The effect of threat and fear of COVID-19 on booking intentions of full board hotels: The roles of perceived coping efficacy and present-hedonism orientation

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ABSTRACT

This study proposes a novel theoretical model on the negative effect of the perceived cognitive threat and fear of COVID-19 on full board hotel booking intentions, which includes the moderating effects of perceived coping efficacy and present-hedonism orientation. The model was tested with a representative online sample (N = 400) of the Spanish population older than 35 years. The results confirmed negative effects of threat and fear of COVID-19 on hotel booking intentions, as well as a negative moderating effect of perceived coping efficacy on the influence of fear of COVID-19. However, coping efficacy did not moderate the effect of perceived cognitive threat on hotel booking intentions. The present-hedonism orientation positively affected full board hotel booking intentions, but did not, however, reduce the negative effect of threat or fear on those intentions. The findings provide new insights for hospitality managers that can contribute to accelerate the recovery of the hospitality industry.

1. Introduction

Health crises, such as outbreaks generated by infectious diseases, can have a significant negative impact on tourism (Pine and McKercher, 2004; Sánchez-Cañizares et al., 2020). In comparison to other pandemics, the SARS-CoV-2 or COVID-19 pandemic has had unprecedented consequences on the tourism industry across the globe (Kock et al., 2020; Pillai et al., 2021). Health measures taken by governments to minimize the spread of the virus, such as lockdowns or quarantining, or people's decisions to avoid public spaces for fear of contagion, have had unfortunate impacts on the hospitality industry (Gursoy and Chi., 2020). The hospitality sector has been globally one of the most impacted by the COVID-19 pandemic (Rather, 2021; Sánchez-Cañizares et al., 2020; Yu et al., 2020). The present study focuses on Spain, which was the world's second most-visited nation in the year before the pandemic started and is one of the European countries that has been strongly affected by the pandemic in terms of number of contagions and mortality rate (Hernández-López et al., 2021). Also, by 2020, the profitability of the Spanish hospitality industry had decreased 66% in comparison to the

previous year (Statista, 2020). According to EY (2020), hospitality is one of the most important sectors in Spain due to its contribution to the country's economy, representing 6.2% of the gross domestic product, which is a higher proportion than in most European countries. All-inclusive full board hotels are particularly popular in Spain. In 2019, almost 84 million foreign tourists visiting Spain stayed in a full board hotel (INE, 2020). These hotels are mainly used by leisure travelers for vacations, and they often include entertainment activities. Since full board hotels also provide breakfast, lunch, and dinner buffets served in designated rooms/areas where many people congregate, the risk of infections is particularly high in a pandemic situation. Research on previous outbreaks suggests that it might take a while for the tourism industry to recover (Novelli et al., 2018). For the COVID-19 pandemic, estimations are that by 2023, or later, the hotel demand will reach pre-COVID 2019 levels (Borko et al., 2020). According to Neuburger and Egger (2020), different studies have analyzed tourist risk perceptions after a health crisis (e.g., Cahyanto et al., 2016; Leggat et al., 2010; Pine and McKercher, 2004). However, the nature and effect of COVID-19 surpasses all previous health crises and affects the risk perception of

travelers severely, influencing their travel behaviors (Ivanova et al., 2020; Pillai et al., 2021). Even after adopting measures to control the spread of the disease and even after the reopening of the industry, the recovery will rely on the safety perceptions of tourists (Godovykh et al., 2021). According to Zheng et al. (2021), travel behaviors in the post-COVID-19 era may be more oriented toward safety.

Literature addressing the effect of public health crises on tourism, and specifically concerning COVID-19 is still scarce (Zheng et al., 2021; Lai and Wong, 2020). Yet, understanding the impact of COVID-19 on tourism behavior is necessary for the recovery of the industry (Qiao et al., 2021; Abbas et al., 2021; Garrido-Moreno et al., 2021). Protection motivation theory (PMT; Maddux and Rogers, 1983; Rogers, 1983) has been used as a framework to address the effect of health threats on tourism behavior (e.g., Fisher et al., 2018; Wang et al., 2019; Wong and Yeh, 2009). Recent studies have applied PMT to the effects of the COVID-19 threat on general travel intentions (Zheng et al., 2021; Qiao et al., 2021). However, except for Zheng et al. (2021), who consider travel fear as a mediator of the effect of COVID-19 threat perception, previous research has not addressed the fear component in threat-related behavior. Research has neither investigated the potential effect of moderators such as perceived coping efficacy and present-hedonism on the effects of Covid threat perception and fear. This study addresses these gaps in the literature by developing a novel theoretical model that integrates PMT with the Fear-Drive Model (Janis, 1967), and the extended parallel processing model (EPPM; Witte, 1992, 1994, 1996) to assess the effect of COVID-19. The model furthermore integrates the moderating influences of perceived efficacy and present-hedonism orientation. The latter variable, while relevant for both booking intentions and threat perception, has not previously been studied in this context. The model specifically focuses on the booking of full board hotels, since in full board hospitality services, human contacts are more likely and therefore the COVID-19 threat higher.

