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Travel avoidance and destination choice analysis: Indonesian's case study

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Abstract

This research aims to analyze the choice based on the research model, a modification of The Health Belief Model (HBM), consisting of perceived susceptibility, perceived severity, self-efficacy, Subjective knowledge and Travel Risk Perception on destination choice and travel avoidance as moderator variables. The results found that perceived susceptibility, self-efficacy, and travel risk perception positively and significantly influence travel avoidance directly. Only travel risk perception significantly impacted tourists' destination choices. Indirectly, perceived susceptibility and travel risk perception greatly influenced destination choice, with travel avoidance as a moderator variable. Travel risk perception was the most influential factor to travel avoidance and tourists' destination choice during the Covid19 outbreak.

Keywords: Travel avoidance; Tourist destinations choice; COVID-19 outbreak; The Health Belief Model

1. Introduction

The world was suffering from a health crisis due to the advance of a deadly virus. Several kinds of viruses occurred centuries ago, such as monkeypox, bird flu (H5N1), Ebola, SARS, MERS, rabies, and smallpox (Aida, 2020). Nevertheless, this time, the deadly Covid19 outbreak was spreading rapidly and was hard to detect. Almost all countries imposed a lockdown, which considerably impacted the world economy. Indonesia on of the countries being hit hardest by this virus. The number of cases in Indonesia infected with Covid19 in May 2020 was more than 17,000 people, and the death of more than 1,000 people (Fanani, 2020) caused Indonesia to become one of the countries seriously affected by this virus spreading.

The companies in tourism, such as transportation, hotels, and travel agents, are victims of this situation, leading to their income dropping drastically. Unlike other viruses, during the Covid19 outbreak, tourists avoid coming for fear of being infected by others in tourist destinations. Many tourists planned to go to destinations domestically and internationally, cancelling the trip indefinitely.

Based on the high rate of travel cancellations and delays in this situation, particularly for domestic tourism, the authors are interested in knowing the tourists' behavior that caused the cancellation increase during the Covid19 outbreak and the choosing tourist destinations during and after the outbreak. This study aimed to examine the travel avoidance effect on destination choices (Karl & Schmude, 2017) by adapting the travel avoidance model formulated by Cahyanto et al. (2016) while the Ebola virus developed in the United States in 2014. The Health Belief Model (HBM) is the most appropriate to find factors influencing travel based on current outbreak conditions. Authors used this model to describe the actions of individuals regarding perceived susceptibility, perceived severity, and self-efficacy (Ajzen, 1998), added with subjective knowledge (Régner et al., 2018) and travel risk perception (Cahyanto et al., 2016). Besides finding the factors that cause travel avoidance, this study also aims to add some thought about destination choice among Indonesian travelers during and after the Covid19 outbreak.

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This study looks for the effect of travel avoidance on tourist attractions/destination choices (Karl & Schmude, 2017) by adapting the travel avoidance model formulated by Cahyanto et al, 2016), when the Ebola virus developed in the United States in 2014. The Health Belief Model (HBM) consists of perceived susceptibility, perceived severity, and self-efficacy; added by Subjective Knowledge and Perceived Travel Risk Perception were the factors that influenced travel avoidance during the Ebola virus outbreak occurs.

Fear and avoidance of tourists from attractions and tourist destinations depend on their personality (Maximiliano, 2011). This fear and anxiety affect the travel and tourism industry as negative factors that prevent people from travelling due to human actions, natural crises, health risks, and crime and in determining tourist destinations (Bowen & Clarke, 2009). He also added that the Health Belief Model (HBM) factors, namely perceived susceptibility, and self-efficacy, significantly affect domestic travel avoidance (Cahyanto et al., 2016). Although there are also studies that epidemics do not considerably affect travel avoidance (Sarman, 2016), it cannot be denied that perceived risk perception and subjective knowledge are strong predictors of the possibility of avoiding (Thapa et al., 2013; Cahyanto et al., 2016).

The choice of tourist destinations is defined as selecting a destination from various competing alternative options (Crompton, 1992; Decrop & Snelders, 2005). Tourist destinations are not only tourism products which offer an integrated experience to consumers but also include concepts which are interpreted by consumers subjectively and depending on many factors (Buhalis, 2000), and one of them is the risks that exist in tourist destinations (Ryu et al., 2013). Travel mode (transportation, distance), tourism organization, travel time (date, duration), and activities are factors in the selection of tourist destinations (Karl & Schmude, 2017).

