NOVA IMS Information Management School

MAA

Mestrado em Métodos Analíticos Avançados
Master Program in Advanced Analytics

”PLANNED” OR “PROTECTED” TOURISM? TOWARDS A PLANNED PROTECTION MOTIVATION APPROACH

Luís Filipe Antunes Pinho

Dissertation presented as partial requirement for obtaining the Master’s degree in Advanced Analytics

NOVA Information Management School
Instituto Superior de Estatística e Gestão de Informação
Universidade Nova de Lisboa

NOVA Information Management School
Instituto Superior de Estatística e Gestão de Informação
Universidade Nova de Lisboa

"PLANNED" OR "PROTECTED" TOURISM? TOWARDS A PLANNED PROTECTION MOTIVATION APPROACH

by

Luís Filipe Antunes Pinho

Dissertation presented as partial requirement for obtaining the Master's degree in Advanced Analytics

Advisor: Mijail Naranjo

Co Advisor*:* Diego Costa Pinto

June 2021

ACKNOWLEDGEMENTS

Firstly, my genuine thank you to Professor Mijail Naranjo for believing in me and in my idea; for his constant availability to answer my questions; for helping me with the statistic model and concepts; for his guidance throughout the development of this project; and for the trust and support given along the months.

Secondly, my honest thank you to Professor Diego Costa Pinto, for his availability to join and contribute to this project; for bringing valuable insights on tourism and Marketing research; for his guidance on the ideas organization and writing; and also for the support provided.

My big thank you to my beautiful parents, grandparents, little brother, my cousin Duarte and my girlfriend Patrícia for their constant support, comfort and patience.

Finally, my sincere thank you to my friends Guilherme and Inês for being there for me when I needed the most.

ABSTRACT

This research aims to develop a new Planned-Protection-Motivation (PPM) approach on tourism research. Drawing on Protection Motivation and Planned Behavior theories, the proposed model combines the beliefs on travel intentions as well as the perceived level of threat and familiarity with the pandemic. Using PLS-SEM multi-group analysis, and a sample of 381 European travelers, this study aims to understand consumers' demand for travel given the pandemic. Findings showed that consumers' attitudes and social influence are the main drivers of travel intentions. Moreover, social influence moderates COVID-19 travelers' fear effects on attitudes and improves travel intentions. However, consumers who have not travelled have mixed feelings, and both response cost and fear negatively influence their travel intentions. The findings represent a shift in the tourism, deepening the understanding of customer motivation for traveling during the pandemic.

KEYWORDS

Tourism; Travel Intentions; COVID-19; Theory of Planned Behavior; Protection Motivation Theory

INDEX

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS AND ACRONYMS

AVE	Average Variance Extracted
CA	Cronbach's Alpha
CR	Composite Reliability
CRM	Customer Relationship Management
EU	European Union
HTMT	Heterotrait-Monotrait ratio of correlations
ICAO	International Civil Aviation Organization
MGA	Multi-group Analysis
PLS	Partial Least Squares
PLS-SEM	Partial Least Squares – Structural Equation Modeling
PMT	Protection Motivation Theory
PPM	Planned Protection Motivation
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UNWTO	World Tourism Organization

1. INTRODUCTION

World tourism has been strongly affected by the COVID-19 pandemic in recent months, changing from over-tourism to non-tourism (Gössling et al., 2021). With a decline of 79% in international arrivals, and a loss of USD 1.3 trillion in export revenues, world tourism had in 2020 its worst year in history (UNWTO, 2021). Travel restrictions imposed by national governments highly explain the decrease of travel demand, and, as of February 2020, over 80 countries had closed borders (Think Global Health, 2020). Portugal, one of the last countries to register a confirmed case, declared state of emergency later in March, and begun lockdown (Resolução Da Assembleia Da República 49/200720, 2020). As a result of the pandemic, the number of national and international arrivals in Portugal decreased 39.2% and 75.7%, respectively (Turismo de Portugal, 2021). Given this challenging context for tourism research and practice, this study assesses travel intentions during COVID-19 pandemic times.

Travel intentions often rely on perceived personal and physical security, with information and news on the media having a major importance for these perceptions (Kozak et al., 2007). The COVID-19 pandemic triggered a wave of fear and anxiety amongst consumers, including traveling, especially by plane, which was no longer seen as safe (Lamb et al., 2020). Although previous research provides relevant insights about the drivers of people's intention to travel by plane in a normal context before the pandemic situation, the drivers of travel intentions during and after the COVID-19 emergency and potential new paradigms that may emerge on the world of tourism remain unknown (Kock et al., 2020). Moreover, past studies regarding travel intentions (Eid et al., 2021; Lamb et al., 2020; Liu et al., 2020; Parady et al., 2020; Pereira et al., 2019; Zheng et al., 2021) do not suggest a link between the level of fear and anxiety from Protection Motivation Theory (Rogers, 1983) and the consumers' viewpoint, neither to social influence, included in the Theory of Planned Behavior (Ajzen, 1991), which can influence consumer's perspective on travel intentions.

Thus, to establish a bridge between these two theoretical approaches, this study contributes to the literature by merging two key theories involved in tourism (Theory of Planned Behavior and Protection Motivation Theory), which we refer to as Planned Protection Motivation (PPM) approach. By doing so, this study combines important theoretical constructs at a personal and third-party beliefs on the pandemic and the perceived level of fear to shed light on the travel intentions during COVID-19 pandemic.

In addition, although travel restrictions have been imposed at a global scale (e.g., lockdowns and travel restrictions in Europe), a respectable number of people have traveled since then, we call them as COVID-19 travelers in this study. However, recent research is still inconclusive regarding the drivers of travel intentions for these consumers. Therefore, this study contributes with new information about travel intentions of COVID-19 travelers compared to who have not yet traveled during the pandemic.

Taken together, this study contributes with an unprecedent social moderating effect between fear and attitudes for the consumers who have already travelled. This study also provides several practical implications that can be applied by tourism operators, hotel managers, and airlines to improve consumers' travel safety perceptions and boost travel intentions.

2. LITERATURE REVIEW

2.1. PLANNED PROTECTION MOTIVATION APPROACH

With the new coronavirus pandemic, travel intentions may not be as linear to determine as before. Every country depicts a different situation of confirmed cases, travel restrictions and lockdown. For this reason, COVID-19 travelers may consider new factors that were not affecting their decisions previously. Indeed, it is needed a new model to assess travel intentions. For this model, travel intentions should be based on both self and third-party beliefs to adopt a travel behavior, but also based on the perceived safety, or threat, that traveling may bring. This study proposes a new theoretical approach, by integrating the Theory of Planned Behavior (Ajzen, 1991) and the Protection Motivation Theory (Rogers, 1975). We call this new approach the Planned Protection Motivation (PPM) model on travel intentions.

The Theory of Planned Behavior (Ajzen, 1991) is one of the most recognized theories to evaluate the drivers of the intention to adopt a certain behavior, or its continuance. It was designed as an improvement of the Theory of Reasoned Action (I. Ajzen & M. Fishbein, 1980), which does not consider individual judgments on their competence to cope with the recommended behavior, as well as the perception that they have towards it. Based on individual behavior, it is composed by three main drivers: (i) attitudinal preferences; (ii) subjective norm; and (iii) perceived behavioral control.

