



UNDERSTANDING THE RELATIONSHIP BETWEEN FEAR OF PANDEMICS AND HOTEL VISIT INTENTION: A MULTIPLE MEDIATION MODEL

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KEYWORDS

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Purchase-based risk perception
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Tourist behavior

ABSTRACT

In the context of the COVID-19 pandemic, it is evident that pandemics entail significant and far-reaching economic and psychosocial consequences globally. This study seeks to examine the psychological impact of the fear of pandemics on the tourism sector by investigating the relationship between the Fear of COVID-19 and hotel visit intentions. Employing a multiple mediation model, we aim to enhance our understanding and specifically focus on the mediating roles of tourism-based risks (destination risk, health risk, and travel risk) and purchase-based risk perception in a pandemic situation. The study draws on quantitative data obtained from travelers through a structured questionnaire. The findings reveal that, although fear of COVID-19 heightens tourism-based risks and purchase-based risk perceptions, it concurrently diminishes hotel visit intentions. The authors propose a model to guide hotel managers and provide a concise summary of practical and strategic recommendations. It is noteworthy that the impact of the fear of COVID-19 on hotel service purchase intention, mediated by risk perception and various travel risk types, remains underexplored in the existing literature. Hence, the authors present a model that is particularly relevant for hotel managers, compressing practical and strategic insights.

1. INTRODUCTION

The novel coronavirus disease has resulted in a high fatality rate and infection rate (Ahorsu et al., 2020). Additionally, therapeutic options are currently unavailable (Jian et al., 2020), leading to heightened panic (Islam et al., 2021) and increased fear, worry, and anxiety emotions (Hassan and Soliman, 2021). For instance, COVID-19 has originated fear related to economic downturns, societal impacts, job loss, extended lockdowns, disruption of routines (Mertens et al., 2020), concerns about physical health and life (Mahmud et al., 2020), as well as fears of contracting the virus and the socio-economic consequences of the pandemic (Taylor et al., 2020).

Overall, the Fear of COVID-19 (FCV) is defined as "a negative emotional state that captures the anxiety and depression experienced due to an awareness of the possible consequences of the COVID-19 pandemic" (Jian et al., 2020). The concept of FCV has gained significant attention in the academic community and is a crucial point for researchers. It is frequently explored in studies related to consumer behaviors, such as purchasing behavior (Hassan and Soliman, 2021), travel intention (Luo and Lam, 2020), revisit intention (Rather, 2021), booking intention (Apaolaza et al., 2022), and destination image (Ong et al., 2022)."

According to the Health Belief Model, any behavior

that may influence an individual's physical health or that an individual perceives may affect their physical health is considered a health behavior (Rosenstock, 1974). Therefore, it can be anticipated that someone prioritizing the avoidance of health hazards expects health-promoting behavior to reduce that risk (Champion and Skinner, 2008).

Travel restrictions and bans to prevent the spread of COVID-19 have increased tourists' perceived tourism-based risk types (travel risk, destination risk, health risk), defined as perceptions of risk related to travel (Floyd et al., 2004), negatively affecting customers' intention to travel (e.g., Agyeiwaah et al., 2021).

As risk can significantly impact destination choice and traveler behavior, the concept of risk has always been examined in the context of the tourism industry (Ritchie and Jiang, 2019). Risk perception is defined as the perception of possible negative consequences of purchasing or consuming products (Reisinger and Mavondo, 2005) and plays an essential role in an individual's choice of destinations and services (Agyeiwaah et al., 2021; Neuburger and Egger, 2021).

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According to the psychometric paradigm of how individuals perceive risk, risk is divided into two categories: unknown risk and frightening risk (Leppin and Aro, 2009). The authors categorize virus outbreaks leading to a health crisis as unknown risks, given the lack of information about the origin and the infection process being unobservable. Safety and security are crucial concerns among tourists (Poon and Adams, 2002). However, unknown health issues (e.g., Hassan and Solliman, 2021), like pandemics, create more fear than known risks. Godovykh et al. (2021) demonstrate that during the COVID-19 pandemic, travelers' behavioral intentions and attitudes were considerably negatively impacted by their fear of an unknown illness. On the other hand, Leppin and Aro (2009) classify pandemic influenza in the dread risk category, as viruses causing health crises are likely to spread rapidly worldwide, increasing their destructive impact and being difficult to control.

The tourism industry is vulnerable to threats, especially unexpected ones such as terrorist attacks, natural disasters, and epidemics/pandemics (Işık et al., 2020; Jiang and Wen, 2020; Gupta et al., 2021). Previous research has shown that crises such as September 11th (Floyd et al., 2004), the Ebola epidemic (Foroudi et al., 2021), and the SARS pandemic (Gupta et al., 2021) had negative impacts on the industry. Diseases can significantly spread via travel (Nicolaidis and Labropoulos, 2019) during pandemic influenzas. The COVID-19 pandemic has also made hotel visit intentions unpredictable, negatively impacting the tourism industry (Hassan and Soliman, 2021; Foroudi et al., 2021). Thus, continual viral mutation raises health concerns, and this condition does not facilitate the tourism industry's return to pre-COVID-19 levels, resulting in a persistent unwillingness to travel (Shin et al., 2022).