The Health Belief Model (HBM) is a theoretical framework often used to analyze health-related behaviors and has adapted to suit various contexts (Jones et al., 2015; Gerend & Shepherd, 2012). There have been several studies on tourism using the Health Belief Model regarding the prevention of health risks, epidemics, immunization, and disease (Huang et al., 2020; Cahyanto et al., 2016; Shepherd & Shoff, 2011; Donohoe et al., 2015). Suppose a person takes preventive action when believing there is a high probability of getting the disease (perceived susceptibility). In that case, there is an enormous negative effect of disease (perceived severity), benefits due to healthy behavior, and some obstacles to healthy behavior (Taymoori et al., 2014) and self-efficacy (Carpenter, 2010; Omar et al., 2013). Based on the suitability of the situation due to the outbreak that occurred when this study was conducted, the appropriate HBM are variables perceived susceptibility, perceived severity, and self-efficacy (Cahyanto et al., 2016). The explanation of each variable in this HBM model is as follows:

1.1. Perceived susceptibility

It is a person's perception of the risk of developing the disease. If the person feels he has a high risk of developing certain conditions, he will perform certain behaviors to reduce that risk (Marmarà et al., 2017). Perceptions of personal vulnerability to threats are a significant component in many theories of behavior change regarding health (Ferrer & Klein, 2015), such as attitudes based on openness and exposure to the risk of certain diseases or conditions (Jeihooni et al., 2018, Huang et al., 2020). This perception of vulnerability is a protective action that positively affects preparedness behavior.

Based on the theoretical backgrounds above, the proposed hypotheses:

- **H1:** Perceived susceptibility significantly influences travel avoidance.
- **H2:** Perceived susceptibility significantly affects tourist destination choice.

1.2. Perceived severity

A unique view of the potential loss and expected risk will negatively affect attitudes toward risk-based behavior but positively but can encourage preventive behavior (Quintal et al., 2010). Also, perceived severity is related to one's attention to the seriousness/urgency of a condition and refers to an assessment of the health impact of the disease (Huang et al., 2020, Brewer & Fazekas. 2007). The potential impact of an illness can be in the form of disability, long-term treatment, mental illness, financial problems or even death (Chin & Mansori, 2019; Maynard et al., 2018).

The hypotheses proposed:

- **H3:** Perceived severity significantly influences travel avoidance.
- **H4:** Perceived severity significantly affects tourist destination choice.

1.3. Self-Efficacy (self-efficacy)

As a personal belief in their ability to participate in preventive health check behaviors (Huang et al., 2020) and their ability to engage in health-promoting behaviors (Orji et al., 2012). Self-efficacy, in turn, can cause a person to recognize the benefits of developing it according to the recommended behavior to get the expected results (Jones et al., 2015; Sas-Nowosielski, 2017) which can lead to self-confidence and possibly explain his position socially. In the tourism sector, Self-Efficacy is an essential factor in influencing the decision to travel (Hung, 2008) and is a preventive measure to avoid travelling to locations affected by infectious diseases (Cahyanto et al., 2016). The following hypotheses were:

- **H5:** Self-efficacy significantly influences travel avoidance.
- **H6:** Self-efficacy significantly influences the tourist destination choice.

Subjective knowledge is an individual's perception of knowledge about a particular topic (Alba & Hutchinson, 2000), the influences on the perception of tourist destinations (Kerstetter & Cho, 2004) and modified the effect of risk perceptions on tourist's avoidance and perceptions of tourist destinations (Wong & Yeh, 2009; Perpiña, 2018). Travelers with higher subjective knowledge have confidence in avoidance and the intention to adopt safe behavior (Régner et al., 2018).

- **H7:** Subjective knowledge significantly influences travel avoidance.
- **H8:** Subjective knowledge significantly influences tourist destination choice.

Travel risk perception is a negative assessment of unfavorable travel health and safety over a certain period (Chien et al., 2017). Risk is often defined as visitors' feelings and experiences while receiving services at a tourism destination (Reisinger & Mavondo, 2005). The health risks perception of tourists towards a tourism destination presented an essential role in the decision-making process. It also impacted their health prevention behavior and travel quality (Chien et al., 2017). Most of the researchers on this risk were case-based. Continuously researching pandemics, risks, and travel is vital information to obtain a better response to health-related crises due to domestic and international epidemic risks in the tourism industry (Cahyanto et al., 2016). The hypotheses are below:

- **H9:** Travel risk perception significantly influences travel avoidance.
- **H10:** Travel risk perception significantly influences the tourist destination choice.

