

## CLUSTER ANALYSIS OF RISK PERCEPTION TO IMPLEMENT TOURIST HEALTH SAFETY IN VIETNAM

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**Abstract:** Perceived risk refers to tourists' objective assessment of the negative consequences associated with travel. The COVID-19 pandemic has significantly impacted all areas of human activity, influencing personal behavior and organizational practices. In post-COVID-19, travellers' perceptions of disease risk and behaviour have evolved. This study aimed to evaluate tourists' risk perceptions while travelling, categorizing them into distinct groups to identify differences among them. The research uses a mixed-method approach with validated surveys to measure travelers' risk perceptions via Likert scales. Data was collected from representative samples at destinations. K-means clustering identifies distinct segments, with the optimal number of clusters determined using the Elbow Method. Using cluster analysis, tourists were divided into three groups: Cluster 1 (32.18%), Cluster 2 (16.56%), and Cluster 3 (51.26%). The perceived risks were ranked in descending order as safety and hygiene risks, health risks, time risks, and emergency response support concerns. The analysis highlights that tourists prioritize safety, hygiene, health risks, and time risks when considering future travel, emphasizing the need for improved safety measures and effective tourism marketing strategies to restore traveler confidence. This study offers original insights through cluster analysis, showcasing the diverse risk perceptions among different social clusters and customer segmentation.

**Keywords:** cluster, risk perception, tourism, health safety, travel

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### INTRODUCTION

Tourism is one of the main economic sectors of the world. It is the third largest business category (after fuels and chemicals). In 2019, the tourism trade sector accounted for 7% of global trade. For some countries, it can account for more than 10-20% of their gross domestic product (GDP) in terms of overall national income; it is the third largest commercial sector of the global economy (UNWTO, 2020). After the Covid-19 pandemic spread, global infection has seriously affected sectors, and the tourism sector has suffered crises in all tourism trade services. Up to 100 million direct jobs in the tourism sector are at risk; in addition, jobs are at risk in tourism-related sectors, such as the labour-intensive food service and accommodation industries, which provide employment to 144 million workers worldwide. Small businesses (accounting for 80% of tourism) are particularly vulnerable (Behsudi, 2020). Notably, vulnerable groups such as women, who make up 54% of the tourism workforce, youth, and workers in the informal economy are the most at risk (External Sector Report, 2020). The effects of the pandemic will also influence certain aspects of travel for individuals, such as their travel motivation and perception of risks during the trip. This indicates a causal relationship between the factors that are acting together and are based on personal perceptions, attitudes, and beliefs, which is at the core of the Theory of Planned Behaviour (Ajzen, 1985). Furthermore, underlying theories regarding epidemics and personal hygiene needs are also considered, in terms of the Pathogen Stress Theory (Thornhill and Fincher, 2014).

The existing literature on risk perception in tourism after the Covid-19 pandemic reveals a notable gap in terms of conducting cluster analyses. Most publications on the subject focus on factors affecting tourist behaviour (Ahmad et al., 2022). and the relationships affecting travel intention (Wang et al., 2022).

While some studies have explored risk perceptions and their determinants, there are limited works that employ cluster analyses to identify distinct groups or clusters of individuals with similar risk perceptions in the post-pandemic tourism context. This gap is significant because understanding the heterogeneity in risk perceptions and identifying distinct clusters can provide valuable insights for tourism stakeholders and policymakers (Horne et al., 2021). To determine the differences in the number of study samples by categorizing individuals into clusters based on their risk perceptions, researchers can uncover nuanced patterns, differences, and similarities in how individuals perceive risks associated with travel (Rimal and Real, 2003). Such an analysis would enable the development of targeted strategies to address the concerns of specific clusters, customize communication and marketing efforts, and tailor risk management approaches to effectively rebuild trust and promote safe tourism experiences in the aftermath of the Covid-19 pandemic (Aebli et al., 2022).

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This study aims to identify different clusters or groups of people based on their risk perceptions and analyse tourists' issues of interest that they contribute to different perceptions of tourism risk. Several insights can be gained from these clusters, and this study seeks to provide valuable insights for tourism industry stakeholders and policymakers in developing targeted strategies to address concerns, rebuild trust, and promote safe travel experiences in the post-pandemic era (Matthew and Princes, 2024). Research results analysing risk perception clusters in tourism after the COVID-19 pandemic demonstrate originality in several aspects. It addresses a significant research gap by employing a cluster analysis to test risk perception into clusters in the context of post-pandemic tourism. Up to now, reports about Corona's origin and risk perception in society are still mysterious (Harambam, 2020). This innovative methodology allows for a deeper understanding of the heterogeneity in risk perceptions within the tourist population.

