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RESEARCH PAPER

Exploring the Factors Affecting Travel Intention During the COVID-19 Pandemic: A Structural Analysis

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Abstract
The purpose of this study was to identify structural relationships between factors affecting domestic tourism intentions in Iran under COVID-19 conditions, taking into account the importance of behavioral intention in predicting behavior. Therefore, it adds to the emerging body of knowledge about travel intentions during the pandemic. Structural equation modelling was used to analyze 383 online questionnaires, which revealed a positive impact of "frequency of past travel" and a negative effect of "Covid-19 risk knowledge," "perceived risk," and "risk aversion attitudes" on "travel intentions." Furthermore, "perceived risk" and "risk aversion attitudes" mediated the relationship between "frequency of past travel" and "Covid-19 risk knowledge" with "travel intentions." Meanwhile, "socio-demographic variables" and "travel purposes" moderated the relationships between "risk aversion attitudes" and "travel intentions" and between "perceived risks" and "travel intentions." The findings enable tourism policy-makers, marketers, and businesses to take purposeful measures to recover domestic tourism.

Keywords: travel intentions, risk aversion attitudes, perceived risk, Covid-19, Iran.

1. Introduction

On March 11, 2020, the World Health Organization declared COVID-19 a pandemic. As expected, tourists' fear of traveling or visiting crowded places, as well as travel risks, negatively affected tourism demand (Ivanova et al., 2021; Nazneen et al., 2020). In Iran, the coincidence of the COVID-19 outbreak with the two-week Iranian New Year holidays and the second and third waves during the summer tourism peak season caused a severe decline in demand.

Considering the significant losses that tourism businesses have suffered due to the COVID-19 pandemic, it appears that recovering tourism is vital, even though the pandemic has yet to be contained in Iran. However, given the uncertainty of the situation during the COVID-19 pandemic, tourists may experience potentially negative consequences due to their decisions (Sánchez-Cañizares et al., 2021). As such, the pandemic could have substantial implications in terms of health-related perceived risks, altering tourists' preferences, attitudes, and behaviors (Ivanova et al., 2021; Karl et al., 2020). Thus, for planning and marketing purposes, the process of intra-pandemic tourism recovery needs to identify the factors affecting travel intentions (Lam & Hsu, 2006), especially tourists' risk attitudes and perceptions (Ivanova et al., 2021; Sánchez-Cañizares et al., 2021).

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Tourists' behavior is usually predictable based on their intentions (Jang et al., 2009). Following the COVID-19 outbreak, various studies focused on identifying and predicting tourist behavioral intentions (e.g., Bae & Chang, 2021; Matiza & Kruger, 2021; Neuburger & Egger, 2021; Rasoolimanesh et al., 2021; Rastegar et al., 2021). However, numerous other issues are left unexplored (Neuburger & Egger, 2021). For example, fewer studies have focused on domestic travel intentions.

Domestic tourism is essential to a country's balanced regional development and economic growth (Li et al., 2016a). Domestic travel represents the most critical alternative to helping the tourism industry rebound (OECD, 2020b; UNWTO, 2020a). Domestic tourists know their destination better (Adeloye et al., 2020) and feel safer when visiting destinations closer to their homes (Ivanova et al., 2021). In addition, pursuing international marketing during a crisis could lead to a loss of capital and resources (Backer & Ritchie, 2017). As a result, governments consider domestic tourism promotion as a strategy to decrease the adverse effects of the crisis on tourism (Hassan & Soliman, 2021). However, researchers have focused more on the behavioral intentions of international tourists. As a result, most developing countries lack appropriate research, policies, and strategies for marketing domestic tourism (Bayih & Singh, 2020).

This research gap is also evident in Iran, where only a few studies have examined the behavioral intentions of domestic tourists since the Covid-19 pandemic (Ghorbanzadeh & Aghamohammadi, 2021; Yavari & Mansourimoayyed, 2021). More importantly, given Iranians' reduced purchasing power as a result of the pandemic and the US sanctions, domestic tourism is the main available option in the country.

The purpose of this study is to probe into Iranian tourists' domestic travel intentions under COVID-19 conditions. The study focuses on factors such as knowledge of COVID-19 risks, frequency of travel during the COVID-19 pandemic, perceived risk, attitudes toward risk aversion, and the moderating roles of socio-demographic variables and travel purposes. The findings help policy-makers, marketers, and activists in tourism identify the factors influencing travel intentions under COVID-19 conditions. These factors assist them in more effectively dealing with the crisis and contribute to their purposeful plans to restart safe travel.

2. Theoretical Foundations

Behavioral intention is an individual's subjective probability of showing a particular behavior (Hsiao & Yang, 2010). As a behavioral intention, travel intention is "the subjective probability of whether a customer will or will not take certain actions that are related to a tourist service" (Rastegar et al., 2021, p. 356). It is considered as an outcome of a mental process that transforms motivation into behavior. Tourists' behavior can usually be predicted based on their intentions (Jang et al., 2009). Many researchers agree that identifying the underlying factors that shape tourists' behavioral intentions can help provide clear insights into the decision-making process (Han et al., 2020).

Since the Covid-19 pandemic, many studies have investigated factors influencing travel intentions, including attitude, subjective norms, perceived behavioral control, risk perception, perceived severity of COVID-19, travel anxiety, trust, crisis management, health-care system, solidarity, mental well-being, perceived uncertainty, desire, knowledge, uncertainty avoidance, previous experience, and socio-demographic characteristics (Bae & Chang, 2021; Chua et al., 2021; Das & Tiwari, 2020; Han et al., 2020; Luo & Lam, 2020; Neuburger & Egger, 2021; Peluso & Pichierri, 2020; Quintal et al., 2021; Rasoolimanesh et al., 2021; Rastegar et al., 2021; Zhu & Deng, 2020). The present study investigates some of the factors that affect domestic travel intentions under COVID-19 conditions.