Meanwhile, Floyd et al. (2004) showed that tourists avoid international travel if the level of perceived risk is too high. Risks and safety while travelling influence travel avoidance and the choice of tourist destinations (Hughes, 2002).

- **H11:** Travel avoidance significantly influences the tourist destination choice.

The Health Belief Model (HBM), adapted from Cahyanto et al. (2016), helped understand this phenomenon. Those with higher risk perceptions, perceived susceptibility, and subjective knowledge were found to be more likely to avoid domestic travel, while those with higher levels of self-efficacy showed a lower tendency to avoid travel cause of the outbreak in tourist destinations choice (Dündar & Güçer, 2015; Beerli & Martin, 2007). Consequently, this study also investigates the mediation effect of travel avoidance between The Health Belief Model (HBM) factors and tourist destination choice resulting in the following hypotheses:

- **H12:** Travel avoidance mediates the relationship between perceived susceptibility and tourist destination choice.
- **H13:** Travel avoidance mediates the relationship between perceived severity and tourist destination choice.
- **H14:** Travel avoidance mediates the relationship between self-efficacy and tourist destination choice.
- **H15:** Travel avoidance mediates the relationship between travel risk perception and tourist destination choice.
- **H16:** Travel avoidance mediates the relationship between subjective knowledge and tourist destination choice.

This research's study framework (figure 1) is based on the Health Belief Model (HBM) revised by Cahyanto et al. (2016) on travel avoidance during the Ebola virus outbreak in the United States. The difference between this study and the previous model was the addition of tourists' destination choices.