However, the specifics of the tourism industry's recovery process are unidentified after the pandemic. Despite an increase in tourism income, the impact of fear and risk perception on tourists' purchase intention is unknown during the COVID-19 pandemic. This study aims to assess the association between FCV and hotel visit intentions in the early stages of the pandemic by conducting a multiple mediation model. To enhance our comprehension of this connection, we concentrate on the mediating function of tourism-based risk types and purchase-based risk perception. Thus, this article contributes to an under-researched area of risk management in a health crisis by primarily investigating the effects of FCV on hotel visit intention. Secondly, testing the relationship between tourism-based risk types and risk perception to understand the significant effects of travel, destination, and health risks on hotel visit intention. Lastly, deepening the understanding of risk management strategies in a health crisis by offering a multiple mediation model that provides a holistic perspective.

2. LITERATURE REVIEW

2.1. Fear of COVID-19 (FCV) and Hotel Visit Intention

Diseases or pandemics prominently evoke fear emotions (Moukaddam, 2019), such as FCV. It constitutes a negative emotion encompassing

depression and anxiety, arising from the high death rates associated with infection and the absence of preventive or therapeutic measures (Jian et al., 2020). Consequently, pandemics introduce uncertainty, fear, and risk into the tourism industry (Das et al., 2023; Foroudi et al., 2021), potentially constraining tourism growth (Yang et al., 2020; Dogru et al., 2023).

Previous instances like the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003, Avian Flu (H1N5) in 2005, Swine Flu (H1N1) in 2009, and the Middle East Respiratory Syndrome (MERS) outbreak in 2015 have been major disruptive events causing substantial financial and human losses (Gupta et al., 2021). Similarly, the COVID-19 pandemic has inflicted a severe impact on hotel services (Jian et al., 2020), with numerous hotel reservations being canceled (Dogru et al., 2023) due to travel restrictions and the fear of encountering the coronavirus. However, the recovery is expected to be gradual until the hospitality industry returns to pre-COVID-19 occupancy and revenue levels (Shin and Kang, 2020; Dobrosielski, 2020).

H1: FCV decreases tourists' hotel visit intention.

2.2. The mediating role of tourism-based risk types

Early studies on tourism and risk utilized consumer behavior models to categorize various risk types (e.g., Cheron and Ritchie, 1982) that may influence travel decisions. According to Hassan and Soliman (2021), major risks for tourists are associated with health issues, crimes, and natural disasters. Consumer sentiment regarding travel safety and security may significantly decline when such risks emerge (Floyd et al., 2008), leading tourists to avoid potentially hazardous locations (Neuburger and Egger, 2021).

Furthermore, evidence indicates a decrease in travel demand based on perceived travel risks during disease circumstances (e.g., Leggat et al., 2010). The pandemic crisis increases perceptions of tourism and travel destinations as riskier (Foroudi et al., 2021). Previous pandemics have inflicted damage on the tourism and travel industry (Cahyanto et al., 2016) as well as the recent pandemic (Dogru et al., 2023). For example, the SARS outbreak resulted in an 80% reduction in airline passengers and a significant decline in hotel occupancies to 90% (Samdin et al., 2021), impacting tourism demand in Asia (Foroudi et al., 2021). During the novel pandemic, FCV has had adverse effects on tourists' perceptions and intentions (Godovykh et al., 2021).

Main component analysis categorizes hotel visit intentions during COVID-19 into three groups based on tourism-based risk types:

Travel Risk refers to the probability of experiencing any danger, especially COVID-19 in this study, while traveling (Fischhoff et al., 1984). Tourists' perceptions of potential outcomes of their travel decisions may increase perceived travel risk, leading to anxiety and fear of negative events (Park and Reisinger, 2010). Tourists' travel risk influences their psychological behavior regarding traveling to a destination (Rahman et al., 2021). It is predicted that FCV during the pandemic may enhance travel risk perception, potentially leading to a decrease in hotel visit intention.

Destination risk refers to potential dangers

associated with the destination (Fuchs and Reichel, 2006). When a destination is perceived as unsafe, negative impressions occur, making the destination less attractive to tourists (Chua et al., 2021). Therefore, it is anticipated that FCV during the pandemic may heighten perceived destination risk, resulting in a decrease in hotel visit intention.

