

# Gender as moderator of the influence of tourists' risk perception on destination image and visit intentions

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## Abstract

**Purpose** – This paper aims to study the influence of gender on the theoretical and empirical relationships between tourists' risk perceptions and both destination image and behavioural intentions.

**Design/methodology/approach** – An empirical study was carried out with potential tourists at home in Germany and the UK considering travelling to Spain, Egypt, Morocco, Brazil, Colombia and Indonesia. Data were analysed using structural equation modelling with multi-group analysis.

**Findings** – Results show that gender moderates the theoretical relationships between risk perception and both destination image and behavioural intentions. Risk perception is higher for women than for men and depends on the type of risks and the characteristics of the destination. Women are more likely than men to reduce their visit to a destination whenever there is an increase in their risk perceptions. However, the influence of risk perception on destination image is higher for men than for women. Thus, results prove there are significant gender differences in the theoretical relationships between risk perceptions and destination image and visiting intentions.

**Originality/value** – This paper provides new evidence on the gender differences in risk perceptions in tourism and their impact on destination image and visiting intentions, showing that whenever there are higher risks at a tourist destination women do change more than men their behavioural intentions. The results are useful for designing risk management and promotion policies at destinations that avoid the masculinisation bias, thereby considering the impact of gender differences on travel behaviour and consumption decisions.

**Keywords** Behaviour, Destination, Gender, Genderisation, Image, Risk

**Paper type** Research paper

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性別作為遊客風險認知對目的地形象和訪問意向影響的調節因素

目的：本文研究了性別對遊客風險感知與目的地形象和行為意圖之間的理論和實證關係的影響。

設計/方法：對考慮前往西班牙、埃及、摩洛哥、巴西、哥倫比亞和印度尼西亞的德國和英國的潛在遊客進行了一項實證研究。使用具有多組分析的結構方程建模來分析數據。

研究結果：結果表明，性別調節風險感知與目的地形象和行為意圖之間的理論關係。女性的風險認知高於男性，這取決於風險類型和目的地的特徵。每當風險認知增加時，女性比男性更有可能減少前往目的地的次數。然而，男性的風險感知對目的地形象的影響要高於女性。因此，結果證明風險感知與目的地形象和訪問意圖之間的理論關係存在顯著的性別差異。

獨創性/價值：本文提供了關於旅遊風險認知的性別差異及其對目的地形象和訪問意圖的影響的新證據，表明每當旅遊目的地的風險較高時，女性的行為意圖變化確實比男性多。結果有助於在目的地設計風險管理和促銷政策，避免男性化偏見，從而考慮性別差異對旅行行為和消費決策的影響。

關鍵詞：行為 目的地 性別 性別化 形象 風險

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**El género como moderador en la influencia de la percepción de riesgo de los turistas en la imagen de destino y las intenciones de visita**

**Propósito** : Este artículo analiza la influencia del género en las relaciones teóricas y empíricas entre las percepciones de riesgo de los turistas y la imagen del destino y las intenciones de visitar.

**Diseño/metodología/enfoque :** *Se ha llevado a cabo un estudio empírico a turistas potenciales en Alemania y Reino Unido que consideran viajar a España, Egipto, Marruecos, Brasil, Colombia e Indonesia en un futuro próximo. Los datos se analizaron utilizando un Modelado de Ecuaciones Estructurales con Análisis Multigrupo.*

**Resultados :** *Los resultados muestran que el género actúa como variable moderadora en las relaciones teóricas entre la percepción del riesgo, la imagen del destino y las intenciones de comportamiento. La percepción del riesgo es mayor para las mujeres que para los hombres y depende del tipo de riesgo y de las características del destino. Las mujeres están más dispuestas que los hombres no visitar un destino cuando aumenta la percepción del riesgo. Sin embargo, la influencia de la percepción del riesgo en la imagen del destino es mayor para los hombres que para las mujeres. Por tanto, los resultados demuestran que existen importantes diferencias de género en las relaciones teóricas entre las percepciones de riesgo, la imagen del destino y las intenciones de visitar.*

