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Title: Personality, risk perception, benefit sought and terrorism effect

Key words: Perceived risk, terrorism, leisure tourism

Risk perception can affect travel decision making. It is subjective and variable among different people. The purposes of this study are threefold; it examines the relationship between personality and risk perception, risk perception and benefit sought and finally tests to see whether willingness to travel alters after a terrorist attack and how this differs across different personalities. To do this a random sample of 475 British households was selected to facilitate the analysis. The findings show that there are differences in terms of people's personality and risk perception. Benefit sought and risk perceptions are partially related, but not in the context of terrorism attacks in seaside resorts, terrorism creates an atmosphere of uncertainty that leave the door open for fear and the lack of ability to

control the risk stops even the most confident traveller.

Introduction

Risk is “a situation or an event where something of human value (including humans themselves) is at stake and where the outcome is uncertain” (Rosa, 2003, p. 56). Benefit (value) can be gained or lost when taking risks, which means that some outcomes may be more desirable to tourists than others (Moutinho, 2000). In the context of leisure tourism, the literature frequently discusses tourist's motivations (e.g. Bansal, 2004; Dann, 1977; Gnoth, 1997). Among the push and pull reasons that drive tourists to go on a particular holiday, certain levels of risk-taking “for some” could be seen as an added value that contributes to fulfilment of motivations (Elsrud, 2001; Lepp and Gibson, 2003) for others risk can be seen as a deterrence. In this context, what is more influential than the actual level of risk, is the perception of risk that shapes people’s attitudes towards destinations and consequently affects their decision making. Overall willingness to travel to a certain destination could be seen as being the result of the calculation between benefits and costs (potential experience of danger) (George, 2010) associated with visiting a destination. If the difference between risk perceptions/cost and the attractiveness of a destination has a strong positive value, the individual might decide to travel to that destination. However, where it has a marginal positive value or a negative outcome the decision could be to not travel there (Mansfeld and Pizam, 2006). This ‘equation’ is further complicated by the fact that perceived destination risk is likely to vary from individual to individual. Wahlberg and Sjöberg (2000) suggest that risk perception is an example of cognition, or

awareness, as the thresholds of risk tolerance may fluctuate from one person to another and across different situations. Thresholds, by definition, set a bar and the fact that we all have thresholds for risk-taking, means that few would, for instance, choose a destination that is held by Isis. Taking all of this into consideration, most people would not see the terrorist attack in Tunisia (26.06.15) or the political unrest in Egypt (2011) as an attraction for destination choice, because safety and security tends to be a pre-requisite, especially when it comes to leisure travel (Fuchs and Reichel, 2006).

This brings us to the central of focus of this paper which is to see what effect personality might have on risk perception and benefit sought in relation to holiday choice. To do this the following research questions were constructed: Does perceived risk differ with personality? Is there a relationship between the holiday benefits sought and the risk perceived? Does willingness to travel after a terrorist attack differ according to different personalities? We begin our analysis with a discussion relating to the concepts of probability and possibility within the context of risk to set the scene for the discussion around the effect of personality.

Possibility and probability in relation to risk

Critical realism (De Roo, 2012; Sayer, 1984; Yeung, 1997) argues that the inherent limitations in the ability of the human brain make it difficult to understand all outcomes. The challenge with risk is the inherent uncertainty attached to it. Because one does not know the event, they cannot predict the outcome, for many, this means they

bridge the 'gap of uncertainty' on the basis of their cognitive understanding of the situation. In day-to-day communication, individuals tend to use the terms ‘possibility’ and ‘probability’ surprisingly loosely. But how they differ and more importantly how these two words relate to the way people think about risk is critical. Possibility in a sense is quite fundamental to other things. Possibility is a binary concept; it has only two states, possible or impossible. Possibility is a logical condition such that, if we say something is possible, we mean that there are conditions that we can envisage which could occur together, to make the event a reality. In other words, possibility is a theoretical entity, so it is something that could occur, but it doesn’t have any kind of implication in itself as to the likelihood of whether the occurrence might happen. For example, if standing outside, it is possible to be killed by a piece of a comet or asteroid which falls through the atmosphere. This is possible, subject to a set of circumstances, nothing illogical in there that cannot occur. The earth is continually bombarded by space debris and although this may be a very unlikely event, it is logically possible. Is it possible for a tourist to be attacked by a roaming indigenous polar bear when visiting African Sahara? Most of this is possible except polar bears are not indigenous to that part of the world, so this is a logical impossibility.