The Protection Motivation Theory (Rogers, 1975), was developed to help clarifying fear appeals, by predicting protective behaviors based on what people fear. This theory aims to predict one's intention in protective actions (Anderson & Agarwal, 2010). In the current situation, the pandemic has brought fear and anxiety to consumers, and this constraint may affect travel intentions. Therefore, PMT is used in this study to analyze the impact of the pandemic on consumers' choices and appraisals. PMT has two main components: (i) Coping Appraisal; and (ii) Threat Appraisal.

The proposed PPM will evaluate travel intentions by merging the two theories described and integrating their variables in adaptation to travel intentions case. From the TPB, the proposed approach will focus on the perceptions of traveling during the pandemic. Furthermore, from the PMT, the proposed approach will highlight the perceived threat that traveling during the pandemic brings, as well as how familiar are consumers with COVID-19. Next, we present the hypothesis of the proposed Planned Protection Motivation approach. For the new proposed research framework, the proposed model is illustrated by Figure 1.

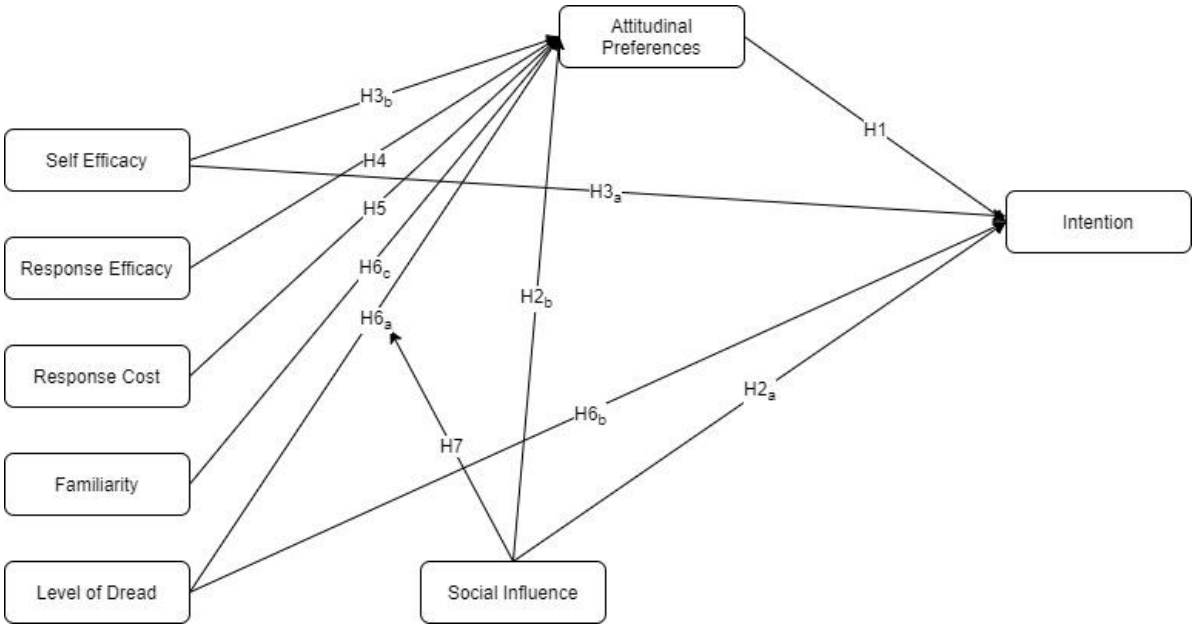

Figure 1 - Conceptual Model of Planned Protection Motivation

2.2. ATTITUDINAL PREFERENCES

Attitudinal preferences reflect the individual perception of one's behavior by evaluating its favorability. The more positive is the consumer's preference, the more likely they are to increase their intention (Ajzen, 1991). Recent literature on travel intentions examined attitudinal preferences with risk uncertainty, air travel, past experience and traveling during COVID-19 (Li et al., 2020; Morten et al., 2018; Nimri et al., 2020; Quintal et al., 2010). Given the current high standards of travels and the pandemic, if a consumer perceives traveling as positive, their travel intentions will increase. Based on TPB and previous research, the following hypothesis was proposed:

H1: Attitudinal preferences affect positively travel intentions.

2.3. SOCIAL INFLUENCE

In a digitalized world, where Internet connection is generally available, different opinions can be read on social media, news channels and blogs. Subjective norm, or social influence, evaluates how the opinion of others influences individual perception and intention, whether that opinion comes from friends, family, or the Internet. If social influence has a favorable opinion regarding traveling, one's opinion will tend to be favorable, as well as their travel intentions. Recent research done in the Philippines has shown that social influence on COVID-19 has had a positive correlation with the intention to adopt preventive measures (Prasetyo et al., 2020). Moreover, in Portugal, COVID-19 has triggered different opinions on Portuguese health professionals (Peres et al., 2020), so, this study aims to understand whether those public opinions are relevant for travel intentions. Therefore, the following hypotheses were suggested:

H2a: Social influence affects positively travel intentions.

H2b: Social influence affects positively attitudinal preferences.

2.4. COPING APPRAISAL

Coping appraisal evaluates how an individual assesses their capability and competence to cope and deal with an existing threat (Woon et al., 2005). To understand travel intentions, it is crucial to retrieve consumers' thoughts on how they deal with the pandemic, what they believe to be beneficial to control it and to prevent infection. Recent research has also explored Coping Appraisal in Iran on the fight against COVID-19 (Bashirian et al., 2020), and findings showed that it has had a positive influence on behavioural intention. In this study, coping appraisal will focus on implementing preventive measures against COVID-19, and how it affects attitudinal preferences, and travel intentions.

The coping appraisal constructor includes the individual's perception on their effectiveness to perform a recommended behavior - self-efficacy. According to Ajzen (Ajzen, 1991), perceived behavioural control from TPB and self-efficacy from PMT are equivalent. Therefore, the proposed model merges both concepts. In the context of travel intentions, if a consumer believes that they can implement preventive measures against COVID-19, and its efficacy is dependent on them, they will feel safer, and their attitude towards traveling is likely to increase. Consequently, travel intentions will also increase. Based on TPB and PMT, the following hypotheses were suggested:

$H3_a$: Self-efficacy affects positively travel intentions.

$H3_b$: Self-efficacy affects positively attitudinal preferences.

Coping appraisal also includes the perceived benefits of an action taken (Rogers, 1983), which is response efficacy. According to TPB (Ajzen, 1991) and the Theory of Reasoned Action (I. Ajzen & M. Fishbein, 1980), beliefs about the positive or negative result of a certain behavior will impact on the Attitudinal Preferences of the individual. Recent research integrated PMT and TRA on scientific knowledge, and findings showed a very significant ($p<0.001$) and positive influence ($\beta=0.18$) of response efficacy on personal attitudes towards knowledge, making response efficacy the strongest construct from coping appraisal on one's attitudes (Wu, 2020). In the same logic as self-efficacy over attitudinal preferences, if preventive measures are perceived as effective, such as surface disinfection, and wearing masks, the perceived safety will increase. Therefore, the better will be the perceived Attitudinal Preferences.

H4: Response-efficacy affects positively attitudinal preferences.