**Originalidad :** *Este estudio proporciona nuevas evidencias sobre las diferencias de género en las percepciones de riesgo en turismo y su impacto en la imagen del destino y las intenciones de visitar, demostrando que cuando aumenta el riesgo en un destino turístico, las mujeres estarán más dispuestas que los hombres a cambiar de destino. Los resultados son útiles para el diseño de políticas de promoción y gestión de riesgos en destinos desde la perspectiva de género, considerando las diferencias de género en los comportamientos de viaje y las decisiones de consumo.*

**Palabras clave :** *Comportamiento, Destino, Género, Perspectiva de género, Imagen, Riesgo*

**Tipo de papel :** *Trabajo de investigación*

## 1. Introduction

Risk in travel and tourism has become an important research area in recent years because of the implications it has for tourist decision-making processes. The perception of risk has been shown to be one of the most important aspects that tourists consider when choosing between alternative destinations and when deciding upon the type and quantity of expenditure (Melly and Hanrahan, 2020; Zhang *et al.*, 2020).

Risks perceptions are different for women than for men, suggesting that gender may play a role in the way human beings react to different levels of risk across society (Zhang *et al.*, 2014). Uncovering the gender differences in the relationships between risk perception and human behaviour is important for designing more effective and efficient risk management policies (Melly and Hanrahan, 2020; Zhang *et al.*, 2020; Wen *et al.*, 2020). Yang *et al.* (2017, p. 97) pointed out that “there is limited understanding in relation to how women interpret gendered travel risk, and how risk influences their travel behaviour”. Therefore, there is a gap in understanding tourist risk behaviour according to gender groups (Yang *et al.*, 2017; Gao *et al.*, 2020).

The pioneering work of Roehl and Fesenmaier (1992) focussed on the perception of risk in tourism identifying the basic dimensions: physical-equipment risk, holiday risk and destination risk. It pointed out that relationships between risk perception and travel behaviour are situation-specific and not generalisable. From a phenomenological point of view, Bunton *et al.* (2004) suggested that the gendering of risk is a more complex phenomenon that needs to be understood.

The objective of the present research is to investigate the influence of the different gender types on the relationships between tourists' risk perceptions, their visiting intentions and their destination's image. Risk is a subjective perception that varies in its different dimensions and its behavioural relationships can be conditioned by specific individual characteristics including personality traits, gender, culture and prior experience (Godovykh *et al.*, 2021).

This paper contributes to the literature first by considering the impact of a more complete classification of different tourist risks on destination image and visit intentions and secondly, by evaluating the differentiation of these impacts by gender groups. This is relevant when targeting specific groups of tourists and there is a need to manage the impact of emerging risks on a destination's performance. Furthermore, unlike most previous studies

(Tavitiyaman and Qu, 2013), the present one focusses on tourists at their source regions or countries, i.e. before travelling to a destination; thus results are not conditioned by the fact that tourists are visiting a particular destination.

## 2. Literature review

### 2.1 Tourists' risks perceptions, destination image and behaviour

Tourism research shows supporting evidence that the perception of risk is linked to the image of a destination, there is a negative impact of the perceived risk on the image (Carballo *et al.*, 2021; Zhang *et al.*, 2020). Thus, to create a successful destination, it is necessary to have an acceptable level of security.

Perceived risk is a multi-aspect construct, which can be categorised into several types of risk (Roehl and Fesenmaier, 1992; Carballo *et al.*, 2017). Tourists' risk perceptions play an important role in decision-making. Therefore, the understanding of risk reaction can help to mitigate its negative perception, helping to create a positive destination image that enhances competitiveness of the tourist destination, quality, sustainable management practices, marketing and motivations for travel (Medhekar *et al.*, 2020; Carballo and León, 2018).