The findings of this study contribute to theory development in several ways: First, findings enrich our understanding of how threat perception and fear affect booking intentions during a pandemic outbreak, in particular, regarding the role of cognitive perception of the threat versus emotional fear response. By including perceived coping efficacy and present-hedonism orientation as potential moderator variables, results provide important insights on why the effects of cognitive threat and fear of COVID-19 on hotel booking intention are higher for some individuals than for others. Second, findings contribute to the development of strategies that promote the recovery of the industry in a post-pandemic era by suggesting how hotel managers can minimize the effects of fear and threat of COVID-19 on bookings. Previous PMT-based research has studied the COVID-19 threat context exclusively for US American and Asian tourists. This study, apart from developing a novel extended model also further extends empirical findings by testing the proposed framework with European (Spanish) subjects.

2. Theoretical background

2.1. The effect of the perceived threat of COVID-19 on full board hotel booking intentions

PMT was developed to understand the adoption of health-protective behaviors. It assesses an individual's behavioral response as a protection mechanism when confronting a threat (Maddux and Rogers, 1983; Rogers, 1983). According to PMT, perceived severity and probability of occurrence are the cognitive appraisal processes that establish an individual's behavioral decision when confronted with a threat. This includes an individual's perception of how well the coping behavior addresses the threat (response efficacy) and his/her perceived ability to effectively perform the coping behavior (self-efficacy) (Floyd et al., 2000; Maddux and Rogers, 1983; Menard et al., 2017). After this appraisal, individuals choose to engage in adaptive or maladaptive behaviors. Adaptive behaviors are those that intend to protect an

individual from the threat; maladaptive responses are related to behaviors in which the threatened person abstains from making the suggested response (Floyd et al., 2000; Prentice-Dunn and Rogers, 1986). According to PMT and EPPM, two elements estimate the perceived level of the threat: (1) its perceived severity, which refers to the seriousness of the possible harm; and (2) its probability, or the vulnerability to its consequences. The higher the perception of severity and vulnerability, the higher the possibility that an individual will engage in behaviors to protect himself/herself from the threat (Floyd et al., 2000; Witte and Allen, 2000).

Tourism research has established that the perceived severity or susceptibility of the threat of previous infectious disease outbreaks, such as H1N1, SARS, or Ebola, negatively influenced tourism behaviors, including travel intentions (e.g., Cahyanto et al., 2016; Leggat et al., 2010; Pine and McKercher, 2004; Yanni et al., 2010). Recent research found that the higher the level of the COVID-19 threat, the higher the negative impact on tourism outcomes. In a sample of Chinese consumers, Zheng et al. (2021) found that the perceived threat of COVID-19 could cause travel avoidance. Furthermore, in a study with data from the United States, MacSween and Canziani (2021) suggested that the worry generated by the risk of a COVID-19 infection had an impact on the use of online travel information, which negatively influenced decisions to book travel-related services. Similarly, Chua et al. (2020) posited that the health-risk perception caused by the COVID-19 pandemic impacted the perceived uncertainty of international travel.

Because COVID-19 is very contagious and its mortality rate is high, it is considered to be a phenomenon that activates threat severity and probability (Bhati et al., 2020). Individuals who perceive COVID-19 as a severe disease and believe they have a higher probability of being infected may be more motivated to adopt preventative practices (e.g., social distancing or avoiding public spaces) to minimize or eliminate the risk (Adunlin et al., 2020). The perception of the threat and travel behavior vary according to individual and situational factors (Tsaur et al., 1997). For the COVID-19 case, the threat is related to an individual's perceptions of the probability of contracting the disease by going to a hotel where there may be the possibility of contagion. Therefore, it is expected that the higher the level of perceived threat, the more negative the impact on the booking intentions of full board hotels.

Hypothesis 1. The perceived level of threat of COVID-19 exerts a negative influence on the booking intentions of full board hotels.