Possibility and probability are related. If something is possible then it can occur and that occurrence could be likely or unlikely. This is when the word probability comes into play. Probability is an empirical occurrence; based on evidence. If one says there is a 95% probability that it will rain today, it means that there are 5 out of 100 chances that it won’t rain and in this way it quantifies something as being highly probable or

improbable. Therefore, all possibilities could be rated on a scale of probability, if we were capable of measuring enough of them to assign a probability factor. In some fields of understanding we can quantify probabilities to help us make decisions as to whether something is a substantive event or effect, or whether something is negligible.

We have ways of using probability but the key issue is what people do with these words psychologically. Research shows that very few people judge risk to their lives by using some numerical probability (Slovic et al., 1984). This is demonstrated by the common discrepancy between expert risk assessment (e.g. mortality rates) and the non-expert public understanding of risk (Rogers et al., 2007; Tanaka, 1998; Wiedemann et al., 2003). Kunreuther et al. (2001) and Sunstein (2003) further argue that people have significant problems with interpreting risk as potential outcomes on the basis of probabilities when making their decisions or forming risk attitudes. Instead, they are likely to use a different logic and rely on experience-based strategies called heuristics (Gigerenzer and Todd, 1999). In other words, rather than being rational and analytical, such decisions are guided by cognition that is automatic and intuitive (Slovic et al., 2000). For example, according to proponents of the affect heuristic (Finucane et al., 2000) people tend to overestimate risk in negative affect-rich contexts such as violent crimes, as opposed to the less spectacular, but much more probable, ones such as heart disease (Lowenstein et al., 2001). At the same time, evidence suggests that when an activity is liked (e.g. driving) people judge the risk as low and benefits as high (Alhakami and Slovic, 1994). Beyond this, peoples' perception of risk is somehow adaptive. This understanding could be influenced by factors such as the media, their social surroundings, their personalities and

their past experience.

It is important to understand how people judge the presence of risk, for example when a potential traveller decides to travel to a destination, such as Egypt, let say during Arab uprising, did they evaluate the risk factors there? The effects vary as a result of a number of factors, not all of which are discussed in this paper. A survey of 400 British households suggested that, in general, there were differences with the risk perceptions of many Middle Eastern destinations, as they were elevated during the Arab Spring rising, even those not directly involved. In spite of this the same survey suggested there was still a will to travel to Egypt, an effect that could be explained by its attractiveness or the benefit that the destination offers to visitors. The number of international visitor arrivals to Egypt following the Arab Spring uprising shows that there was a drop but a large number still visited (WTO, 2015). For some this has resulted in increased risk levels and elevated uncertainty affecting investment and travel decision making, these stakeholders becoming more sensitive towards areas prone to terrorist attacks. In contrast there may be some who, finding that the prices have fallen following the Arab Spring uprising feel that the benefits provided override the risk and this leads to an opportunity for them to enjoy a holiday experience they could not normally afford.

But how do people respond to the risk of terrorism compared with other types of risk and how might their personality affect their response as to whether they visit or not? In the next section we review the literature on this area before empirically testing these

questions.

The relationship between tourists' personality, perceived risk and destination benefits (attractiveness)

Among studies that aim to distinguish between tourists with different levels of sensibility to risk, the psychographic variables, especially personality traits, are often considered to be of particular relevance (Fuchs, 2011; Pizam et al., 2004; Rohel and Fesenmaier, 1992; Sonmez and Graefe, 1998a). The variability in tourists' risk perceptions has been linked with self-confidence (Valencia and Crouch, 2008), sensation-seeking (Fuchs, 2011; Lepp and Gibson, 2008; Sharifpour et al., 2013), and novelty seeking (Correia et al., 2008; Lepp and Gibson, 2003). A variable that has seldom been used in this context is the psychographic system proposed by Plog (1974; 1991) which identifies tourists with different levels of allocentricity. A number of studies used Plog's model to investigate tourist preferences, which resulted in some empirical support for this personality dimension (Nickerson and Ellis, 1991; Griffith and Albanese, 1996; Plog, 2002; Weaver, 2012). Others failed to find support for the hypothesized association between Plog's psychographic system and destination preferences (Litvin, 2006; Smith, 1990).

While the ability of the instrument to predict destination choices has received much attention, its use in understanding differences in tourists' risk perception and willingness to travel in troubled times requires more investigation. Jackson and Inbakaran (2006) and

Weaver (2012) disclose the dimensions of Plog's personality construct which can be used to measure tourists allo-psychocentric tendencies.

Related to the interplay between tourists' personality and perceived risk is the concept of benefits associated with tourist destinations. While risk can outweigh the benefits of visiting a destination, a reverse scenario in the risk-benefit trade-off is also possible. Tourism scholars propose that the uniqueness of a destination's attributes, in other words lower degrees of substitutability, may determine its ability to recover from tourism crises such as terrorism (Frey et al., 2007; Mansfeld, 1999; Neumayer, 2004). Therefore, it is possible that the perceived benefits of a destination, that match tourists' preferences, can increase their risk tolerance or willingness to negate risk when making travel decisions. According to Plog (2002) tourist types that can be identified using his psychographic system, are also indicative of different leisure trip activities. Specifically, psychocentrics tend to visit sun-and-fun destinations which are consistent with their preference for low activity levels (Plog, 2001). Allocentrics, prefer active holidays that allow them to explore the physical and cultural worlds around them (Plog, 2002).