In the context of the pandemic response from the government and organisations, there have been restrictions on social activities, particularly tourism trade business activities. This traveller, when hearing the spread of the disease and aware of the risk to themselves, is the anxious thoughts of each individual. From there, travel behaviours are formed during travel by vehicles, behaviour changes depending on the infected area, and the demographics of the locals (Kim et al., 2017).

Therefore, an approach for grouped research on tourist risk perception will help businesses effectively manage customer service and propose tourism strategies (Lestari and Mahir Pradana, 2024). In addition, this will help businesses achieve the following benefits: accurately identify the target customer group through behavioural analysis, characteristics of each customer group related to hygiene perceived, groups of visitors concerned about health risks, groups of guests concerned about time risks, and groups of guests concerned about the risk of the emergency response support channel (Arora et al., 2024).

## LITERATURE REVIEW

Risk perception has been of interest to scholars for a long time, and studies dating back to the 1970s mentioned risk perception (Jacoby and Kaplan, 1972). According to the author, there are aspects that need to be taken care of, such as psychological risk, social risk, financial risk, time risk, and material risk. These research results were later carried out by scientists studying risk perception in tourism (Roehl and Festival enmaier, 1992; Stone and Grønhaug, 1993) who expanded and exploited in many aspects travel risk in different subjects and identified three new aspects of risk perception: material and equipment risk, holiday risk, and destination risk. Follow-up studies identified additional risk aspects, including perceived satisfaction risk and political uncertainty risks (Seddighi et al., 2001), and health risks (Richter, 2003).

The pathogen stress theory mentioned personal hygiene and safety (Thornhill and Fincher, 2014). The operational behaviour theory also addressed risk perceptions (Fishbein, 1980). Tourism stakeholders need to consider the issues related to the hygiene and safety of visitors. Issues related to the sanitation of public transport, hotels, and entertainment venues should be considered to improve visitors' safety (Sigala, 2020). The COVID-19 pandemic is an infectious disease that has spread rapidly worldwide. Studies on infection risk perceived while travelling have reported the possibility of infection in places of recurrent infections (Brida et al., 2021).

In light of the news of the pandemic, many travellers intend to avoid or cancel trips, as it has a lot to do with the risk perception of travel in general, especially to destinations with reported cases of infection (Neuburger and Egger, 2021). This is consistent with the results of other studies that show that perceptions of health risks are negatively associated with perceptions of the safety of a destination and may influence travellers' travel intentions (Yoo et al., 2022). After the COVID-19 pandemic, people's safety- and hygiene-related perceived has increased even more.

The COVID-19 pandemic has significantly affected the travel decisions of tourists as well as their safety and health hygiene (Wen et al., 2021). Most travellers are concerned because safety and hygiene can be important factors in assessing travel risk; they are aware of how to manage tourist operations during trips. Since the risks are largely related to safety and hygiene, including health-related issues (Goran Perić, 2021). Potential tourists often prefer factors like safety and hygiene of the destination, cleanliness, infrastructure, and high-quality medical facilities during the COVID-19 pandemic (Sánchez-Cañizares et al., 2021). Travel risk has been described as a factor of concern for many travellers during trips, with studies focusing on infectious disease transmission (Hall, 2006). The movement of international tourists can spread new infectious diseases across the world, as tourists can carry pathogens from one place to another (Richter, 2003). Among the health-related risks previously described in travel are HIV, schistosomiasis, Legionnaires' disease, sexually transmitted diseases, SARS, and COVID-19 (Bauer, 2007; Jonas et al., 2011).

Several empirical studies have explained the impact of cognition on health issues when people make travel decisions (Nazneen et al., 2020). The study results describe the impact of the pandemic on attitudes towards different types of tourism without specifying the nature and relative importance of the various factors affecting travellers' perceptions. Most pre-2020 studies focused on health in tourism, describing travellers' intention to visit in a medical tourism environment (Collins et al., 2019). Travel trip planning, time factor a lot of tourists are concerned about, and time risks, including the possibility that the trip will waste time, limits on vacation time as planned and prepared will also take too much time (Mowen and Minor, 1998). In this study subject, the time risk mentioned when infected with COVID-19 extended the treatment and isolation period by 14 days or even longer (Almaghrabi, 2021).