2.1. Frequency of Past Travel

According to behavioral theory, as people tend to show behavioral persistency and value consistency (Lam & Hsu, 2006), the frequency of past behavior is the optimal predictor of future behavioral intention and actual behavior (Sönmez & Graefe, 1998). Previous visits to the destination affect the tourist's decision-making process and the probability of a visit. For example, familiarity and previous destination experience determine how early tourists return to visit it after disasters (Rasoolimanesh et al., 2021). Past research has confirmed the impact of prior experience or frequency of travel on future travel intentions (Das & Tiwari, 2020; Floyd et al., 2004; Karl et al., 2020; Lee et al., 2012; Sönmez & Graefe, 1998; Turnšek et al., 2020). Thus, the present study hypothesizes that:

H1: Frequency of travel during the pandemic positively and significantly affects travel intention.

2.2. Risk Knowledge

Subjective knowledge influences behavioral intention as it accounts for a consumer's certainty of a proper decision. As such, tourists with more prior knowledge of a destination and its risks are more likely to visit because they have a more positive image of the destination and know it more accurately (Sharifpour et al., 2014). In terms of risks, perceived knowledge is an essential determinant of tourists' behavior (Han et al., 2020). When people are at risk, they try to reduce the risk by making rational decisions through complete or incomplete avoidance (Zhu & Deng, 2020). Media and word of mouth indirectly shape risk knowledge (Godovykh et al., 2021). Therefore, the present study hypothesizes that:

H2: Covid-19 risk knowledge negatively and significantly affects travel intention.

2.3. Risk Aversion Attitude

Attitude towards risks is a good indicator of how likely you are to travel (Hsiao & Yang, 2010). Risk aversion refers to "an individual's degree of negative attitude towards risk arising from outcome uncertainty" (Mandrik & Bao, 2005, p. 533). According to recent studies, the risk aversion attitude may predict protective behaviors during the COVID-19 pandemic and negatively impact travel intention (Xu & Cheng, 2021).

Based on Karl et al. (2020) findings, risk-averse tourists are more likely to change their travel intention to visit a risky place. They are willing to choose safe destinations. In contrast, risk-resilient tourists may prefer risky destinations. Zhu and Deng (2020) indicated a negative correlation between risk aversion attitude and rural travel intention. As such, the present study states the following hypothesis:

H3: Risk aversion attitude negatively and significantly affects travel intention.

The knowledge that tourists have gained from previous visits to the destination shapes the basis of their attitude (Rasoolimanesh et al., 2021). The perceived knowledge of COVID-19 among tourists has also been regarded as a critical determinant of their attitude towards international travel (Han et al., 2020). Zhu and Deng (2020) explained that as people increase their knowledge about a disease, they are less likely to take a risk. The reason is the higher cost of risk-taking than its benefits. As Zhu and Deng (2020) further stated, a risk aversion attitude could mediate the relationship between knowledge and behavior. Thus, it is hypothesized that:

H4: Knowledge of COVID-19 risks positively and significantly affects risk aversion attitude.

H5: Risk aversion mediates the relationship between knowledge of COVID-19 risks and travel intention.

People's risk aversion attitudes change as a result of their previous experiences. Therefore, although tourists may experience similar risk aversion attitudes, they may make different choices based on their prior experiences (Nugraha et al., 2016; Reichel et al., 2007). Hence, we hypothesized that:

H6: Frequency of travel during the COVID-19 pandemic negatively and significantly affects risk aversion attitude.

H7: Risk aversion attitude mediates the relationship between frequency of travel during the COVID-19 pandemic and travel intention.

2.4. Perceived Risk

Perceived risk is a tourist's subjective judgments (Godovykh et al., 2021) or feelings (Zhan et al., 2020) "of the overall negativity of a course of action based upon assessing the possible adverse outcomes and the likelihood that those outcomes will occur" (Mowen & Minor, 1998, as cited in Fuchs & Reichel, 2006, p. 84).

Studies have revealed that the perceived risk associated with a destination has a significant impact on a tourist's decision about visiting or avoiding it (Chua et al., 2021; Floyd et al., 2004; JamalKhan et al., 2017; Karl et al., 2020; Matiza & Kruger, 2021; Sharifpour et al., 2013; Sönmez & Graefe, 1998). Even though there is little real risk, the perceived risk is one of the most critical factors influencing travel intention (Godovykh et al., 2021). Risk perception also makes tourists find strategies to minimize risk (Bae & Chang, 2021; Fuchs & Reichel, 2006; Li et al., 2016b; Neuburger & Egger, 2021; Reichel et al., 2007). The findings of Zhu and Deng (2020) also suggested a negative correlation between perceived risk and rural travel intention. Therefore, it is hypothesized that:

H8: Perceived risk negatively and significantly affects travel intention.

The perceived risk affects attitude and behavioral intention (Quintal et al., 2010; Sánchez-Cañizares et al., 2021). As such, we might hypothesize that:

H9: Perceived risk positively and significantly affects risk aversion attitude.

H10: Risk aversion attitude mediates the relationship between perceived risk and travel intention.

Perceived risk can be explained by information integration and protection motivation theories. According to the former, people make decisions based on the content and amount of information received. Protection motivation theory describes how risk-related information is processed and decisions made to deal with risk. In both cases, the information received shapes a person's risk-taking or risk-avoidance behavior (Chua et al., 2021). Therefore, consumers' knowledge can affect their perceived risk (Lepp & Gibson, 2003; Sharifpour et al., 2014; Sharifpour et al., 2013; Williams & Baláž, 2013).