Numerous benefit-based segmentation studies have been applied in a tourism context with the end goal of understanding and identifying tourist preferences and behaviour (Frochot and Morrison, 2001; Kay, 2006). One approach defines benefits as product and service specific attributes, or pull factors, of a destination desired by tourists (e.g. Kastenholz et al., 1999; Sarigollu and Huang, 2005) e.g. the availability of entertainment, beaches, heritage sites etc. The others focus on tourist motivations, or push factors, to

find psychological benefit outcomes people seek to satisfy their needs (e.g. Cha et al., 1995; Beh and Bruyere, 2007), such as relaxation, achievement etc. A recent review of segmentation studies by Bigne et al. (2008), suggests that the benefits sought and push motivation factors should be treated as separate segmentation criteria. Thus, to avoid confusion, the following approach is employed in this study. Benefits sought are conceptualized as activities and attributes, referring to pull factors, which people seek from holidays to satisfy their needs.

Methods

A questionnaire survey was conducted comprising four different sections: travel preferences (allocentric-psychocentric) personality and benefits sought, perceived risk, willingness to travel (normally and post-terrorist attack scenario) and demographic information (age, gender, travel experience). Personality was measured using a 5 Likert scale comprised of 8 items adapted from Jackson and Inbakaran (2006) from 1= 'Strongly disagree' through to 5= 'Strongly agree' for responses. To avoid an acquiescence bias and mindless answering (DeVellis, 2003), the scale consists of a mixture of both allocentric and psychocentric items. Each of the items represents a different aspect of the tourist personality i.e. the need for structure, familiarity/novelty, off-the-beaten-track destinations, and reliance on the tourism industry, venturesomeness, intellectual curiosity, activity, and openness to other cultures. Phrasing of these items is formatted as statements referring to tourists' holiday preferences. The holiday benefits sought are measured with a 15-item scale of attributes and activities of a holiday destination (e.g. beach and water activities, unique culture, remote/wilderness, and

environment). The respondents were asked to indicate the extent of the importance of each of the items in the choice of a holiday destination on a 5-point Likert scale: from 1=Not at all important to 5=Very important.

To control for the influence of a destination's benefits on tourists' ratings of willingness to travel in a hazard scenario, the questionnaire was constructed in three different versions. Each version differed with respect to the country context (in section 2), and the three regions (each emphasizing different benefits) within this country (in section 3), while keeping other elements of the questionnaire constant. Three countries (Egypt, India, and Turkey) were selected on the basis of the following criteria:

1. The number of terrorist incidents over the past two years.
2. The popularity of the countries among British tourists (measured by arrivals). Egypt (1.034 millions), India (787.000), Turkey (2.582 millions) (FCO, 2012).
3. The diversity of tourism attractions and distinct destination contexts

The perceived risks associated with Egypt, India or Turkey was measured with the use of 4 specific risk items (i.e. crime, health, terrorism and political instability) on a 5-point Likert scale: from 1=Very worried to 5=Not at all worried.

Next, tourists were asked about their willingness to travel to three regions (rural nature/adventure, seaside resort, and culture/heritage centres) within Egypt, India, or Turkey pre- and post- a terrorist attack. The description of destination regions emphasised key activities and attractions characteristic of the regions. For instance, the

descriptions included the Great Pyramids and the Sphinx in Egypt, or the adventurous activities and natural wonders of the Cappadocia region in Turkey. Responses were measured on a 5-point Likert scale: from 1 = would definitely avoid to 5 = would definitely visit.

The sample was drawn from a sampling frame of UK postal addresses with the use of the Postcode Address Finder (PAF) database (Royal-Mail-Group, 2013). The PAF contains 28 million entries (Royal Mail-Group 2013). A list of all 2,981 post-code districts denoted by the first group of numbers and letter in the post code e.g. BH3 was sourced (Map-Logic, 2013), and a sample of 100 post-codes were selected at random using the formula within Excel spread sheet. Every residential address within these 100 districts was extracted from the PAF database, and a weighted sample drawn from this to form a sampling frame of 100,000 addresses. Addresses were chosen on a simple random basis from this new database. A total of 3,000 questionnaires were distributed by post between June and July of 2012. A total of 475 questionnaires were returned. This included 18 non-leisure tourists and 13 unusable (blank or half-filled) responses, which were excluded from further analyses resulting in a final sample of 444. The questionnaire was completed by 195 male (44.0%) and 248 female respondents (56.0%). The ages ranged from 18 to 65 years old and over, with '65 years and over' being the largest age category (24.6%), followed by '45 to 54' (20.7%), and '55 to 64' (19.4%). With the exception of the '65 and over' age group, these data reflect the UK population of outbound holiday-makers measured between 2005 and 2009 (ONS, 2011).