2.2. The effect of the fear of COVID-19 on full board hotel booking intentions

Fear refers to an adaptative response to a perceived risk (Tanner et al., 1991). It is related to an individual's anxiety about their vulnerability to a risk (Sjöberg, 1998). The uncertain evolution of COVID-19 and its higher rates of contagion and mortality have become a source of fear (Mertens et al., 2020). Recently, research has explored the extent to which the potential social and economic problems generated by COVID-19 may foster an individual's fear and worries, implying negative consequences for subjective well-being (Paredes et al., 2021). The fear and anxiety that COVID-19 exerts over the population are stimulated by mass media and social media (Yu et al., 2020).

EPPM asserts that an individual's evaluation of fear will lead to one of the following outcomes: no response, acceptance response, or rejection of a proposed behavior (Witte, 1992; Witte and Allen, 2000). The Fear-Drive Model (Janis, 1967) postulates that fear arousal can lead to persuasion. In a health-related context, the literature has confirmed the direct effect of fear on behavioral intentions (e.g., Baker, 2014; Charry and Demoulin, 2012). In tourism research, there is evidence that a health-related crisis generates feelings of fear, worry, or anxiety that negatively impact tourists' behaviors (e.g., Dolnicar, 2005; Wolff et al., 2019). For instance, Reisinger and Mavondo (2005) found a negative relationship between the health risk, traveler's anxiety, and intentions

to book future travel. Moreover, McKercher (2003) analyzed the negative consequences of fear of the SARS outbreak on tourism in terms of decreasing hotel occupancy. Similarly, Mizrachi and Fuchs (2016) explored the negative effect of fear and risk perceptions of Ebola on a tourist's decision-making process.

Bae and Chang (2021) found that the fear and emotional worries generated by the COVID-19 pandemic influenced attitudes towards traveling, exerting a negative influence on behavioral intentions. Thus, fear and worries may inhibit consumers from traveling. Furthermore, Nazneen et al. (2020) asserted that COVID-19 has generated anxiety among tourists, increasing their safety concerns. These factors have negatively impacted travel behavioral intentions. Furthermore, Rather (2021) found a negative relationship between the fear of COVID-19 and attitude towards traveling. A health crisis spreads fear and concern among leisure travelers more than other kinds of travelers (such as business travelers) (Peattie et al., 2005), which may be the case for individuals who book full board hotels. Therefore, the fear associated with COVID-19 will likely negatively influence booking intentions for full board hotels.

Hypothesis 2. Fear of COVID-19 exerts a negative influence on the booking intentions of full board hotels.

2.3. The moderating role of perceived coping efficacy

PMT establishes that the cognitive assessment of the appraisal of the threat and the coping strategy (i.e., protective behaviors that may mitigate the threat) influence an individual's decision to engage in preventive behaviors (Janmaimool, 2017). According to the Fear-Drive Model (Janis, 1967), fear can directly motivate an individual's coping behavior, which relates to his/her willingness to engage in risk preventative behaviors. The probability of selecting an adaptive response will be linked to the response efficacy, self-efficacy, and response cost (i. e., the costs associated with the recommended behavior). Higher perceived coping efficacy increases the likelihood of engaging in adaptive behaviors, and higher costs may prevent individuals from engaging in the recommended behaviors (Floyd et al., 2000; Prentice-Dunn and Rogers, 1986). If individuals perceive higher levels of coping resources, their threat perception and fear may diminish. Thus, coping efficacy acts as a mitigating factor (Taylor and Stanton, 2007).

Bish and Michie (2010) identified three kinds of behaviors in response to a health crisis: preventive, avoidant, and management. For the COVID-19 case, preventive behaviors may be related to washing hands, maintaining social distancing, wearing a mask in a public place, or sanitizing surfaces. Avoidant behaviors may include minimizing contact with others, avoiding visiting crowded places, or not using public transportation. Finally, management behaviors are related to seeking professional advice (Yuen et al., 2020). For instance, in the tourism literature, hygiene has been identified as one of the most crucial elements of health-protective behaviors (Zheng et al., 2021). Attitudes towards health and hygiene are determinants of the attractiveness and competitiveness of tourist destinations (Frost et al., 2019). In a study of travel behavior after the pandemic, Ivanova et al. (2020) asserted that the most critical factors for travel intentions were hygiene, disinfection, and a reliable health system at the intended destination. Moreover, in analyzing the effect of technology development and tourists' risk perception of hotels, Shin and Kang (2020) found that the expected cleaning of the hotel mitigated the perceived health risk when attracting customers in the COVID-19 context. This suggests a potential relationship between hotels' adoption of greater security measures and tourists' booking intentions. Adunlin et al. (2020) found that fear, response-efficacy, and self-efficacy significantly predicted willingness of intent to align with the measure of social distancing imposed by COVID-19 in rural areas in the United States. Finally, in terms of hotel selection, Atadil and Lu (2021) found that medical preparedness, hygiene control, health communication, and self-service technology were

the underlying dimensions for the perceptions of safety that influenced hotel selection in the context of COVID-19.

