Travel Anxiety and Intentions to Travel Internationally: Implications of Travel Risk Perception

YVETTE REISINGER AND FELIX MAVONDO

This article investigates the impact of cultural and psychographic factors on perceptions of travel risk, anxiety, and intentions to travel internationally. The study involved 246 Australian and 336 foreign respondents who were surveyed as to their cultural orientation, personality, lifestyle, travel motivation, risk and safety perception, anxiety, and intentions to travel. The results of a path analysis showed that the travel risk perception was a function of cultural orientation and psychographic factors in both samples, and anxiety was a function of type of perceived risk. The terrorism and sociocultural risk emerged as the most significant predictors of travel anxiety. Intentions to travel internationally were determined by travel anxiety levels and level of perceived safety. Implications for future research and marketing practices are discussed.

Keywords: *travel risk; travel safety; anxiety*

This article was written following the September 11, 2001, terrorism attack on the Twin Towers of the World Trade Center in New York City and the Pentagon in Washington, D.C., and the October 12, 2002, attack on a nightclub in Bali. We argue that tourism research must take up the challenge of risk assessment. If the tourism industry is going to be prosperous, then tourism researchers must make efforts to increase the industry's understanding of risk perception. Tourism cannot develop in places that are perceived as dangerous. Safety and physical security are the primary conditions for normal tourism development of a destination, region, or country. Unfortunately, today the perception of risk that an individual will be a victim of terrorism, an international conflict, or a health hazard is higher than ever before. There is a growing perception of the world as a more risky place to live and travel (Fischhoff, Nightingdale, and Iannotta 2001), and this perception could have serious implications for tourism. Thus, the concerns of safety and physical security within the tourism industry justify attention and research.

This article addresses an underresearched area of risk perception in the tourism context. The purpose of the study is to test the relationships among cultural and psychographic factors, the perception of travel risk and safety, anxiety, and intentions to travel, and to compare the results across Australian and international tourist groups. For comparable studies of the concept of risk perception in tourism, see Roehl and Fesenmaier (1992), Um and Crompton (1992), Mansfeld (1992), Mitchell and Vassos (1997), Maser and Weiermair (1998), and Sonmez and Graefe (1996, 1998a, 1998b). Before the study results are presented and evaluated, however, the concepts of perceived risk, safety, anxiety, and intentions to travel are discussed. These are followed by the literature review supporting the development of hypotheses, then a discussion of the methodology used in this study.

LITERATURE

Risk

Perceived risk. Risk was defined as exposure to the chance of injury or loss, a hazard or dangerous chance (*Macquarie* 1999), or the potential to lose something of value (Priest 1990). There are generally three types of risk recognized: absolute, real, and perceived risk (Haddock 1993). Absolute risk is assessed by commercial providers who implement safety procedures to ensure that the real risk is minimized. Perceived risk is assessed by individuals in a specific context (Haddock 1993) and refers to the individual's perceptions of the uncertainty and negative consequences of buying a product (or service) (Dowling and Staelin 1994), performing a certain activity, or choosing a certain lifestyle. Most scholars concentrate on perceived risk

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Journal of Travel Research, Vol. 43, February 2005, 212-225
DOI: 10.1177/0047287504272017
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rather than objective or real risk (Bauer 1967), because individuals are concerned with only a few of the possible outcomes (related to themselves) rather than the total outcome (Budescu and Wallstein 1985).

Risk perception in tourism. The concept of perceived risk in tourism was examined in many studies (Hales and Shams 1991; Moutinho 1987; Roehl and Fesenmaier 1992; Yavas 1987). In tourism, risk was defined as what is perceived and experienced by the tourists during the process of purchasing and consuming traveling services and at the destination (Tsaur, Tzeng, and Wang 1997). Risk has been identified as a major concern for international travelers (Yavas 1990).

Perception of risk in tourism varies depending on tourists' characteristics. Roehl and Fesenmaier (1992) distinguished among three groups of tourists based on their perceptions of risk: risk neutral, functional risk, and place risk. The risk-neutral group of tourists does not perceive its vacations or traveling to destinations as risky. The functional-risk group considers the possibility of mechanical, equipment, and organizational risks. The place-risk group perceives tourism and traveling as risky. Lepp and Gibson (2003) suggested that the perception of risk associated with international tourism varies depending on the tourist role and tourists' preferences for familiarity or novelty. The organized mass tourist prefers the greatest amount of familiarity and travels in an "environmental bubble." The drifter who seeks novelty follows the host's way of doing things. For example, backpackers who seek novelty are attracted to a location associated with risk (Elsrud 2001). According to Bello and Etzel (1985), a need for novelty and excitement might be associated with an individual's lifestyle. Also, the perception of danger in a vacation destination might be influenced by personality type (Carr 2001) and nationality (Seddighi, Nuttall, and Theochaous 2001). For example, the levels of perceived political risk differed among travel agents from six Western European countries. In sum, the literature suggests that to understand the perception of travel risk among tourists, the individual's sociocultural and psychological characteristics should be considered.

Types of risk. Perception of risk may vary depending on the types of risk perceived. There are seven types of risk identified in consumer behavior literature: financial (losing or wasting money if the service goes wrong), functional or performance (not performing, not delivering benefits to customers, and/or not meeting the customers' needs and requirements), physical (inflicting injury or illness), social (losing personal and social status, appearing unfashionable, and/or lowering status), psychological (damaging self-image and/or reflecting poorly on personality), satisfaction (not delivering satisfaction), and time (not performing on time, taking too much time, and/or wasting time) (Schiffman and Kanuk 1991). In tourism, Roehl and Fesenmaier (1992) identified three dimensions of the perceived risk: physical-equipment risk, vacation risk, and destination risk. Sonmez and Graefe (1998a) identified four types of risk as most often associated with tourism, namely, financial, psychological, satisfaction, and time risks. Maser and Weiermair (1998) examined travel risks associated with diseases, crime, natural disasters, problems with hygiene, transportation, culture/language barriers, and uncertainty related to destination-specific laws and regulations. Mitchell and Vassos (1997) identified 43 risk factors of a holiday package ranging from natural disasters to a tour representative not being able to join in activities.

Recently, terrorism risk and concern about safety became major factors when choosing a vacation destination (Sonmez and Graefe 1998a, 1998b). Terrorism is defined as "any attack, or threat of attack, against unarmed targets, intended to influence, change, or divert major political decisions" (Radu 2002, p. 1). The attacks are largely against civilian targets to generate fear (Radu 2002). Since the late 1960s, terrorist attacks became more severe, better organized, more focused and violent, and geographically more widespread. Today, the public fears terrorism more than ever (Atkinson, Sandler, and Tschirhart 1987; Jenkins 1988). Tourists are primary targets of terrorist attacks because they represent Western capitalism, consumption, and values. Tourists are targeted for their symbolic values (Richter and Waugh 1986) such as wealth, freedom of choice, or independence. For terrorists who represent ideological opposition to Western consumption, the symbolic values of tourists "are too valuable to be left unexploited" (Sonmez, Apostolopoulos, and Tarlow 1999, p. 15). Attacks on tourists symbolize attacks on their governments (Richter and Waugh 1986).

Little academic research has been done on the impacts of terrorism and travel risk perception on decision-making process (e.g., Sonmez and Graefe 1996, 1998a, 1998b). The need for safety, security, and stress-free travel will be the key factors determining future travel intentions of many tourists. The issue of safety raises such important questions as how international tourists perceive travel risk, what factors influence their perceptions of travel risk, how these perceptions influence tourist travel anxiety, perceptions of safety, and travel intentions.