Analysis, Psychographic types

Firstly, given that some items in the scale were negatively worded, the scores were reversed to obtain meaningful overall scores on the scale (table 1). Having reversed the scores i.e. coded the scores for allocentrism, it was expected that the items would be correlated. This was confirmed with all items positively correlated, with correlation coefficients (r_s) ranging from .247 to .499. The analysis then focused on internal consistency and produced an acceptable alpha score of .789.

Plog's classification (1974; 2002) was used as a guide for dividing the sample into three main groups (see also Park and Jang, 2014). Specifically, the groups obtained were as follows: midcentrics (estimated by Plog to constitute about 60% of the population), allocentrics and psychocentrics (comprised of ideal allo/psychocentric and near-allo/psychocentric types, each estimated to account for 20%). Given the sample size and the percentage of people that can be classified as pure allocentrics or psychocentrics (2.5% and 4%, respectively), three psychographic groups were used instead of five.

In order to investigate if there was one single factor on which all of these 8 questions load strongly and if this was found to be the case, generate factor scores to represent the eight measured variables into a single composite variable which we could use to partition our cases into the three groups of allocentric, midcentric and psychocentric. Table 1 shows that there is one Eigen value greater than 1, accounting for 40% of the variation in the data, which we can confidently equate with Plog's travel confidence construct. Further, the loadings on these variables for this factor are within the range from 0.559 to 683 with

7 items ranging from 0.617 to 0.683 (table 2). In others words these loadings are sufficiently similar to justify an equally weighted summing of the eight variables. The score of individuals on this factor were portioned into groups of 20%, 60% and 20% respectfully. This approach follows Plog's guidance to produce three groups with three categories (allocentric, mid centric and psychocentric).

Table 1 Psychographic groups PCA

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.275	40.941	40.941	3.275	40.941	40.941
2	0.913	11.408	52.349			
3	0.859	10.732	63.081			
4	0.711	8.894	71.975			
5	0.636	7.952	79.927			
6	0.598	7.478	87.406			
7	0.520	6.495	93.901			
8	0.488	6.099	100.000			

Table 2 Extraction Method: Principal Component Analysis

	Component
	1
(Self-Reliance) Prefer tourist package	0.617
(Novelty) Prefer familiar destinations	0.659
(Novelty/Off-the beaten track) Stay away from popular tourist areas	0.559
(Venturesomeness) Enjoy a sense of discovery	0.683
(Institutionalization) Prefer usual comforts	0.670

(Intellectual curiosity) Willing to learn	0.639
(Physical activity) Enjoy resting and relaxing	0.641
(Open to otherness) Prefer to socialize with same culture	0.644

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Benefits sought

In order to uncover the underlying dimensions of benefits sought by tourists that may be indicative of broad holiday types, factor analysis using principal component analysis (PCA) with a varimax rotation was employed. Following the suggestion of Hair et al., (2010), conventional criteria were used for factor analysis: (1) eigenvalues above 1.0, (2) factor loadings equal to or above 0.40, and (3) results of the factor analysis explaining at least 50% of the total variance. The analysis revealed three factors with eigenvalues greater than 1, accounting for 64.7% of the variance (Table 4). One of the variables, 'scenic beauty' was excluded from further analysis as it did not load on to any of the three factors. Bartlett's test of sphericity indicated a statistically significant (p<0.01) correlation matrix. Consequently, Kaiser-Meyer-Olkin measure of sampling adequacy resulted in a value of 0.809.

Table 3 Factor analysis results of benefits sought by tourists

Factors and items	Factor loading	Eigenvalue	Variance (%)	Cronbach's α
Factor 1: Culture/Heritage		3.071	21.934	0.84
Unique culture	0.718			

Historic sites	0.819			
Art/cultural events	0.791			
Heritage and arts exhibitions	0.849			
Traditional lifestyle	0.661			
Factor 2: Nature/Adventure		2.863	20.449	0.83
Physical challenge activities	0.836			
Abundant wildlife	0.807			
Remote and wilderness environment	0.861			
Camp sites	0.716			
Factor 3: Seaside		2.818	20.131	0.81
Warm climate and sun	0.737			
Nightlife and entertainment	0.749			
Amusement or theme parks	0.761			
Beach and water activities	0.772			
Good shopping facilities	0.728			

Note: Extraction method: principal component analysis

Rotation method: Varimax

Benefits sought (Kaiser-Meyer-Olkin =0. 809, Bartlett's test of sphericity: $x^2 = 2553.279$, $p < 0.001$).