On the other hand, security – or the absence of relevant risks – can be considered as a dimension that is integrated into the perceived image of a destination, although it is not clear what specific dimensions of perceived risk do influence the destination image (Sharma and Nayak, 2019; Leri and Theodoridis, 2020). Hence, this article contributes to the existing literature by identifying those dimensions or types of risk that make up tourists' perceived risks and how the latter affects the image of the destination. Thus, the first hypothesis of the paper is formulated:

*H1.* Perceived risk has a negative and significant effect on destination image.

In addition, tourists' perceptions of risks are likely to play a crucial role in travel decisions and behaviour. In general, there is a positive relationship between the level of risk perception about a destination and the likelihood that tourists avoid choosing that destination (Zhang *et al.*, 2020). Studies report that the threat to safety causes a decrease in the number of tourists at a destination (Rittichainuwat, 2013). More recently, Abraham *et al.* (2020) has shown a negative association of perceived risk with willingness to travel. The perception of security might also affect loyalty to the destination and recommendations to visit (Godovykh *et al.*, 2021). Consequently, the following hypothesis is defined:

*H2.* Perceived risk has a negative and significant effect on the tourists' intentions to visit.

Human travel behaviour is heterogeneous in terms of the destination selection process (Çakar, 2020). Tourists often have limited knowledge about destinations they have not visited and they frequently construct their image of them mostly through visits, the literature reports that the image of a destination have an impact on the decision to visit it (Stylidis and Cherifi, 2018). The destination image is commonly accepted as an important concept in successful tourism development and plays a key role in improving destination attractiveness and competitiveness.

Destination image can be conceptualised as having dimensions. The first is the cognitive or functional dimension and the second is the affective or emotional dimension, with both demonstrating that have an impact on the imager perception of tourists (Sharma and Nayak, 2019; Leri and Theodoridis, 2020). Based on the aforementioned theoretical considerations, a third hypothesis is formulated:

*H3.* Destination image has a positive and significant effect on intentions to visit.

## 2.2 Gender and tourists' risks perceptions

Gender can be considered as a system of social beliefs and practices that differentiates men from women and which is shared by all individuals of a community. Because gender is embedded in all dimensions of society, it can be expected that women and men participate and experience tourism in different ways (Pritchard, 2007).

The perception and reaction to various risks and their levels are subject to gender differences. That is, women and men may be sensitive to different risks and may also perceive the same risks differently. It is found that men are riskier tolerant, express less concern for most risks and have a less risk perception than women (Yang *et al.*, 2017).

Previous researchers have found that female tourists are more sensitive to physical risks, such as sexual harassment or assault (Gao *et al.*, 2020). These risks have emerged as the most prominent types of risk affecting women's travel experiences. Few studies explore the effects of the risk perceptions of the western solo female travel population on the commonly adopted response strategies of those travelling alone (Thomas and Mura, 2019), adding an extra layer of discomfort, in that being alone could make women a target (Brown *et al.*, 2020). The findings in hitchhiking travel demonstrate that gendered subjectivities of the vulnerable female are produced by normative heterosexuality and the principle of reciprocity (Gao *et al.*, 2020). In the study by Reisinger and Crotts (2009), female tourists perceived travelling internationally as involving higher risks, and were more anxious, felt less safe, intended to travel less internationally. Wang *et al.* (2021) show that women displayed higher ratings than men about China's image during the Covid-19 outbreak. The present research empirically examines the moderating roles of gender in the causal relationships between perceived risk and destination image;

*H4.* Gender will moderate the structural relationships between perceived risk and destination image.

In relation to visiting intentions, Harris and Jenkins (2006) argued that the higher degree of risky behaviour exhibited by men is explained by their different perceptions of the probability and consequences of negative outcomes and by a higher level of enjoyment gleaned from risky activities. There is a large amount of evidence concerning the riskier environments in which male tourists tend to participate. The review of Yang *et al.* (2017) conclude that there are gender differences in tourist risk experience in at least 70% of the studies available and when differences in gender are not reported, studies have serious methodological limitations. Women's susceptibility to corporeal risk has been the most commonly reported. Limited research has actually explored the association between the social forces and the gendered travel risk, such as how risk is constructed, how gender intersects with risk and how risk-taking behaviour shapes the gender performance (Yang *et al.*, 2017).