Safety

To create a "favorable environment" for tourism development, it is important to understand how potential tourists experience their environment in terms of safety. Several studies have examined the concept of safety in the context of tourism. For example, Chon (1991) analyzed American travelers' attitudes to safety as a result of their touristic experiences in South Korea. Wilks, Watson, and Faulks (1999) evaluated the perceptions of road safety by international tourists in Australia. Westwood, Pritchard, and Morgan (2000) examined women's concerns over the inadequate level of comfort and safety as related to airline services, both prior to flight and on arrival.

Today safety and security for domestic and international travelers have become global concerns. Lack of personal safety is perceived as a major deterrent to international travel. For example, the United States warned its nationals about safety risks to Americans in Southeast Asia, including Malaysia and the Philippines (U.S. Department of State 2002). The United Kingdom highlighted the threat to its citizens in Brunei, Cambodia, Laos, Singapore, and Vietnam (Foreign and Commonwealth Office 2002). Australia issued a warning about a lack of safety in "high risk" nations such as Brunei, Cambodia, Laos, Malaysia, Myanmar, the Philippines, Singapore, and Thailand (Australian Department of Foreign Affairs and Trade [ADFAT] 2002). The announcements of the international governments contributed to

general concerns about personal safety and an atmosphere of risk and anxiety in the international world. They also created much-needed awareness of tourism security and raised the need for more empirical research of safety in the context of tourism and travel.

Anxiety

Anxiety is a subjective feeling that occurs as a consequence of being exposed to actual or potential risk; it is a feeling of being nervous, apprehensive, stressed, vulnerable, uncomfortable, disturbed, scared, or panicked (McIntyre and Roggenbuck 1998). Hullett and Witte (2001) referred to anxiety as being frustrated and awkward. According to Gudykunst and Hammer (1988, p. 126), anxiety is the affective element that "refers to the fear of negative consequences." When a person plans a purchase that is risky, this generates a fear of unknown consequences and feeling of "anxiety" (Dowling and Staelin 1994).

To avoid anxiety and its negative consequences, potential travelers evaluate the risk of the purchase and make decisions accordingly. Travelers may evaluate the perceived risk of the purchase at different levels (product/destination attributes, negative consequences of the purchase, own needs and values, and purchase situation). Travelers' evaluation of the product at all levels may be different. For example, some individuals may perceive a destination as generating fear and nervousness; others may perceive it as enhancing the feelings of relaxation, happiness, and well-being. Some may perceive the purchase as being risky; others may perceive it as involving no risk.

There is no research to date that has documented the impact of the travel risk on anxiety level. The only travel anxiety and stress study in tourism was conducted in the context of physical, social, and psychological consequences of road traffic accidents for different types of road users (Mayou and Bryant 2003). This study seeks to understand the influence of travel anxiety on the perception of safety and intentions to travel.

Intentions to Travel

The perceived risk and perception of safety greatly influence the intentions to travel. When the risk makes a destination to be perceived as less safe, the potential travelers can (1) pursue their travel plans, (2) change their destination choice, (3) modify their travel behavior, or (4) acquire additional information if they decide to continue with their travel plans (Chandler 1991; Englander 1991; Norton 1987). For example, the risk of experiencing a threat of terrorism makes a destination to be perceived as less safe, and the less risky destination is likely to be chosen (Sonmez and Graefe 1998a). The destinations perceived as too risky may become undesirable (Crompton 1992) and be eliminated from the selection process (Sonmez and Graefe 1998a). Terrorism risk may deter tourists from choosing to travel to not only specific destinations but also entire regions (Sonmez and Graefe 1998a). Goodrich (2002) listed 27 countries that U.S. citizens were advised not to travel to because of high risk.

PURPOSE OF THE STUDY

The purpose of this study is to establish empirically the relationships among the cultural and psychographic factors, travel risk perception, anxiety, safety perception, and intentions to travel, and to compare the findings across two groups (i.e., Australian and international tourist groups). A path model was used to test these relationships in a holistic manner (see Figure 1).

DEVELOPMENT OF HYPOTHESES

Cultural Orientation versus Risk Perceptions

Several cross-cultural studies found that national cultures influenced risk perceptions (Goszczynska, Tyszka, and Slovic 1991; Mechitov and Rebrik 1990; Tiegen, Brun, and Slovic 1988) and explained risk adjustment (Tse et al. 1988).

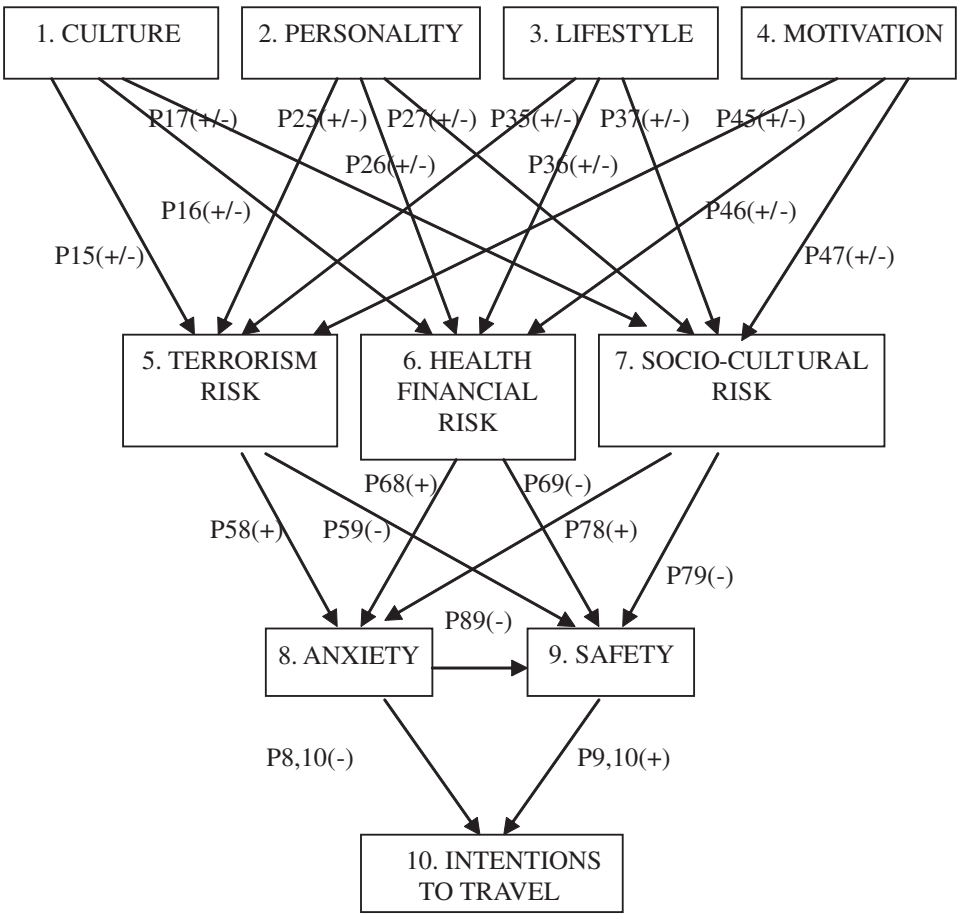
National culture has been frequently defined by using five dimensions of cultural variability identified by Hofstede (1980, 2001) and Hofstede and Bond (1988), namely, power distance, individualism, masculinity, uncertainty avoidance, and the Confucian work dynamism, or long-term orientation. The cultural orientation toward uncertainty avoidance (the degree to which a society feels threatened by uncertain and ambiguous situations and tries to avoid them) is most closely associated with the degree and type of risk a society is prepared to accept in everyday life. Members of the high-uncertainty cultures try to avoid risk and situations that are considered dangerous, and seek greater stability in their lives. Members of the low-uncertainty cultures accept more risk and danger in their lives (Hofstede 1980, 2001).