Regarding the SARS outbreak and the COVID-19 pandemic, fear of new and unknown viruses, along with conflicting information about their origins and consequences, had a negative impact on people's perceptions, attitudes, and behavioral intentions (Godovykh et al., 2021). Zhu and Deng (2020) stated that perceived risk could considerably increase under new or uncertain conditions. They also found that risk knowledge during the pandemic could

reinforce rural tourism intention through mediator variables, such as risk perception. Then, this study suggests that:

H11: Knowledge of COVID-19 risks positively and significantly affects perceived risk.

H12: Risk perception mediates the relationship between knowledge of COVID-19 risks and travel intention.

Studies have shown that tourists with higher levels of experience perceive less travel risk (Floyd et al., 2004; Fuchs & Reichel, 2006; Karl et al., 2020; Neuburger & Egger, 2021; Sharifpour et al., 2013; Sönmez & Graefe, 1998; Yang et al., 2015). As Karl et al. (2020) pointed out, as tourists gain more experience, they face more challenging conditions. In response, their self-confidence as a coping strategy and their cognitive skills improve, while their levels of perceived risk decrease. Therefore, we might hypothesize that:

H13: Frequency of travel during the COVID-19 pandemic negatively and significantly affects perceived risk.

H14: Perceived risk mediates the relationship between frequency of travel during the COVID-19 pandemic and travel intention.

2.5. Socio-Demographic Specifications

Previous research has shown the significant impact of socio-demographic factors on perceived risk (Quintal et al., 2021), travel intention (Das & Tiwari, 2020; Karl et al., 2020; Neuburger & Egger, 2021; Qi et al., 2009; Sönmez & Graefe, 1998; Yang et al., 2017), and attitude toward risk (Croson & Gneezy, 2009; Karl, 2016; Williams & Baláž, 2013). Bae and Chang (2021) observed the moderating role of gender and marital status in the structural relationships between the factors affecting tourists' travel intentions during the COVID-19 pandemic. So, it is hypothesized that:

H15: Socio-demographic factors, including (a) gender, (b) age, (c) family life stage, (d) income, and (e) education, moderate the relationship between perceived risk and travel intention.

H16: Socio-demographic factors, including (a) gender, (b) age, (c) family life stage, (d) income, and (e) education, moderate the relationships between risk aversion attitude and travel intention.

2.6. Travel Purposes

Travel purposes may affect tourist's choice of destination under risky circumstances. Previous studies have found that, under risky conditions, visitors' perceptions, attitudes, and intentions differ depending on their trip purposes and motivations (Khan et al., 2019; Nugraha et al., 2016; Sönmez & Graefe, 1998; Yang et al., 2015). As reported by Sönmez and Graefe (1998), leisure tourists, in contrast to business tourists, enjoy more freedom in choosing or avoiding a destination in terms of its safety. According to Yang et al. (2015), although safety is a critical issue for tourists who travel for peace and tranquility, those who prefer adventure tourism seek an optimal level of risk. Nugraha et al. (2016) found that the effect of prior experience and risk-taking on decision-making might vary depending on the destination and travel purpose. However, research in this area is underdeveloped, especially regarding the role of travel purpose in tourists' travel intention under COVID-19 conditions. Thus, the present study hypothesizes that:

H17: Travel purposes, including (a) recreation, (b) VFR, (c) work-education, (d) pilgrimage, moderate the relationships between perceived risk and travel intention.

H18: Travel purposes, including (a) recreation, (b) VFR, (c) work-education, and (d) pilgrimage, moderate the relationships between risk aversion attitudes and travel intention.