Throughout the tourism business, managers need to consider setting up support channels to respond to situations that occur (Law et al., 2015). Travel distribution channels are set up to address issues when travellers need assistance regarding travel, accommodation, and visiting attractions (Pearce and Schott, 2005).

A support channel is an online information technology platform (Rahman et al., 2021), which can provide advice to tourists on choosing tours, buying tickets, booking hotels, and emergency response to paying costs during the journey of visitors (Merkert and Hakim, 2022). When there is a support channel, customers can connect and feel secure about

exploring tourism (Pearce and Schott, 2005), which has a significant connection with purchasing behaviour, destination selection, experience sharing, and information seeking. Timely information can help tourists easily reduce travel risks and control communication and contact behaviour (Gretzel et al., 2019). Overall, all previous studies have identified risk perceptions in many aspects related to travel intentions. However, the relationship of the risk perception aspects does not define the group of visitors in the perception that synchronises all visitors. In this study, the analysis focused on identifying groups of travellers who had different perceptions of risk during trips.

## MATERIALS AND METHODS

### Data collection

This study was designed as a survey through questions. The content of questions was determined in two parts, the survey part on demographic characteristics. The second part surveyed the risk perceptions of visitors. A 5-level Likert scale was used, where 1 (strongly disagree) to 5 (strongly agree) (Likert, 1932) and some demographic variables were referenced from the results of social research (European Social Survey, 2014).

A convenient, non-probability sampling method was used for data collection, involving random samples from tourists at various destinations (Manfreda and Vehovar, 2015). A questionnaire was the primary tool, divided into two sections: the first collected demographic information, and the second focused on the main research content.

The survey content was carefully designed to align with the research objectives. With proper permissions and consent from visitors, the author approached visitors at tourist destinations, explained the research and measurement concepts, and provided a link for feedback via [drive.google.com](https://drive.google.com) to those who agreed to participate (Bauman et al., 1998). This study used a Cronbach's alpha reliability analysis and coefficient values above 0.7 were acceptable for psychological constructs (Paul Kline, 2000). Cortina (1993) found that the magnitude of Cronbach's alpha coefficient depends on the number of item categories in the scale, with more items having higher coefficients (Cortina, 1993). The larger the sample size principle, the lower the complexity of the deep analysis and the lower the risk of Type I errors.

Hinkin et al. (1997) recommended that final scales should be four to six items long. Recent publications have systematically reviewed the sample size, depending on the results of Cronbach's alpha reliability analysis above 0.7 that can use sample sizes of 250 – 300 to ensure a representative sample performs the study (Bujang et al., 2018). We designed a survey of 350 submitted samples and obtained valid responses from 320 samples, with a 91% response rate.

### Data analysis

In this study, Cronbach's alpha was used to verify the correlation between variables observed in the same survey group and test results in the dataset obtained. Cronbach's alpha values above 0.7, Corrected item – total correlation coefficients greater than or equal to 0.5, Guaranteed trust requirements for the data obtained (Nunnally, 1978).

Frequency analysis was used to analyse the percentages of demographic factors. The study used descriptive statistical methods to calculate the mean values and standard deviations of survey variables. This study used group analysis methods (Wu, 2012) to determine the optimal number of groups and the relevance of groups and survey data (Duran and Odell, 2013).

Cluster analysis, specifically K-means clustering, identifies distinct segments based on risk perception (Li and Wu, 2012). Optimal cluster numbers are determined using the Elbow Method (Rolison and Shenton, 2020).

## RESULTS AND DISCUSSION

### Demographic characteristics

Table 1 offers a thorough study of the demographic traits of the survey participants, showing that, in comparison to male respondents (42.2%), a somewhat greater number of female respondents (57.8%). Although the sample has a somewhat equal gender distribution, there is a little tendency toward female individuals. This may suggest that there is gender-specific differences in how risk perception is perceived. The age distribution of the respondents indicates that a substantial proportion belongs to the younger and early middle age categories (Suparman et al., 2024). More precisely, 33.4% of the participants fall within the age range of 18-25, 34.7% fall within the age range of 26-30, and 27.8% fall within the age range of 31-45. According to the age distribution of the study, younger people's and adults in their early middle age viewpoints predominate (Fu et al., 2024). Compared to earlier age groups, these ones could have distinct opinions on health safety and risk perception. Regarding occupation, the sample exhibits a wide range of diversity.