Individuals weigh the appraisal of response-efficacy and self-efficacy (coping efficacy) against the costs of engaging in protective behaviors. The higher the response-efficacy and self-efficacy, and the lower the coping costs, the higher the probability of engaging in adaptive behaviors (Floyd et al., 2000). For the booking intentions of a full board hotel in the COVID-19 context, if an individual believes that being infected by the virus is a possible threat and they are vulnerable to the disease, but at the same time they also perceive that anti-COVID-19 measures (e.g., hygiene control, using sanitization gel, wearing a mask, or practicing safety distance) are effective against the disease, they will have a higher likelihood of booking a hotel that guarantees such measures. Therefore, the higher (lower) the perceived coping efficacy through the use of anti-COVID-19 measures by the hotel, the weaker (stronger) will be the negative effect of perceived threat and fear response on the booking intentions of full board hotels.

Hypothesis 3. The effect of threat from COVID-19 on the booking intentions of full board hotels is negatively moderated by the level of perceived coping efficacy.

Hypothesis 4. The effect of fear on the booking intentions of full board hotels is negatively moderated by the level of perceived coping efficacy.

2.4. The moderating role of an individual's present-hedonism orientation

Time perspective can be defined as an "often unconscious process whereby the continual flows of personal and social experiences are assigned to temporal categories or time frames that help to give order, coherence, and meaning to those events" (Zimbardo and Boyd, 1999, p. 1271). When making decisions, individuals have stronger inclinations for one of the three dimensions of temporal orientations, that is, past, present, and future (Zimbardo et al., 1997). Time perception has a major role in setting and pursuing social goals, impacting emotions, cognition, and motivation (Carstensen et al., 1999), including decisions related to health behaviors (Daugherty and Brase, 2010).

In health-related contexts, the future time orientation is related to healthy decisions, while the present orientation is correlated with engaging in more risky behaviors (Daugherty and Brase, 2010; Sobol et al., 2020; Strathman et al., 1994). Individuals with a higher present-hedonism orientation tend to focus on the enjoyment of pleasures in the present moment, searching for sensation or novelty while not fully considering future consequences (Boyd and Zimbardo, 2005; Zimbardo and Boyd, 1999). Research has found a positive link between present-hedonism orientation and risky behaviors, such as drinking or having unprotected sex, having many sexual partners (Rothspan and Read, 1996), refusal to use a condom (Protogerou and Turner-Cobb, 2011), smoking (Keough et al., 1999), or drug abuse (Barnett et al., 2013).

In the COVID-19 context, Sobol et al. (2020) explored the relationship between time orientation and compliance with public health regulations related to COVID-19. The authors found that individuals with a higher focus on future time perspectives were more inclined to comply with public health regulations concerning COVID-19. Furthermore, Jovančević and Milićević (2020) found a direct relationship between a positive attitude toward the future and COVID-19-related preventive behaviors. Thus, it would be expected that individuals with present-hedonism orientation, by thinking less about the future consequences of their actions, and by being risk-seekers of immediate pleasures, oriented to live in the present moment, could experience the effect of fear and cognitive threat of COVID-19 to a lesser extent than those without a present-hedonism orientation. In this case, people with higher (lower) present-hedonism orientation will experience the negative effect of threat and fear on booking intention in a weaker (stronger) way than people with a less present-hedonistic orientation. Therefore, based on the literature, the following research questions were developed:

2.4.1. Research question 1

Does an individual's present-hedonism orientation negatively moderate the negative effect of threat from COVID-19 on the booking intentions of full board hotels?

2.4.2. Research question 2

Does an individual's present-hedonism orientation negatively moderate the negative effect of fear on the booking intentions of full board hotels?