Both observations in the eigenvalue and factor loadings in the rotated component matrix have led to the conclusion that there are 3 components in this matrix. Factor 1, 'Culture/Heritage' comprised of benefit items such as historic sites, heritage and arts exhibitions, traditional lifestyle etc. This accounted for 21.93% of the variance and had a

Cronbach reliability score of 0.84. Factor 2, labelled as 'Nature/Adventure' included items such as physical challenge activities, camping sites, and abundant wildlife. Factor 2 explained 20.44% of the variance and had a Cronbach's α value of 0.83. Factor 3, 'Seaside' explained 20.13% of variance and Cronbach's value of 0.81. It comprised of items such as warm climate and sun, sunbathing, and nightlife and entertainment. The factor scores were then saved as variables. This resulted in composite scores, of importance, attached to the underlying dimensions of the benefits sought by respondents.

Does perceived risk differ with personality?

Plog's psychocentrics are characterized by being anxious within their daily lives and risk averse. This is in contrast to allocentrics who are more confident, less anxious and motivated by novelty. Therefore, one could expect that H_1: risk perception is different among psychographic groups (three groups of alocentrict, midcentrict and psychocentrict). The questionnaire asked respondents how worried they are when they are travelling in relation to 4 different types of risk, and the higher the mean meant the less worried they are (1 = very worried and 5 = not worried at all). In order to assess whether there are differences among the groups, Kruskal-Wallis was run (table 4.1 and 4.2) and the K-W initial results suggest there are significant differences between different psychographic groups and the level of risk perception (how worried they are) and it is increasing from allocentrics to psychocentrics. We then ran post hoc tests with bonferoni correction (*p* significant at 0.016) to check the differences pairwise.

Table 4.1 Kruskal Wallis : Mean Ranks

	Travel confidence	N	Mean Rank

Crime risk	Allocentric	89	281.54
	Midcentric	267	219.82
	Psychocentric	88	170.92
Health risk	Allocentric	89	294.45
	Midcentric	267	216.20
	Psychocentric	88	168.84
Political Instability risk	Allocentric	89	282.65
	Midcentric	267	220.37
	Psychocentric	88	168.14
Terror risk	Allocentric	89	281.91
	Midcentric	267	225.61
	Psychocentric	88	152.98

4.2 Test Statistics[a,b]

	Crime risk	Health risk	Political Instability risk	Terror risk
Chi-Square	35.997	48.584	38.157	48.310
df	2	2	2	2
Asymp. Sig.	<0.001	<0.001	<0.001	<0.001

a. Kruskal Wallis Test

b. Grouping Variable: travel confidence

4.3 Mann Whitney U Test Statistics[a]

	Crime risk	Health risk	Political Instability risk	Terror risk
Mann-Whitney U	8464.500	7608.000	8431.000	8745.500
Wilcoxon W	44242.500	43386.000	44209.000	44523.500
Z	-4.228	-5.321	-4.253	-3.854
Asymp. Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001

a. Grouping Variable: Allocentric and Midcentric

4.4Test Statistics[a]

	Crime risk	Health risk	Political Instability risk	Terror risk
Mann-Whitney U	2078.500	1786.000	2013.000	1764.500
Wilcoxon W	5994.500	5702.000	5929.000	5680.500
Z	-5.613	-6.575	-5.776	-6.559
Asymp. Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001

a. Grouping Variable: Allocentric and Psychocentric

4.5Test Statistics[a]

	Crime risk	Health risk	Political Instability risk	Terror risk
Mann-Whitney U	9046.500	9155.500	8867.500	7782.000
Wilcoxon W	12962.500	13071.500	12783.500	11698.000
Z	-3.384	-3.281	-3.605	-4.942
Asymp. Sig. (2-tailed)	0.001	0.001	<0.001	<0.001

a. Grouping Variable: Midcentric and Psychocentric

The findings indicate that there are significant differences in all four risks of crime, political instability, terrorism and health among all three psychographic groups and that the lower the travel confidence, the higher the risk perception.

Is there a relationship between the holiday benefits sought and the risk perceived?

Based on the differences in benefits sought and perceived risk by the distinct psychocentric types, it was expected that H_2: there is a relationship between benefits sought by tourists and perceived risk; more specifically, it was predicted that the greater importance attached to nature/adventure holiday benefits, the lower the risk concerns, which constitutes a positive relationship. Conversely, it was expected that seaside benefits would be associated with greater concerns about risk, which constitutes a negative relationship (see table 5). Given the ordinal nature of the data, utilization of the Spearman correlation was implemented. The results suggest that there is a weak positive relationship between adventure and cultural benefits and all types of risk, suggesting the

higher the adventure/cultural benefit the lower the risk perception and therefore the higher the risk tolerance (see table 5). On the contrary, identification of a weak negative relationship between seaside benefit types and all types of risks was noted, suggesting the higher the seaside benefit, the higher risk perception. In this context a lower risk tolerance becomes evident.