Travel risk may be of particular concern for tourists from high-uncertainty-avoidance cultures. For example, Money and Crotts (2003) found that tourists from the high-uncertainty-avoidance group stayed three times as short, visited two times fewer destinations, traveled alone significantly less often, and traveled more with business associates and friends in organized groups than those from the medium-uncertainty group to minimize risk. Consequently, this study hypothesizes that cultural orientation is associated with the perception of risk (see Figure 1, paths P15, P16, and P17).

Psychographics versus Risk Perceptions

The perceived risk is highly variable and depends on personality characteristics (Priest 1990; Roehl and Fesenmaier 1992) and one's ability to successfully meet a situational risk (Priest 1992). Passive personality combined with low-level activity generates feelings of peace, calm, and enjoyment, and an absence of threat. Active personality induces the feelings of arousal, stress, and even fear (McIntyre and Roggenbuck 1998). Plog's (1974) psychocentric tourists (passive and risk averse) are likely to seek peace and choose destinations perceived as safe, whereas allocentric tourists (active and risk taking) are likely to seek excitement and are less concerned about choosing destinations based on safety factors. Also, each tourist assesses risk differently depending on the need for familiarity and novelty. A tourist seeking

FIGURE 1
RELATIONSHIPS AMONG TRAVEL RISK, TRAVEL ANXIETY, AND INTENTIONS TO TRAVEL



Note: P15(+/–) indicates an association between the cultural orientation and terrorism risk; P68(+) indicates a positive association between health/financial risk and travel anxiety; and P79(–) indicates a negative association between sociocultural risk and travel safety.

familiarity is likely to perceive an alien environment as more risky than a tourist seeking novelty (Lepp and Gibson 2003). Cohen's (1972) mass tourists who chose to travel in an organized fashion on a packaged tour prefer the greatest amount of familiarity because they feel more vulnerable than explorers who seek novelty within a safety net or drifters for whom novelty and risk are most important. Differences in feelings and experiences of risk can be explained by sensation-seeking personality (Hull, Stewart, and Yi 1992).

The perceived risk is influenced by travel motivation. Tourists select the destination that best matches their needs and offers the most benefits for the least risk (Sonmez and Graefe 1998a). Some individuals may be motivated by the experience of risk that may be a significant factor in feeling excited and satisfied with experiences (McIntyre and Roggenbuck 1998). Others may be motivated by the rest and relaxation, and avoid risk. Also, the perceived risk is influenced by an individual's lifestyle. For example, novelty and excitement seeking might be associated with an individual's lifestyle (Bello and Etzel 1985). Consequently, it is hypothesized that personality, motivation, and lifestyle are associated with the perception of risk (see Figure 1, paths P25, P26, P27, P35, P36, P37, P45, P46, and P47).

Risk Perception versus Travel Anxiety

According to Gudykunst and Hammer's anxiety/uncertainty management (AUM) theory (1988), when sojourners experience uncertainty (and risk), anxiety dominates and they have difficulties in adapting to a new environment. When uncertainty is controlled, sojourners are more adaptive. Thus, it is hypothesized that a perception of risk is associated with travel anxiety (see Figure 1, paths P58, P68, and P78).

Risk Perception versus Travel Safety

Risk perception determines if potential tourists feel safe on a trip. Individuals who associate high risk with travel are less inclined to feel safe. Risk perception is the strongest predictor of safety concerns (Sonmez and Graefe 1998a). Concern for safety increases with risk perception levels (Sonmez and Graefe 1998a). According to Plog's (1974) theory of

risk, risk-averse individuals are likely to choose destinations perceived as safe, and risk seekers choose destinations perceived as less safe. Consequently, it is hypothesized that a perception of risk is associated with travel safety (see Figure 1, paths P59, P69, and P79).

The Relationship between Travel Anxiety and Safety and Intentions to Travel Internationally

According to Gudykunst and Hammer's (1988) anxiety/risk-reduction management theory, when a sojourner's anxiety and risk are high (and confidence is low), he or she will likely perceive an environment as less safe and withdraw from it. When a sojourner's anxiety and risk are low (and confidence is high), he or she will perceive the environment as safe and adapt to circumstances. Thus, when anxiety increases, perceptions of safety decrease and the intentions to travel decrease. Mitchell et al. (1999) noted that the relationship between consumers' risk and purchase intention of the package holiday is mediated by anxiety. Thus, it is hypothesized that travel anxiety is associated with the perception of safety and intentions to travel (see Figure 1, path P89 and P8,10), and travel safety is associated with intentions to travel (see Figure 1, path P9,10).

METHOD

Sample

Samples of 246 Australian and 336 foreign respondents were surveyed in Australia. A sample of Australian and foreign respondents was randomly selected from a population of visitors at various tourist attractions in Melbourne such as Victoria Market, the Botanic Garden, and the Melbourne Arts Center, and outside Melbourne such as Healsville Sanctuary and Phillip Island. The tourist attractions were chosen on the size of the tourist population visiting particular places and their willingness to participate in the research. The foreign nationalities were selected for their significance to the Australian tourism market (most international tourist arrivals to Australia are from Asia, Europe, and the United States). The sample elements were not, however, selected in proportions that reflected the size of each major foreign tourist market to Australia; rather, the emphasis was on getting a maximum (and balanced) number of respondents from different international tourist groups during a 3-month period in October-December 2001. A screening question was asked to select only those respondents who had been born and raised in the same country. It was felt that foreign nationals (born in one country and raised in another) and those who had lived overseas for extended periods would perceive the travel risks differently than those who were born and raised in the same country.

Although the use of Australian versus foreign samples could be questioned, there is some evidence to support the distinction between the two groups and to combine the foreign group into one. This was arrived by comparing differences within the foreign group, which showed no significant differences, and by comparing the two groups using *t*-tests, which showed several differences. This was the first cut of the data to justify the methodology used in this research. We accept that the two groups are not completely comparable because the foreigners were viewed as tourists who had decided to travel internationally, whereas the Australians in this study can be considered as tourists who took their holidays at home. In Australia, domestic tourists represent three-quarters of all tourists (Bureau of Tourism Research [BTR] 2001a). Also, the aim of this study was to determine whether the same relationships among the cultural and psychographic factors, travel risk perception, anxiety, safety, and intentions to travel internationally hold in the two samples: among those who take holidays internationally and those who take their holidays domestically. Australians perceive their country as being relatively safe in comparison to other parts of the world. Australia's affluence and stability promote less concern for safety and security at both the personal and national levels (Feather 1975, 1980, 1986; Feather and Hutton 1973). We accept as one of the limitations of this study that the Australian sample could be considered relatively more homogenous than the foreigner group. Unfortunately, it was not possible to use the analytical method chosen with small subsamples to minimize the heterogeneity of the foreign group. Given, however, our interest in understanding the differences between international tourists and domestic tourists in their perceptions of risk, safety, anxiety, and intentions to travel, this limitation is not serious.