Finally, coping appraisal takes into consideration effort, monetary and time costs employed to implement a behavior - response cost (Rogers, 1983). Response cost includes consumers' discomfort and negative appraisal when taking preventive measures against COVID-19. These costs may include discomfort when using masks, time taken to prevent against the pandemic, or hand sensibility of using disinfection products. Therefore, the goal is to assess if the response cost implies a decrease in the perceived attitudinal preferences towards traveling. Accordingly, the following hypothesis was developed:

H5: Response cost affects negatively attitudinal preferences.

2.5. THREAT APPRAISAL

Threat appraisal involves the perceived level of threat a certain behavior brings and how it affects intention (Rogers, 1983; Woon et al., 2005). Threat Appraisal is composed of Perceived Vulnerability, which is the probability that one will experience harm from the behavior, and Perceived Severity, which is the level of danger that the behavior will reach. Research on risk perception has demonstrated that there is a gap between the actual risk and the individual's perception of the risk (Slovic, 1987). For that reason, Slovic developed three key factors that help to understand the perception of risk: (i) Level of Dread; (ii) Familiarity; and (iii) Number of People Involved. For this research, dread and familiarity will be included in threat appraisal, and the number of people involved will not be considered, since the number of people traveling is low.

Since the beginning of the pandemic, some consumers' decisions have been affected by fear, such as panic buying (Arafat et al., 2020). According to the PMT (Rogers, 1983), fear is often very effective in behavioral changes. Fear from COVID-19 is real and has affected a large percentage of people, and, in some cases, has led to depression (Tsang et al., 2021). The way people travel is no longer the same, as the level of fear is now included. The higher the perceived fear, the less someone is willing to travel (Duan et al., 2021). Although fear may relate to travel intentions, individual attitudes must change for that to happen. Therefore, this study aims to understand if fear also affects the attitudinal preferences.

Familiar, or unknown, is defined by the way an individual believes they are familiarized with what they perceive as a threat (Slovic, 1987). As knowledge increases, people tend to make better decisions and to formulate more consistent opinions. In the beginning of the pandemic, little information was in the hands of health professionals to understand COVID-19. However, as research advanced, more information was available online. This information has helped national governments to inform population, and to make more weighted decisions. As preventive measures are now well defined, it is expected that consumers are aware of how to protect themselves against COVID-19, and they may feel more comfortable in their daily life, knowing what to do. Therefore, the higher the familiarity with the pandemic, the better they may perceive the attitude of traveling.

Recent research in Japan has also evaluated Threat Appraisal according to Slovic's (1987) key factors on COVID-19 risk perception (Parady et al., 2020), demonstrating that level of dread increases the probability of reducing the number of trips. However, Familiarity registers the opposite, as the lower the familiarity, the higher the probability to travel in leisure. Therefore, the following hypotheses were suggested:

$H6_a$: Level of dread affects negatively attitudinal preferences.

$H6_b$: Level of dread affects negatively travel intentions.

$H6_c$: Familiarity affects positively attitudinal preferences.

2.6. MODERATING EFFECT OF SOCIAL INFLUENCE ON THE RELATIONSHIP BETWEEN LEVEL OF DREAD AND ATTITUDINAL PREFERENCES

As mentioned before, social factors have caused fear amongst consumers during the pandemic, and past research has also shown that fear from deceases starts to arise on consumers after seeing

others expressing their concerns (Ahorsu et al., 2020; Lamb et al., 2013). That level of fear from each consumer will directly influence their perception on travel during the pandemic (attitudinal preferences). The proposed hypothesis focuses on how the influence of fear on attitudinal preferences is affected by social influence (Dread x Attitude). Therefore, the final hypothesis will include a moderating effect in the model:

H7: The relationship between level of dread and attitudinal preferences is moderated by social influence.

3. METHODOLOGY

3.1. DATA COLLECTION

The online survey conducted consisted in 8 parts, seven of which referring to the variables mentioned in the literature: attitudinal preferences, social influence, self-efficacy, response efficacy, response cost, level of dread and familiarity. The eighth section included demographic questions. It was defined as target population for this study all Portuguese citizens with ages over 18 years old. The main reason for this sample was due to the different travel restrictions and pandemic situations in every country. Therefore, all participants should be resident in the same country, so that everyone is under the same pandemic conditions. All study items in the first seven sections of the survey were based on pre-validated studies on TPB and PMT, and they were answered using a seven-point Likert Scale (1 = strongly disagree, 7 = strongly agree). The survey was conducted through Qualtrics™ platform. Before publishing the survey, the Institutional ethics committee validated all the questions. The survey was active from November 4th, 2020 to December 20th, 2020.

Three hundred and eighty-one participants from Portugal were studied in this research (242 male, 138 female, and 1 undisclosed). We conducted data validation regarding outliers. Outliers were not detected. Accordingly, all initial participants were kept in study. Table 1 presents the demographic data of the respondents. The sample includes mainly young respondents, with 67% having less than 40 years old. The number of annual trips before the pandemic is similarly distributed from every interval. Twelve percent of the study's sample affirmed to suffer from health conditions which include them in the risk group. In terms of household, more than half of the respondents register between three and four people. Regarding income, the sample includes respondents from all financial status. Finally, nearly half of the respondents (48.6%) affirmed to have travelled since the beginning of the pandemic.

Demographic Variable	Types	Frequency	Percentage (%)
Gender	Male	242	63.5
	Female	138	36.2
	Undisclosed	1	0.3
Age	18-29	136	35.7
	30-39	121	31.7
	40-49	75	19.7
	50-59	37	9.7
	60-69	11	2.9
	70-79	1	0.3
	≥80	0	0.0
Suffer from any decease?	Yes	47	12.3
	No	334	87.7
Number of annual trips before the pandemic	0-2	67	17.6
	3-5	68	17.9
	6-8	79	20.7
	9-11	48	12.6
	12-14	26	6.8

	15-17	21	5.5
	≥18	72	18.9
Household	1	39	10.2
	2	90	23.6
	3	103	27.0
	4	113	29.7
	5	30	7.9
	6	2	0.5
	≥7	4	1.1
Income	0€-699€	9	2.4
	700€-1399€	70	18.4
	1400€-2099€	98	25.7
	2100€-2799€	87	22.8
	2800€-3499€	49	12.9
	3500€-4199€	24	6.3
	≥4200€	44	11.5
Has travelled since the beginning of the pandemic	Yes	185	48.6
	No	196	51.4

Table 1 - Demographic data of participants (N=381)

3.2. MODEL QUALITY ASSESSMENT

Discriminant validity is defined as the degree of correlation of constructs that should not be related to each other. To assure research quality and to avoid any redundancy or bias that may occur between the variables, few tests were conducted using correlation matrices from Fornell-Larcker and Heterotrait-Monorait Ratio (HTMT) discriminant validities.

The Fornell-Larcker criterion (Fornell & Larcker, 1981) assesses the discriminant validity through the comparison between the square root of the average variance extracted (AVE) and the correlation of latent constructs. To ensure discriminant validity, the variance of the own indicator should be higher, than the variance between that construct and another, meaning that the values of AVE should be higher than the other correlation values. Correlation coefficients according to Fornell-Larcker (Appendix A) were inferior to 0.40 between most constructs. The higher correlation values corresponded to the relationship between Social Influence and Attitudinal Preferences (0.765), and between Intention and Attitudinal Preferences (0.697) and Social Influence (0.697). As expected, the square roots of the AVE values, correspondent to the diagonal values, were always higher than the other correlation values.