Health Risks refers to potential dangers or harms to visitors' health and well-being during any tourism activity at the destination (Samdin et al., 2021). Perceived health risks, as proposed by the theory of perceived risk (Mitchell, 1999), can significantly influence customer behavior due to potential negative effects in a crowded environment. Preliminary fears of pandemics in travel research date back to instances such as foot and mouth disease (Frisby, 2002), SARS, and bird flu epidemics (Mao and Bian, 2010). Some studies (Seabra et al., 2013; Yang and Nair, 2015) discuss the need to analyze health risks in travel research, specifically addressing the "fear of pandemics" such as the SARS outbreak. Brug et al. (2009) support a direct link between perceived health threats and behavior during the SARS pandemic. Consequently, there is a need for more focused investigation into how COVID-19 is perceived as a health concern and how this perception influences tourists' travel plans.

H2: The negative effect of FCV on hotel visit intention is mediated by tourism-based risks types (health risk (H2a), travel risk (H2b), destination risk (H2c)).

2.3. The mediating role of purchase-based risk perception

Risk perception, defined as how a consumer perceives an action that could expose them to danger, can significantly influence travel decisions if the perceived threat is deemed greater than reasonable. This influence extends to destination choices (Ong et al., 2022). In the context of purchasing hotel services during the pandemic, sources of risk may stem from potential negative consequences related to performance (concerns about the quality of hotel service and hygiene), psychological aspects (anxiety associated with staying in a hotel rather than at home), or physical concerns (health risks posed by the virus). These risk sources amalgamate to constitute an overall level of perceived risk associated with the consumer's decision to purchase the hotel service (Campbell and Goodstein, 2001).

Rundmo (2002) argues that emotional factors are crucial predictors of risk estimates, with worry being particularly significant. Worry, defined as an uncontrolled thought arousing negative emotions and heightening anxiety and distress in anticipation of uncertain and likely negative outcomes, plays a central role in influencing risk perceptions. Given the infectious nature of COVID-19 and consumers' fear of infection through the consumption of hospitality and tourism services, the tourism sector and hotel visits are perceived as risky purchase situations (Atadil and Lu, 2021; Shin and Kang, 2020). Fear can easily emerge when individuals become aware of potential adverse health effects from being in a social situation with other people (Gursoy et al., 2021). According to the social amplification of risk framework, infections entail a social dimension more than other types of diseases. In this context, risk perception extends beyond an individual to include the likelihood that

close others will be affected (Leppin and Aro, 2009). Consequently, it has been found that FCV (Rather 2021a/2021b; Zhang and Huang, 2022; Pasztor et al., 2020) and perceived risk (Bratic et al., 2021; Seçilmiş et al., 2022; Rather 2021b) negatively impact tourists' traveling behavior.

However, in the post-lockdown period, the tourism industry experienced a positive shift. Certain travel restrictions were lifted in some countries, domestic flights resumed, and domestic travel markets reopened (UNWTO, 2020a). Concurrently, the approval of COVID-19 vaccines for emergency use positively impacted the reduction of FCV (Seçilmiş et al., 2022) and the willingness to stay at a hotel (Gursoy and Chi, 2021). Despite increased travel after strategic changes and medical advances, consumers' concerns about risks associated with tourism persisted (UNWTO, 2020a), altering travel trends and accommodation choices (Bresciani et al., 2021). Travelers, for example, opted for trips closer to home, made bookings closer to departure dates, favored car and RV trips (UNWTO, 2020a), engaged in one-day tours (Roy and Sharma, 2021), and showed a preference for shared accommodations (Lee and Deale, 2021).

H3: The negative impact of FCV on consumers' hotel visit intention is mediated by the perceived risk of hotel visits.

2.4. A multiple mediation models

The concept of risk has consistently been scrutinized within the framework of the tourism industry (Ritchie and Jiang, 2019). To establish a "favorable environment" for tourism development, it is crucial to comprehend how potential visitors perceive safety in their surroundings, which is intricately linked to perceived tourism-based risk (Sönmez and Graefe, 1998b). Tourists are unlikely to feel secure if they experience intimidation and anxiety during travel or their stay (Sönmez and Graefe, 1998b). Travelers with a heightened perception of travel risk are more inclined to opt for destinations they perceive as safer (Jahari et al., 2021). Therefore, tourists' perceived risk plays a pivotal role in travel and destination decisions during pandemics (Rahman et al., 2021).

In times increasingly prone to pandemic crises, a focus on the interplay of different risk types is essential to assist the tourism industry in reducing vulnerability and fostering resilience. Thus, understanding how tourists perceive the risk of visiting a hotel may be influenced by various tourism-based risks. Although not thoroughly explored to date, the current study aims to investigate the relationship between these two mediators.

H4: The negative effect of FCV on hotel visit intention is sequentially mediated by tourism-based risk types (health risk (H4a), travel risk (H4b), destination risk (H4c)), and purchase-based risk perception.