Instrument and Measures

A structured questionnaire was used to measure the constructs in the conceptual model. The questionnaire was self-administered. Questions in the survey asked about the respondent's cultural orientation, psychographics (personality, lifestyle, and travel motivation), travel risk perception, travel anxiety, perception of travel safety, and intentions to travel in the coming years (see Table 1 for more details about the items and the scales used). The survey also posed questions regarding the respondents' sociodemographic details. The questionnaire was developed in English, then translated into several languages such as German, French, Spanish, Mandarin, and Hindu. Fortunately, 95% of the respondents chose to use the English version. The remaining 5% used French and Mandarin in equal numbers.

DATA ANALYSIS

The SPSS 10 statistical software package and Amos 4 were used to analyze the data. In the initial stage of analysis, the Cronbach's coefficient alpha (Cronbach 1951) was calculated to test the reliability of each scale. If the error variance accounts for the majority of the observed variance, the scale is not to be assessed as reliable. A principal components analysis (PCA) was conducted to determine underlying dimensions of perceived risk, that is, the major groups of travel risk perceptions. A PCA was chosen to minimize the number of factors needed to account for the maximum portion of the variance represented in the original set of variables and to reduce the specific and error variance as a proportion of the total variance. Orthogonal rotation was chosen to maximize the differences among the factors extracted. Only the factors having latent roots (eigenvalues) greater than 1 and factor loadings greater than 0.6 were kept in the model. According to Comrey in Hair et al. (1995), loadings

TABLE 1
INSTRUMENT AND ITS MEASURES

Construct Measured	Scale	Items
Cultural orientation	7-point dis/agreement scale	Items representing Hofstede's (1980) cultural dimensions: power distance, uncertainty avoidance, individualism and collectivism, and femininity and masculinity; Bond and the Chinese Culture Connection's (1987) long- and short-term orientation; and Hall's (1976) low- and high-context cultures
Personality	7-point scale	Several descriptive words were presented and respondents were asked to indicate how accurately these words (adjectives) describe them Items adapted from Menzes and Chandra's (1989) scale, for example active, extroverted, confident, helpful, and venturesome
Lifestyle	7-point dis/agreement scale	Items adapted from lifestyle studies (Abbey 1979; Schul and Crompton 1983; Schewe and Calantone 1978), for example I enjoy traveling to new places, I like to walk around in strange cities, and I like comfort
Motivation for travel	7-point scale according to their importance	Items adapted from Kale, McIntyre, and Weir' (1987) study, for example to go on holiday, to do business, and to study
Perception of travel risk	7-point scale (1 = *none*; 7 = *very high*)	13 travel risk perceptions: cultural, equipment/functional, financial, health, physical, political, psychological, satisfaction, social, airplane hijacking, bomb explosion, biochemical attack, and time
Travel anxiety	7-point semantic differential scale	Scale composed of 12 bipolar adjectives to describe feelings, for example calm/worried, relaxed/tense, and composed/stressed
Perception of travel safety	7-point scale (1 = *very* unsafe; 7 = *very safe*)	Items related to perceptions of travel safety in selected regions and situations, for example at hotels, airports, and when sightseeing
Intentions to travel internationally	100-point scale (0 = *no intention*; 100 = *definite intention*)	For example, cancel all travel plans, intent to fly/travel again

in excess of 0.63 are very good. The individual items within each of the measured construct were summed, then mean scores were computed for each group and used in the subsequent analysis.

A path model with observed variables was run to test the hypotheses, as presented in the conceptual model in Figure 1. Each path (arrow) represents a distinct hypothesis and is labeled (P11, P12 . . . P*nn*). The sign of the relationship (+/–) between the variables, if the hypothesis is a directional one, is also shown. A multiple group comparison of locals (Australians) and foreigners was performed. The aim was to identify the relationships among the analyzed constructs, establish if the same conceptual model held in the two samples, and establish whether there are any differences between the two groups. The results are presented both graphically in Figure 2 and numerically in Table 4. In the table of statistics, the standardized regression weights and critical values (CR) and the level of significance are shown.

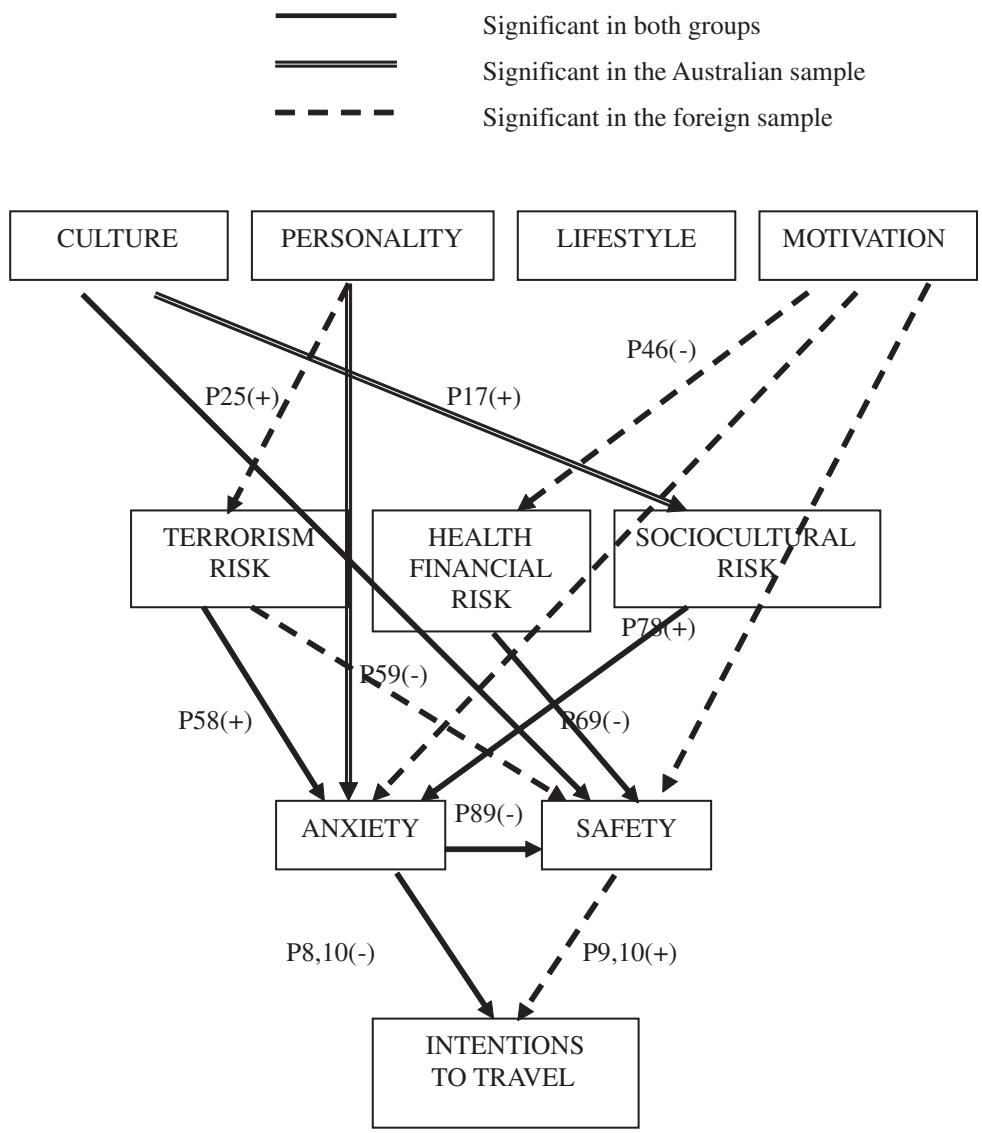
RESULTS AND DISCUSSION

The characteristics of the total sample indicate that there was adequate representation of both gender groups; females (50.7%) were represented by a slightly larger percentage than males (49.3%). In the Australian group, females represented 51.2% of the sample and males 48.8%; in the foreign group, males represented 50.3% of the sample and females 49.7%. Both samples tended to be young, with the majority (66.2%) of the Australian sample and 77.8% of the foreign sample being younger than 30 years. This is no surprise, because the majority of international and domestic tourists to Australia are young (BTR, 2001a, 2001b). Also, more than 90% of all Australian and foreign respondents were on holiday (see Table 2).