Table 1. Results of sample information analysis (N = 320) (Source: Author analysis from data, 2024)

Character	Content	Frequency	Percent
Gender	Female	185	57.8
	Male	135	42.2
Age	18 - 25	107	33.4
	26 - 30	111	34.7
	31 - 45	89	27.8
	More than 45	13	4.1
Working	Private Companies	72	22.5
	Coporation	101	31.6
	Government	104	32.5
	Other	43	13.4

Specifically, 32.5% of respondents are employed in the government sector, 31.6% work in joint-stock firms, and 22.5% are employed in private enterprises. The diversity of work sectors offers a comprehensive outlook on risk perception, since individuals with diverse professional backgrounds may have variable degrees of exposure to health safety information and distinct experiences that shape their perceptions (Chufan Xiao, 2024). The segment data provides insights about respondents' gambling insights and their effects on visitor wellbeing and security acceptance. The overview includes people of all ages, sexual orientations, and livelihoods to show the Vietnamese indigenous travel industry.

**Statistics describing and verifying the scale of measurement variables**

From Table 2, the results of the statistical analysis described by the four measurement groups, there are three groups of Perceived safety and hygiene: health risk perceived, time risk perceived, the visitors rated level above 4, level 4 is high perceived. Meanwhile, the issue of concern for the emergency response support channel, 3.77 is at the level from moderately aware to high aware. Cronbach's alpha scale reliability test results reflect the degree of correlation between the observed variables in the same group. The results obtained were all above 0.77, indicating that the variables observed in one group fully supported the content and data obtained (Ayele and Singh, 2024).

Therefore, the data structure was sufficiently reliable for the analysis of the subsequent stages.

Table 2. Descriptive analysis results and inspection results using Cronbach's alpha (Source: Author analysis from data, 2024)

About travel risks	Mean	Standard deviation	Cronbach's alpha
Perceived safety and hygiene risks	4.30	0.66	0.80
Perceived health risks	4.10	0.69	0.77
Time risk perceived	4.09	0.73	0.81
Emergency response support channels	3.77	0.70	0.80

**Results of the analysis to select the optimal number of customer groups**

In a dataset, the problem arises as to how to obtain the best value for optimal group estimation. Using Elbow's optimal group search methodology, the results of the analysis of the grouping model dataset to find the number of groups needed for the classification of risk-aware travellers are shown in Figure 1.

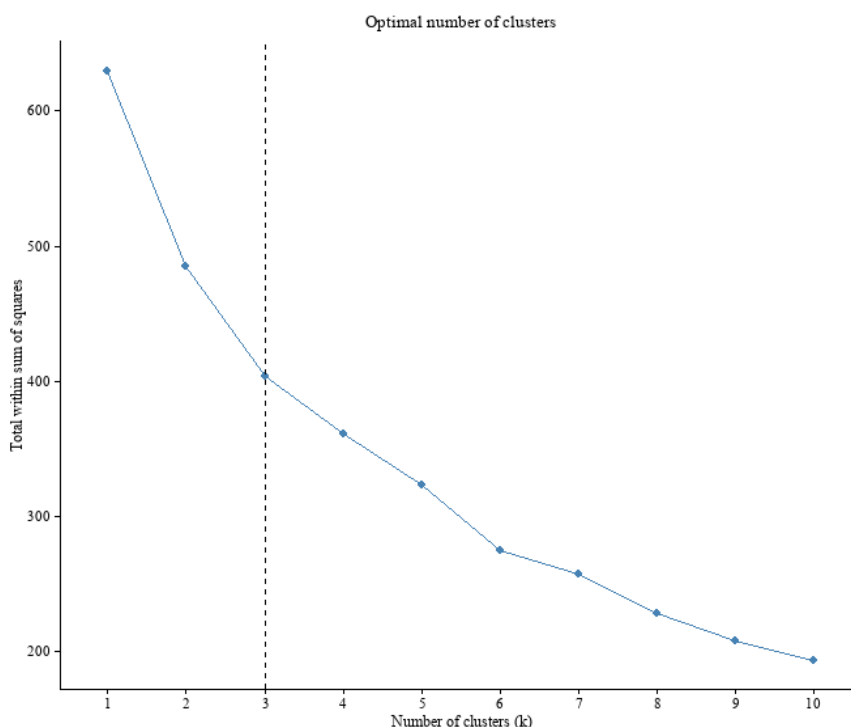


Figure 1. Results of optimal recommendations for three groups of customers on risk perceived (Source: Author analysis from data, 2024)