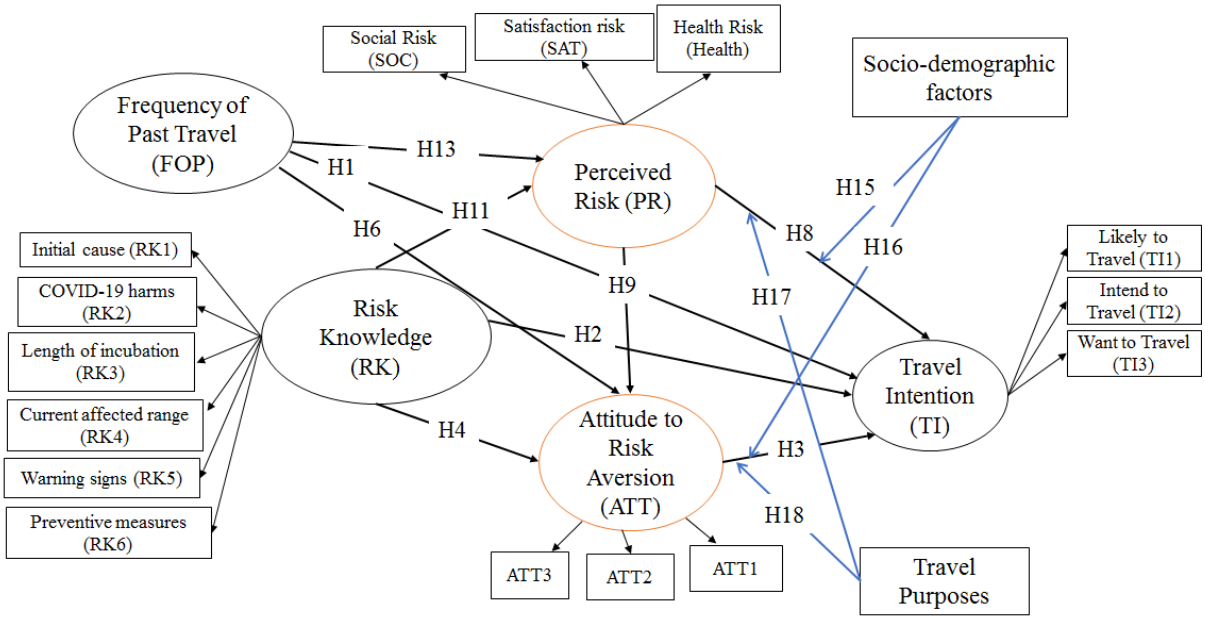

Figure 1. The Conceptual Model

3. Method and Materials

The study was carried out in Iran. An unrestricted, self-selected survey was conducted, which is a non-probability convenience sampling method. There were no restrictions on who could participate in these surveys, and it was up to the individual to choose to participate (Fricker, 2008). The survey consisted of an online questionnaire created with the Google Forms platform and distributed via WhatsApp and Telegram Messenger. It invited people across Iran to participate and asked them to share the link with their contact list and groups. Online surveys utilizing social media platforms have been consistently employed in contemporary tourism research, including studies associated with the COVID-19 pandemic (Matiza & Kruger, 2021). Given an average response rate of 54% in previous studies, social media is the most effective way to collect online data (Rasoolimanesh et al., 2021). Finally, between September and October 2020, 383 questioners were completed.

The questionnaire consisted of two parts, one related to respondents' socio-demographic characteristics and the other related to the study variables. A five-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5) was employed to evaluate the variables. These variables were (a) "COVID-19 risk knowledge" (RK) (Zhu & Deng, 2020); (b) "perceived risk" (PR) (including social risk, health risk, and satisfaction risk) (JamalKhan et al., 2017; Laver et al., 2006; Li et al., 2016b; Qi et al., 2009; Reichel et al., 2007; Sharifpour et al., 2014; Sharifpour et al., 2013; Sönmez & Graefe, 1998; Zhu & Deng, 2020); (c) "risk aversion attitude" (ATT) (Zhu & Deng, 2020); (d) "travel intention" (TI) (Hsiao & Yang, 2010; Khan et al., 2018; Lam & Hsu, 2006); (e) "future travel purposes" (Koo et al., 2016); and (f) "frequency of past travel" (during the pandemic) (FOP) (Floyd et al., 2004; Lam & Hsu, 2006; Lee et al., 2012; Qi et al., 2009; Sönmez & Graefe, 1998).

Reliability analysis and confirmatory factor analysis (CFA) were applied to all survey items through the maximum likelihood estimation procedure. The study drew on measurement and structural models, multi-group analysis, and interaction effect analysis. The data was analyzed using SPSS 25 and AMOS 24.

3.1. Study Context

Iran was one of the first countries to report cases of COVID-19 infection on February 19, 2020. According to the latest report on August 28, 2021, more than 4,960,000 confirmed cases were recorded, with more than 107,000 deaths (WHO, 2021).

Following the COVID-19 outbreak, the tourism industry in Iran experienced severe losses (Sharifi et al., 2020). In 2019, about 9.1 million international tourists traveled to Iran (UNWTO, 2020d), representing approximately 25% growth compared to 2018 (UNWTO, 2021b). It means Iran received nearly 0.62% of the world and 2.52% of the Asia-pacific region's international tourist arrivals. However, by October 2020, the COVID-19 pandemic had reduced the number of tourists visiting Iran by 77% on average (UNWTO, 2021a). According to WTTC (2021), Iran's tourism GDP dropped 48.6% in 2020 compared to 2019, and inbound and domestic tourism expenditures were reduced by 86.7% and 44.1%, respectively. International tourism accounted for 6% of tourism expenditures in 2020, while domestic tourism accounted for 94%.

Despite calls from the Iranian Ministry of Cultural Heritage, Handicrafts, and Tourism for "smart" and "responsible" travel, the National Committee to Combat Corona advised people to avoid traveling (TEHRANTIMES, 18 September 2020). Currently, domestic tours are limited and supervised (IRNA, 2021).

4. Results

4.1. Data Screening

Following the procedure suggested by Kline (2011), deviation from normality in the data was inspected. The results showed that the absolute values of skewness and kurtosis for all the items were acceptable.

4.2. Measurement Model

First-order CFA was conducted to analyze the construct validity of the variables. Table 1 shows that the factor loadings for all items were greater than 0.4. Therefore, as Ertz et al. (2016) explained, convergent validity was established. Moreover, all the composite reliability (CR) values were greater than the threshold value of 0.70, revealing that the latent variables were sufficiently reliable (Hair et al., 2006, p. 94). Convergent validity was assessed through the average variance extracted (AVE) values. An AVE value greater than 0.5 would be good, although a value of 0.4 would be acceptable as well. According to Fornell and Larcker (1981), if the AVE value is less than 0.5, but the CR value is greater than 0.6, the convergent validity of the construct would be adequate (Essmui et al., 2014). Table 1 also shows Cronbach's alpha values for each scale, greater than 0.7, demonstrating the data's reliability (Wang et al., 2016). The Cronbach's alpha value for the 'future travel purposes' variable is also 0.73.