The reliability results showed that the items in each scale all measured the same thing (Anastasi 1982). The scales appeared to be reasonably consistent in how they measured the concepts analyzed. The internal consistency test showed that in general, all scales had high item-total correlations and squared multiple correlations with other items in the scale. The test, however, identified several variables that did not highly correlate with other items. These were deleted to increase the coefficient alpha of the scales. In the final result, all scales exceeded Nunnally's suggested minimum acceptable alpha coefficient of .70 (Nunnally 1978). The culture orientation scale had an alpha value of .9156, personality .8634, lifestyle .7054, motivation .7359, risk perception .8514, travel anxiety .9455, and travel safety .8982.

The results of the PCA are presented in Table 3. The PCA identified three major groups of travel risks. The first factor included the items that were associated with *terrorism risk* (bomb explosion, airplane hijacking, and biochemical attack). The second factor included variables such as health, physical, financial, and functional. This factor was

FIGURE 2
RELATIONSHIPS AMONG TRAVEL RISK, TRAVEL ANXIETY, AND INTENTIONS TO TRAVEL



consequently labeled *health and financial risk*. The third factor was labeled *sociocultural risk* and included variables such as time, satisfaction, psychological, and social. The reliabilities (Cronbach's alpha) for the three risk scales are shown in Table 3.

Results of the path analysis with observed variables revealed an acceptable chi-square ratio and fit indices ($\chi^2/df = 1.015$; GFI = 0.990; AGFI = 0.962; NFI = 0.973; TLI = 0.999; CFI = 0.999; RMSEA = 0.005, $p = .443$). The chi-square/degrees of freedom ratio was between 3 and 1 and represented a good fit (Carmines and McIver 1981). The GFI, AGFI, and NFI values of more than 0.90 indicated an acceptable fit. The TLI and CFI values were more than 0.95 and indicated a relatively good model fit (Hu and Bentler 1999). The RMSEA value was less than 0.05 and indicated a good fit (MacCallum, Browne, and Sugawara 1996). Overall, these results indicate that the model adequately fits the data. The model fit statistics reflect the structural part of the model because in path models, there is no measurement part. This was the most appropriate model specification because interest was on the relationships among variables and in examining the mediation effects.

Significant Results in Both Groups

The results indicate that the general structure of the model in the two samples is the same (conceptually equivalent). There are six corresponding significant paths coefficient in both samples: from culture to safety, from terrorism risk to anxiety, from health and financial risk to safety, from sociocultural risk to anxiety, from anxiety to safety, and from anxiety to intentions to travel (see Figure 2 and Table 4). These significant paths provide support for hypotheses implied by the corresponding paths (P58, P69, P78, P89, and

TABLE 2

CHARACTERISTICS OF FOREIGN AND AUSTRALIAN TOURISTS (*N* = 582)

	Foreign Tourists		Australian Tourists	
	N = 336	Percentage	*N* = 246	Percentage
Gender				
Female	167	49.7	126	51.2
Male	169	50.3	120	48.8
Age				
18-20	34	10.1	47	19.1
20-29	227	67.7	116	47.1
30-39	29	8.7	26	10.6
40-49	21	6.3	32	13.0
50-59	20	5.9	18	7.3
60 and older	5	1.5	7	2.8
Purpose of visitation				
Holiday	312	92.9	222	90.2
Business	7	2.1	5	2.0
Study	9	2.7	9	3.7
Visiting friends and relatives	4	1.2	4	1.6
Sport	4	1.2	6	2.4

TABLE 3

PRINCIPAL COMPONENT ANALYSIS OF TRAVEL RISKS

Factor Name	Factor Loading	Eigenvalue	Explained Variance (%)	Cronbach's Alpha
Terrorism risk		4.732	36.4	0.9059
Bomb explosion	0.922			
Airplane hijacking	0.863			
Biochemical attack	0.855			
Health and financial risk		1.680	22.9	0.7569
Health	0.827			
Physical	0.693			
Financial	0.659			
Functional	0.657			
Sociocultural Risk		1.353	10.4	0.7042
Time	0.770			
Satisfaction	0.694			
Psychological	0.650			
Social	0.640			

P8,10). The first path from culture to safety was not initially hypothesized and thus has not been presented in Figure 1.

The significant negative associations between cultural characteristics and perceptions of safety in the Australian ($\beta = -0.10$, $p < 0.05$) and foreign sample ($\beta = -0.10$, $p < 0.05$) indicate that both groups of tourists, regardless of their cultural orientation, are concerned that they may not be safe in the destination visited. This is in accordance to the Anaheim Study's (2004) findings that safety and security are major concern factors for tourists in selecting destinations.

Perception of terrorism risk is positively associated with anxiety in the Australian ($\beta = 0.27$, $p < 0.001$) and foreign ($\beta=0.21$, $p<.001$) sample (support for P58[+]), indicating that perceived terrorism risk associated with travel generates anxiety in both samples. Whether this is a posttraumatic disorder worldwide is debatable, but it is apparent that terrorism has become a major source of travel anxiety for both local and foreign tourists. Both groups of tourists are concerned about bomb explosions, airplane hijacking, and biochemical attacks. This finding is supported by several other studies that have documented the development of stress disorder in the community related to the terrorist attacks of September 11, 2001 (Galea et al. 2002; Raphael et al. 2002; Rosenheck 2002; Schuster et al. 2001). The finding is, however, surprisingly in contrast to the messages conveyed by the U.S. travel magazines. Kingsbury and Brunn (2004, p. 47) argue that in the significant proportion of the U.S. travel magazines, there is a denial of what happened on September 11, 2001. This is evident in the messages of escapism to exotic locations so that "one would conclude that safety, risk anxiety and fear are not important."