Figure 1 illustrates the application of group division methods in a theoretical model designed to study risk perceptions in tourism. Conducting the search for the optimal number of groups as recommended by the Elbow method, this is a way to select the number of suitable groups based on a visualization graph at the point of attenuation of the deformation function and select the elbow point, at which point is the optimal number of groups required for cluster analysis (Syakur et al., 2018). In this equation, the initial assumption divides 10 groups, estimating the optimal number of groups recommended by the Elbow model (Nagaraj et al., 2022). The analysis of Figure 1 shows that the optimal number of groups proposed for group classification is three groups of customers with different risk perceptions.

**The results of the analysis divided the group of risk-perceived customers**

Clustering is a method used to identify smaller groups of observations in a dataset. This helps to perform subheadings

based on observations in the same large group with similar patterns. The cluster results identify homogeneous groups and classify directly from the dataset, the study results represented in Figure 2.

As shown in Figure 2, the level of interpretation of the two components in the dataset was 64.6%, which explains the variability in groups with a separation of three clusters (Jardim and Mora, 2022). Of the three clusters, Cluster 1 had a greater difference than Clusters 2 and 3. The proportion of visitors in Cluster 1 who were aware of the risks was 32.18%.

For Cluster 2, the concentration density was low, the elements were widely dispersed, and the interference rate between Clusters 2 and 3 was unclear. Cluster 2 accounted for 16.56% travellers who were aware of travel risks, suggesting that a small proportion of travellers was not homogeneous in their level of risk perceived.

For Cluster 3, the concentration of visitors was high; in Group 3, there was uncertainty about cluster division, as shown in Figure 2, and there was a small percentage of interference between Cluster 3 and Cluster 1 and Cluster 3 with Cluster 2. This issue needs to be researched and clarified to explain the unclear differences in visitor surveys. However, most tourists in Cluster 3 were aware of tourism risks, accounting for 51.26% of the total number of visitors surveyed.

This study as well as previous studies, when identifying differences in context, the results are biased, but the results also have similarities in the grouping, the reports can be referenced in the direction of the study in the risk perception subgroup (Goran Perić, 2021). Notably, in this study, after the COVID-19 tourists had the highest Perceived safety and hygiene risks, other perceived groups were listed, gradually reducing health risk perceived, time risk perceived, and concern about emergency response support channels during the trip.