3. Method

3.1. Data collection: participants and procedure

To test the proposed conceptual framework, data was collected using an online survey of Spanish consumers. The sample was drawn from a nationally representative online panel of the Spanish population age (35+) recruited by a commercial panel provider (N = 400, 51.5% male, M_{AGE} = 51.96, SD = 10.47, age ranging from 35 to 74). The requirement that participants had to be older than 35 was introduced because the study addressed the booking of full board hotel services, and recent hospitality industry data for Spanish national tourism shows that booking full board is much more common for older tourists. For instance, a 2019 study showed that the mean age for full board tourists is 49 and that 87% were older than 31 years (55,7% were older than 45; (INE, Instituto Nacional de Estadística, 2021; Turismo de Islas Canarias, 2019). Data were collected during February 2021. Participants rated on a 7-point scale (1 = not at all to 7 = very often) how often they booked full board hotels when on vacation. Seventy percent of the participants affirmed that they often or very often stayed at this type of accommodation (M = 5.29). All participants were required to answer a filter question at the beginning of the questionnaire because only individuals who had not had COVID-19 up to that point in time were invited to complete the survey (individuals recovered from COVID-19 would likely not perceive the same level and effects of COVID-19 threat). Next, participants responded to an online questionnaire, assessing their level of the perceived threat from COVID-19, their level of fear of contracting the virus, their level of perceived coping efficacy through the hotel's use of anti-COVID-19 measures, and their intention to book a full board hotel for their next vacation. Finally, the survey contained a question to measure the level of the participants' present-hedonism orientation.

3.2. Measurement

Following PMT (Rogers, 1983) and EPPM (Witte, 1992, 1994), cognitive beliefs on the perceived level of threat were measured through the dimensions of *threat probability* and *threat severity*. Similar measures have been used in previous research (e.g., Baldassare and Katz, 1992; Cauberghe et al., 2009; Floyd et al., 2000; Hartmann et al., 2014; Hass et al., 1975; Krieger and Sarge, 2013; Tanner et al., 1991). Items were adapted for the specific case of COVID-19 threats. Based on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*), the respondents were first instructed to rate how likely they thought they would be to contract COVID-19 if they went on vacation in a full board hotel (all meals included), and the extent to which they thought that COVID-19 would affect their health and quality of life if they contracted the virus. To measure fear of COVID-19, participants were asked how they felt about COVID-19 using a 7-point scale (1 = *not at all* to 7 = *very much*) to rate the extent to which they felt *fearful* and *worried.* These scaling items had also been used by Mertens et al. (2020). To assess perceived coping efficacy, four items based on the study conducted by Shin and Kang (2020) were used. The participants used a 7-point scale (1 = *highly unlikely* to 7 = *highly likely*) to rate how likely they thought that the hotel's adoption of anti-COVID-19 measures (e.g., the use of sanitizing gel and masks) would protect them from the virus and would enable them to avoid being infected during their stay. Hotel booking intention was measured

on two items from the literature (Chan et al., 2017; Shin and Kang, 2020; Wang et al., 2015). Present-hedonism orientation was assessed with items from Zimbardo and Boyd (1999), who designed the Time Perspective inventory to measure the extent to which an individual is characterized by an orientation toward present enjoyment, pleasure, and excitement. According to Zimbardo and Boyd (1999), high scores on the present-hedonism scale would suggest an orientation toward experiencing present pleasure with little concern for future consequences, and an emphasis on novelty and sensation seeking. Participants were asked to read five statements to answer the question "How characteristic or true is this of you?" on scales ranging from *very uncharacteristic* = 1 to *very characteristic* = 7. All measurement items and their properties are displayed in Table 1. Cronbach's alpha confirmed the reliability of all the scales (Fig. 1).

4. Results

The correlations of all variables are shown in Table 2. The results confirmed a significant negative relationship between perceived threat from COVID-19 and booking intention (r = −0.44, p < .01), and a significant negative relationship between perceived fear of COVID-19 and booking intention (r = −0.33, p < .01). The results also confirmed a significant positive relationship between fear and threat (r = 0.57, p < .01), a significant positive relationship between perceived coping efficacy and booking intention (r = 0.18, p < .01), and a significant positive relationship between present-hedonism orientation and booking intention (r = 0.25, p < .01).

Linear regression analysis was used to analyze the influence of perceived threat from COVID-19 and fear of the virus on full board hotel booking intentions. The results revealed a significant negative relationship between perceived threat from COVID-19 and booking intention (β = −0.38, p < .001) and a significant negative relationship between perceived fear of COVID-19 and booking intention (β = −0.11, p < .04; R^2 = 0.204, F = 50.78, p < .001), providing support for H1 and H2, respectively.