Table 5 Relationship between benefits sought and perceived risk

Correlations

		Crime risk[2]	Health risk	Political Instability risk	Terror risk
Beach benefits - degree of interest [1]	Correlation Coefficient	-.323**	-.322**	-.308**	-.391**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001
	N	177	177	177	177
Cultural benefits - degree of interest	Correlation Coefficient	.281**	.249**	.244**	.294**
	Sig. (2-tailed)	. <0.001	.001	.001	<0.001
	N	177	177	177	177
Adventure benefits - degree of interest	Correlation Coefficient	.266**	.335**	.363**	.407**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001
	N	177	177	177	177

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

1: Risk perception: Very worried=1, Not worried at all=5

2: Benefit: Not at all important=1, Very important=5

Does willingness to travel after a terrorist attack differ according to different personalities?

The final hypothesis for this study was set to test the difference between willingness to travel, after terrorist attacks and personality type. To achieve this, a comparison of the willingness, before and after, was done using all three psychographic types, as well as all types of benefit sought, using the Wilcoxon test. The findings suggest that terrorism significantly reduces the willingness to travel in all three psychographic groups and all types of benefit sought. The next natural step was to examine the differences between the different psychographic groups and risk perception post-terrorist attacks, conducting Kruskal-Wallis tests. The result suggested post terrorist attack there are significant differences between (see table 6.1 and 6.2), both in terms of willingness to travel for adventure and cultural tourism. Therefore, analysis followed by a post hoc test and Bonferroni correction (p= 0.016) (see table 6-3 to 6-5). Results confirmed the initial findings that willingness to travel is significantly different in relation to those seeking cultural and adventure benefits. But the fact that there was no difference among different psychographic groups in relation to seaside benefit draw the attention to the vulnerability of seaside destinations which we will discuss it in the final section of this paper.

Discussion of the findings and implications

In this study we empirically tested the relationship between personality and risk perception, risk perception and holiday benefit sough and finally the effect of terrorist attacks on risk perceptions taking personality and holiday benefits into account.

Our findings support the literature in that psychographic variables are of relevance in distinguishing between tourists with different levels of risk averseness (Sharifpour et al. 2013, Correia et al. 2008, Lepp and Gibson 2003). Specifically, the result suggests that psychographic groups are negatively related to the level of risk perception (see table 4.1 and 4.2). This means that the higher one's travel confidence or the further they are along the psychographic-allocentric spectrum, the lower their risk perception, including those related to man-made hazards. The findings are of interest to the industry given the well documented significance of perceived risk of terrorism and political instability (Buigut and Amendah, 2015; Fletcher and Morakabati, 2008; Neumayer, 2004) as a predictor of travel behaviour.

In examining the relationship between benefits sought and risk perception, the findings (see table 5) suggest that benefit sought and risk perceptions are related in that risk perception can be mitigated by the strength of the benefits sought. This is supported by the tourism literature which suggests that when the benefits of engaging in a tourism product outweigh the costs (risks) tourists may disregard the costs and engage with the product, and vice versa (e.g. Fuchs and Reichel, 2011, Mansfeld and Pizam, 2006). In a similar vein, Lepp and Gibson (2008) argue that people who tolerate higher level of

physical risk involved in performing extreme sports do so, at least partly, because of the benefits they expect to obtain from this activity, such as feelings of thrill, excitement and fun.

An alternative interpretation comes from Alhakami and Slovic (1994) and Finucane et al. (2000) who suggest an inverse relationship between perceived risk and perceived benefit is linked to individual's affective evaluation of an activity judged. Their studies suggest that when an activity is 'liked', in this case visiting a type of tourist destinations, results in judgment of risk as low and benefit as high. Consequently, an activity which involves benefits results is performed. Our findings indicate that the higher the importance attached to Culture/Heritage and Nature/Adventure benefits the less risk averse are individuals. So probability of risk might still remain the same, but given benefits are high, people willing to take the higher level of risk. Conversely, a higher importance attached to Seaside benefits was related with greater risk concerns. This is supported by Plog (2002) who suggest that the risk averse psychocentrics value sun and fun holidays whereas confident and venturesome **allocentrics** prefer physical/nature and cultural attributes of destinations. In practice this suggests for example if European tourists taking holidays to destinations on the Mediterranean Sea, a terrorist attack could impact on their decision to travel to Mediterranean Sea resorts, not only because tourist themselves could be more risk averse, but also because the destination is more easily substitutable with alternative resorts. In others words the benefits offered by seaside resorts are not unique and terrorist's activities could displace tourists emphasizing the vulnerability of these types of destinations. These findings indicate that the tourist profiles created on the basis of their psychographic groupings and benefits sought provide some understanding of the