Gender differences have also received attention from hospitality researchers to explain observed heterogeneity in consumption behaviours. Whilst empirical evidence found that male and female groups differed significantly in fashion shopping behaviour (Jin *et al.*, 2013), other researchers have found that gender does not affect the relationship between a destination's image and visiting intentions (Wang *et al.*, 2020). Thus, there is need for further research of the potential role of gender as a moderator of the relationship between image and visiting intentions. This forms the basis for the last sets of hypothesis:

*H5.* Gender will moderate the structural relationships between perceived risk and intentions to visit.

*H6.* Gender will moderate the structural relationships between destination image and intentions to visit.

### 3. Methodology

#### 3.1 Theoretical model

Risk perceptions consist of different dimensions of security and other objectionable characteristics of tourist destinations that may affect destination image and tourist behaviour. Figure 1 depicts the theoretical relationships that follow from the research hypotheses outlined in the previous section. In this model, tourist risk perception influences the destination image and both condition the intention to travel. These relationships are moderated by gender type, as women and men are expected to behave differently according to their different social construction of risk perception.

#### 3.2 Data collection

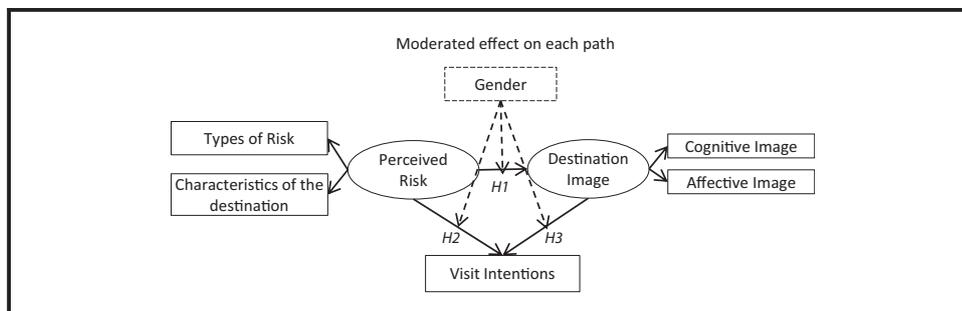
To evaluate the research hypotheses, an empirical study was carried out on the image and risk perception of Spain, Egypt, Morocco, Brazil, Colombia and Indonesia. These destinations were selected because they present a fair range of different risk perceptions amongst potential tourists from the source countries. Reisinger and Mavondo (2006) reported that travel risks are of growing importance in the global tourism environment and present threats not only to tourists but also host societies and the tourist's home nations. Terrorist attacks have been extended to many locations worldwide (e.g. Morocco, Colombia, Indonesia and Egypt) and crime against tourists (e.g. Spain and Brazil).

The nationalities for this study were chosen amongst those countries with a greater level of international outbound travel: Germany and the UK were considered two of the major international tourism source markets (Assaker and Hallak, 2013). The questionnaire was translated into British English and German. The number of valid interviews was 1.212 (603 in the UK and 609 in Germany). The field work was conducted between June and October 2018 through Web interviews.

**3.2.1 Sample characteristics.** The objective population was the population of travellers in countries of origin aged 18 and older. The sample was taken randomly subject to quotes of age and gender. Thus, gender was balanced with a 50% of men. The age structure was 35–44 years old (23%), 45–54 years old (23%), 55 years old or older (14%) and 25–34 and 16–24 years old (20% each group). In total, 40.7% were single and 58.3% were married. The modes of travel were: “lone traveler” (13.3%), “with friends” (29.4%), “with partner” (27.2%), “with family [no children]” (17.2%) and “with family [children]” (12.9%).