Sociocultural risk is positively associated with anxiety in the Australian ($\beta = 0.24$, $p < 0.01$) and foreign sample ($\beta = 0.19$, $p < 0.01$) (support for P78[+]), indicating that tourists in both groups are concerned about sociocultural and language barriers. The possibility of experiencing difficulties in communicating with foreigners, cultural misunderstanding, inability to adjust to foreign ways of life and standards, and

TABLE 4
RELATIONSHIPS IN THE MODEL

Relationship	Australians		Foreigners	
	Standardized Regression Weights	Critical Values (CR)	Standardized Regression Weights	Critical Values(CR)
Culture is associated with the following:				
Perception of terrorism risk	.06	0.964 (*ns*)	.003	0.052 (*ns*)
Perception of sociocultural risk	.13*	2.327	.07	1.433 (*ns*)
Perception of travel safety	–.10*	–1.856	–.10*	–2.004
Personality is associated with the following:				
Perception of terrorism risk	–.08	–1.274 (*ns*)	.10*	1.723
Perception of health and financial risk	–.002	–0.031 (*ns*)	.06	1.044 (*ns*)
Perception of sociocultural risk	–.04	–0.541 (*ns*)	–.02	–0.402 (*ns*)
Level of travel anxiety	–.25***	–4.366	.06	1.085 (*ns*)
Lifestyle is associated with the following:				
Perception of health and financial risk	–.01	–0.171 (*ns*)	.01	0.234 (*ns*)
Motivation is associated with the following:				
Perception of terrorism risk	.07	1.088 (*ns*)	.06	1.051 (*ns*)
Perception of health and financial risk	–.03	–0.507 (*ns*)	–.11*	–2.016
Perception of sociocultural risk	–.09	–1.342 (*ns*)	.09	1.549 (*ns*)
Level of travel anxiety	.03	0.557 (*ns*)	–.18***	–3.425
Perceived level of travel safety	–.00	–0.002 (*ns*)	.19***	3.936
Terrorism risk is associated with the following:				
Level of travel anxiety	.27***	4.205	.21***	3.698
Perceived level of travel safety	–.04	–0.591 (*ns*)	–.21***	–3.840
Health and financial risk is associated with the following:				
Level of travel anxiety	–.01	–0.117 (*ns*)	.09	1.421 (*ns*)
Perceived level of safety	–.16*	–2.143	–.12*	–1.985
Sociocultural risk is associated with the following:				
Level of travel anxiety	.24**	3.132	.19**	3.014
Perceived level of safety	– .01	–0.165 (*ns*)	.06	0.916 (*ns*)
Travel anxiety is negatively associated with the following:				
Travel safety	–.53***	–9.292	–.28***	–5.415
Travel anxiety is negatively associated with the following:				
Intention to travel	–.22***	–2.946	–.12*	–2.110
Travel safety is positively associated with the following:				
Intention to travel	.02	0.247 (*ns*)	.20***	3.512

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

different beliefs, religion, or socialization may contribute to feelings of discomfort, tension, nervousness, and even helplessness. This finding is supported by the anxiety/uncertainty management theory (Gudykunst and Hammer 1988), which argues that sojourners not only are uncertain about how to behave or what behaviors to expect in the foreign cultural environment, but also experience feelings of anxiety—the fear of negative consequences of being in an alien environment. In particular, participants in interethnic encounters tend to experience more anxiety and uncertainty than those in intraethnic encounters. It is possible that this anxiety is attributable to differences in knowledge and lack of perceived cultural similarity.

Perception of health and financial risk is negatively related to perceived level of safety in the Australian sample ($\beta = -0.16$, $p < 0.05$) and foreign ($\beta = -0.12$, $p < 0.05$) sample (support for P69[–]), indicating that both groups fear diseases and the possibility of becoming sick while traveling or at the destination visited. This finding is supported by the literature documenting that the tragic events of September 11, 2001, and perceptions of lack of safety had adverse consequences for people's overall physical and mental health (Ursano, Fullerton, and Norwood 2002). Although the SARS outbreak of 2003 was contained, the perception of health hazard and lack of safety deterred thousands of potential travelers from parts of Asia. There were fears that the disease could reemerge. Also, physical danger or personal injuries (accidents) that are detrimental to health negatively influenced tourists. McIntosh et al. (1998) reported that a significant proportion of air travelers experience health problems during flight. Takeoff and landing, flight delays, and even customs baggage reclaim might be perceived as being stressful (McIntosh et al. 1998) and cause health problems. In addition, both groups are concerned that travel experience will not provide them with value for their money in the event of some unexpected (e.g., mechanical, equipment, or organizational) problems occurring during travel or at the destination (e.g., transportation or accommodation), which also negatively affect tourists' perceptions of safety.

Anxiety is strongly and negatively associated with safety in the Australian ($\beta = -0.53$, $p < 0.001$) and foreign ($\beta = -0.28$, $p < 0.001$) sample (support for P89[–]). As would be expected, travel anxiety is related to high levels of concern for safety. Tourists who are more vulnerable, stressed, and threatened during their travel feel less safe. This is again supported by the literature. A big proportion of air travelers seem to

experience travel anxiety and even fear of flying during their travel due to their perception of air travel as being unsafe. The takeoff, landing, and air-travel process have been assessed as being particularly stressful (McIntosh et al. 1998). Personal safety was found to be a main factor affecting choice of airline carriers and a major factor creating concern for passengers (Westwood, Pritchard, and Morgan 2000).

Anxiety is negatively associated with intentions to travel in the Australian ($\beta = -0.22$, $p < 0.001$) and foreign ($\beta = -0.12$, $p < 0.05$) sample (support for P8,10[–]), as was expected. Tourists who are more concerned and nervous about their travel tend to travel less. In part, this explains the decline in international travel after the September 11, 2001, attacks in the United States and October 12, 2002, in Bali. After the bombings, Bali experienced a more than 50% drop in international visitation ("Bali Bets on Recovery" 2002). More than 40% of Australian bookings had been cancelled ("Devastated Tourism Industry" 2002). Similarly, the war in Afghanistan and political tensions between India and Pakistan were the reasons for negative flows to Nepal (Thapa 2004).

The above findings suggest that there are common concerns for Australians and foreign visitors when traveling. Although there are significant associations between the analyzed constructs in both samples, however, the significance of some parameters in the two populations differs (see Table 4).

Significant Results in the Foreign Group

Results of the path analysis show six additional direct significant paths in the foreign sample. These paths are from personality to terrorism risk, from motivation to health and financial risk, from motivation to anxiety, from motivation to safety, from terrorism risk to safety, and from safety to intentions to travel (see Figure 2 and Table 4). The results suggest that foreign tourists in Australia, despite deciding to travel abroad, had risk concerns. Personality types are associated with fear of terrorism ($\beta = 0.10$, $p < 0.05$; support for P25), regardless whether tourists are confident, venturesome, and risk takers, or are less outgoing, more comfort oriented, and risk avoiders. This supports the notion of Sonmez and Graefe (1998a), who postulated that personality might be influential in explaining perceptions of risk.

Motivation for travel is negatively associated with perceived health and financial risk ($\beta = -0.11$, $p < 0.05$; support for P46). Foreign tourists are motivated to travel to destinations where the risks of becoming sick or physically injured and not being provided with value for money are small. Motivation for travel is also negatively associated with anxiety ($\beta = -0.18$, $p < 0.001$), indicating that tourists who are highly motivated to travel also experience less anxiety. In addition, motivation is associated with perceptions of safety ($\beta = 0.19$, $p < 0.001$). Foreign tourists tend to travel more to destinations perceived as safe. This is in accordance with Sonmez and Graefe (1998a), who reported that tourists travel to destinations that are perceived as being safe.

The level of perceived terrorism risk is negatively associated with safety ($\beta = -0.21$, $p < 0.001$; support for P59). This is not surprising; tourists who perceive a high risk of terrorist attack also feel less safe. Finally, safety is positively associated with intentions to travel ($\beta = 0.20$, $p < 0.001$; support for P9,10). We infer that foreign tourists feel that they would travel more if they felt safe. Again, this is in line with the findings of Sonmez and Graefe (1998a), who reported that tourists travel to safe destinations, and Floyd et al. (2004), who reported that travel intentions of the residents of New York City after September 11, 2001, were related to safety concerns. Similarly, McKercher and Hui (2004) noted a significant softening in intentions to travel among Hong Kong residents after the September 11 terrorist attacks. They reported that consumers have modified their travel activities by taking shorter trips and expressing greater concern about the safety of travel.