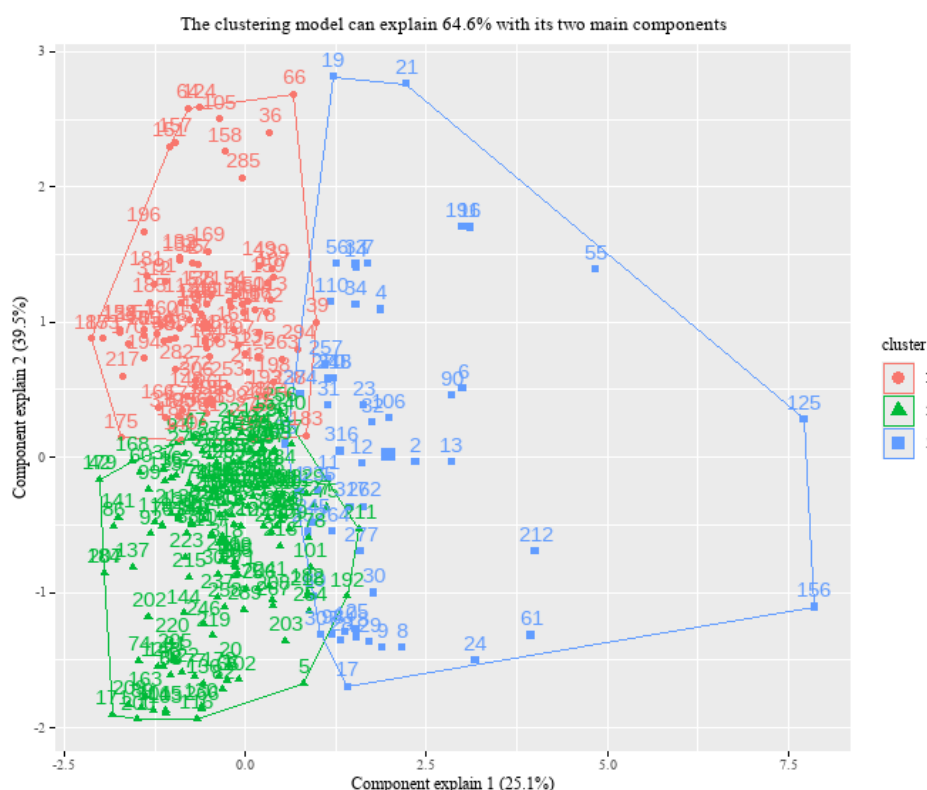


Figure 2. Results describe the grouping of risk perceived customers in tourism (Source: Author analysis from data, 2024)

## DISCUSSION

The examination of risk perception among local visitors in Vietnam highlights the substantial influence of health risk knowledge on travel intentions and destination preferences. Crucial aspects that affect this view include the perceived seriousness of health hazards, confidence in health safety measures, and past health-related encounters (Bengthong et al., 2024). It is essential to emphasize the interplay of these components. Media coverage and personal experiences have a significant role in determining how severe hazards are perceived, whereas trust in safety measures is impacted by clear and open communication as well as visible protocols implemented by authorities (Wijayanto et al., 2024). Furthermore, demographic factors such as age, gender, and socioeconomic level, together with the cultural environment, significantly influence the risk perceptions of domestic tourists (Safrizal et al., 2024).

Cluster analysis is employed in the study of risk perception to classify visitors according to their perceptions of different dangers associated with travel. Cluster 1 might comprise health-conscious visitors, Cluster 2 might consist of those prioritizing time and convenience, while Cluster 3 may largely emphasize safety and hygiene.

These findings should be compared with similar studies to ensure objectivity. For example, research by Neuburger and Egger (2021) in Italy identified three distinct clusters with unique characteristics and highlighted a significant increase in COVID-19 risk perception and travel behavior changes over a short period (Neuburger and Egger, 2021). Similarly, a study by Jarumaneerat (2022) in Thailand segmented international tourists based on travel risk perceptions and past travel experiences, examining how each segment employs risk reduction strategies (Jarumaneerat, 2022).

In the current study, Cluster 1, comprising 32.18% of respondents, exhibited high health risk awareness, likely due to the lingering effects of the COVID-19 pandemic and human damage (Golets et al., 2023). Cluster 2, accounting for 16.56% of respondents, showed a lower concentration density with widely dispersed elements, suggesting concerns about time and convenience rather than specific health or safety risks (Brida et al., 2022). The unclear interference rate between Clusters 2 and 3 indicates less sharply defined risk perceptions among these tourists.

Cluster 3, encompassing 51.26% of the surveyed tourists, showed a high concentration of visitors acutely aware of travel risks, primarily focusing on safety and hygiene. This group's size underscores the importance of safety and hygiene measures in rebuilding tourist confidence (Nair and Pratt, 2024). The uncertainty about cluster division within Cluster 3 suggests that while these tourists share common concerns, they prioritize these risks differently.

These findings highlight the need for targeted risk communication and management strategies to address the specific concerns of each tourist segment, enhancing the overall travel experience in the post-pandemic era.

## CONCLUSION

This section provides the study's conclusions, which can enable tourism business administrators to take measures to improve the quality of tourism services. A significant proportion of the respondents of this study were female; aged 18-30 years; worked in government agencies, joint stock companies, or private companies. These are characteristics for managers interested in exploiting or implementing tourism marketing strategies (Alonso-Vazquez et al., 2024).

The study identified three clusters; the proportion of clusters identified and focused on Cluster 3 had a rate of 51.26%, the highest safety and hygiene perceptions in the surveyed issues. For places of tourism exploitation, at the destination of tourists, focus on three groups of tourists with different risk perceptions, including group 3 tourism risk perceived, they are groups that care a lot about safety and hygiene from the attraction, means of transportation (Yoo et al., 2022).