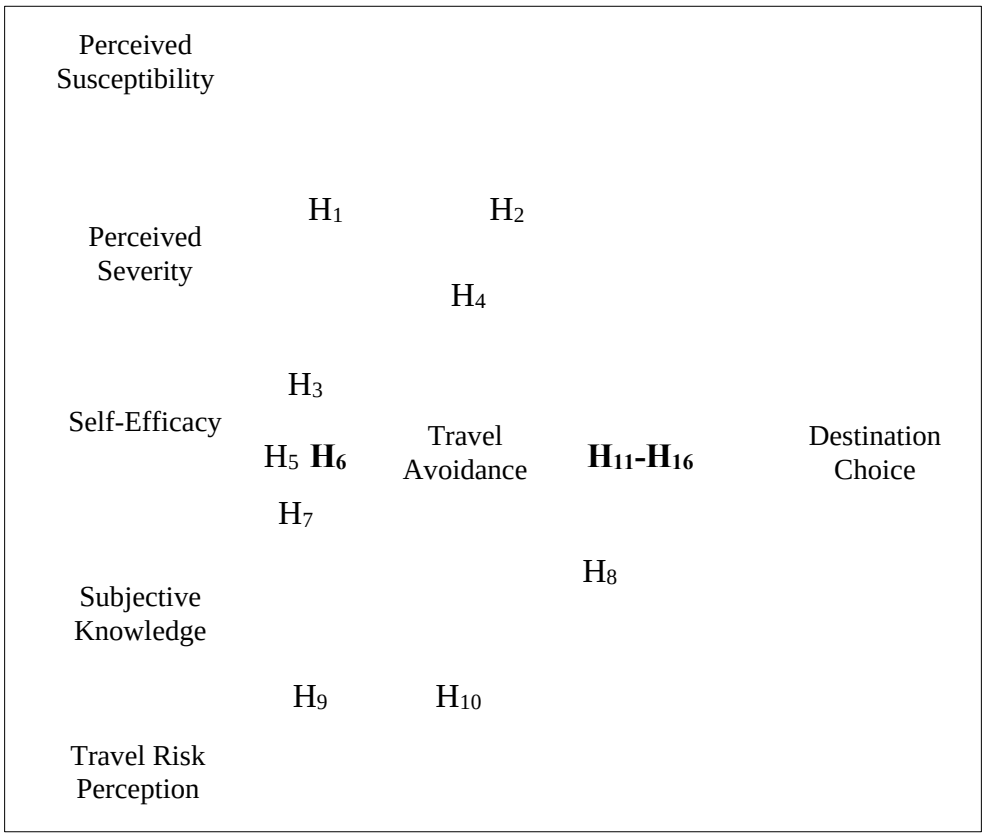

Figure 1 Model for travel avoidance and destination choice

2. Material and methods

This quantitative research used path analysis with three Health Belief Model (HBM) factors, travel risk perception and subjective knowledge, as independent variables and two dependent variables, travel avoidance as moderating variable and destination choice. The study instruments were developed based on the literature review and the experts' experiences on The Health Belief Model (HBM), travel avoidance and tourist destination choice to test the hypotheses. Questions in the questionnaire used five-scale Likert statements from 'strongly disagree' to 'strongly agree'. About thirty Likert scale questions in the questionnaire helped this study as an overview of the research questions divided into twenty-two questions of independent variables (perceived susceptibility, perceived severity, self-efficacy, subjective knowledge, and travel risk perception) and eight questions on dependent variables of travel avoidance and tourist destination choice.

Travelers from Indonesia were the population, and this study used a convenience sampling technique. Data was collected by distributing the questionnaires to 260 Indonesian people online and offline as samples who like, have and wish to travel to tourist destinations. Data received from the survey were processed using the IBM SPSS (Statistical Package for the Social Sciences) statistical software version 22.0 for descriptive results.

Table 1 shows that socio-demographics include four elements: gender, age, education level, and frequency of visits. Based on the table, the distribution according to the gender of the respondents shows that 46.15% were male, and 53.85% were female. There were 141 respondents aged 15-25 years, 64 people aged 26-35 years and 33.8% of respondents aged 36-45 years, and six people aged 45 years and over. The respondents' latest education results show that 31.92% were in high school or graduated from high school, 74 people or 28.46% are diplomas, and 1.15% of respondents were bachelors. Respondents who had visited destinations as tourists more than four times were 41.92% or 109 people. As many as 27.69% stated that they had travelled three times, 45 people or 17.31% visited twice, and 13.08% travelled once before this study.

Table 1 Profile of Respondents

Socio-Demographic		**Frequency**	**%**
Gender	Male	120	46.15%
	Female	140	53.85%
Age	15-25	141	54%
	26-35	64	25%
	36-45	49	19%
	≥45 years old	6	2%
Education	High school	83	31.92%
	Diploma	74	28.46%
	Bachelor	100	38.46%
	Master	3	1.15%
	Doctorate	0	0%
Number of visits	Once	34	13.08%
	Two times	45	17.31%
	Three times	72	27.69%
	≥4 times	109	41.92%

Source: Field Survey, 2023

The survey was delivered and collected online and offline to gather the data and was conducted from Augustus to November 2020. Data were coded and analyzed using SmartPLS 3.2.9 for the partial least squares approach to Structural Equation Model (SEM-based) analysis and multigroup analysis. The model comprises mediating variables; therefore, PLS-SEM will ensure correct and valid terms for theory validation and predict the relationship among the variables (Henseler and Chin, 2010) and is very appropriate when theoretical information is low (Chin et al., 2003). The PLS technique estimated the study model in two steps: the structural model (outer) that establishes the link among latent variables and the inner model as the measurement model (Nasar et al., 2019).

3. Results and discussion

The structural model below (Figure 2) was applied to justify tourists' destination choice's direct and mediation effects. The initial model includes five independent variables: perceived susceptibility, perceived severity, self-efficacy, subjective knowledge, and travel risk perception towards tourists' destination choice, with travel avoidance being the mediating variable.