In sum, the main source of significant paths in the foreign sample is motivation. In this sense, the motivation for travel appears more significantly related to types of risk in the foreign sample than for Australians. This means that international tourists evaluate various risks differently depending on their motive for travel.

Significant Results in the Australian Group

In the Australian sample, there are two additional direct significant paths: from national culture to sociocultural risk, and from personality to anxiety. These results suggest that Australian tourists, despite traveling domestically, also had risk concerns. Their cultural orientation is associated with sociocultural risk ($\beta = 0.13$, $p < 0.05$; support for P17), indicating that Australian tourists may be concerned about exposure to different sociocultural locations and the fact that they may not be embraced in the destination county. The Australian inherent need for mateship, socializing, and being together may have a significant influence on the way tourists feel when being outside their permanent place of residence.

Also, Australians' personality is negatively associated with travel anxiety ($\beta = -0.25$, $p < 0.001$). This is because many Australians are venturesome, extroverted, and outgoing, especially young tourists who represent the majority of the sample. They may evaluate their travel experiences in terms of excitement rather than danger. The literature shows that Australians value exciting life more than other groups and a comfortable life less than other groups (Feather 1975), and scored relatively low on the uncertainty-avoidance dimension (Hofstede 1980, 2001). Those who are venturesome and seek excitement may have perceived less risk. They often engage in risky and adventurous holiday activities such as scuba diving, bungee jumping, or rock climbing to experience excitement and challenge. The study finding supports Breivik (1996), who reported that personality is related to anxiety and risk taking. Breivik (1996) noted that sensation-seeking Norwegian climbers of Mount Everest scored lower on worry and anxiety, were more willing to take risk, and had more stability and maturity than other Norwegian elite climbers, sports students, and military recruits. Similarly, Madrigal (1995) found that tourists who place more value on safety and security are more fearful (i.e., psychocentric), and those who are more adventuresome feel less threatened by the risk (i.e., allocentric). The study finding also supports the notion that some individuals, depending on their personality, may experience different feelings (Hull, Stewart, and Yi 1992) and willingness to approach or avoid risky situations (Knowles et al. 1973).

In general, the study findings appear consistent with existing literature in that terrorism threat is of concern to tourists and is fundamentally important to tourists' perceptions of safety. Intentions to travel internationally are

determined by lower anxiety levels and a higher degree of perceived safety. The results support the findings of Sonmez and Graefe (1998a, 1998b) that tourists are concerned about terrorism risk and safety, that tourists travel to safer destinations, and that as the perception of terrorism risk increases, the destinations become less safe and are eliminated from future travel plans.

CONCLUSION

From the theoretical perspective, this study contributes to a better understanding of the risk perceptions and anxiety associated with international tourism. The study suggests that there is a strong relationship between travel risk perceptions and travel anxiety, and that studies of travel decision making should include an analysis of cultural and psychographic factors, types of risks, anxiety, and perceived insecurity during traveling. The study showed that culture, personality, and motivation to travel had significant influence on perceptions of travel risk, anxiety, and safety. In particular, culture had an important influence on perception of travel safety and sociocultural risk. Personality had an important influence on perception of terrorism risk and travel anxiety. Motivation had an important influence on perceptions of health and financial risk, travel anxiety, and perceptions of safety. Lifestyle did not influence the travel risk perception, level of anxiety, or future intentions to travel internationally. Perceptions of terrorism and sociocultural risks had a significant influence on level of anxiety. Perceptions of health and financial risk had a significant influence on perceived level of safety. Anxiety had a major impact on safety perception and intentions to travel.

From the practical standpoint, identifying the above relationships may contribute to a better understanding of the impact of risk perception on travel anxiety, perceptions of safety, and intentions to travel. The perceptions that tourists have of travel risk may influence their intentions to travel and the likelihood of visiting a destination. These issues are important for understanding the marketability of tourist destinations and reflect destination characteristics that are important to tourists. Marketers and the tourism providers can encourage potential tourists to travel by decreasing the perception of travel as risky. Perceptions of safety may become increasingly important to tourism as the world becomes more dangerous. The perception of high risk associated with international travel can have a devastating effect on not only tourism but also the entire region. This was evident, for example, in Bali, where the bombings at two nightclubs in Kuta cost US$2 billion from international and domestic tourism earnings, leaving 2.7 million unemployed (World Trade Organization [WTO] 2002).

Because the sample was composed mostly of young tourists, the generalizability of the findings is limited to a similar population. Consequently, the study results contribute to a better understanding of the perceptions of travel risk, anxiety, and intentions to travel by young people only. It is reasonable to expect that older tourists' perceptions of risk and safety would be different from those of young people. Although Sonmez and Graefe (1998a) did not find age to influence an individual's perception of risk, Gibson and Yiannakis (2002) found that preference for risk as related to tourism decreases with age. Consequently, one suggestion for future research would be to replicate this study with respondents in different age groups.

IMPLICATIONS

Understanding the perceptions of travel risk and anxiety of potential tourists has a number of implications. To react to the travelers' needs for safety, tourism promoters need to be sensitive to sociocultural considerations and understand how they affect perceptions of risk. For example, Doxey's (1975) theory of visitor-resident irritants that uses a 4-stage continuum or "irridex" ranging from "euphoria" to "antagonism" could be used to assess the point at which tourists perceive their sociocultural surrounding as joyful and relaxed versus risky and stressful. Also, marketers should tailor their advertising messages to the cultural background of tourists. This is in accordance to the notion that the degree of uncertainty avoidance varies across cultures (Kim and Gudykunst 1988) and that tourists differ in the degree to which they rate cultural concerns as important when choosing destination (Basala and Klenosky 2001). Members of the high-uncertainty cultures (e.g. Greece, Portugal, Belgium, Japan, the former Yugoslavia, or Spain; Hofstede 1980, 2001) should be targeted with messages of stability, order, and security. Many strategies could be developed to appeal to risk-avoiding cultures such as traveling in groups, traveling shorter distances, traveling to destinations with lower border-entry hurdles, promoting shorter stays at familiar and closer-to-home destinations, offering risk-free activities and customized holidays, or shifting from active holidays to holidays as an experience. The package guided tours could be offered because they provide comfort and the services of a capable and professionally trained guide who has the knowledge of the local resources and safety procedures and who can create an atmosphere of reassurance and being in control. Because Japan scored the highest among all countries on the uncertainty dimension, Japanese tourists should receive particular attention when one is promoting new travel products. On the other hand, members of the low-uncertainty cultures (e.g., Singapore, Denmark, Sweden, Hong Kong, Ireland, Great Britain, Malaysia, India, or the Philippines; Hofstede, 1980, 2001) could also be targeted with messages of safety and security. Because, however, they accept more risk and tolerate unfamiliar behavior, some elements of adventure could be introduced in advertising campaigns.