**3.2.2 Questionnaire design.** The questionnaire was designed following a literature review on the topics of image evaluation and risk perception. The destination image includes cognitive image and affective image attributes: a group of 27 attributes focussed on evaluating the cognitive aspects of the image. To measure the affective dimension of the destination image, a six-item, seven-point, bipolar semantic differential scale was used. A

**Figure 1** Proposed theoretical model



question focussed on the intention to visit the destinations was also included. A seven-point Likert-type scale (1 = *Unlikely*; 7 = *Likely*) was used.

The perceived risks about the six destinations considered in the study were calculated in two-ways – through 25 attributes related to the probability of encountering risky situations at the destinations and through the destination risk management policies that make tourists perceive destinations as being riskier. The later approach was evaluated using four attributes of the destination (Figure 2; characteristics of the destinations). A seven-point Likert-type scale (1 = *Very unimportant*; 7 = *Very important*) was used. The last part of the questionnaire collected the socioeconomic characteristics of the interviewed.

### 3.3 Modelling

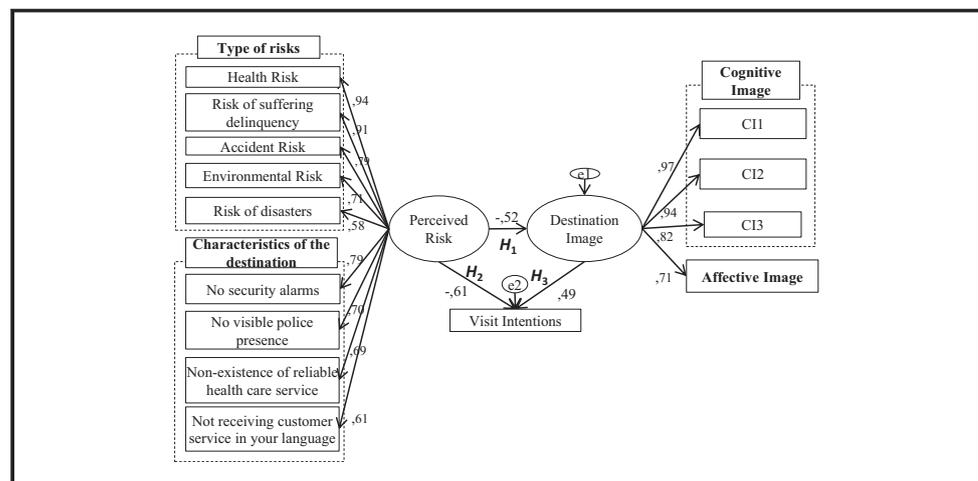
Data were processed using AMOS 27 statistics packages. Firstly, the measurement model was carried out. Factor analysis with Varimax rotation, was used to identify the underlying dimensions of perceived risks and cognitive and affective aspects of the destination image. The convergent validity of the scale to confirm the exploratory factorial analysis (EFA) results was tested using confirmatory factorial analysis (CFA). Secondly, the causal relationships between perceived risks, visit intentions and destination image were empirically tested using a structural equations model (SEM) (Sharma and Nayak, 2019). The SEM procedure is an appropriate method for evaluating how well a proposed conceptual model that contains observed indicators and hypothetical constructs explains or appropriately fits the data. This technique allows researchers to appraise causal relationships between variables in complex models involving simultaneous relationships between variables. A multi-group analysis was conducted to determine if gender significantly moderates the causal relationship (Figure 1).

## 4. Results

### 4.1 Measurement model

4.1.1 *Factorial analysis of the perception of risk.* The application of the EFA to the responses to the 25 questions on specific risk attributes raised five dimensions of risk (Table 1). As both the risk perception and destination image construct were based on the scientific literature, content validity is assumed. The convergent validity of the scales was tested using CFA. The construct reliability (CR) was above 0.7 and the average variance extracted

**Figure 2** The estimated structural model



**Table 1** Factor analysis results of risk perception

Scale	CR	AVE	Cronbach $\alpha$
Health risk	0.72	0.75	0.824
Risk of suffering delinquency	0.74	0.67	0.768
Accident risk	0.73	0.62	0.755
Environmental risk	0.86	0.58	0.724
Risk of disasters	0.88	0.54	0.706