3. METHOD

3.1. Measurement of Variables

The FCV scale was adapted from Ahorsu et al. (2020). The scale assesses individual fears towards COVID-19 and comprises 7 items, including anxiety (e.g., "my hands become clammy when I think

about coronavirus-19") and depression levels of participants (e.g., "I am afraid of losing my life because of coronavirus-19"). It also gauges the perceived vulnerability of participants to infectious diseases and their dislike for germs. The overall score, derived from the sum of item scores, indicates the severity of FCV.

The Risk Perception scale and hotel visit intention scales were borrowed from Sözer (2019). The travel risk scale (Floyd et al., 2004) measures an individual's comfort and anxiety about travel (e.g., "I am afraid of traveling at the moment"), while the health risk scale (Floyd et al., 2004) reflects an individual's concerns about the safety of travel decision making. The destination risk scale (Fuchs and Reichel, 2006) is employed to measure an individual's level of destination risk. Respondents express their opinions using a five-item scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3.2. Data Collection and the Sample

Two proficient academics independently translated English surveys into Turkish, after which they collaborated to address any translation issues in the Turkish version. Subsequently, two separate expert academics performed back-translations of the revised Turkish version into English. Both experts reconciled any inconsistencies in their translations, resulting in a finalized English version. All four translators convened to refine the Turkish instrument, and three bilingual academics conducted a final assessment, making minor adjustments to enhance clarity.

Structured questionnaires were disseminated to participants using an online survey method, employing convenience sampling. Eligible participants were individuals residing in Turkey who had purchased hotel services at least once in their lives. To determine the sample size, a formula based on estimates of effect size, level of statistical power, number of variables, and probability level, as recommended by Soper (n.d.), was employed. According to this formula, the recommended minimum sample size was 161. We received 274 responses, but due to survey incompleteness, 263 responses were ultimately deemed usable.

As indicated in Table I, both females (60.1%) and males (39.9%) were represented in the sample, with ages ranging between 19 and 65 years. The majority of participants (86.3%) reported not having a chronic disease.

Table I: Respondent demographics (N=263)

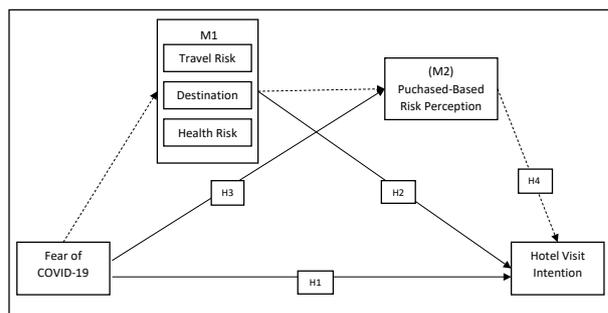
Items	Classification	Sample Amounts	Percentage (%)
Gender	Female	158	60.1
	Male	105	39.9
Age	Under 20	4	1.5
	20-29	138	52.47
	30-39	58	22.05
	40-49	46	17.49
	50-59	9	3.42
	60 and Above	3	1.14
Chronic Condition	Yes	35	13.3
	No	227	86.3

3.3. Statistical Analyses

All analyses were conducted with 263 participants. Descriptive statistics and Pearson's correlation method were employed to evaluate the bivariate relationships between variables. Kurtosis and skewness values were calculated to verify normal univariate distribution (Tabachnick and Fidell, 2013).

For hypothesis testing, three different multiple (serial) mediation models (Preacher and Hayes, 2008, p. 880) were utilized. Figure 1 illustrates the two-mediator model, where the independent variable (X) affects the dependent variable (Y) through four different pathways. One pathway represents the indirect effect of X on Y with the first mediator (M1) only; the second pathway involves the second mediator (M2) only, and the third pathway is indirect through both mediators (M1 and M2) sequentially. In this study, three different multiple mediator models were constructed, corresponding to three different M1 variables (travel risk, destination risk, and health risk). The participants' chronic disease status was used as a control variable in this study due to unequal variance distribution.

Figure 1: The Serial Mediation of Tourism-based Risk Types (destination risk, travel risk, health risk) and Purchased-based Risk Perception in the Relationship between Fear of COVID-19 and Hotel Visit Intention



Bootstrapping analyses of the study were conducted using "Multiple Mediation Model 6" through the PROCESS Macro with 5000 bootstrap samples (Hayes, 2017). Following Hayes (2009), the assertion of a significant indirect effect requires that the 95% confidence interval "between the lower and upper bound must not include zero." A p-value of 0.05 is considered on the borderline of statistical significance.

3.4. Common Method Variance

Due to all responses being derived from consumers in this study, common method variance (CMV) was assessed to investigate the possibility (Aragon-Correa and Sharma, 2003). CMV could lead to a false relationship between constructs. In this study, the single-factor method of Harman and the correlation coefficient between variables were used to test CMV. Harman's one-factor test was applied to load each of the construct items examined, and one factor explained 39.11 percent of the variance, which is below the minimum threshold value (50 percent), indicating that CMV is not severe. Additionally, the correlation coefficient of the different relationships is not greater than 0.9, indicating a lower level of CMV. Therefore, this study exhibits a lower level of CMV.