Table 1. Results of Confirmatory Factor Analysis

Variables	Factor loading	CR	AVE
RK (α=0.81)		**0.80**	**0.45**
(RK1) I know about the initial cause of COVID-19.	0.69		
(RK2) I know about the harm caused by COVID-19.	0.64		
(RK3) I know about the length of the incubation period of COVID-19.	0.80		
(RK4) I know about the current affected range of COVID-19.	0.52		
(RK5) I know about the surveillance and warning signs for COVID-19.	0.66		
(RK6) I know about the preventive measures for COVID-19.	0.70		
PR (α=0.79)		**0.82**	**0.61**
(SOC) If I decide to travel under COVID-19 conditions, people who know me (family members, friends, or colleagues) would negatively view me.	0.66		
(SAT) If I take a trip under COVID-19 conditions, I may not be satisfied with my travel experience.	0.80		
(Health) If I take a trip under COVID-19 conditions, I would be very likely to catch the virus.	0.79		
ATT (α=0.81)			
(ATT1) I would not welcome the risk of COVID-19 infection due to taking a trip.	0.79		
(ATT2) I would disagree with my family members and friends if they wanted to take a trip under COVID-19 conditions.	0.90		
(ATT3) If my family members and friends took a trip during the COVID-19 pandemic, I would not visit them for two weeks.	0.64		
TI (α=0.85)		**0.86**	**0.67**
(TI1) I may travel domestically during the COVID-19 pandemic.	0.79		
(TI2) I have decided to travel domestically during the COVID-19 pandemic.	0.92		
(TI3) I would like to travel domestically during the COVID-19 pandemic.	0.75		

The goodness-of-fit indices for the measurement model were RMSEA = 0.077, CFI = 0.972, and NFI = 0.960, which were acceptable according to Kline (2005).

4.3. Structural Model

Structural Model: Direct Effects

The direct relationships between the variables were analyzed by excluding the mediating variables (ATT and PR). The path coefficient was significant at the 1% level of confidence ($P<0.01$). Thus, hypotheses H1, H2, H3, H6, H8, H9, H11, and H13 were supported. The CMIN/DF value of 2.243 indicated that the model fit was satisfactory. The results showed that the specifications of the factor loadings, including factor variances, covariances, and error variances, were valid for the model under study. The CFI value was 0.974, indicating that the proposed model adequately described the sample data. Furthermore, the RMSEA value was 0.05, which revealed a good fit between the hypothesized model and the data observed.

SEM estimations were used to inspect the relationships between the latent variables (Figure 2). The chi-square statistic was $\chi 2=222.289$ with DF=96. Generally speaking, a ratio

of $\chi 2$ to DF less than five would be acceptable. The CMIN/DF=2.13 verified the overall model fit. Since chi-square is sensitive to sample size, other supplementary model-fit indices were considered (Hu & Bentler, 1995). Incremental fitness index (IFI), Tucker-Lewis Index (TLI) and comparative fitness index (CFI) showed values of 0.951, 0.938, and 0.951 (>0.9), respectively. The adjusted goodness-of-fit index (AGFI) was 0.903 (>0.8). The RMSE of approximation was <0.08 at 0.06. These indices demonstrated the model's plausibility.

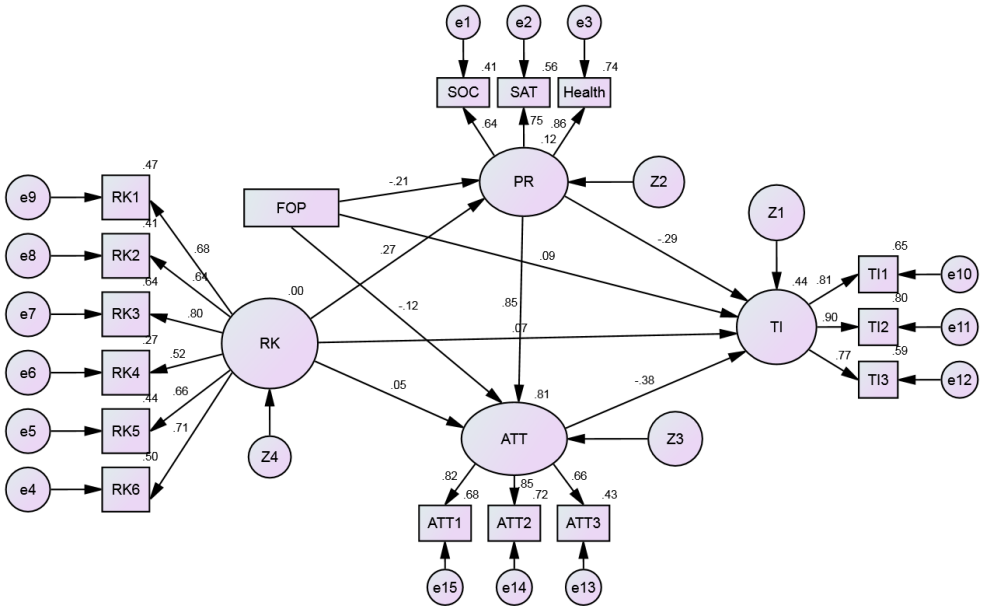

Figure 2. The Structural Equation Model

Structural Model: Mediation Effects

After creating the model, bootstrapping (Abdulla Lari et al., 2020) was used to evaluate the mediating role of PR and ATT. Table 2 shows the direct and indirect effects of all the constructs concluded in the model.