**Notes:** Bartlett's test of sphericity ( $\chi^2 = 510$ ,  $df = 300$ ;  $p < 0.000$ ). GFI = 0.934; AGFI = 0.903; CFI = 0.957; TLI = 0.944; IFI = 0.957; RFI = 0.935; NFI = 0.950. RMSEA = 0.071

(AVE) exceeded the minimum criterion of 0.5 cut-offs (Sharma and Nayak, 2019), demonstrating internal consistency for the types of risk. The Cronbach's  $\alpha$  and composite reliability also prove internal consistency.

*4.1.2 Factorial analysis of destination image.* The EFA of the six affective attributes of destination image (healthy, active, sustainable, authentic, pleasant and exciting destination) led to only one factor called "Affective image".

The application of EFA to the 27 cognitive attributes of the image of the destination led to three factors (CI1, CI2 and CI3) (Table 2).

## 4.2 Structural model

A SEM approach was applied to analyse the causal relationships. The structural model (Figure 2) shows coefficients in a standardised form. The goodness of fit is satisfactory ( $\chi^2/df = 3.2$ ;  $p < 0.00$ ), as a common level of the  $\chi^2/df$  ratio is below 5 (though below 3 is better) (Carballo et al., 2021) and the estimated indices are above 0.9 (GFI = 0.946; AGFI = 0.916; CFI = 0.967; TLI = 0.955; IFI = 0.967; RFI = 0.937; NFI = 0.954). The root-mean-square error of approximation statistics was RMSEA = 0.043, lower than the maximum value of 0.08, which is considered a good level of fit for the model.

The regression coefficients are all significant as the statistics are below the 0.05 level (5%). Thereby allowing the three research questions to be accepted (Table 3). Perceived risk has a negative and significant influence on the image of the destination and on the intentions to visit ( $\beta = -0.52$  and  $\beta = -0.61$ ;  $p < 0.000$ , respectively), validating *H1* and *H2*. Thus, the higher the risk perceived by tourists, the greater the negative image of the destination. Tourists will be less willing to visit a destination when the perception of risk is higher. On the other hand, the image of the destination has a positive and significant influence on the intentions to visit the destination ( $\beta = 0.49$ ;  $p < 0.000$ ), confirming *H3*. Tourists are more willing to visit the destination when it offers a better image.

The model shows that the perceived risk depends on the type of risk and the characteristics of the destination. It can be shown that the perceived risk of the destination depends significantly on the health risk, which is the most important attribute ( $\beta = 0.94$ ). Regarding the destination risk management policies that influence risk perception, tourists are more influenced by the lack of security alarms in hotels and tourist facilities ( $\beta = 0.79$ ).

**Table 2** Factor analysis results of cognitive image of destination

Scale	CR	AVE	Cronbach $\alpha$
CI1: Environment and reputation image	0.71	0.61	0.787
CI2: Infrastructure and product image	0.76	0.57	0.771
CI3: Cultural image	0.78	0.53	0.724

**Notes:** Bartlett's test of sphericity ( $\chi^2/df = 2,79$ ,  $p < 0.000$ ). GFI = 0.934; AGFI = 0.905; CFI = 0.968; TLI = 0.960; IFI = 0.969; RFI = 0.953; NFI = 0.963; RMSEA = 0.067

**Table 3** Summary of hypotheses testing results

Direct effect	Estimates	p	Hypothesis
Perceived risk→ Destination image	-0.52*	0.000	H1 supported
Perceived risk → Intention to visit	-0.61*	0.000	H2 supported
Destination image→ Intention to visit	0.49*	0.000	H3 supported

Note: \*Significant path coefficients at  $p < 0.05$

### 4.3 Moderating effects of gender

This research empirically examined the moderating roles of gender in the causal (Table 4). For the moderation tests, the sample was randomly divided into two subgroups based on the tourists' gender: men (606) and women (606). The objective of multi-group simultaneous path analysis is to determine whether the path coefficients for the causal relationships vary across the groups of tourists.

