to security values,

the more emotional they felt about these risks. Security values emphasize safety, harmony, and the stability of society, of relationships, and oneself. They derive from basic individual and group requirements (Schwartz, 2005a). Thus, there are two subtypes of security values: individual and group. Security values correlated positively and consistently across seven samples with the micro (e.g., my getting cancer) and macro (e.g., the outbreak of a nuclear war) safety/health worries (Schwartz, 2000). Therefore, security values may sensitize feelings about terror attacks with regard to oneself and the one's country.

As hypothesized, self-direction values correlated with negative affect about being exposed to a terror attack. However, the finding that these values correlated with negative affect about the risk for one's country was not predicted. This unpredicted finding might again be explained by the factor of self-control (Olson, 2005). Because emotional self-control helps one to adapt to an external threat, imminent danger, and potential loss, it may control distressing emotions about a threat both to oneself and to one's country. It follows that the Turkish and Israeli participants, who attributed more importance to self-direction values felt themselves less emotional about both risks.

Self-direction values correlated negatively with the perceived severity of a terror attack that may occur in the country. The greater importance the Turkish and Israeli respondents gave to self-direction values, the less severe they perceived the risk for their country. This relationship needs to be further studied because of its consistent pattern across the two samples.

Predicted associations supported in either sample: It was postulated that security values would correlate positively with perceived severity and perceived likelihood about being exposed to a terror attack and about a terror attack that may occur in the country. These hypotheses were partly supported in the Turkish and Israeli samples. The greater priority the Israeli respondents gave to security values, the more likely they perceived the risk for themselves and for their country. On the other hand, the more importance the Turkish respondents attributed to security values, the more severe they perceived both risks to be.

In the current research, it was found that the Turkish participants attributed significantly more importance to security values than did the Israeli respondents ($F = 15.96, p < .001$). This finding supports the claim that security is more highly valued by collectivist than by individualist cultures (Probst, 2006). Furthermore, in one study, Israel and Turkey were found to be distant from each other on the conservatism value dimension (Schwartz, 1999). Turkish people attributed more importance to conservatism values compared to their Israeli counterparts. These arguments may clarify why security values relate to perceived likelihood in the Israeli sample and to severity in the Turkish sample. In the collectivist cultures that attribute more importance to security values, the relationship between security values and risk perception may be based on perceived severity rather than on likelihood. It appears that a fruitful area for future research would be to focus on the relationship between security and risk perception in collectivist versus individualist cultures.

Similar to the findings about the relationship between security and risk perception about a terror attack that may occur in the country, the benevolence & conformity value type correlated positively with perceived likelihood in the Israeli sample but with perceived severity in the Turkish sample. Because the hypotheses were postulated for conformity values but the findings were obtained for benevolence & conformity values, it may be speculative to discuss this result.

These findings demonstrate that the strength of correlations between values and risk perception are low but significant. Nonetheless, the consistent pattern of the relationships between the self-direction, hedonism & stimulation and security value types and risk perception across the two samples is promising for future research.

Participants in this study were university students from Turkey and Israel. It is possible that their value structures and representations of terror risk do not represent those of people from different demographic and socio-economic backgrounds in their countries. It is, therefore, important to be cautious in making generalizations from the findings regarding values and risk perception. Further research using the current instruments in other groups of people is highly desirable.

Current thesis focused on the two cognitive variables in risk perception research, perceived likelihood and perceived severity. Future studies may investigate the relationship between values and other cognitive variables (eg., trust and control), in addition to perceived likelihood and severity.

6.2. Conclusions and Implications

Current dissertation involved (1) constructing a survey that measures cognitive and emotional components of terror risk perception for oneself and for one's country, and (2) applying this survey together with SVS in two countries with terror experience: Turkey and Israel. The consistency of the associations between the self-direction, hedonism & stimulation, and security value types and risk perception across the two samples provide support for the existence of a link between social processes and risk perception. Furthermore, this consistent pattern of associations suggests the applicability of Schwartz Value Theory (1992, 1994) in risk perception of terror attacks. Differences among the samples in the associations of values with risk perception, in particular, the associations of the security and benevolence & conformity value types with perceived severity in the Turkish sample but with perceived likelihood in the Israeli sample may have theoretically interesting causes such as cultural differences in values and in normative expressions of risk perception. Investigating such possibilities is worthwhile in future research. Furthermore, the TRPS in its current form should be improved to include more cognitive components of risk perception (eg., trust and control) and the associations of values with risk perception should be further investigated in other cultures to assess the cross-cultural generality of the present findings.