Table 2. Direct, Indirect, and Total Effects

Outcome	Standardize estimate (β)	Direct effect	Indirect effect	Total effect
TI				
RK → TI	0.112	0.067	-0.185***	-0.2
PR → TI	-0.442	-0.292	-0.321	-0.612***
ATT → TI	-0.508	-0.377	0.000	-0.377
FOP → TI	0.091	0.088	0.175***	0.263***
PR				
FOP → PR	-0.143	-0.210***	0.000	-0.210***
RK → PR	0.3	0.270	0.000	0.270
ATT				
RK → ATT	0.066	0.053	0.229***	0.282***
FOP → ATT	-0.095	-0.124	-0.178***	-0.303***
PR → ATT	0.956	0.849	0.000	0.849

Note: ***P<0.001

The direct effect analysis revealed a significant positive relationship between RK and TI. The results met the conditions suggested by Baron and Kenny (1986), who emphasized a

significant relationship between the predictor and the outcome variable before examining the mediation effect. As such, the model was estimated by the mediators. The coefficients of RK to PR and ATT and also PR and ATT to TI were all significant. Following the addition of the mediating variables (PR and ATT) to the model, the relationships between the predictor variables RK, PR, and FOP, and the outcome variable TI all became insignificant ($p>0.05$). The results then revealed an indirect-only or full-mediation effect.

The mediator's impact on the relationships between RK and TI, PR and TI, and FOP and TI was investigated using the specific indirect effect. The test results revealed that the indirect negative effect of RK on TI was statistically significant through PR and ATT (H5 and H12 were supported; $\beta=-0.185$; $p<0.001$). In addition, PR and ATT were found to mediate the relationship between FOP and TI (H7 and H14 were supported; $\beta=0.175$; $p<0.001$). However, ATT did not mediate the relationship between PR and TI (H10 was rejected; $\beta=-0.321$; $p>0.001$).

4.4. Multi-group Analysis

To calculate the moderating effect, the authors used a multi-group analysis (Banerjee, 2020).

Gender

The multi-group effect was examined, and the p-value was greater than 0.05, indicating no significant difference between the groups ($\Delta\chi2=6.921$, $\Delta df=4$, p-value=0.140). $\chi2$diff test indicated that there was no moderation at the model level. Therefore, the individual paths for each group were investigated. The results showed that in such paths as PR → TI and ATT→ TI, the z-scores were greater than 1.96. Thus, gender moderated the relationships between the variables involved (H15a and H16a were supported).

Income

The results showed that $\Delta\chi2=47.743$, $\Delta df=20$, and p-value=less than 0.0001. In terms of the model fit, the multi-group SEM analysis revealed a significant difference between the groups' income levels (including low income, below-average income, average income, above-average income, and high income) (H15d and H16d were supported).

Age

The data showed that the measurements were inconsistent across the age groups ($\Delta\chi2=23.555$, $\Delta df=12$, p-value: 0.023). More specifically, the multi-group SEM analysis pointed to a significant difference in model fit between the age groups (including 15-24, 25-44, 45-65, and over 65) (H15b & H16b were supported).

Family life stage

Based on the chi-square test result for the individual path, the family life stage was not statistically different because the p-value was greater than 0.05. As the models were alike, chi-square tests of difference were conducted on all individual paths. The findings indicated that family life stage (including, I live alone, I am single and live with my family, I live with my spouse and children, I live with my spouse but without our children, and I am married and have no children) could moderate the relationships between PR and TI, and ATT and TI (H15c and H16c were supported).

Education

In terms of education, the results showed that $\Delta\chi2=7.667$, with $\Delta df=8$ and p-value=0.467. The chi-square test results revealed that the individual education path did not show any statistical difference because the p-value was greater than 0.05. The findings indicated that education (including high school diploma and below, associate's and bachelor's degree, and master's degree and Ph.D.) could moderate the relationships between PR and TI and between ATT and TI (H15e and H16e were supported).

4.5. Testing the Interaction Effects

After the interaction term was introduced to the model, it was observed that travel purposes (TP), including TP1 (recreation), TP2 (VFR), and TP4 (pilgrimage), significantly moderated the relationship between ATT and TI ($\beta=0.72$, $\beta=-0.72$, $\beta=0.116$, $p<0.05$). TP3 (work-education) did not moderate the relationship between ATT and TI. To demonstrate the interaction effect, a simple slope analysis was performed (Zhang et al., 2020). The study plotted the significant interaction effects of ATT, TP1, TP2, and TP4 on TI. The interaction plots clarified that a high TP1 could reinforce the ATT - TI direct relationship. Meanwhile, a low rate of TP1 weakened this association; otherwise, TP1 could moderate the negative relationship between ATT and TI. A small TP2 value could strengthen the association between ATT and TI, whereas a high TP2 value would weaken the link between ATT and TP1. Otherwise, TP2 could reinforce the negative relationship between ATT and TI. TP4 moderated the negative association between ATT and TI. Therefore, hypotheses H18a, H18b, and H18d were supported.

Concerning the moderation effects of TP on the relationship between PR and TI, all the two-way interaction effects of TP1 and TP4 were significant ($\beta=0.05$, $\beta=0.13$, $p<0.05$). TP2 and TP3 did not moderate the relationship between PR and TI. These observations revealed that when TP4 and TP1 values were higher, the relationship between PR and TI was stronger than the time when TP4 and TP1 values were lower. Plausibly, the relationship between PR and TI was moderated by TP4 and TP1 (H17a and H17d were supported).