The Heterotrait-Monotrait Ratio must be less than 1.00 (Henseler et al., 2015), and most values are under 0.40 (Appendix B). All values for the HTMT assessment are below the threshold (1.00). The lower value corresponds to the correlation between the moderator Dread x Attitude and response efficacy (0.077).

Regarding the Partial Least Squares (PLS), we analyzed the loadings of the variables (Table 2). In sum, constructor loadings were high for every constructor, with a range from 0.478 (REF1) to 0.974 (REF2) and an average of 0.775. Attitudinal preferences and self-efficacy registered the higher loading scores.

Construct	AVE	CR	CA	Item	Mean	Standard Deviation	Loading
Attitudinal Preferences	0.804	0.925	0.877	ATT1	5.171	1.758	0.867
				ATT2	5.218	1.784	0.931
				ATT3	4.958	1.819	0.890
Social Influence	0.618	0.823	0.696	SOC1	4.693	2.024	0.890
				SOC2	5.383	1.918	0.878
				SOC3	4.751	2.015	0.541
Response Efficacy	0.588	0.719	0.421	REF1	6.507	0.831	0.478
				REF2	6.354	0.944	0.974
Self-Efficacy	0.775	0.873	0.713	SEF1	5.102	1.631	0.909
				SEF2	4.520	1.901	0.850
Response Cost	0.575	0.800	0.646	REC1	2.373	1.529	0.612
				REC2	2.554	1.748	0.800
				REC3	3.118	1.860	0.843
Level of Dread	0.537	0.766	0.656	DREAD1	6.213	1.344	0.584
				DREAD2	4.808	1.848	0.963
				DREAD3	3.625	1.631	0.585
Familiarity	0.519	0.759	0.610	FAM1	6.441	0.810	0.572
				FAM2	6.346	0.999	0.679
				FAM3	5.961	1.420	0.877
Intention	0.854	0.946	0.914	INT1	5.039	1.986	0.934
				INT2	4.987	2.095	0.946
				INT3	4.178	2.374	0.890
Dread x Attitude	1.000	1.000	1.000				

Table 2 – Descriptive Statistics Results

3.3. DESCRIPTIVE ANALYSIS BY GROUP

Given the complexity of the proposed model, due to the high number of constructs and relationships, alongside with moderators and mediators, PLS-SEM was indicated as best option to study the travel intentions of the sample (Hair et al., 2019). PLS-SEM is also the most indicated statistical model to improve research based on theoretical frameworks, contributing to their development and understanding.

In addition, the sample data was split according to travel behaviour since the beginning of the pandemic. One group included consumers who have not travelled since the beginning of the pandemic, and the other group included COVID-19 travelers. A multi-group analysis (MGA) was employed, and bootstrapping results from each group reveal the statistical significance of each path coefficient, with a 5% significance (Appendix C).

4. RESULTS AND DISCUSSION

4.1. MULTI-GROUP ANALYSIS

The sample was divided in two subsets: the first group with 196 participants including people who have not travelled since the beginning of the pandemic (NO group); and the second one with 185 participants including people who have travelled since the beginning of the pandemic, or COVID-19 travelers (YES group). The main purpose is to infer if there is any difference between relationships, namely those including attitudinal preferences, social influence, and the level of dread. For this reason, it was employed a multi-group analysis.

Additionally, we analysed two quadratic effects in the model: self-efficacy over intention (SEF_Q) and dread over intention (DREAD_Q). If confirmed, it could mean that a small variation in these two constructs may lead to a high variation in travel intentions. In addition, this could represent SEF and DREAD as the main drivers of this study.

The results of multi-group analysis, applying bootstrapping technique with 5000 iterations, are shown in Table 3, Figure 2 and Figure 3.

Items	**Path Coefficient (NO)**	**Path Coefficient (YES)**	**t-Value (NO)**	**t-Value (YES)**	**p-Value (NO)**	**p-Value (YES)**
ATT → INT	0.380	0.401	4.525	4.461	0.000	0.000
SOC → INT	0.365	0.247	4.187	2.585	0.000	0.010
SOC → ATT	0.698	0.530	14.855	7.150	0.000	0.000
SEF → INT	0.127	0.177	2.187	2.485	0.029	0.013
SEF → ATT	0.009	0.113	0.165	1.535	0.869	0.125
REF → ATT	-0.051	0.085	0.914	1.206	0.361	0.228
REC → ATT	-0.119	-0.073	2.614	0.900	0.009	0.368
DREAD → ATT	-0.151	-0.102	2.757	1.271	0.006	0.204
DREAD → INT	0.006	-0.088	0.092	0.855	0.927	0.393
FAM → ATT	0.083	0.114	1.301	1.593	0.193	0.111
DREAD x ATT → ATT	0.045	0.190	0.828	2.130	0.408	0.033
SEF_Q → INT	0.083	0.063	1.505	1.156	0.132	0.248
DREAD_Q → INT	0.007	0.071	0.145	1.336	0.885	0.182