The finding that people giving importance to certain values perceive terrorism threat differently has potentially important ramifications for targeting of relevant communication messages to particular audience. For example, people

attributing more importance to security values may require communication messages that will reduce their risk perceptions, whereas those giving more importance to hedonism & stimulation and self-direction values may require more alerting messages to make them prepared for a potential terror attack. Perceptions of risk by public officials also appear to play a large role in the examination of nation's preparedness to deal with the threat of terrorism (Slovic, 2003). In preparing professionals to provide effective emergency risk communication to an anxious public, the importance these professionals attribute to certain values should be considered and included in the training plans. Future research on the relationship between professionals' values and their risk perceptions of terror attacks may shed more light on this issue.

The finding that hedonism & stimulation values correlate negatively with risk perception may have practical implications. Personal threats that pose a physical danger are likely to be very affectively arousing and to elicit fear to a greater degree (Huddy et al., 2002). This fear may be reduced by organizing stimulating activities in the community. Future research that evaluates the effectiveness of providing stimulating activities in reducing risk perception may provide an effective way of managing the public fear of terrorism.

After the 9/11 attacks, people whose emotional reactions were dominated by anger attributed the attacks to fanaticism of the terrorists and to poor US security and endorsed an aggressive military response; those whose emotional reactions were dominated by sadness or fear expressed reservations about a strong military reaction (Sadler et al, 2005). Although this study demonstrated the effects

of emotions on policy endorsement, a similar relationship can be predicted between values and policy preferences. Thus, people attributing more importance to security values may assert more punitive preferences for policies. However, those giving more priority to hedonism & stimulation and self-direction values may assert more conciliatory preferences. Further research should examine the effects of value preferences on policy endorsement about terrorism.

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APPENDICES

APPENDIX A
The Schwartz Value Survey

VALUE SURVEY

In this questionnaire you are to ask yourself: "What values are important to ME as guiding principles in MY life, and what values are less important to me?" There are two lists of values on the following pages. These values come from different cultures. In the parentheses following each value is an explanation that may help you to understand its meaning.

Your task is to rate how important each value is for you as a guiding principle in your life. Use the rating scale below:

0--means the value is not at all important, it is not relevant as a guiding principle for you.

3--means the value is important.

6--means the value is very important.

The higher the number (0, 1, 2, 3, 4, 5, 6), the more important the value is as a guiding principle in YOUR life.

-1 is for rating any values opposed to the principles that guide you.

7 is for rating a value of supreme importance as a guiding principle in your life; ***ordinarily there are no more than two such values.***

In the space before each value, write the number (-1,0,1,2,3,4,5,6,7) that indicates the importance of that value for you, personally. Try to distinguish as much as possible between the values by using all the numbers. You will, of course, need to use numbers more than once.

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

opposed to my supreme values importance -1	not important 0	1	2	important 3	4	5	very important 6	of 7
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Before you begin, read the values in List I, choose the one that is most important to you and rate its importance. Next, choose the value that is most opposed to your values and rate it -1. If there is no such value, choose the value least important to you and rate it 0 or 1, according to its importance. Then rate the rest of the values in List I.

VALUES LIST I

- 1 ____EQUALITY (equal opportunity for all)
- 2 ____INNER HARMONY (at peace with myself)
- 3 ____SOCIAL POWER (control over others, dominance)
- 4 ____PLEASURE (gratification of desires)
- 5 ____FREEDOM (freedom of action and thought)
- 6 ____A SPIRITUAL LIFE (emphasis on spiritual not material matters)
- 7 ____SENSE OF BELONGING (feeling that others care about me)
- 8 ____SOCIAL ORDER (stability of society)
- 9 ____AN EXCITING LIFE (stimulating experiences)
- 10____MEANING IN LIFE (a purpose in life)

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

opposed to my values		not important			important		very important		of supreme importance
-1		0	1	2	3	4	5	6	7