The comparison of the chi-square values of these two models yielded significant differences in the structural paths of the tested model amongst the two groups ( $\Delta X^2 = 2.1$ ;  $p = 0.00$ ). It appears the gender of the groups of tourists significantly moderates the path relationships between perceived risk and destination image ( $\Delta X^2 = 1.8$ ;  $p = 0.00$ ). Each of the coefficients (Table 4) explained the relative importance of the path relationships.

The coefficients show that the influence of risk perception on destination image is greater for men ( $\beta = -0.46$ ) than for women ( $\beta = -0.33$ ). Thus, the sensitivity of the destination image to the perceived risks of tourists is higher for the male group. In addition, the results show that there is a significant moderating effect of the tourists' gender on the relationship between perceived risk and the behavioural intentions ( $\Delta X^2 = 2.4$ ;  $p = 0.00$ ). The coefficient of the group of women ( $\beta = -0.88$ ) is higher than the group of men ( $\beta = -0.68$ ). The impact of risk perception on visit intentions is larger for the former gender group than for the latter, i.e. women respond to the perceptions of risk by reducing their visit intentions more dramatically.

Finally, the relationship between destination image and visit intentions is significantly moderated by the gender of the individual at the 0.10 level ( $\Delta X^2 = 2.7$ ,  $p = 0$ ), the patch coefficient for women ( $\beta = 0.93$ ) is larger than for men ( $\beta = 0.81$ ). In the case of the female gender, destination image has a greater impact on visit intentions.

## 5. Discussion

Tourists face risks whenever they make decisions about tourist destinations and their consumption behaviour. The results prove H1–H2 regarding the influence of risk perceptions on destination image and visit intentions (Leri and Theodoridis, 2020; Zhang et al., 2020) and also H3 involving the influence of destination image on visit intentions (Stylidis and Cherifi, 2018; Sharma and Nayak, 2019). Gender differences in these structural relationships as formulated in H4–H6 are also proved. The perceptions of these risks are not

**Table 4** Multi-group structural path estimates

Path relationships ML (95%) (1.212)	Constrained path(s) model	Path coefficient	
	$\Delta X^2$	Female	Male
All	2.1*		
H4: Risk perception → Destination image	1.8*	-0.33*	-0.46*
H5: Risk perception → Visit intentions	2.4*	-0.88*	-0.68*
H6: Destination image → Visit intentions	2.7**	0.93*	0.81*

Notes: \*Significant path coefficients at  $p < 0.05$ ; \*\*significant path coefficients at  $p < 0.1$

the same for women as they are for men (Yang *et al.*, 2017; Zhang *et al.*, 2014; Reisinger and Crotts, 2009), thereby having potential implications for behavioural intentions and purchase decisions. This paper has proved that the influence of tourists' risk perceptions on the image of destinations and the intentions to visit is not the same for women and men. The principal implication of this research is women are more likely than men to change their behavioural intentions when the level of risk changes at a destination.

Risk perception is a strategic factor in managing tourist destinations (Melly and Hanrahan, 2020; Zhang *et al.*, 2020). Even though destinations cannot control all the risk dimensions that contribute to tourists' image formation, it is possible to manage tourists' risk perceptions in the short term by focussing on the image of a safe destination (Zhang *et al.*, 2020; Carballo *et al.*, 2019). As most tourists, and particularly women, are sensitive to security risks, managing them plays an important role in providing tourists with quality experiences (Dai *et al.*, 2020; Samarathunga and Cheng, 2020; Fuentes *et al.*, 2015). Gendered risk perceptions vary significantly with the type of risk and with the way in which destinations manage specific risks (e.g. alarms, police and health care) (Yang *et al.*, 2017).