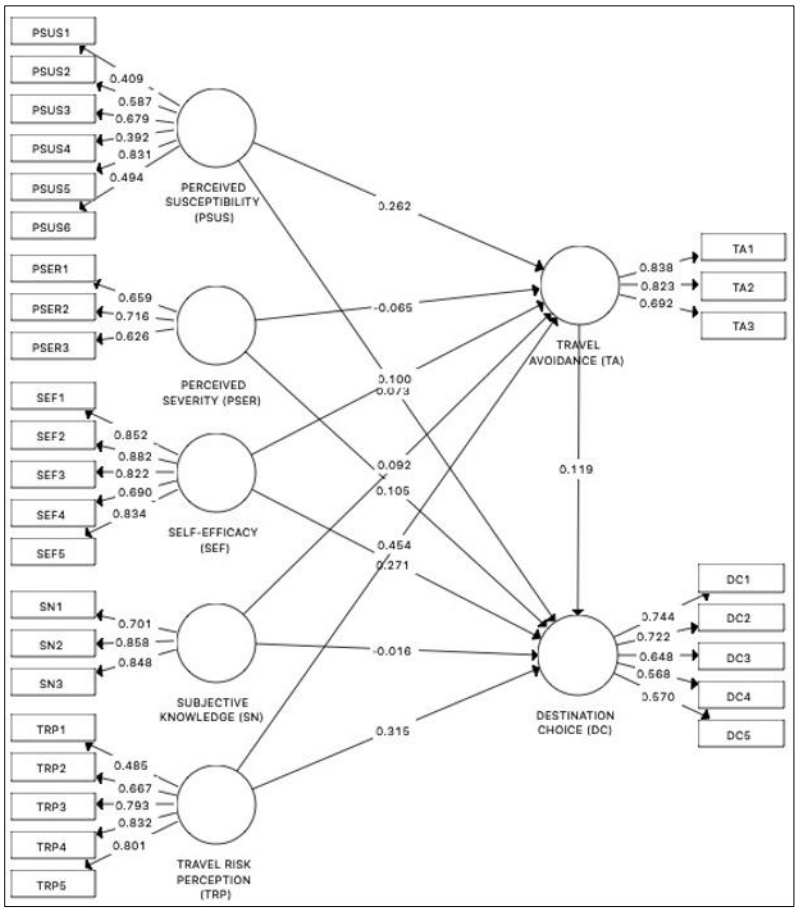

Figure 2 The Initial Path Model

The hypotheses were formulated using SmartPLS 3.2.9 software. In the PLS (Partial Least Square) method, the analysis techniques carried out as follows:

3.1. Outer Model Analysis

Confirmatory factor analysis (CFA) was conducted to assess the construct and to test the scales of reliability, convergent validity, and discriminant validity (May-Chiun et al., 2013).

The average variances extracted (AVE) is a criterion to measure convergent validity of more than 0.5 (Wixom & Watson 2001), and the smaller value must be deleted. In this study, AVE posited the value from 0,552 – 0,804 (more than 0,5), and all variables were valid.

Composite reliability, which should exceed 0.70, has been applied to test the survey's reliability (McLure & Faraj 2005). The reliability results indicated the consistency in the construct and meeting the required standard at an acceptable level. In table 2, the composite reliability was 0,851 for Perceived susceptibility, the composite reliability was 0,711 for Perceived severity, as much as 0,919 for self-efficacy, 0,842 for Subjective knowledge, 0,856 for travel avoidance, and 0,891 for tourists' destination choice.

For the discriminant validity, PLS ensure the model's extent (McLure & Faraj 2005) with an outer loading value > 0.7, which is considered sufficient and higher than the cross-loading value and AVE value higher than R-square (see table 3). After applying the PLS method, some variables did not satisfy the loading and communalities conditions and were removed from the initial model. The removal started from the lowest loadings value until every value > 0,7, as shown in Table 2. The model's acceptable loading values were PSUS3, PSUS5, PSER1, PSER2, SEF1, SEF2, SEF3, SEF5, SN1, SN2, SN3, TRP3, TRP4, TRP5, TA1, TA2, DC1, and DC2.

Table 2 Measurement Model Results

Construct		**Loading**	**Composite Reliability**	**Average Variance Extracted (AVE)**
PERCEIVED SUSCEPTIBILITY			0.851	0.741
PSUS1	Recently. the risk of exposure to the virus is high	0.403		
PSUS2	I am aware of the possibility of virus exposed if travel to different regions/ countries	0.592		
PSUS3	Stay at home is the proper behavior	0.685		
PSUS4	I will wear masks if travelling	0.383		
PSUS5	I avoid the high affected virus areas	0.828		
PSUS6	I will reduce the number of visits to crowded places	0.493		
PERCEIVED SEVERITY			0.711	0.552
PSER1	If ones exposed to the virus will most likely die	0.678		
PSER2	If catch the virus. tell relatives and friends	0.700		
PSER3	I will become susceptible to the virus if lack of health	0.623		
SELF-EFFICACY			0.919	0.740
SEF1	I understand the health instruction prevention	0.854		
SEF2	I understand how to avoid the virus	0.884		
SEF3	I understand the procedure to avoid the virus	0.822		
SEF4	Able to identify the virus exposed symptoms	0.684		
SEF5	I understand the procedure while exposed to the virus	0.835		
SUBJECTIVE KNOWLEDGE			0.842	0.641
SN	I can maintain the health	0.718		
SN	I know about Covid19 well	0.847		
SN	I understand the virus prevention procedure	0.842		
TRAVEL RISK PERCEPTION				
TRP1	I aware may be exposed to the virus if travelling	0.480		
TRP2	Domestic and international flights unsafe	0.658		
TRP3	Covid19 is terrifying	0.799		
TRP4	I choose the slightly affected tourist destinations	0.835		
TRP5	The people refrain from travelling cause of virus outbreak	0.804		
TRAVEL AVOIDANCE			0.856	0.749
TA1	I cancel all the travel plan until the virus outbreak resolved	0.838		
TA2	I will not travel to the greatly affected virus destinations	0.822		
TA3	I advise relatives and friends to avoid all trips during outbreak	0.693		
DESTINATION CHOICE			0.891	0.804