differences in tourists' perceived risk. From a theoretical point of view, these outcomes substantiate the view that personality traits contribute to the effect, in terms of our understanding of the various levels of risk (Correia et al., 2008; Lepp and Gibson, 2003; Rohel and Fesenmaier, 1992; Sharifpour et al., 2013; Sonmez and Graefe, 1998b; Valencia and Crouch, 2008). However, although these results bring to light the fact that these relationships exist, it would be naïve to assume they are sufficient on their own merit to explain people's behaviour.

Furthermore regarding the effects of terrorist attacks, in line with previous studies there are significant differences in risk perceptions irrespective of the psychographic group and benefits before and after the terrorist attack (Morakabati et al, 2014, Rubin et al., 2005) However, what seems to be more important is the fact there is no significant difference in the willingness to travel to seaside types of destinations, regardless of the psychographic group. Terrorist attacks are outside the control of people, and the risk is involuntary therefore tourist confronted by situations where they cannot know the probability of the attack and faced with increased levels of uncertainty, find that this is not desired by those who are classified as being allocentric, this further adds to the vulnerability of beach destinations.

Mitigating these effects is the fact that tourists tend to have relatively short memories and if events are not to repeated the likelihood of the attacks could diminish in the minds of tourists. At the same time terrorist attacks in the 21st century have extended beyond the most vivid of imaginations, events which were once considered improbable (i.e. 9/11 or

the ISIS atrocities) have become a reality. One could argue that attacks hold less of a shock now than they used to because people have adapted to the probability of a recurrence of events which may have seemed improbable a few decades ago. In general, most people see the probability of terrorist attacks higher in specific areas (daily telegraph, 06.10.15) and this reduces the net value of the equation between levels of risk and the perceived benefits of visiting those areas. In this sense the decision making becomes more complex and harder to rationalise. The more daunting picture for countries that are heavily associated with terrorist activities is one that emphasises the fact that the effects of terrorism seem to be contagious (Independent,06.10.15) and spill over into neighbouring areas. In reality, as soon as the prospect of safety darkens a little, what were once reasonable fears are revived in full strength and countries that are heavily dependent on tourism's economic contribution find they have to deal with increasing poverty levels as the tourists stay away, creating greater unemployment and poverty, and an environment that become a breeding ground for recruits for the terrorist groups.

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Table 1 Psychographic groups PCA

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.275	40.941	40.941	3.275	40.941	40.941
2	0.913	11.408	52.349			
3	0.859	10.732	63.081			
4	0.711	8.894	71.975			
5	0.636	7.952	79.927			
6	0.598	7.478	87.406			
7	0.520	6.495	93.901			
8	0.488	6.099	100.000			

Table 2 Extraction Method: Principal Component Analysis

	Component
	1
(Self-Reliance) Prefer tourist package	0.617
(Novelty) Prefer familiar destinations	0.659
(Novelty/Off-the beaten track) Stay away from popular tourist areas	0.559
(Venturesomeness) Enjoy a sense of discovery	0.683
(Institutionalization) Prefer usual comforts	0.670

(Intellectual curiosity) Willing to learn	0.639
(Physical activity) Enjoy resting and relaxing	0.641
(Open to otherness) Prefer to socialize with same culture	0.644

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 3 Factor analysis results of benefits sought by tourists

Factors and items	Factor loading	Eigenvalue	Variance (%)	Cronbach's α
Factor 1: Culture/Heritage		3.071	21.934	0.84
Unique culture	0.718			
Historic sites	0.819			
Art/cultural events	0.791			
Heritage and arts exhibitions	0.849			
Traditional lifestyle	0.661			
Factor 2: Nature/Adventure		2.863	20.449	0.83
Physical challenge activities	0.836			
Abundant wildlife	0.807			
Remote and wilderness environment	0.861			
Camp sites	0.716			
Factor 3: Seaside		2.818	20.131	0.81
Warm climate and sun	0.737			
Nightlife and entertainment	0.749			
Amusement or theme parks	0.761			
Beach and water activities	0.772			
Good shopping facilities	0.728			
Note: Extraction method: principal component analysis				
Rotation method: Varimax				
Benefits sought (Kaiser-Meyer-Olkin =0. 809, Bartlett's test of sphericity: $x^2 = 2553.279$, $p < 0.001$).				