4. FINDINGS AND DISCUSSION

4.1. Reliability and Validity Analysis

In this study, each construct's reliability was assessed by examining Cronbach's Alpha, with a minimum requirement of 0.7 (Fornell and Larcker, 1981:39-51). As shown in Table II, the Cronbach's Alpha values of all constructs exceed the acceptable value of 0.7, indicating the reliability of the measurements is acceptable.

The validity of the constructs was evaluated using discriminant validity and convergent validity. According to Hair et al. (2014), AVE above 0.5 and CR above 0.7 are acceptable. AVEs and CR values for the construct meet the recommended values (Hair et al., 2014), indicating that the content validity of the measurements is accepted. Therefore, there is convergent validity for the construct. Table II presents Cronbach's Alpha coefficient, average variance extracted (AVE), and composite reliability (CR) of the measurements.

Table II: Reliability, confirmatory factor analysis and discriminant validity analysis

Constructs	Cronbach's Alpha	Composite reliability (CR)	Average Variance Extracted (AVE)
FCV	0.92	0.91	0.60
DR	0.82	0.83	0.56
TR	0.85	0.86	0.68
HR	0.93	0.93	0.87
RP	0.84	0.83	0.56
HVI	0.89	0.90	0.69

Model fits CMIN=671.879; DF=252; CMIN/DF=2.66; CFI=0.91; RMSEA=0.08

FCV: fear of COVID-19; DR: destination risk; TR: travel risk; HR: health risk; RP: purchase-based risk perception; HVI: Hotel visit intention

To examine discriminant validity, a heterotrait-monotrait (HTMT) correlation ratio was assessed, as shown in Table III. Henseler et al. (2015) found that HTMT has greater specificity and sensitivity (97% to 99%) than the cross-loadings criteria (0.00%) and Fornell-Lacker (20.82%) using Monte Carlo simulation. If the HTMT exceeds 0.85, discriminant validity is considered lacking. Some authors recommend a threshold of 0.85 (Kline, 2011), while Gold et al. (2001) suggest 0.90. In our study, all HTMT values are below 0.85, indicating that HTMT does not suggest discriminant validity problems. Additionally, the results of the constructs revealed that a measurement model comprising all study constructs had fit indices (CMIN=671.879; DF=252; CMIN/DF=2.66; CFI=0.91; RMSEA=0.08) that meet the recommended values.

Table III: Heterotrait-Monotrait Ratios (HTMT)

	FOC	DR	TR	HR	RP	HIV
FOC						
DR	0.56					
TR	0.65	0.70				
HR	0.33	0.45	0.60			
RP	0.56	0.57	0.75	0.47		
HVI	-0.30	-0.45	-0.60	-0.37	-0.56	

4.2. Descriptive Statistics and Correlation Analysis

In addition to the content validity assessment, as demonstrated in Table IV, criterion validity was examined using correlation analysis, indicating that

the constructs operate credibly. Table IV illustrates the means, standard deviations, and correlations of the study variables. FCV positively correlated with DR ($r = 0.47, p < 0.01$), TR ($r = 0.57, p < 0.01$), HR ($r = 0.30, p < 0.01$), and RP ($r = 0.49, p < 0.01$), while negatively correlated with HVI ($r = -0.26, p < 0.01$).

Table IV: Descriptive Statistics and Correlation among Variables

		M	SD	1	2	3	4	5	6
1.	FCV	3.18	1.00	1					
2.	DR	2.74	0.86	0.47***	1				
3.	TR	2.07	0.91	0.57***	0.59**	1			
4.	HR	1.56	0.73	0.30***	0.40**	0.53**	1		
5.	RP	2.16	0.86	0.49***	0.44**	0.63**	0.43**	1	
6.	HVI	4.26	0.67	-0.26**	-0.32**	-0.40**	-0.36**	-0.36**	1

Note. ***p < 0.01. N=267

4.3. Mediation Model Analyses

In three multiple mediation models, the serial link between FCV and HVI via HR, TR, and DR as M1 and RP as M2, with participants' chronic diseases as a control variable, was examined. The multiple mediations were tested using Model 6 of the PROCESS macro (Hayes, 2013). The direct effect of FCV on HVI was significant (direct effect= -0.28, 95% CI= -0.40 to -0.16), supporting H1.