Table 3 - Multi-group Analysis Results

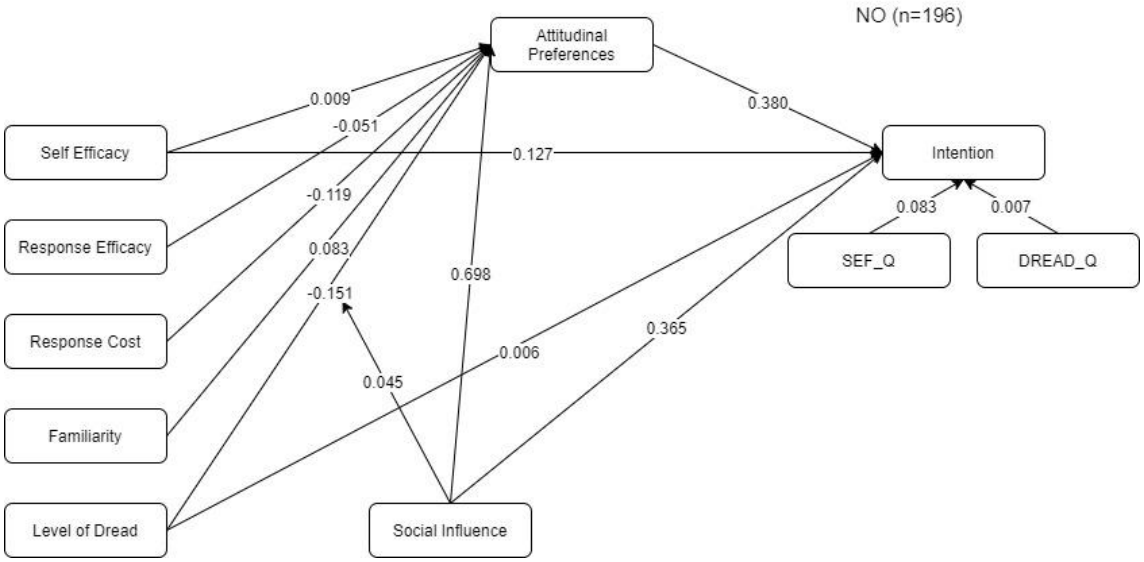

Figure 2 - Multi-group Analysis Results of NO Group

Note: NO Group - Consumers who have not traveled during the pandemic

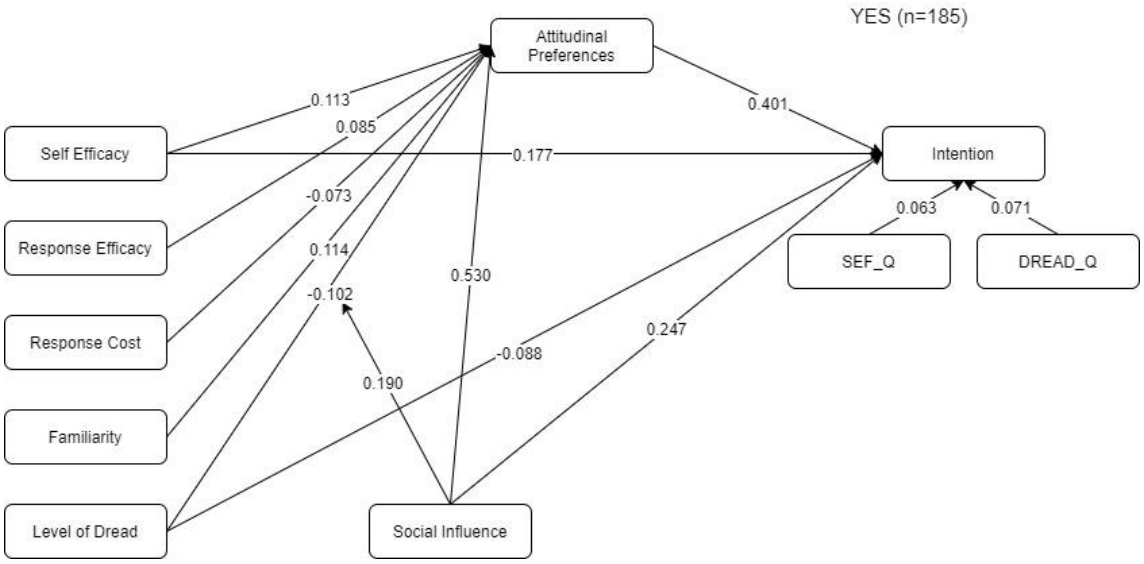

Figure 3 - Multi-group Analysis Results of YES Group

Note: YES Group – Consumers who have traveled during the pandemic (COVID-19 travelers)

With a threshold of 5% significance, the multi-group results present some trends, but also some discrepancies. Both groups rated the importance of attitudinal preferences and self-efficacy on travel intentions to be highly significant, as well as the influence of social influence on attitudinal preferences. The results also depict that the influence of the level of dread on attitudinal preferences and the influence of response cost on attitudinal preferences are only significant in the NO group. The importance of the moderator Dread x Attitude was only found significant by the YES group. Finally, all the remaining relationships are not significant individually.

4.2. HYPOTHESES RESULTS

The main observable trend is that only four hypotheses were accepted in both groups (H1, $H2_a$, $H2_b$ and $H3_a$). The positive importance of social influence on attitudinal preferences ($H2_b$) is, undoubtedly, the strongest relationship in the model (t_{NO}*=14.855,* p_{NO}*=0.00;* t_{YES}*=7.150,* p_{YES}*=0.00*), followed by the positive influences of attitudinal preferences and social influence on travel intentions (H1 and $H2_a$), with the same *p-value*, but lower *t-values*. Self-efficacy also found its positive importance on travel intentions to be significant ($H3_a$), however, the *p-values* were higher than the previous hypotheses (p_{NO}*=0.029,* p_{YES}*=0.013*).

The data from the sample of consumers who have not travelled since the beginning of the pandemic also supports a negative influence of response cost and the level of dread on attitudinal preferences (H5 and $H6_a$). Despite being influent of attitudinal preferences, social influence does not statistically moderate the level of dread (p_{NO}=0.408). However, the level of dread does not directly influence travel intentions ($H6_b$). This reinforces the role of attitudinal preferences as a mediator in this model, meaning that the personal attitude governs the relationship between the level of dread and travel intentions.

On the other hand, the sample of "COVID-19 travellers" had less hypotheses supported by the data, five, which corresponds to less than half of the proposed ones. The hypotheses $H3_b$ to $H6_c$ are not statistically significant. However, despite the influence of the level of dread on the attitudinal preferences ($H6_a$) not being significant, social influence (H7) moderates this relationship.

Therefore, $H3_b$, H4, $H6_b$ and $H6_c$ are the only hypotheses which are not supported by the data. The hypotheses H5 and $H6_a$ are only accepted on consumers who have not travelled yet, and H7 is only accepted on who has already travelled.

4.3. THEORETICAL IMPLICATIONS

This study deepens the understanding of travel intentions in the context of the COVID-19 pandemic. By doing so, we extend the Theory of Planned Behavior that suggests that the average consumers' intentions are driven by their personal attitudes, social influence, and perceived ease to cope with the behavior (Ajzen, 1991). In particular, we demonstrate that travel intentions extend their Planned Behavior to the Protection Motivation field. The findings indicate that planned travel behaviors are the main drivers of travel intentions, and self-efficacy has also as important contribution.

4.3.1. Consumers who have not traveled yet

The new Planned Protection Motivation (PPM) model provides better results on the consumers who have not travelled since the beginning of the pandemic. As expected, these consumers are very responsive to negative thoughts and beliefs. Our results suggest that response cost and the level of dread negatively influence their attitudes towards travelling during the pandemic, unlike people who have travelled. One possible explanation to such findings can be the fear of the unknown. Lovecraft (1927), stated that "The oldest and strongest emotion of mankind is fear, and the oldest and strongest kind of fear is fear of the unknown". Since these consumers have not travelled yet, their perceived fear may be causing misconception of the actual experience of travelling during the pandemic. However, since our results show that the downsides of having to deal with the constraints of life during the pandemic strongly influence travel intentions, the level of dread is not directly

associated to travel intentions, but only to attitudes. These findings demonstrate a major importance of the mediating effect of attitudes on travel intentions, which is consistent with previous research (Luo & Lam, 2020).

Moreover, our findings show that, in accordance with the concerns towards traveling, consumers who have not travelled yet do not have a definitive answer to the question whether they want to travel in the medium-short time, as their level of intention is medium, but with a slight positive trend. In addition, the standard deviation is high. One possible explanation for this finding is many different opinions regarding traveling, resulting in medium results. Their attitudes, highly influenced by a small level of fear and a perceived discomfort of protective measures, follow the same trend. Although this finding does not represent a truly optimistic view from these consumers, it surpassed the expectations of not wanting to travel due to a high level of fear (Abdullah et al., 2020; Hotle et al., 2020; Lamb et al., 2020; Rather, 2021).

The last variable influencing personal attitudes of the consumers who have not travelled was social influence, which had a very positive importance, but the average responses followed the same trend. Our results suggest that third party opinions are not encouraging enough to travel. Therefore, the opinion of others may have influenced them to have a 'mixed feelings' reaction towards travelling.