5. Discussion

According to the findings, the frequency of travel during the COVID-19 pandemic positively impacts travel intention. However, knowledge of COVID-19 risks, perceived risk, and risk aversion attitude negatively impact travel intention. People who have traveled since the beginning of the pandemic are more likely to travel again. This finding is in line with the observations of Das and Tiwari (2020), Ivanova et al. (2021), and Turnšek et al. (2020). Furthermore, greater risk knowledge can reduce respondents' tendency to travel, which is compatible with Han et al. (2020) and Hotle et al. (2020) observations. Increased rates of risk aversion attitude would undermine travel intention; this finding has also been reported by Han et al. (2020), Sánchez-Cañizares et al. (2021), and Zhu and Deng (2020). Tourists' attitudes toward particular behavioral consequences can predict whether they will take or refrain from taking action (Bae & Chang, 2021; Chua et al., 2021). Moreover, tourists who experience increased perceived risk may have lower travel intention, which is also reported in studies conducted by Bae and Chang (2021), Hotle et al. (2020), Neuburger and Egger (2021), and Zhu and Deng (2020).

Socio-demographic variables moderate the relationships between perceived risk and travel intention, as well as the relationship between risk aversion attitude and travel intention.

Studies on COVID-19 supported the effects of socio-demographic variables on tourists' perceived risk and behavioral intention (Das & Tiwari, 2020; Hotle et al., 2020; Ivanova et al., 2021; Karl et al., 2020; Neuburger & Egger, 2021; Peluso & Pichierri, 2020; Turnšek et al., 2020). However, their moderating effect on the relationship between perceived risk and travel intention has yet to be investigated. Apart from Bae and Chang (2021), studies on COVID-19 failed to focus on the moderating role of socio-demographics in the relationship between risk aversion attitude and behavioral intention.

Results indicated that the negative relationship between risk aversion attitude and travel intention is stronger among males, low-income groups, people over 65, those who lived with their spouse but without children, and those with higher education levels (master's and Ph.D.).

Low-income people, those over 65, and those living with their spouses without children (often empty-nesters in Iran) find themselves more vulnerable to infection by Covid-19. Therefore, they avoid risk by comparing travel costs and benefits (Zhu & Deng, 2020). Studies have shown that older people are more sensitive to risk due to increased experience (Correia et al., 2008). They are also less likely to travel in risky situations (Das & Tiwari, 2020; Ivanova et al., 2021; Neuburger & Egger, 2021; Peluso & Pichierri, 2020; Turnšek et al., 2020). In addition, media warnings about higher mortality rates and perceived lack of control over the situation may lead to stronger attitudes toward risk avoidance among the elderly (Das & Tiwari, 2020; Peluso & Pichierri, 2020).

In low-income people, the stronger relationship between risk-avoidance attitudes and travel intentions may be due to their fewer financial resources to cover the costs imposed if they become ill. This group lacks the option of choosing safer and more personalized travel options, which can be more expensive. In addition, since people with higher education try to get more diverse information, they are more likely to negatively evaluate the disease's consequences. Previous studies have shown the impact of news and messages on individuals' risk assessment (Xu & Cheng, 2021).

The negative relationship between perceived risk and travel intention is higher among females, those aged 45-65, those who lived with their spouses and children, the high-income group, and those holding a high school diploma.

According to previous studies, women perceive certain risks, such as health risks, more than men (Das & Tiwari, 2020; Hotle et al., 2020; Karl et al., 2020; Khan et al., 2019; Neuburger & Egger, 2021). The reason may be their social role in the family (Das & Tiwari, 2020) or because they have learned to take fewer risks during the socialization process (Lepp & Gibson, 2008). Moreover, married people have a higher perceived risk because of their responsibilities (Das & Tiwari, 2020). Having children on a trip also affects perceived risk. Tourists traveling with children have different perceptions of risk and consider other criteria in travel decision-making. Although studies have found a negative correlation between perceived risk and level of education, income does not always explain perceived risk (Karl & Schmude, 2017). In general, studies on the role of demographic variables in perceived risk yielded inconsistent results; some indicated a significant difference, while others found no significant difference due to other factors (Khan et al., 2019).

The results support the idea that leisure and pilgrimage travel purposes moderate the negative relationship between perceived risk and travel intention. In addition, all travel purposes (except work-education) would reinforce the negative relationship between risk aversion attitude and travel intention. Khan et al. (2019) have emphasized that the travel motivations of each market segment need to be considered when developing marketing strategies because motivations strongly influence tourists' decision-making and behavior.

Concerning pilgrimage, previous research has shown that, contrary to expectations, religious people would perceive travel risks more (He et al., 2013). In addition, crowded places of worship and a high risk of infection may explain why people avoided religious travel during the COVID-19 pandemic. The lack of moderating effect of VFR in the relationship between perceived risk and travel intention can be explained by the lower perceived risk associated with the features of this travel due to travelers' connections with the host community and their familiarity with the destination (Backer & Ritchie, 2017). Besides, as many families refused to travel during the 2020 Iranian New Year holidays due to the COVID-19 outbreak, they might decide to visit their relatives during summer vacations. Meanwhile, repeated warnings about the high risks of family gatherings have led to a negative attitude toward taking traveling risks.

Based on the cost-benefit analysis, the respondents' idea of unnecessary travel can be explained by the strong moderating role of leisure travel purpose in the relationships investigated. People who decide to travel may experience high levels of stress and risk, as well as the failure to achieve tranquility and peace as their primary motivations (Abdullah et al., 2020). Previous research has indicated that perceived risks such as terrorism, infectious disease, or natural disasters cause tourists to cancel their leisure trips due to the importance of safety (Khan et al., 2019).

In this study, work-education is the only travel purpose that does not appear to play a moderating role in the relationships investigated. The reason for this might be the necessity of such travel and the lack of alternatives, which force individuals to have travel intentions despite their negative attitude to risk and perceived risk. The findings of Das and Tiwari (2020) revealed that people traveling for work/education-related goals were less likely to adopt personal non-pharmaceutical interventions. The wide-ranging use of online technologies is expected to reduce the need for work/education-related travel (Ivanova et al., 2021).