Table 4.1 Kruskal Wallis : Mean Ranks

	Travel confidence	N	Mean Rank
Crime risk	Allocentric	89	281.54
	Midcentric	267	219.82
	Psychocentric	88	170.92
Health risk	Allocentric	89	294.45
	Midcentric	267	216.20
	Psychocentric	88	168.84
Political Instability risk	Allocentric	89	282.65
	Midcentric	267	220.37
	Psychocentric	88	168.14
Terror risk	Allocentric	89	281.91
	Midcentric	267	225.61
	Psychocentric	88	152.98

4.2 Test Statistics[a,b]

	Crime risk	Health risk	Political Instability risk	Terror risk
Chi-Square	35.997	48.584	38.157	48.310
df	2	2	2	2
Asymp. Sig.	<0.001	<0.001	<0.001	<0.001

a. Kruskal Wallis Test

b. Grouping Variable: travel confidence

4.3 Mann Whitney U Test Statistics[a]

	Crime risk	Health risk	Political Instability risk	Terror risk
Mann-Whitney U	8464.500	7608.000	8431.000	8745.500
Wilcoxon W	44242.500	43386.000	44209.000	44523.500
Z	-4.228	-5.321	-4.253	-3.854
Asymp. Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001

a. Grouping Variable: Allocentric and Midcentric

4.4Test Statistics[a]

	Crime risk	Health risk	Political Instability risk	Terror risk
Mann-Whitney U	2078.500	1786.000	2013.000	1764.500
Wilcoxon W	5994.500	5702.000	5929.000	5680.500
Z	-5.613	-6.575	-5.776	-6.559

Asymp. Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001

a. Grouping Variable: Allocentric and Psychocentric

4.5Test Statistics[a]

	Crime risk	Health risk	Political Instability risk	Terror risk
Mann-Whitney U	9046.500	9155.500	8867.500	7782.000
Wilcoxon W	12962.500	13071.500	12783.500	11698.000
Z	-3.384	-3.281	-3.605	-4.942
Asymp. Sig. (2-tailed)	0.001	0.001	<0.001	<0.001

a. Grouping Variable: Midcentric and Psychocentric

Table 5 Relationship between benefits sought and perceived risk

Correlations

	Crime risk[2]	Health risk	Political Instability risk	Terror risk

Beach benefits - degree of interest [1]	Correlation Coefficient	-.323**	-.322**	-.308**	-.391**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001
	N	177	177	177	177
Cultural benefits - degree of interest	Correlation Coefficient	.281**	.249**	.244**	.294**
	Sig. (2-tailed)	. <0.001	.001	.001	<0.001
	N	177	177	177	177
Adventure benefits - degree of interest	Correlation Coefficient	.266**	.335**	.363**	.407**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001
	N	177	177	177	177

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

1: Risk perception: Very worried=1, Not worried at all=5

2: Benefit: Not at all important=1, Very important=5

Table 6.1 Ranks

	Travel confidence	N	Mean Rank
Willingness for cultural context after attacks	Allocentric	89	298.12
	Midcentric	267	214.32
	Psychocentric	88	170.84
	Total	444	
Willingness for adventure context attacks	Allocentric	89	300.77
	Midcentric	267	218.55
	Psychocentric	88	155.32
	Total	444	
Willingness for beach context after attacks	Allocentric	89	226.29
	Midcentric	267	225.24
	Psychocentric	88	210.36
	Total	444	

Table 6.2 Test Statistics[a,b]

	Willingness for cultural context after attacks	Willingness for adventure context attacks	Willingness for beach context after attacks
Chi-Square	50.270	63.604	1.087
df	2	2	2
Asymp. Sig.	<0.001	0.001	0.581

a. Kruskal Wallis Test

b. Grouping Variable: Travel confidence

Table 6.3Test Statistics[a]

	Willingness for cultural context after attacks	Willingness for adventure context after attacks
Mann-Whitney U	7330.500	7333.500
Wilcoxon W	43108.500	43111.500
Z	-5.598	-5.618
Asymp. Sig. (2-tailed)	<0.001	<0.001

a. Grouping Variable: Allocentric and Midcentric

Table 6.4Test Statistics[a]

	Willingness for cultural context after attacks	Willingness for adventure context after attacks
Mann-Whitney U	1736.500	1498.000
Wilcoxon W	5652.500	5414.000
Z	-6.623	-7.456
Asymp. Sig. (2-tailed)	<0.001	<0.001

a. Grouping Variable: Allocentric and Psychocentric

Table 6.5Test Statistics[a]

	Willingness for cultural context after attacks	Willingness for adventure context after attacks
Mann-Whitney U	9381.000	8254.000
Wilcoxon W	13297.000	12170.000
Z	-3.003	-4.492
Asymp. Sig. (2-tailed)	0.003	<0.001

a. Grouping Variable: Midcentric and Psychocentric