4.3.2. COVID-19 travelers: Consumers who have already traveled during the pandemic

This study also provides a new contribution by presenting results from consumers who have already travelled since the beginning of the pandemic. Recent research assessed COVID-19 travelers satisfaction towards travelling during the pandemic (Khaddar & Fatmi, 2021), but provided little insights on their attitudes and motivations. Our results suggest that their willingness to travel did not consider as many variables for its definition as the previous study. Their Protection Motivation was not crucial for their travel intentions, and self-efficacy, which was a merge from perceived behavioral control (TPB) and self-efficacy (PMT), was the only significant variable from the PMT, by directly influencing travel intentions.

Our findings also suggest that these consumers are willing to travel during the pandemic times. Unlike the previous group, their level of fear and discomfort of protective measures do not impact their travel intentions. Our findings show that a possible explanation for their lack of fear is social influence, which plays a moderating effect of their influence on attitudinal preferences. This way, third party opinions do not discourage them to travel, and their opinion was important to increase their confidence on the travel experience. In addition, past travels during the pandemic may have influenced their willingness to travel nowadays, and they already know what to expect and what procedures they should take to safe travel with the minimum discomfort.

4.4. PRACTICAL IMPLICATIONS

This research provides several practical implications for future applications. Firstly, our findings provide new insights on tourists' profiles. Tourism operators, which are responsible for developing travel packages including hotel and transport, could use this approach to understand in which way the tourism paradigm has changed in the past months. The data suggests that the coronavirus pandemic has altered tourists' requirements to travel, with new concerns and demands, such as fear and discomfort from protective measures. This way, the results could be used to develop and apply

new campaigns, including hotels which provide better conditions to mitigate the pandemic, in destinations where the virus does not have a significant impact, or where there is some isolation from major focus (e.g., resorts).

Secondly, hotel managers could infer what can be changed in the customer experience, by applying a *customer relationship management* (CRM) approach. The goal is to provide better conditions and to improve safety, regarding social distance, cleaning services and hotel activities. Having families as the main target could be important, since they represent a higher revenue per room, and a higher hotel loyalty. Given that children are the main concern for the families, it is recommended a good promotion of the safety of the children dedicated spaces to attract the families. A better understanding of these factors could help in the hotel promotion, as well as an increased ease in closing deals with tourism operators.

Thirdly, airlines could redefine their business strategies in order to convince consumers to fly again. Nowadays, airlines are facing the biggest crisis ever in history, with a decline of over 60% in the number of passengers worldwide (ICAO, 2021). Airlines should focus on promoting good health practices to show consumers who are yet not convinced, that travelling by airplane is safe. Our findings suggest that consumers who have not travelled yet since the beginning of the pandemic fit in this group. Regarding airlines operations recovery, airlines could primarily focus on the routes that are historically profitable and with high demand. The remaining routes that were suspended after the COVID-19 outbreak could be gradually resumed in agreements with tourism operators, as it could provide less business risk on their operation.

Finally, communication means could consider the fact that social influence has a great importance on both attitudes and travel intentions. The data suggests that, presently, media channels have a positive importance on consumers' attitudes. However, for COVID-19 travelers, social influence moderates the relationship between fear and attitudes. Therefore, it is important that the communication level remains this way, and that information must be clear and impartial in order not to cause any panic or fear, so that tourism does not lose its current customers. Lastly, there should be a higher control of *fake news* on the Internet. In the past years, the concern about *fake news* has been increasing, and social media has been the stage for misleading information (Domenico et al., 2021). To mitigate false information spreading, Instagram (2020), included automatic links on posts regarding the pandemic and vaccines, redirecting users to the WHO website. As a measure to prevent the increase of fear, we suggest that other platforms should take similar measures, and include *fact-check*'s pages to better inform users.

5. CONCLUSIONS

This study provides a new framework to study travel intentions in the context of the coronavirus pandemic: Planned Protection Motivation (PPM) approach. The results suggest that tourism companies should be aware of fear and discomfort factors laying on COVID-19 travelers, and they should act in order not to let the fear prevent them from traveling. Acting on safety and preventive measures should be the main focus, as well as to increase families trust to travel, while the pandemic situation is not mitigated. Media companies should also keep a communication level in order not to spread fear, but awareness.

6. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE WORKS

Although this study provides some significant insights on travel intentions during the COVID-19 pandemic, there are also some limitations that should be addressed in future studies.

The first limitation of this study is the small representativity of elderly consumers in the sample, making the demography of the study unbalanced. Older consumers are a very important market for cruise companies, beach and rural markets, and health tourism. A higher representativity of these consumers could have increased the number of participants included in the risk group and could have provided better insights on travel intentions. Lastly, it could have provided an interesting study of the opinions of the different age groups.

Another limitation of this study is the fact the lack of distinction between the results from people suffering from deceases, and the remaining part of the sample. These consumers, with fragile health conditions, could have different priorities and opinions on travelling, due to their health condition. Since the pandemic is a health-related issue, it could be interesting for future researchers to implement an aside multi-group analysis only based on health reasons, instead of the past travels.

Thirdly, this study was conducted in Portugal, a European Union (EU) and Schengen Area member. The EU members' population are allowed to travel between member states without any bureaucracy or restrictions (any restrictions applied were only during the toughest months for each country). If someone travels inside the EU, but to a country that does not belong to the Schengen Area, only the ID card is requested. Therefore, Portuguese population can travel to another EU member with no problem. Future research could conduct a similar study in a country with higher border control and safety protocols and analyse if travel intentions would remain similar.

Lastly, four hypotheses were not accepted in any of the defined groups ($H3_b$, H4, $H6_b$ and $H6_c$). The role of attitudes as a mediator is a possible explanation for the indirect impact of fear and the rejection of $H6_b$ because consumers will tend to evaluate the behavior beforehand based on their past experiences, and they will later formulate their opinion (Luo & Lam, 2020). On the other hand, self-efficacy, response efficacy and familiarity are not significant for the personal attitudes towards travelling ($H3_b$, H4 and $H6_c$). This factor may be explained by the young age of the respondents. Recent research has shown that a higher age may be associated to higher level of awareness and a higher protection motivation against COVID-19 (Ezati Rad et al., 2021). Since fear plays an important role in this research, future research could investigate the reasoning behind the lack of significance of these hypotheses, especially on the effect of fear on travel intentions ($H6_b$).

7. BIBLIOGRAPHY

Abdullah, M., Dias, C., Muley, D., & Shahin, M. (2020). Exploring the impacts of COVID-19 on travel behavior and mode preferences. *Transportation Research Interdisciplinary Perspectives*, *8*, 100255. https://doi.org/10.1016/j.trip.2020.100255

Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The Fear of COVID-19 Scale: Development and Initial Validation. *International Journal of Mental Health and Addiction*, 1–9. https://doi.org/10.1007/s11469-020-00270-8

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Anderson, C. L., & Agarwal, R. (2010). Practicing safe computing: A multimethod empirical examination of home computer user security behavioral intentions. *MIS Quarterly: Management Information Systems*, *34*(SPEC. ISSUE 3), 613–643. https://doi.org/10.2307/25750694

Arafat, S. M. Y., Kar, S. K., Menon, V., Kaliamoorthy, C., Mukherjee, S., Alradie-Mohamed, A., Sharma, P., Marthoenis, M., & Kabir, R. (2020). Panic buying: An insight from the content analysis of media reports during COVID-19 pandemic. *Neurology Psychiatry and Brain Research*, *37*, 100–103. https://doi.org/10.1016/j.npbr.2020.07.002