This study is similar to many other studies, in that it puts in a different context, meaning that the results may be similar or different. Most of the previously published studies related to clustering have notable differences in focus and results. The methodologies employed in these studies also vary, with some utilizing qualitative approaches such as interviews or surveys, while others adopt quantitative methods, such as cluster analyses (Dolnicar, 2020). Additionally, the number of clusters identified in the studies varies, with some finding two or three distinct clusters, while others uncover more nuanced typologies (Ghuman and Mann, 2018).

Furthermore, existing studies differ in their emphasis on various factors influencing risk perception, such as personal characteristics, travel motivations, destination attributes, and health and safety measures (Bulin, 2014). These differences highlight the diverse perspectives and approaches within the literature, contributing to a more comprehensive understanding of risk perception in tourism after the COVID-19 pandemic.

For administrators, focusing on exploiting three groups of risk perceived about tourism, the groups have differences, but groups have a clear perceived trend from the highest safety and hygiene risk perceived, health risk perceived, time risk perceived and concern about emergency response support channels in tourism (Suhud et al., 2024). This finding can be applied when it comes to tour sales and tourism marketing programs.

## IMPLICATIONS

A cluster analysis on risk perception in tourism after the COVID-19 pandemic can provide valuable insights into how different groups of individuals perceive and respond to risks associated with travel and tourism. These insights can help the industry understand the diverse range of perspectives and develop targeted strategies to address concerns and meet the needs of various customer segments. Here are some implications and potential applications that the industry can consider based on the findings of this study:

A cluster analysis of risk perception in tourism after the COVID-19 pandemic can provide valuable insights into how different groups of individuals perceive and respond to risks associated with travel and tourism (Brida et al., 2022). These insights can help the industry understand the diverse range of perspectives and develop targeted strategies to address concerns and meet the needs of various customer segments. Here are some implications and potential applications that the industry can consider based on the findings of this study:

Cluster analysis can identify distinct groups of travellers with similar risk perceptions and behaviours. By understanding these segments, the tourism industry can tailor their marketing strategies, communication efforts, and service offerings to target each segment's specific needs and concerns effectively. Some segments may be more risk-averse and prioritise safety protocols, while others may be more open to travel but require additional reassurance (Tapsall et al., 2022). From there, the tourism industry can design different tours to meet the needs of customers.

Developing targeted to clear communication strategies, the different risk perception clusters may respond differently to communication messages. The tourism industry can use the findings to create targeted communication strategies that address each cluster's specific concerns and risk perceptions. This can involve emphasising safety measures, highlighting flexible booking and cancellation policies, showcasing destinations with low infection rates, and promoting experiences that align with different risk appetites (Dryhurst et al., 2022).

Businesses need to consider improving safety protocols and measures, cluster analysis can shed light on the specific risk factors that different traveller segments consider important. The industry can use this information to prioritise and enhance safety protocols that address the concerns of each cluster (Sawang et al., 2023). This may include implementing stricter cleaning and sanitation procedures, enforcing social distancing measures, providing contactless services, and communicating the measures taken to ensure customer safety (Sannas Salsabila, 2024).



Furthermore, the findings of the cluster analysis can guide the industry in developing travel experiences that align with the risk perceptions and preferences of different segments. Some clusters may prefer outdoor activities or remote destinations with limited crowds, while others may be more interested in immersive cultural experiences or wellness-oriented travel (Alonso-Vazquez et al., 2024). By catering to these preferences, the industry can create customised packages and itineraries that resonate with each cluster.

On the other hand, the policymakers need to pay attention to adapting pricing and refund policies, the different risk perception clusters may have varying sensitivities to pricing and cancellation policies (Brida et al., 2022). Some segments may be willing to pay a premium for added safety measures, while others may be more price sensitive. The tourism industry can use the study's findings to refine pricing strategies and offer flexible refund and rebooking options that address the concerns of different clusters, thereby increasing customer confidence and willingness to travel (Wen et al., 2023). For health authorities, cluster analysis can provide insights into the risk perception profiles of different traveller segments, which can be valuable for public health authorities (Jarumaneerat, 2022). By sharing these findings, the tourism industry can collaborate with health authorities to develop guidelines, recommendations, and policies that align with the needs and expectations of travellers. This collaboration can help create a unified and consistent approach to managing risks in tourism and enhance overall trust in the industry.

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