- 11___POLITENESS (courtesy, good manners)
- 12___WEALTH (material possessions, money)
- 13___NATIONAL SECURITY (protection of my nation from enemies)
- 14___SELF RESPECT (belief in one's own worth)
- 15___RECIPROCATION OF FAVORS (avoidance of indebtedness)
- 16___CREATIVITY (uniqueness, imagination)
- 17___A WORLD AT PEACE (free of war and conflict)
- 18___RESPECT FOR TRADITION (preservation of time-honored customs)
- 19___MATURE LOVE (deep emotional & spiritual intimacy)
- 20___SELF-DISCIPLINE (self-restraint, resistance to temptation)
- 21___PRIVACY (the right to have a private sphere)
- 22___FAMILY SECURITY (safety for loved ones)
- 23___SOCIAL RECOGNITION (respect, approval by others)
- 24___UNITY WITH NATURE (fitting into nature)
- 25___A VARIED LIFE (filled with challenge, novelty and change)
- 26___WISDOM (a mature understanding of life)
- 27___AUTHORITY (the right to lead or command)
- 28___TRUE FRIENDSHIP (close, supportive friends)
- 29___A WORLD OF BEAUTY (beauty of nature and the arts)
- 30___SOCIAL JUSTICE (correcting injustice, care for the weak)

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VALUES LIST II

Now rate how important each of the following values is for you as a guiding principle in YOUR life. These values are phrased as ways of acting that may be more or less important for you. Once again, try to distinguish as much as possible between the values by using all the numbers.

Before you begin, read the values in List II, choose the one that is most important to you and rate its importance. Next, choose the value that is most opposed to your values, or--if there is no such value--choose the value least important to you, and rate it -1, 0, or 1, according to its importance. Then rate the rest of the values.

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

opposed to my values	not important	1	2	3	4	5	6	7 of supreme importance
-1	0							

- 31___ INDEPENDENT (self-reliant, self-sufficient)
- 32___ MODERATE (avoiding extremes of feeling & action)
- 33___ LOYAL (faithful to my friends, group)
- 34___ AMBITIOUS (hard-working, aspiring)
- 35___ BROADMINDED (tolerant of different ideas and beliefs)
- 36___ HUMBLE (modest, self-effacing)
- 37___ DARING (seeking adventure, risk)
- 38___ PROTECTING THE ENVIRONMENT (preserving nature)
- 39___ INFLUENTIAL (having an impact on people and events)
- 40___ HONORING OF PARENTS AND ELDERS (showing respect)
- 41___ CHOOSING OWN GOALS (selecting own purposes)
- 42___ HEALTHY (not being sick physically or mentally)
- 43___ CAPABLE (competent, effective, efficient)
- 44___ ACCEPTING MY PORTION IN LIFE (submitting to life's circumstances)
- 45___ HONEST (genuine, sincere)
- 46___ PRESERVING MY PUBLIC IMAGE (protecting my "face")
- 47___ OBEDIENT (dutiful, meeting obligations)

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

opposed to my values		not important			important		very important	of supreme importance
-1		0	1	2	3	4	5	6
								7

48___ INTELLIGENT (logical, thinking)

49___ HELPFUL (working for the welfare of others)

50___ ENJOYING LIFE (enjoying food, sex, leisure, etc.)

51___ DEVOUT (holding to religious faith & belief)

52___ RESPONSIBLE (dependable, reliable)

53___ CURIOUS (interested in everything, exploring)

54___ FORGIVING (willing to pardon others)

55___ SUCCESSFUL (achieving goals)

56___ CLEAN (neat, tidy)

57___ SELF-INDULGENT (doing pleasant things)

APPENDIX B
Terror Attacks Risk Perception Survey

Terrorism is a major ongoing concern in our country. Hundreds of civilians have been killed by terrorist attacks throughout the years. Furthermore, on November 15 and 20, 2003, suicide car bomb attacks on two synagogues, the British Consulate and the HSBC Bank Headquarters in Istanbul left 52 people dead and over 700 people injured.

This questionnaire consists of four sections that aim to measure your risk perception of terrorist attacks (**acts of terrorism against civilians' lives and properties**). Please read the instructions at the beginning of each section carefully before presenting your answers.

THANK YOU FOR YOUR PARTICIPATION

SECTION 1

Please answer the following questions:

Gender: Male ☐ Female ☐

Age: _____

University major: _____

Have you ever been exposed to a terrorist attack?

- Yes ☐ *When was it? _____
*Your physical condition:
I survived without any injuries ☐
I was injured ☐
I became physically disabled ☐
No ☐

Do you have any relatives/friends who were exposed to terrorist attacks?

- Yes ☐ *When was it? _____
*Degree of your relationship _____
*His/her physical condition:
He/she survived without any injuries ☐
He/she was injured ☐
He/she became physically disabled ☐
He/she was killed ☐
No ☐

What is your level of knowledge about terrorist attacks in Turkey and in other countries?