Bashirian, S., Jenabi, E., Khazaei, S., Barati, M., Karimi-Shahanjarini, A., Zareian, S., Rezapur-Shahkolai, F., & Moeini, B. (2020). Factors associated with preventive behaviours of COVID-19 among hospital staff in Iran in 2020: an application of the Protection Motivation Theory. *Journal of Hospital Infection*, *105*, 430–433. https://doi.org/10.1016/j.jhin.2020.04.035

Domenico, G. di, Sit, J., Ishizaka, A., & Nunan, D. (2021). Fake news, social media and marketing: A systematic review. In *Journal of Business Research* (Vol. 124, pp. 329–341). Elsevier Inc. https://doi.org/10.1016/j.jbusres.2020.11.037

Duan, J., Xie, C., & Morrison, A. M. (2021). Tourism Crises and Impacts on Destinations: A Systematic Review of the Tourism and Hospitality Literature. *Journal of Hospitality and Tourism Research*, *XX, No. X*, 1–29. https://doi.org/10.1177/1096348021994194

Eid, R., Agag, G., & Shehawy, Y. M. (2021). Understanding Guests' Intention to Visit Green Hotels. *Journal of Hospitality and Tourism Research*, *45*(3), 494–528. https://doi.org/10.1177/1096348020947800

Ezati Rad, R., Mohseni, S., Kamalzadeh Takhti, H., Hassani Azad, M., Shahabi, N., Aghamolaei, T., & Norozian, F. (2021). Application of the protection motivation theory for predicting COVID-19 preventive behaviors in Hormozgan, Iran: a cross-sectional study. *BMC Public Health*, *21*(1), 466. https://doi.org/10.1186/s12889-021-10500-w

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, *18*(1), 39–50. https://doi.org/10.1177/002224378101800104

Gössling, S., Scott, D., & Hall, C. M. (2021). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism*, *29*(1), 1–20. https://doi.org/10.1080/09669582.2020.1758708

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*, 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hotle, S., Murray-Tuite, P., & Singh, K. (2020). Influenza risk perception and travel-related health protection behavior in the US: Insights for the aftermath of the COVID-19 outbreak. *Transportation Research Interdisciplinary Perspectives*, *5*, 100127. https://doi.org/10.1016/j.trip.2020.100127

I. Ajzen, & M. Fishbein. (1980). Understanding Attitudes and Predicting Social Behavior. *Journal of Experimental Social Psychology*, *278*. https://www.researchgate.net/publication/304534338_Understanding_Attitudes_and_Predicting_Social_Behavior

ICAO. (2021). *Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis*. https://www.icao.int/sustainability/Documents/COVID-19/ICAO_Coronavirus_Econ_Impact.pdf

Instagram. (2020, March 24). *COVID-19 Announcement | Instagram | Official Blog*. https://about.instagram.com/blog/announcements/coronavirus-keeping-people-safe-informed-and-supported-on-instagram

Khaddar, S., & Fatmi, M. R. (2021). COVID-19: Are you satisfied with traveling during the pandemic? *Transportation Research Interdisciplinary Perspectives*, *9*, 100292. https://doi.org/10.1016/j.trip.2020.100292

Kock, F., Nørfelt, A., Josiassen, A., Assaf, A. G., & Tsionas, M. G. (2020). Understanding the COVID-19 tourist psyche: The Evolutionary Tourism Paradigm. *Annals of Tourism Research*, *85*, 103053. https://doi.org/10.1016/j.annals.2020.103053

Kozak, M., Crotts, J. C., & Law, R. (2007). The impact of the perception of risk on international travellers. *International Journal of Tourism Research*, *9*(4), 233–242. https://doi.org/10.1002/jtr.607

Lamb, A., Paul, M. J., & Dredze, M. (2013). Separating Fact from Fear: Tracking Flu Infections on Twitter. *Association for Computational Linguistics*, 789–795.

Lamb, T. L., Winter, S. R., Rice, S., Ruskin, K. J., & Vaughn, A. (2020). Factors that predict passengers willingness to fly during and after the COVID-19 pandemic. *Journal of Air Transport Management*, *89*, 101897. https://doi.org/10.1016/j.jairtraman.2020.101897

Li, J., Nguyen, T. H. H., & Coca-Stefaniak, J. A. (2020). Coronavirus impacts on post-pandemic planned travel behaviours. *Annals of Tourism Research*, 102964. https://doi.org/10.1016/j.annals.2020.102964

Liu, Y., Li, Q., Edu, T., & Negricea, I. C. (2020). Exploring the Continuance Usage Intention of Travel Applications In the Case of Chinese Tourists. *Journal of Hospitality and Tourism Research*, *XX, No. X*. https://doi.org/10.1177/1096348020962553

Lovecraft, H. P. (1927). Supernatural Horror in Literature. *The Recluse*, *1*, 23–59.

Luo, J. M., & Lam, C. F. (2020). Travel Anxiety, Risk Attitude and Travel Intentions towards "Travel Bubble" Destinations in Hong Kong: Effect of the Fear of COVID-19. *International Journal of Environmental Research and Public Health*, *17*(21), 7859. https://doi.org/10.3390/ijerph17217859

Morten, A., Gatersleben, B., & Jessop, D. C. (2018). Staying grounded? Applying the theory of planned behaviour to explore motivations to reduce air travel. *Transportation Research Part F: Traffic Psychology and Behaviour*, *55*, 297–305. https://doi.org/10.1016/j.trf.2018.02.038

Nimri, R., Patiar, A., Kensbock, S., & Jin, X. (2020). Consumers' Intention to Stay in Green Hotels in Australia: Theorization and Implications. *Journal of Hospitality and Tourism Research*, *44*(1), 149–168. https://doi.org/10.1177/1096348019862602

Parady, G., Taniguchi, A., & Takami, K. (2020). Travel behavior changes during the COVID-19 pandemic in Japan: Analyzing the effects of risk perception and social influence on going-out self-restriction. *Transportation Research Interdisciplinary Perspectives*, *7*, 100181. https://doi.org/10.1016/j.trip.2020.100181

Pereira, V., Gupta, J. J., & Hussain, S. (2019). Impact of Travel Motivation on Tourist's Attitude Toward Destination: Evidence of Mediating Effect of Destination Image. *Journal of Hospitality and Tourism Research*, *XX, No. X*, 1–26. https://doi.org/10.1177/1096348019887528

Peres, D., Monteiro, J., Almeida, M. A., & Ladeira, R. (2020). Risk perception of COVID-19 among Portuguese healthcare professionals and the general population. *Journal of Hospital Infection*, *105*, 434–437. https://doi.org/10.1016/j.jhin.2020.05.038

Prasetyo, Y. T., Castillo, A. M., Salonga, L. J., Sia, J. A., & Seneta, J. A. (2020). Factors affecting perceived effectiveness of COVID-19 prevention measures among Filipinos during Enhanced Community Quarantine in Luzon, Philippines: Integrating Protection Motivation Theory and extended Theory of Planned Behavior. *International Journal of Infectious Diseases*, *99*, 312–323. https://doi.org/10.1016/j.ijid.2020.07.074

Quintal, V. A., Lee, J. A., & Soutar, G. N. (2010). Risk, uncertainty and the theory of planned behavior: A tourism example. *Tourism Management*, *31*(6), 797–805. https://doi.org/10.1016/j.tourman.2009.08.006

Rather, R. A. (2021). Demystifying the effects of perceived risk and fear on customer engagement, co-creation and revisit intention during COVID-19: A protection motivation theory approach.