To test the moderating effect of the variables perceived coping efficacy and present-hedonism orientation on the relationship between

Table 1
Variables and measurement items.

|	Mean	SD	α
Threat probability	4.78	1.83	.96
I am at high risk for getting the coronavirus disease.			
I am likely to get the coronavirus disease.			
My chances of getting the coronavirus disease are high.			
Threat severity	5.82	1.57	.95
COVID-19 is a serious threat to my quality of life.			
COVID-19 would be a severe threat to my health.			
COVID-19 would be harmful to my well-being.			
Fear of COVID-19	5.17	1.63	.81
Fearful			
Worried			
Perceived coping efficacy	5.43	1.41	.95
Continuous sanitization and use of cleaning products			
recommended for disinfecting COVID-19.			
Use of sanitizing gel and masks.			
Constant renewal of the air in common areas.			
Guarantee capacity and safety distances.			
Present-hedonism orientation	3.96	1.54	.82
I try to live my life as fully as possible, one day at a time.			
Ideally, I would live each day as if it were my last.			
I make decisions on the spur of the moment.			
It is important to put excitement in my life.			
Taking risks keeps my life from becoming boring.			
Full board hotel booking intention	3.22	1.91	.94
Do you plan to book a stay in a full board hotel for your next vacation?			
How likely is it that you will book a stay in a full board hotel for your next vacation?			
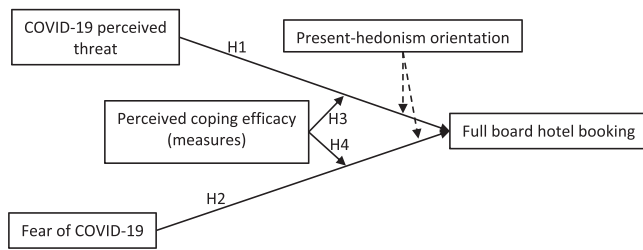
Fig. 1. Theoretical model.

Table 2
Variable correlations.

	TH	FE	PCE	BI
Threat (TH)				
Fear (FE)	.57**			
Perceived coping efficacy (PCE)	-0.08	.06		
Full board hotel booking intention (BI)	-0.44**	-.33**	.18**	
Present-hedonism orientation (PHO)	-0.08	-0.10	.11	.25**

**p < 0.01.

perceived threat and booking intention (H3 and RQ1, respectively), as well as on the relationship between fear and booking intention (H4 and RQ2, respectively), a linear regression analysis was conducted, introducing these interaction effects (R^2 = 0.278, F = 18.84, $p < .001$). Table 3 presents the results of the regression analyses and interaction effects. Results confirmed the negative moderating effect of perceived coping efficacy on the negative relationship between fear of COVID-19 and booking intention (β = −0.61, $p = .02$), providing support for H4. Results confirmed that the higher the perceived coping efficacy through the hotel's use of anti-COVID-19 prevention measures, the weaker was the negative effect of fear on booking intention. However, the results did not corroborate the negative moderating effect of perceived coping efficacy on the negative relationship between the threat from COVID-19 and booking intention (H3). Thus, the effect of the threat of COVID-19 on booking intention was not reduced by the perceived efficacy of the measures the hotel takes to combat COVID-19, only the effect of fear on booking was diminished. Furthermore, the negative effect of threat on booking intention continues to be marginally significant (β = −0.47, $p = .06$), even after introducing both moderators into the regression.

Regarding the two research questions (RQ1 and RQ2), the results do corroborate the moderating effect of the individual's present-hedonism orientation on the relationship between neither the threat from COVID-19 and booking intention nor fear of COVID-19 and booking intention. However, present-hedonism orientation had a positive effect on booking intention (r = 0.25, $p < .01$). Thus, the higher an individual's present-hedonism orientation, the more likely they are to book a full board hotel. However being a higher present-hedonistic individual does not decrease the negative effect of fear or the threat of COVID-19 on booking intention.