Terrorist attacks in Turkey

- I do not have any information at all ☐
I have some information ☐
I have a lot of information ☐

Terrorist attacks in other countries

- I do not have any information at all ☐
I have some information ☐
I have a lot of information ☐

SECTION 2

Please indicate the intensity of your feelings about *being exposed* to a terrorist attack within a year by choosing an appropriate number from 1-7 on the scale.

	I do not feel at all				I strongly feel		
Fear	1	2	3	4	5	6	7
Helplessness	1	2	3	4	5	6	7
Anger	1	2	3	4	5	6	7
Distress	1	2	3	4	5	6	7
Insecurity	1	2	3	4	5	6	7
Hopelessness	1	2	3	4	5	6	7
Sadness	1	2	3	4	5	6	7
Anxiety	1	2	3	4	5	6	7

Please indicate the intensity of your feelings about a terrorist attack that may occur in *our country* within a year by choosing an appropriate number from 1-7 on the scale.

	I do not feel at all				I strongly feel		
Fear	1	2	3	4	5	6	7
Helplessness	1	2	3	4	5	6	7
Anger	1	2	3	4	5	6	7
Distress	1	2	3	4	5	6	7
Insecurity	1	2	3	4	5	6	7
Hopelessness	1	2	3	4	5	6	7
Sadness	1	2	3	4	5	6	7
Anxiety	1	2	3	4	5	6	7

SECTION 3

Please indicate your ratings for items 1-3 by choosing an appropriate number from 1-7 on the scale.

	Extremely unlikely					Extremely likely	
1. How likely do you think <i>you</i> will be exposed to a terrorist attack within a year?	1	2	3	4	5	6	7
2. How likely do you think <i>a typical person of your age, sex and background</i> will be exposed to a terrorist attack within a year?	1	2	3	4	5	6	7
3. How likely do you think a terrorist attack will occur <i>in our country</i> within a year?	1	2	3	4	5	6	7

Please indicate probabilities for items 4-6 by choosing a percentage between 0% and 100% (where 0% indicates *impossible to happen* and 100% indicates *certain to happen*).

4. Probability that *you* will be exposed to a terrorist attack within a year: ——
5. Probability that *a typical person of your age, sex and background* will be exposed to a terrorist attack within a year: ——
6. Probability that a terrorist attack will occur *in our country* within a year: ——

Please indicate your ratings for items 7-8 by choosing an appropriate number from 1-7 on the scale.

	Not serious at all					Extremely serious	
7. If <i>you</i> are exposed to a terrorist attack within a year, how serious will the consequences be <i>for you</i> ?	1	2	3	4	5	6	7
8. If <i>a typical person of your age, sex and background</i> is exposed to a terrorist attack within a year, how serious will the consequences be <i>for him/her</i> ?	1	2	3	4	5	6	7
9. If a terrorist attack occurs <i>in our country</i> within a year, how serious will the consequences be <i>for our country</i> ?	1	2	3	4	5	6	7

SECTION 4

Items 10-17 represent possible consequences you might experience if you were being exposed to a terrorist attack within a year. Please indicate your rating of how likely each consequence is for you to face by choosing an appropriate number from 1-7 on the scale.

	Extremely unlikely					Extremely likely	
10. My life wouldn't be the same as it was before	1	2	3	4	5	6	7
11. My position at work would be endangered	1	2	3	4	5	6	7
12. I would face psychological problems	1	2	3	4	5	6	7
13. I would need help from close others (eg. spouse, parents, friends) to cope with this trauma	1	2	3	4	5	6	7
14. I would very often catch myself thinking about my terrorist attack experience	1	2	3	4	5	6	7
15. My relationship with close others (eg. spouse, parents, friends) would be threatened	1	2	3	4	5	6	7
16. I would be physically disabled	1	2	3	4	5	6	7
17. My financial situation would get worse	1	2	3	4	5	6	7

Items 18-25 represent possible consequences our country might experience if a terrorist attack occurs within a year. Please indicate your rating of how likely each consequence is for our country to face by choosing an appropriate number from 1-7 on the scale.

	Extremely unlikely					Extremely likely	
18. Public panic in our country	1	2	3	4	5	6	7
19. Decrease or pause in investments of foreign or local investors	1	2	3	4	5	6	7
20. Loss of trust in government institutions	1	2	3	4	5	6	7
21. War against another country	1	2	3	4	5	6	7
22. War in our country	1	2	3	4	5	6	7
23. An earlier election in our country	1	2	3	4	5	6	7
24. Decrease in the earnings of tourism	1	2	3	4	5	6	7
25. Economic crisis in our country	1	2	3	4	5	6	7