Journal of Destination Marketing and Management, *20*, 100564. https://doi.org/10.1016/j.jdmm.2021.100564

Resolução da Assembleia da República 49/200720, Diário da República n.º 144/2020, Série I 3 (2020). https://dre.pt/application/conteudo/138852741

Rogers, R. W. (1983). Cognitive and physiological processes in fear appeals and attitude change: A revised theory of protection motivation. *Social Psychophysiology: A Sourcebook*, 153–177.

Rogers, R. W. (1975). A Protection Motivation Theory of Fear Appeals and Attitude Change. *The Journal of Psychology*, *91*(1), 93–114. https://doi.org/10.1080/00223980.1975.9915803

Slovic, P. (1987). Perception of risk. *Science*, *236*(4799), 280–285. https://doi.org/10.1126/science.3563507

Think Global Health. (2020). *Travel Restrictions on China due to COVID-19*. https://www.thinkglobalhealth.org/article/travel-restrictions-china-due-covid-19

Tsang, S., Avery, A. R., & Duncan, G. E. (2021). Fear and depression linked to COVID-19 exposure A study of adult twins during the COVID-19 pandemic. *Psychiatry Research*, *296*, 113699. https://doi.org/10.1016/j.psychres.2020.113699

Turismo de Portugal. (2021). *TURISMO EM NÚMEROS | dezembro 2020*. https://travelbi.turismodeportugal.pt/pt-pt/Documents/Turismo%20em%20Portugal/turismo-em-numeros-dez-2020.pdf

UNWTO. (2021). *2020: Worst Year in Tourism History with 1 Billion Fewer International Arrivals*. https://www.unwto.org/taxonomy/term/347

Woon, I. M. Y., Tan, G. W., & Low, R. T. (2005). *A Protection Motivation Theory Approach To Home Wireless Security*.

Wu, D. (2020). Empirical study of knowledge withholding in cyberspace: Integrating protection motivation theory and theory of reasoned behavior. *Computers in Human Behavior*, *105*, 106229. https://doi.org/10.1016/j.chb.2019.106229

Zheng, D., Luo, Q., & Ritchie, B. W. (2021). Afraid to travel after COVID-19? Self-protection, coping and resilience against pandemic 'travel fear.' Tourism Management, 83, 104261. https://doi.org/10.1016/j.tourman.2020.104261

8. APPENDIX

	1	2	3	4	5	6	7	8	9
1. Attitudinal Preferences	0.896								
2. Social Influence	0.765	0.786							
3. Self-Efficacy	0.311	0.363	0.880						
4. Response Efficacy	0.026	-0.033	0.110	0.767					
5. Response Cost	-0.364	-0.330	-0.232	-0.218	0.758				
6. Level of Dread	-0.167	-0.141	0.194	0.202	-0.101	0.733			
7. Familiarity	0.146	0.093	0.192	0.264	-0.165	0.265	0.721		
8. Intention	0.697	0.697	0.355	-0.057	-0.280	-0.128	0.143	0.924	
9. Dread x Attitude	0.313	0.274	0.244	0.053	-0.168	0.137	0.150	0.253	1.000

Appendix A - Fornell-Larcker Discriminant Validity

	1	2	3	4	5	6	7	8	9
1. Attitudinal Preferences									
2. Social Influence	0.924								
3. Self-Efficacy	0.386	0.528							
4. Response Efficacy	0.059	0.152	0.255						
5. Response Cost	0.451	0.476	0.353	0.410					
6. Level of Dread	0.153	0.293	0.351	0.484	0.191				
7. Familiarity	0.166	0.142	0.290	0.693	0.233	0.378			
8. Intention	0.777	0.796	0.434	0.082	0.339	0.164	0.145		
9. Dread x Attitude	0.333	0.365	0.286	0.077	0.187	0.128	0.145	0.264	

Appendix B - Heterotrait-Monorait Ratio Discriminant Validity

Construct	Item	Mean (NO)	Mean (YES)	Standard Deviation (NO)	Standard Deviation (YES)
Attitudinal	ATT1	4.719	5.649	1.919	1.422
Preferences	ATT2	4.806	5.654	1.944	1.478
	ATT3	4.469	5.476	1.899	1.574
Social Influence	SOC1	3.985	5.443	2.052	1.698
	SOC2	4.689	6.119	2.150	1.276
	SOC3	4.515	5.000	2.049	1.948
Response Efficacy	REF1	4.796	5.427	1.699	1.487
	REF2	5.735	6.265	1.629	1.114
Self-Efficacy	SEF1	6.571	6.438	0.789	0.868
	SEF2	6.561	6.481	0.846	0.750
Response Cost	REC1	2.418	2.324	1.613	1.434
	REC2	2.658	2.443	1.810	1.673
	REC3	3.372	2.849	1.873	1.807
Level of Dread	DREAD1	6.153	6.276	1.388	1.292
	DREAD2	4.872	4.741	1.787	1.908
	DREAD3	3.541	3.714	1.630	1.627
Familiarity	FAM1	6.378	6.508	0.875	0.729
	FAM2	6.306	6.389	1.129	0.838
	FAM3	5.857	6.070	1.525	1.278
Intention	INT1	4.413	5.703	2.099	1.612
	INT2	4.337	5.676	2.215	1.709
	INT3	3.398	5.005	2.357	2.096

Appendix C - Descriptive Statistics per group

9. ANNEXES

Variable	Item	Questions
Attitudinal Preferences	ATT1	Traveling during the pandemic is not harmful to health.
	ATT2	Traveling during the pandemic is good.
	ATT3	Traveling during the pandemic is satisfactory.
Social Norm (Social Influence)	SOC1	My friends and family would approve me travelling during the pandemic.
	SOC2	If my family and friends travel during the pandemic, I will also do it.
	SOC3	Media channels encourage me to travel during the pandemic.
Self-Efficacy	SEF1	Washing my hands regularly prevents contagion.
	SEF2	Keeping social distance prevents contagion.
Response Efficacy	REF1	Preventive protocols are easy to implement.
	REF2	I can wear a mask for a long period of time.
Response Cost	REC1	Protecting me against the virus is too time consuming.
	REC2	Washing my hands regularly makes my skin very sensitive.
	REC3	I struggle to breathe while wearing a mask.
Level of Dread	DREAD1	Being infected can be a serious problem.
	DREAD2	There is a chance that my family can be infected in case I travel.
	DREAD3	I think I am very vulnerable to COVID-19.
Familiarity	FAM1	I am aware of the COVID-19 symptoms.
	FAM2	I am aware of the number of contagions and deaths by COVID-19 in my country.
	FAM3	I believe the pandemic will last at least 12 more months.
Intention	INT1	If I have the opportunity to travel in the medium-short time, I will.
	INT2	If I have the monetary conditions to travel in the medium-short time, I will.
	INT3	I intend to travel in the medium-short time as regularly as I used to before the pandemic.

Annex A – Survey conducted for the present study