Psychological factors should be analyzed to better understand tourist reactions to risk. Marketers need to target tourists with a higher tolerance risk and risk acceptance level. This is the point at which consumers perceive the product as exciting (e.g., scuba diving or sky diving) and above which it is perceived to involve an unacceptable level of perceived risk (Dowling and Staelin 1994). For example, the individuals who are confident, extroverted, and venturesome tolerate high risk and engage more frequently in risky activities. If, however, the risk is too high and reaches the threshold at which the individuals cannot tolerate the risk any longer, they participate less in risky activities and either engage in risk-reducing activities (e.g., information search) or abandon the purchase (Dowling and Staelin 1994). Lepp and Gibson (2003) suggested that novelty seekers tolerate higher levels of risk. Special packages that include additional security services could be developed to appeal to those with lower

tolerance of risk, or less active, outgoing, and experienced travelers, to enhance their feelings of safety and security. This substantiates the notion that personality might be a very important factor in understanding the risk-acceptance level, the perception of risk associated with tourism (Roehl and Fesenmaier 1992; Sonmez and Graefe 1998a), and the level of travel anxiety.

In terms of travel motivation, marketers should target the segments that are less sensitive to risk. Lepp and Gibson (2003) implied that novelty and excitement seekers might be less sensitive to risk. Also, those who are motivated by challenge and a physical risk (e.g., rock climbing, whitewater rafting, or parachuting) and specialized experiences such as snorkeling or scuba diving could be less sensitive to risk and attracted to more risky and stressful product. They would also, however, require the appropriate safety net such as guiding services that provide them with the safety and security procedures.

Marketers should promote tourist destinations and provide more travel products that are seen as safe and reassuring. Carter (1998) identified Europe and North America to be perceived as safe, the African continent as dangerous and to be avoided, and Asia as posing risk but worth visiting due to its exoticness. Marketers' promotional efforts should concentrate on improving perceptions of safety and target the specific tourist markets accordingly to their travel anxiety and safety needs. For example, Australia and New Zealand would do well by positioning themselves as safe destinations for tourists who are anxious about traveling internationally. Because, however, safety may not be the primary concern of all tourists, the destinations' advertising should include messages promoting their potential for either "safety and tranquility" or "risk and adventure," depending on the market segment a destination wishes to attract (risk seekers versus risk avoiders). For example, New Zealand could specifically target "young risk seekers" in its international advertising and promotion campaigns.

Promoting safety versus risk may, however, be difficult. In the tourism context, perceived risk is often manipulated by tour operators and guides to create a sense of certainty for potential travelers. Also, media coverage significantly influences the perceptions of risk by causing one destination to appear less or more risky than others (Sonmez and Graefe 1998a). The misperception of risk, often exaggerated by the sensation-seeking media, can lead to unreasonable concerns, which can cause a significant level of anxiety among potential travelers in the long term. To react to the travelers' anxiety level, marketers should either provide tourists with more risk-reduction opportunities (e.g., more information about a destination) or reposition the travel products and offer packages that reduce the anxiety level and stimulate tourism. Tourists should be encouraged to seek information from sources other than the mass media such as TV or radio, which are saturated with images of the terrorist events and messages of terrorist threats. Those with a lower risk tolerance should be encouraged to contact professional tour operators who could assist tourists by providing accurate and valid information and reassuring them through increasing a sense of safety. Airlines and travel companies should improve their communication messages to reassure clients of the trip safety and thus diminish their anxiety during air travel.

In sum, the study findings have sound theoretical and practical implications in the area of travel risk perception and safety. The study did not prove the relationships between personality and health and financial risk (P26), personality and sociocultural risk (P27), lifestyle and terrorism risk (P35), lifestyle and health and financial risk (P36), lifestyle and sociocultural risk (P37), motivation and terrorism risk (P45), motivation and sociocultural risk (P47), health and financial risk and anxiety (P68), and sociocultural risk and safety (P79). Thus, another suggestion for future research would be to test these relationships on a different sample.

LIMITATIONS

Several limitations are noted with respect to interpreting and generalizing the findings reported in this study. First, the two samples are not directly comparable because the Australians had not undertaken international travel, whereas the foreign group had made that decision and actually implemented their travel plans. Due to resource and time limitations, it was not possible to study Australians on international visits as tourists. The fact that the conceptual equivalence of the model was established, however, suggests that the two groups are comparable. Again, the differences identified in the regression weights were largely explainable in terms of known characteristics of Australians and foreign visitors. Thus, the fact that Australians were surveyed at home did not appear to be a central explanation. We recognize this as a limitation of the study, however, because the foreign group represents a qualitatively different group. Second, a nontravel group was not surveyed. Surveying the nontravel segment could allow for identifying possible differences (or not) in responses of those who had undertaken travel and those who had not traveled. Third, the foreign sample comprises many cultures and nationalities, making it very heterogeneous. This is not a major limitation, because even in the Australian sample, there are many different cultures and nationalities and thus the sample is heterogeneous. It is fair, however, to expect significant differences in responses from different geographic regions, for example the United States and the Middle East. Initial *t*-tests of differences across the foreign groups did not, however, reveal many differences, allowing us to treat this as a group. Fourth, the results may reflect proximity to the events in the United States and the tragic bombing of the Twin Towers on September 11, 2001. This might have skewed the responses somewhat. Being able to establish a common conceptual model between Australians and foreigners, however, gives us confidence that the issues under investigation resonate across many tourist groups. The common perceptions clearly indicate global concerns of risk and its impact on intentions to travel. Next, the results do not reflect the possible changes in risk and safety perceptions that might occur throughout time. It is possible that the results could be different if the data were collected at different points of time. Finally, the study results can be generalized only to the young travel market segment that was under investigation. Although the above limitations reduce the generalizability of the findings, they do not affect the value of demonstrating the approach to the analysis of travel risk perception and its implications for travel anxiety and intentions to travel.

FUTURE STUDIES

Future research could replicate the study by surveying tourists who had not traveled (nontravel segment) and comparing their responses with tourists who had undertaken travel. Also, by repeating the study throughout a period of time, one would be able to assess the changes in the travel risk and safety perceptions. Future research might consider testing whether a disaggregation of the different cultures and nationalities could provide more insights. As an intermediate step, however, comparisons could be made across regions of relatively similar cultures, for example North America, South America, Southeast Asia, Western Europe, or the Middle East. Such comparisons would minimize the potential impact of culture.

We also suggest examining the strength of the relationships across various sectors of the tourism and travel industry (e.g., accommodation, transportation, attractions, and food and beverage) to create a more comprehensive picture of perceived risk's influence on purchase decisions in these sectors. One might also examine the strength of the relationships across specific holiday products such as cultural, environmental, adventurous, or packaged versus individually purchased products. According to Mitchell et al. (1999), perceived risk should be examined in terms of product-category risk (an individual's perception of the risk inherent in purchasing any holiday product category) and product-specific risk (associated with a particular holiday purchase) (Bettman 1973; Dowling and Staelin 1994). Although most studies have examined product-category risk, the product-specific risks are the most real to consumers and most relevant to marketers (Mitchell et al. 1999).

Furthermore, the study also implies the need for tourism researchers to test and assess the travel anxiety model across different international markets, and to determine whether the measurement scales are similar across groups. This is important before testing substantive theory.

Finally, future research might also consider testing the travel-risk-perception model on respondents from different age groups, gender groups, social classes, and family life stages to determine the differences in the strength of the relationships across various segments with different sociodemographic characteristics. Although Sonmez and Graefe (1998a) did not find age and gender to influence an individual's perception of risk, other researchers found that tolerance for risk related to tourism decreases with age (Gibson and Yiannakis 2002) and differs according to gender (Carr 2001; Gibson and Jordan 1998a, 1998b).

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