First, multiple mediations were tested for health risk (HR) (M1). According to the results of the analysis, while controlling for the effect of participants' chronic diseases, the pathway from FCV to HVI via HR was significant (indirect effect = -0.05, 95% CI= -0.08 to 0.02). Therefore, H2a was supported. The second pathway from FCV to HVI via RP was significant (indirect effect = -0.06, 95% CI = -0.10 to -0.02), thus supporting H3. The sequential pathway from FCV to HVI was also significant (indirect effect = -0.01, 95% CI = -0.03 to -0.01). Therefore, HR and RP only sequentially mediated the link between FCV and HVI. Thus, FCV was serially related to increasing HR ($b=0.22, p<0.001$) and RP ($b=0.35, p<0.001$), but lowered the HVI ($b= -0.17, p<0.001$). This supports H4a. The residual direct pathway from FCV to HVI was also significant ($b=-0.17, p<0.01$). Thus, HR and RP sequentially mediated the link between FCV and HVI. The details were shown in Table V.

Table V: Testing the pathways of the multiple mediation model model (M1= Health risk)

Effect	b	SE	t	p	LLCI	ULCI
Direct effects						
FCV → HR	0.22***	0.04	4.98	0.00	0.13	0.30
HR → RP	0.37***	0.06	5.81	0.00	0.24	0.49
RP → HVI	-0.17***	0.05	-3.15	0.00	-0.27	-0.06
FCV → RP	0.35***	0.05	7.53	0.00	0.26	0.44
HR → HVI	-0.22***	0.06	-3.80	0.00	-0.33	-0.10
FCV → HVI	-0.17**	0.04	-4.31	0.00	-0.25	-0.10
Indirect effects						
	b	SE			LLCI	ULCI
FCV → HR → HVI	-0.05	0.01			-0.08	-0.02
FCV → RP → HVI	-0.06	0.02			-0.10	-0.02
FCV → HR → RP → HVI	-0.01	0.01			-0.03	-0.01

Note. ***p < 0.001.

FCV=Fear of COVID-19; HR=Health Risk; RP=Purchased-based Risk Perception; HVI=Hotel Visit Intention

Second, multiple mediations were also tested for travel risk (TR) (M1). The pathway from FCV to HVI via TR was significant (indirect effect = -0.10, 95% CI = -0.16 to -0.05), supporting H2b. The pathway from FCV to HVI via RP was also significant (indirect effect = -0.02, 95% CI = -0.05 to -0.01). The sequential pathway from FCV to HVI was significant as well (indirect effect = -0.03, 95% CI = -0.07 to -0.01). The residual direct pathway from FCV to HVI was also statistically significant (b= -0.17, p<0.01). Moreover, TR and RP sequentially mediated the link between FCV and HVI. Thus, FCV was serially related to increasing TR (b=0.51, p<.001) and RP (b=0.17, p<.001), but decreased the HVI (b=-0.17, p<.001). H4b is supported. The details were shown in Table VI.

Table VI: Testing the pathways of the multiple mediation model model (M1= Travel risk)

Effect	b	SE	t	P	LLCI	ULCI
Direct effects						
FCV → TR	0.51***	0.05	11.07	0.00	0.42	0.60
TR → RP	0.49***	0.05	8.89	0.00	0.38	0.59
RP → HVI	-0.14	0.06	-2.42	0.02	-0.25	-0.03
FCV → RP	0.17***	0.05	3.53	0.00	0.08	0.27
TR → HVI	-0.20***	0.06	-3.50	0.00	-0.31	-0.09
FCV → HVI	-0.17**	0.04	-4.30	0.00	-0.25	-0.09
Indirect effects						
			b	SE	LLCI	ULCU
FCV → HR → HVI			-0.10	0.03	-0.16	-0.05
FCV → RP → HVI			-0.02	0.01	-0.05	-0.01
FCV → HR → RP → HVI			-0.03	0.01	-0.07	-0.01

Note. ***p < 0.001.

FCV= Fear of COVID-19; TR= Travel Risk; RP= Purchased-based Risk Perception; HVI= Hotel Visit Intention

Third, multiple mediations were also tested for destination risk (DR) (M1). The pathway from FCV to HVI via DR was significant (indirect effect = -0.06, 95% CI = -0.10 to -0.01). H2c is supported. The pathway from FCV to HVI via RP was also significant (indirect effect = -0.06, 95% CI = -0.10 to -0.02). Therefore, DR and RP mediated the link between FCV and HVI. The sequential pathway from FCV to HVI was significant as well (indirect effect = -0.02, 95% CI = -0.04 to -0.01). The residual direct pathway from FCV to HVI was also significant (b=-0.17, p<0.01). Thus, FCV was serially related to increasing DR (b=0.40, p<.001) and RP (β= 0.28, p<.001), but decreased the HVI (b= -0.17, p<.001). DR and RP sequentially mediated the link between FCV and HVI. Therefore, H4c is supported. The details were shown in Table VII.