DC1	I will travel after the Covid19 outbreak subsided	0.812		
DC2	I will travel again after the outbreak resolved	0.792		
DC3	If I have to. travel by flight is safer than other types of transportations	0.684		
DC4	I prefer to travel independently than with a group	0.415		
DC5	After Covid19 outbreak subside. I prefer nature-based tour	0.480		
Note: Loading > 0.7; CR > 0.7; AVE > 0.5				

Source: Field Survey, 2023

3.2. Inner Model Analysis

After examining the measurement model's validity and reliability, this study examined the structural model by evaluating the R-square, t-test, and path parameter significance. R-square for the dependent variables to determine a model's explanatory power (Fornell and Larcker, 1981). The higher R-square value indicates a more substantial explanatory power.

Table 3 shows that R-square (R2) for Travel Avoidance and Destination Choice are 0,497 and 0,319, respectively. This result implies that perceived susceptibility, perceived severity, self-efficacy, subjective knowledge, and travel risk perception explain 49,70% variance in travel avoidance and 31,90% in tourist destination choice.

Table 3 R-Square (R2) values

	R-square	**R-square (%)**
Travel Avoidance (TA)	0.497	49.70%
Destination Choice (DC)	0.319	31.90%

Source: Field Survey, 2023

The significance values between the constructs can be seen from the bootstrapping results. The direct and indirect effects through path coefficients show in table 4. Perceived susceptibility of the Health Belief Model (HBM) factors only directly contributes to travel avoidance and is subsequently supported (H1) (β= 0,244, p-value= 0,000). This result indicates that the higher level of perceived susceptibility, the higher level of travel avoidance in tourists' behavior. Concerning self-efficacy, H5 shows a significant positive relationship with β= 0,160 and p-value= 0,025 (supported). The hypothesis illustrates that the tourists' preventive health check behavior will form tourists' avoidance to travel. This study's most influencing factor was tourists' travel risk perception, which significantly influences travel avoidance and destination choice. The outcomes supported H9 and H10 (β= 0,484, p-value= 0.000 and β= 0,273, p-value= 0,001). All the impact of the Health Belief Model (HBM) factors on tourists' destination choices was insignificant; thus, H2, H3, H4, H6, H7, and H8 were not supported. Only travel risk perception positively and significantly impacted tourists' destination choices. This table also shows the significant impact between travel avoidance and tourists' destination choice (H11) with β= 0,194, p-value= 0,014.

The evaluation of the avoidance's mediation effect used bootstrapping to provide more accurate tests of the indirect impact on the relationships between perceived susceptibility, perceived severity, self-efficacy, subjective knowledge, and travel risk perception towards tourists' destination choice. The results show a significant positive indirect effect of perceived susceptibility with tourists' destination choice ($\beta = 0.046$, $p < 0.033$), thus supporting hypothesis 12.

The study also found a significant positive indirect effect of tourists' travel risk perception on travel avoidance and destination choice ($\beta = 0.094$, $p < 0.019$). Therefore, Hypothesis 16 was supported. PLS gives the bootstrap t-statistics for the total effect, which is 2,497 and 4,887 (higher than 1.96), meaning that both total effect paths were significant.