From a managerial perspective, reducing women's risk perceptions of destinations becomes important and can be mitigated by adopting measures. Previous studies have shown that risk perceptions are gendered based and/or constructed on cultural and social backgrounds, with women particularly more sensitive to security and physical risks (Gao *et al.*, 2020). The results of the study show that uncontrollable risks (i.e. health care deficit, physical violence, sexual harassment and traffic accidents) have a greater impact on the overall negative perception of risk of a destination than those risks that are considered more controllable (e.g. sexual diseases, food poisoning and drowning, sun exposure).

Gendered risk perceptions do influence both destination image and behavioural intentions, revealing the way in which the differences between genders have tangible and economic implications (Zhang *et al.*, 2020; Desbiolles, 2020). The negative impact of a higher risk perception of a destination on its image and the resulting decrease in visit intentions is higher for women than for men. These results build upon previous studies that have found that tourists' risk perceptions of security have a high probability of influencing the image of tourist destinations and the intentions to visit a destination (Carballo *et al.*, 2019). It should be considered that there can be gender differences in the behavioural impacts of tourists' risk perceptions of destinations.

The gender differences in the effects of risk perceptions on key variables attracting tourists to destinations raise relevant managerial challenges for destination management organisations. As travel decisions are made within the family, involving the interchange of gender perceptions and opinions, there is need to attend all potential effects of risk management decisions at destinations on the various genders (Melly and Hanrahan, 2020). Tourist products and services should manage risk to balance the perceptions of the different gender groups, putting special attention on women as the most sensitive to particular risks and because they are the most likely to change their minds about travelling.

Market products are designed with a bias towards the masculine gender and this also applies to the features that are related to the levels of risk involved (Spielmann *et al.*, 2021). The design of destination risk features should carefully consider the different perceptions of gender groups, avoiding the common masculinisation of tourist products and services at destinations and of the risks involved in their consumption and visitation. Particular attention could be paid to the factors influencing the greater perceptions of personal and physical risks amongst women at destinations by implementing surveillance infrastructures and urban planning measures that increase the level of security.

## 6. Conclusions

Gender differences not only affect the risk perceptions of consumers but also have differential effects on consumption decisions. These effects should be considered by tourist

destination organisations to maximise the attractiveness of destinations to relevant market segments (Carballo *et al.*, 2017). The results of this research confirm that gender moderates the relationships between tourists' perceptions of the different types of risk and both the destination image and the intentions to visit. For both genders there is a significant and inverse relationship between risk perception and destination image, i.e. the higher the perception of risk, the poorer the destination image (Zhang *et al.*, 2014). Secondly, there is a significant and negative relationship between risk perception and the intention to visit a destination, i.e. the higher the perception of risk, the less likely tourists are to visit a destination. Thirdly, the influence of risk perception on destination image is greater for men than for women, although risk perception has more behavioural implications for women, i.e. women are less likely to visit a destination when they perceive a higher level of risk.

Special attention needs to be paid in tourism marketing and communication to women, who are subject to potentially stronger behavioural reactions when facing risks at destinations (Gao *et al.*, 2020). The destination image and the inflow of tourists can be substantially increased by working through the factors that influence risk perceptions, such as characteristics of the destination managing risk and the type of risks that can be reduced through policy and prevention measures (Carballo *et al.*, 2017). Understanding the factors influencing tourist risk perception can be useful for managing destination image and for the attraction of tourists to a destination.

Although exhaustive efforts have been made to ensure the validity of this study, it has important limitations that should be overcome by further research. Due to resource and time constraints, it was not possible to study a sample of tourists in the origin countries with a greater international scope, limiting the study to two nationalities (British and German), so the results could change if the sample is extended to other nationalities. Secondly, this study has analysed the perceived risk by focussing on six international destinations; although these are scattered throughout the world, it may be the case that the results would vary if other destinations or if urban ones are analysed. Thirdly, although the perceived risk has been analysed considering different types of risk, there could be other aspects that might influence risk perceptions and induce differences across gender groups. Fourthly, there may also be other demographic and travel characteristics of tourists regarding destinations that could have an influence on the causal relationships.

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