Table VII: Testing the pathways of the multiple mediation model model (M1= Destination risk)

Effect	b	SE	t	P	LLCI	ULCI
Direct effects						
FCV → DR	0.40***	0.05	8.58	0.00	0.31	0.49
DR → RP	0.28***	0.06	4.67	0.00	0.16	0.40
RP → HVI	-0.20***	0.05	-3.72	0.00	-0.30	-0.10
FCV → RP	0.31***	0.05	6.16	0.00	0.21	0.41
DR → HVI	-0.14	0.05	-2.69	0.01	-0.25	-0.04
FCV → HVI	-0.17**	0.04	-4.31	0.00	-0.25	-0.09
Indirect effects						
			b	SE	LLCI	ULCU
FCV → DR → HVI			-0.06	0.02	-0.10	-0.01
FCV → RP → HVI			-0.06	0.02	-0.10	-0.02
FCV → DR → RP → HVI			-0.02	0.01	-0.04	-0.01

Note. ***p < 0.001.

FCV= Fear of COVID-19; DR= Destination Risk; RP= Purchased-based Risk Perception; HVI= Hotel Visit Intention

The present study aims to examine the link between the fear of pandemics and the hotel visit intentions of tourists, with mediating roles of tourism-based risk types and purchase-based risk perception. The research results provide comprehensive findings for academics and tourism marketers. Fear can be a predominant emotion in the occurrence of tourism-based risk types, such as anxiety and a fear of potential negative events while traveling, potential danger perceptions related to the destination, and potential harm to visitors' health and well-being during tourism activities. In 2003, hotel occupancy rates in China fell by 10% (Wilder-Smith, 2006), and in Thailand, by 8.8% (Rittichainuwat and Chakraborty, 2009), due to the fear of SARS. Swine flu fear also decreased hotel occupancy by up to 55% in Mexico in 2009 (Staff, 2009).

When the impact of participants' chronic conditions is controlled, the fear of COVID-19 negatively affects tourists' hotel visit intention, consistent with the first hypothesis. This result indicates that tourists avoid purchasing hotel services to protect themselves from crowded environments. Moreover, we observed that health risk is an important explanatory mechanism through FCV to hotel visit intention. Therefore, the greater the fear emotion that is felt, expectations about health issues during traveling will be high and make tourists avoid hotel visits.

In addition to health risks, we also found that high FCV causes an increase in destination risk and travel risk, which also decreases hotel visit intention. The results show that FCV increases risk perceptions even in domestic destinations, consequently decreasing hotel visit intention. Besides, the greater the fear emotion that is felt, the riskier the traveling behavior becomes, further decreasing the hotel visit intention. These findings are roughly consistent with the prior research findings (Sönmez and Graefe, 1998a; 1998b; Karagöz et al., 2020) that focus on safety concerns and travel intention.

Substantial evidence has been found for the protection motivation theory (Rogers, 1975), which maintains that individuals engage in protective behavior when the threat and the possibility of accruing are high, mitigating actions (e.g., alternative travel behavior or staying home) occur, and if there are manageable consequences (e.g., postponing or canceling the travel) (Floyd et al., 2004). In this sense, high travel, destination, and health risk are not only an outcome of FCV but also an antecedent of hotel visit intention.

Our results also illustrate that purchase-based risk perception is another mediator between FCV and hotel visit intention. For the second part of the mediation process, we found that high-risk perception decreases tourists' hotel visit intention. Although risk perception is important to consumers' decisions and judgment (Yavas, 1987), people tend to avoid visiting places deemed risky (Sönmez & Graefe, 1998a). Therefore, the hotel visit intention is significantly influenced by physical risks (one of the purchase-based risks), such as the danger of contracting a virus (Chew and Jahari, 2014). This mediation finding is consistent with the study (Neuburger and Egger, 2021) that found the COVID-19 pandemic significantly influences risk perception and willingness to change or cancel travel intentions. Also, some researchers found that

FCV (Rather 2021a/2021b; Zhang and Huang, 2022; Pasztor et al., 2020) and perceived risk (Bratic et al., 2021; Seçilmiş et al., 2022; Rather 2021b; Karagöz et al., 2023) have both negative impacts on tourists' travel behavior.

Finally, the sequential pathway from FCV to hotel visit intention was significant as well. Thus, FCV was serially related to increasing health risk, travel risk, and destination risk, where they increase purchase-based risk perception and lower hotel visit intention. This result reveals the relation between tourism-based risk types and purchase-based risk perception. People with high-risk perceptions about health concerns in destination areas, vacations in domestic places, and traveling may find hotel visits riskier. To the best of our knowledge, this study is the first to show how FCV and the intention to purchase a hotel service are mediated by different tourism-based risk types and purchase-based risk perception.