Table 4 Path Coefficients

Hypotheses		**Original Sample (O)**	**Sample Mean (β)**	**T Statistics**	**P Values**	**Significant**
Direct Effect						
H1	PSUS --> TA	0.244	0.237	4.290	0.000	Yes
H2	PSUS --> DC	0.108	0.109	1.815	0.070	No
H3	PSER --> TA	0.006	0.010	0.114	0.910	No
H4	PSER --> DC	0.138	0.135	1.769	0.077	No
H5	SEF --> TA	0.167	0.160	2.243	0.025	Yes
H6	SEF--> DC	0.042	0.044	0.443	0.658	No
H7	SN --> TA	0.000	0.011	0.002	0.999	No
H8	SN --> DC	-0.060	-0.053	0.644	0.520	No
H9	TRP --> TA	0.484	0.484	8.551	0.000	Yes
H10	TRP --> DC	0.278	0.273	3.325	0.001	Yes
H11	TA --> DC	0.197	0.194	2.470	0.014	Yes
Indirect Effect						
H12	PSUS --> TA --> DC	0.048	0.046	2.135	0.033	Yes
H13	PSER --> TA --> DC	0.001	0.002	0.107	0.915	No
H14	SEF --> TA --> DC	0.033	0.030	1.717	0.087	No
H15	SN --> TA --> DC	0.000	0.002	0.001	0.999	No
H16	TRP --> TA --> DC	0.095	0.094	2.360	0.019	Yes
Total Indirect Effect						
	PSUS --> DC	0.156	0.155	2.497	0.013	Yes. Full mediation
	PSER --> DC	0.139	0.137	1.779	0.076	No
	SEF --> DC	0.075	0.075	0.832	0.406	No
	SN --> DC	-0.060	-0.051	0.641	0.522	No
	TRP --> DC	0.374	0.367	4.887	0.000	Yes. Full mediation

Source: Field Survey, 2023

4. Conclusion

Several direct and indirect influences were obtained in this study. Travel avoidance is directly influenced by perceived susceptibility as a variable Health Belief Model (HBM) and another variable, travel risk. The choice of tourist destination is only influenced directly, positively, and significantly by travel risk perception, like previous research. The variable destination choice is indirectly influenced by perceived susceptibility and travel risk perception, with travel avoidance as a moderator variable.

Concerned about potential health risks and knowing the latest health were unimportant factors in avoiding travel during Covid19 outbreak. Meanwhile, the negative assessment of the destinations related to the Covid19 outbreak was essential in choosing tourist destinations. Regarding travel avoidance, they prefer to avoid it by staying at home and refusing direct contact with others by avoiding coming to crowded places and prone areas. It is a protective action that positively affects preparedness behavior.

The risk perception of travel very much influences the choice of tourist destinations. All factors related to health, including prevention, potential risks, preventive health measures, and the basic knowledge of health, have not been considered crucial when choosing a tourist destination and the confidence that travelling is not the only way to be affected by the virus. Nevertheless, there was a high-risk awareness of taking domestic and international flights during the Covid19 outbreak. So, if travel is indispensable, visit only less affected places or refrain from travelling for the time being. The trip will continue if the Covid19 outbreak has subsided and been resolved adequately. Even though flying by plane was risky, this transportation was the best choice over the others during the episode. Although avoiding direct contact with others, they were travelling in groups or buying the tour package in groups is still an exciting option for Indonesian tourists. They chose tour packages considered attractive in cultural, nature, and leisure tourism.

The increasing number of Indonesians affected by Covid19 per day also impacts visit limitations from many countries to the Indonesian people. So, the two disadvantages are that foreign tourists are afraid to travel to Indonesia, and the Indonesian people are banned from travelling to other countries due to delayed handling of the Covid19 outbreak in Indonesia. Crisis management plans and strategies for tourist destinations concerned with methods and procedures for handling Indonesia's tourist destination crises are needed. The strategy must positively impact tourists and the community. Central and local governments need to plan a strategy containing strategic formulations for every tourism crisis, especially in every tourist destination that requires commitment from stakeholders and the community. The government must be firm in carrying out the strategy drawn up without favoritism. The implementation of the strategy should also be reviewed periodically.

Tourists' destination management, transportation companies, hotels, and travel agents must have strict health procedures to prevent virus deployment at the facilities provided. It would be better if the government issued regulations containing standard procedures, methods, and tools also developed a guide on applying preventive and protective measures. In future studies, government and company managers' opinions will be used as guidance to reveal the specific handling to prevent the spreading of the virus pandemic in different tourist destinations.

Compliance with ethical standards

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Disclosure of Conflict of interest

The authors of this manuscript declare no conflict of interest.

Statement of informed consent

Consent was obtained from all individual participants included in the study.

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