Increased knowledge of COVID-19 risks raises perceived risk, while a higher frequency of past travel reduces it. Tourists' perceptions of the disease's threats will be greatly increased as they gain a better understanding of how easily the coronavirus spreads and the risks/dangers of infection. Respondents reported lower travel intentions linked to increased perceived risk, resulting from more knowledge of COVID-19 concerns. This observation was also confirmed by Zhu and Deng (2020). In terms of the negative relationship between frequency of past travel and perceived risk, the findings were compatible with those of Neuburger and Egger (2021) and Karl et al. (2020). Furthermore, increased travel frequency during the COVID-19 pandemic may reduce perceived risk, resulting in increased future travel intention.

Increased knowledge of the disease reinforces risk aversion attitudes, therefore, reducing travel intention. These findings matched those of Zhu and Deng (2020) and Han et al. (2020). They found the mediating role of attitude in the relationship between knowledge and behavioral intention. In most areas, except medicine, having considerable knowledge of risk could make an individual more willing to confront risk. Given the incompatibility of cost and benefit under COVID-19 conditions, more knowledge about COVID-19 risks would reduce an individual's risk-taking tendency (Zhu & Deng, 2020).

The findings show that increasing people's frequency of travel under COVID-19 conditions can reduce their negative attitudes toward risk-taking. Moreover, there is a mediating role for risk aversion attitude in the relationship between frequency of past travel and domestic travel intention. However, no previous studies have investigated this role. As tourists usually judge a destination based on their actual experiences (Chua et al., 2021), their last safe trip may encourage them to take more travel risks and increase their tendency to travel.

Finally, the increased perceived risk reinforces the individuals' risk aversion attitude, consistent with Bae and Chang (2021) and Sánchez-Cañizares et al. (2021) findings.

6. Conclusion

6.1. Theoretical Contribution

The tourism industry faces a tremendous challenge, but it is essential to learn lessons from the COVID-19 pandemic, which is still a global disaster (Gössling et al., 2021). The study findings had various theoretical implications. *First*, this study explored the structural relationships between factors supposed to affect domestic tourism intentions in Iran under COVID-19 conditions. As such, it tried to expand the emerging body of research on travel intention during the pandemic. Previous research findings were further examined in Iran's context, which was hard hit by the COVID-19 outbreak. *Second*, given that the COVID-19 pandemic has not been contained yet, the findings could serve as a reference for longitudinal studies looking at tourists' behavioral changes in the short- and long term. *Third*, scientists have warned that environmental changes might result in future pandemics (EuropeanCommission, 2020). Communities can use the findings of such studies in their planning for potential crises. Recognizing people's travel intentions during a pandemic would be an overriding element in formulating policies/strategies to reduce perceived risk and improve risk aversion attitudes while enhancing marketing messages.

6.2. Practical Contribution

The results of this study provide important managerial implications for DMOs and the industry. Considering the influence of perceived risk and attitude on travel intention, it is recommended that changes be implemented throughout the whole tourism value chain and in each step of the traveler's journey (UNWTO, 2020c) to increase safety, reduce perceived risk, and improve attitudes toward safe travel. Different tourism sectors, for example, can adopt measures, such as contactless payments, check-in and boarding in the transportation sector, e-tickets and e-booking for visits and entertainment, and contactless border control. They can enhance the use of technology at the destination for safe, seamless, and touchless travel (UNWTO, 2020b). Apart from the importance of knowledge, these initiatives should be communicated to potential tourists to raise their awareness and recover their confidence (OECD, 2020a). Businesses should also share knowledge and best practices to help the destination recover (UNWTO, 2020c).

Furthermore, tourists' awareness of coping behaviors needs to be raised to reduce infection risks while traveling. For each market segment, destinations need to communicate with potential tourists using the appropriate media (mass media, social media, or destination website). As stated by UNWTO (2020b), destinations would have to provide travelers with reliable, consistent, and easy-to-access information on protocols by sending SMS to tourists, informing them of national and local health protocols, and relevant health contacts. Customers should be informed about protocols and responsibilities by the private sector, both on-site and through digital and social media. According to the OECD (2020a), to reduce consumers' perceived risk, DMOs need to provide safe and clean labels and certificates to reassure visitors that tourism businesses and destinations follow national and international sanitary protocols.

This research shows that destinations can target tourists who have traveled during the COVID-19 pandemic and have developed coping strategies to prevent infection and reduce perceived risk. Destinations should also prioritize market segments and formulate targeted marketing strategies.

Based on the results, tourism destinations must target younger and single individuals, childless couples (who feel fewer degrees of responsibility/concern), and tourists for work-

education purposes in order to recover tourism. Such groups would experience weaker associations between perceived risk and travel intention and risk aversion attitude and travel intention. Tourists who perceive more risks (e.g., the elderly, people traveling with their children, people with higher education, and tourists who pursue other travel purposes) need to receive more information about preventive strategies and coping behaviors to reduce infection risks. UNWTO (2020b) has also suggested developing segmented and sustainable products for niche markets. In addition, OECD (2020b) and UNWTO (2020a) recommended that marketing activities must primarily target young tourists.

6.3. Limitations and Directions for Future Research

As communities vary in their levels of risk-taking, the validity of the model can be tested in other destinations, rather than just Iran. Additionally, the data was gathered using a cross-sectional analysis, despite the fact that people may change their travel intentions in different phases of COVID-19 containment. Moreover, other potential factors influencing travel intentions in risky situations were not investigated in this study. Finally, the study drew on a convenient sampling method via an online platform, limiting the findings' generalizability.

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