5. Discussion and theoretical contributions

The hospitality industry is one of the most vulnerable sectors to the adverse effects of the COVID-19 pandemic (Pillai et al., 2021; Kock et al., 2020; Zenker and Kock, 2020). Based on a representative sample of the Spanish population, this study shows how the perceived threat of COVID-19 and the emotional fear response to the pandemic affect the booking of full board hotels and how this effect depends on the perception of the efficacy of the coping measures adopted by the hotel and the present-hedonism orientation of the tourist. The findings contribute to theory development in several ways:

While recent studies have applied PMT to the effects of the COVID-19 threat on general travel intentions (Zheng et al., 2021; Qiao et al., 2021), and hotel stays (e.g., Hsieh et al. (2021) this study develops and tests a novel theoretical model by integrating PMT with the Fear-Drive Model (Janis, 1967), and the extended parallel processing model (EPPM; Witte, 1992, 1994, 1996). The results confirm the negative effect of the cognitive appraisal of threat probability and severity and fear of COVID-19 on full board hotel booking intentions. These findings are consistent with PMT and EPPM research, since the higher the perceived level of threat and fear, the greater the probability of engaging in protective behaviors (Adunlin et al., 2020; Bhati et al., 2020; Liu et al., 2016). The results are also consistent with the findings reported in the tourism literature that has used PMT frameworks to explore the consequences of other health-based risks on behavioral intentions, including travel intentions (e.g., Fisher et al., 2018; Wang et al., 2019). Furthermore, the results are in line with recent studies that reported adverse effects on tourism behavioral intentions due to COVID-19 (Bae and Chang, 2021; Chua et al., 2020; Rather, 2021).

This study adds to the findings of these studies by integrating the emotional effect of fear, additionally addressing the moderating influences of coping efficacy and present-hedonism orientation, and also by specifically assessing their effects on full board bookings. The results show that perceived coping efficacy, represented by the anti-COVID-19 measures enacted by the hotel to diminish the risk, negatively moderates the effect of the emotional fear response to COVID-19 on hotel booking intentions. However, it does not moderate the negative effect of cognitive threat perception on hotel booking intentions. These findings indicate that, for individuals who perceive that the hotel is implementing anti-COVID-19 measures, the effect of fear on booking intentions decreases, but not the negative effect of cognitive threat perception. Despite the perception of the efficacy of anti-COVID-19 measures, the perceived probability and severity of contracting the disease still strongly affect booking intentions. As stated by Fisher et al. (2018) when employing PMT to analyze health threats, results may vary according to the context or consequences associated with a threat. During the time of this study, COVID-19-related information was daily on the media, providing constant information about the threat of the disease. Mass media and social media constantly reminded people of the existence of the virus (Mertens et al., 2020; Yu et al., 2020). Previous research has confirmed the effect of media on customers' perception of the threat, especially in times of uncertainty (Cheng et al., 2016).

Table 3
Regression analysis and interaction effects.

	Main effects model					Interaction effects model				
	B	SD	β	t	p	B	SD	β	t	p
Threat	-0.34	.05	-0.38	-6.97	p < .001	-0.43	.23	-0.47	-1.86	.06
Fear	-0.14	.07	-0.11	-2.06	.04	.27	.34	.22	.79	.43
Coping efficacy (CE)						.56	.18	.39	3.17	p < .001
Present-hedonism orientation (PHO)						.25	.25	.16	.98	.33
Threat x CE						.04	.04	.25	1.11	.27
Fear x CE						-0.10	.05	-0.61	-2.26	.02
Threat x PHO						-0.03	.04	-0.14	-0.69	.49
Fear x PHO						.04	.05	.16	.65	.52

Dependent Variable: Full board hotel booking intentions.

Therefore, although anti-COVID-19 measures can help, they may not reduce the effects of the cognitive perception of the threat, because people perceive that there is always the possibility that they will be infected (Abbas et al., 2021).

The finding that the effect of fear of COVID-19 can indeed be reduced by perceived coping efficacy further contributes to theory development. For instance, there is evidence that when facing outbreaks, coping strategies allow individuals to manage emotional responses to deal with the stress of the situation (Reich, 2006). In the COVID-19 context, research has demonstrated that coping strategies may be effective in reducing emotional fear (Polizzi et al., 2020). The findings indicate that perceived coping efficacy can reduce the effect of fear of the pandemic on a specific behavior such as booking intentions, reducing in this way the effect of the emotional pandemic-induced barriers to tourism.

A further novel finding of this study is that, while present-hedonism orientation has a positive effect on full board hotel booking intentions, it does not affect the influence of neither COVID-19 induced cognitive threat perception nor emotional fear on booking intentions. More present-hedonistic individuals seem to be no less affected by pandemic threat evaluation and fear than the less hedonistic ones. This finding adds to recent research exploring compliance with COVID-19 prevention guidelines and time perspective. Research has argued that since the threat of the COVID-19 is in the present, individuals with higher present-hedonism orientation will also be more willing to use escapist coping mechanisms to deal with stressful situations such as the outbreak (Eden et al., 2020). However, Keinan et al. (2021) found a non-significant relationship among present hedonistic time perspective and passive risk corona behaviors, i.e., not following protection recommendations. The findings of the present study diverge from the former but provide support for the latter argumentation.