5. CONCLUSIONS AND IMPLICATIONS

This study contributes to the existing knowledge about the association between FCV and hotel visit intention. First, to deepen our understanding of this relationship, we use a multiple mediation model and focus on the mediating roles of health risk, destination risk, travel risk, and purchase-based risk perception. The results of this analysis indicate that FCV sequentially lowers tourists' hotel visits. Specifically, FCV increases tourism-based risks (health risk, destination risk, and travel risk), increases purchase-based risk perception, and lowers tourists' hotel visit intention. Second, our work contributes to the growing body of knowledge about the effects of pandemic fear, including altered travel habits and hotel assessments in case of a potential health crisis.

On the other hand, in a pandemic situation, tourists may differ in vacation types; choosing trips closer to home, making bookings closer to the departure date, and opting for preferred car or RV trips (UNWTO, 2020a; Sozzi, 2020), or engaging in one-day tours by road in the luxury of their cars along with home-cooked food (Roy and Sharma, 2021) instead of using public transport (Rahman et al., 2021). In addition, tourists' accommodation choices may also change (Bresciani et al., 2021). For instance, it seems that COVID-19 will have a greater influence on shared accommodation (Airbnb, 2020; UNWTO, 2020). According to Lee and Deale (2021), customers' impression of the risk of using shared accommodations, such as Airbnb services, increased. This may be because of the nature of the pandemic, which has made sanitation, cleanliness, and hygiene more significant to consumers compared to the pre-pandemic period (Yuko, 2020). Although tourists must interact with others in shared public spaces such as lobbies or restaurants in hotels, they tend to choose Airbnb services that offer social distancing (Dogru et al., 2023; Yoo et al., 2022; Bresciani et al., 2021).

5.1. Theoretical Implications

This study extends prior research efforts (Tu et al., 2023; Rather, 2021a; Rather, 2021b; Zhang and Huang, 2022; Pasztor et al., 2020; Bratic et al., 2021; Seçilmiş et al., 2022) by examining the influence of fear emotions on hotel visit intentions during pandemics within the framework of a serial

mediation model.

We proposed a multiple mediation model to deepen our understanding of the predictors of hotel visit intentions. We found that Fear of COVID-19 (FCV) increases perceptions of various tourism-related risks (destination risk, travel risk, and health risk), subsequently elevating purchase-based risk perceptions and resulting in a decrease in hotel visit intentions. This finding is consistent with previous research (Maher et al., 2022; Spr et al., 2023; Gursoy et al., 2021).

Alam et al. (2023) concluded that fear amplifies anxiety, leading to a reduction in the intention to consume hotel services. In line with this, Agina et al. (2023) found that perceived risk has a negative impact on the intention to consume accommodation services, but remediation of risk factors can mitigate this effect. Specifically, Spr et al. (2023) suggested that promotional activities and service quality, including cleanliness, can reduce health risks, thereby increasing purchase intention. Achieving this may necessitate consumer experiences with the hotel, fostering loyalty, or establishing trust in specific hotel brands. This implies that tourism and hospitality brands may exhibit resilience to external shocks.

5.2. Practical implications

Our research has some major practical implications. First, in pandemic situations, we observe that safety and trust are essential factors in hotel management. Hence, we suggest that hotel managers enhance their safety and trust-based image to decrease the risk perceptions of tourists. Therefore, implementations in health practices such as additional health employees, and protocols with local hospitals or other healthcare organizations can be useful as a marketing tool. In addition, governmental partnerships can be utilized to decrease destination risk perceptions. Explaining the quality level of health organizations, providing statistics or numbers about health facilities, may increase safety perceptions. Establishing private travel facilities or developing safe travel instructions may decrease the travel risk perceptions of tourists. Thereby, these policy recommendations can help managers manipulate the visit intention of tourists by decreasing purchase-based risk perception.

5.3. Limitations and Future Directions

As with all research, this study has several limitations. First, although we propose a multiple mediation model in our study, FCV is still a new topic for research, and it is not possible to establish causality due to the inadequacies of research. Additional longitudinal studies are needed to better examine the validity of these relations in the proposed model. The Fear of Coronavirus Scale is a newly developed scale. It is important to mention that only Turkish data were gathered for the current study. However, FCV and risk perception are deeply attached to cultural frameworks, and the results have a narrow range of generalizability. Future research may consider collecting data from different cultures.

The majority of the participants in this study were between the ages of 20-29. It is recommended to examine different age ranges for further studies to provide a more comprehensive understanding of the relationship across various age groups. Additionally,

the presence of chronic diseases was used as a control variable in this study, as the majority of the participants did not have any chronic conditions. It may be useful to consider chronic conditions as a moderating variable for future studies. Future research could explore the differences between participants with chronic conditions and those without chronic conditions. This study addresses the uncertainties caused by health crises. In addition, it is suggested that future studies should examine the effects on tourism by addressing concepts with high uncertainty elements such as climate crisis, economic policy, climate policy, renewable energy, economic freedom, and wars.

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CONFLICT OF INTEREST

We Declare that there are no conflicts of interest attached to this manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author's respondents who participated in the survey while developing this article.

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