6. Practical implications

Understanding the COVID-19-related antecedents of full board hotel booking intentions has significant managerial implications and can contribute to the recovery of the tourism industry by restoring customer confidence (Rivera, 2020). The findings of the present study imply that managers should focus on minimizing the threat and fear of COVID-19 since there is a negative relationship between these variables and hotel booking intentions. Consequently, the implemented strategies must increase protection motivation in tourists. This may be achieved through communication focused on the enhancement of coping efficacy mechanisms through anti-COVID-19 measures to increase safety perceptions (Zheng et al., 2021). Garrido-Moreno et al. (2021) found that marketing communication highlighting safety measures is essential to restore customers' confidence. Previous research in the hospitality sector has stated that, in times of uncertainty, communication strategies to keep customers informed about the protective measures, are essential to restore their confidence (Lo et al., 2006). Communication messages should emphasize the COVID-19 measures that the hotel is implementing in order to reduce the impact of threat and fear on booking intentions. For instance, recent research has shown that safety perceptions are increased by hygiene measures and the cleanliness of hotels, and that these aspects are some of the most important antecedents of customer hotel selection in the COVID-19 era (Hao et al., 2020; Pillai et al., 2021; Shin and Kang, 2020). Therefore, hotel managers should focus on highlighting the efforts that have been made to implement hygiene measures and ensure safety. Marketing communications are crucial elements for the recovery of the hospitality industry as they transmit information on how a hotel's cleaning strategies promote safety (Jiménez-Barreto et al., 2021).

Furthermore, Im et al., (2021) stated that the commitment of the top management is crucial for the deployment and communication of the safety protocols of the hotels, to increase customers' safety perceptions. Hotels have launched different programs to communicate the anti-COVID-19 measures that are being implemented. Hsieh et al.

(2021) asserted the efficacy of different programs that enhanced safety and well-being measures such as: "Hilton CleanStay" that Hilton Hotels and Resorts proposed, describing their disinfection protocols and new cleaning technologies, or the "IHG Clean Promise" implemented by the InterContinental Hotels Group to ensure the safety of the employees and guests.

Another element that increases consumers' safety perceptions in the COVID-19 era in the hospitality industry is the adoption of technology (e.g., artificial intelligence, robotics, mobile, virtual, and augmented reality) to increase self-service and minimize contact (Hao et al., 2020; Pillai et al., 2021). For instance, in line with the trend of the inclusion of robots in the tourism industry, recent evidence in the COVID-19 context suggests that customers prefer robot service in comparison to human service in the tourism industry, which contrasts with findings before the outbreak revealing a preference for human service (Kim et al., 2021). Thus, hotels should also communicate and highlight the adoption of technology in response to the COVID-19 pandemic (Jiang and Wen, 2020).

7. Limitations and future research avenues

This study has several limitations that should be acknowledged. First, this research used a nationally representative sample of Spanish consumers since Spain is one of the European countries most affected by COVID-19 and also a prime tourist destination. Therefore, other studies may replicate this framework with representative samples from other countries or cultural environments, which may be in other stages of the pandemic. Future studies may also consider other types of hotels or travelers (e.g., individual vs. branded or leisure vs. business travelers) as suggested by Shin and Kang (2020). Second, the results are based on a cross-sectional study, which captures data at a certain point in time. The COVID-19 pandemic is evolving rapidly and its stages may influence people's perceptions of its impact on their lives, affecting research findings (Bae and Chang, 2021; Yuen et al., 2020). Therefore, longitudinal studies are needed to measure the effect of the evolution of the COVID-19 pandemic and its impact on hotel booking intentions to offer more generalizable results. Especially, such studies could consider tourists' long-term behaviors, which will determine the evolution of the industry (Bonfanti et al., 2021; Gössling et al., 2020). Third, future studies may include the perspective of different behaviors regarding safety perception when faced with health risks. Recent research has also emphasized the role of technology, such as self-service options or robots, in the hygiene perspective of the hospitality industry (Hao et al., 2020; Kim et al., 2021). Subsequent studies may incorporate the perspective of these kinds of technologies into the framework presented in this article, specifically as coping efficacy strategies. This may help provide a new perspective on their influence on hotel booking intentions.

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