TOURISTS' TRAVEL BEHAVIOUR AFTER COVID-19

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Abstract: The aim of this research is to examine tourists' travel behaviour using the extended theory of planned theory (TPB). Two research questions were proposed. First, what are the factors affecting tourists' attitude toward travel after COVID-19? Second, what are the factors affecting tourists' behavioral intention to travel after COVID-19? Finally, what are the boundary conditions on the relationships for the research model? A cross-sectional survey involving 132 Hong Kong participants was conducted in March 2021. A pilot test was carried out to refine the wordings of questions beforehand. It was found that perceived psychological risk and safety climate were associated with subjective norm. Protection motivation and subjective norms were associated with tourists' attitude toward travel. Behavioral intention to travel was affected by attitude towards travel and Resilience via perceived behavioral control. It was also found that protection motivation was associated with attitude toward travel in mature people but not the young age group. Also, protection motivation was associated with attitude towards travel only in female group.

Key words: Tourists' travel intention; COVID-19; theory of planned behaviour; safety climate; psychological risk; psychological resilience; protection motivation

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INTRODUCTION

The purpose of this study is to investigate tourists' travel behaviour using the extended theory of planned behaviour (TPB). Cross-broader travel has been severely affected by the coronavirus disease (COVID-19) (Wut et al., 2021). Almost all the Governments in the world have closed borders since March 2020. The total contribution of travel and tourism to gross domestic product worldwide was dropped from US$9,170 billion in year 2019 to US$4,671 billion in year 2020 (Statista, 2022). It is anticipated that travel activities will remain to be limited until end of year 2022 and possibly, beginning of year 2023. In view of this, some countries have come up with the idea of travel bubble, which refers to a contract between nearby nations, allowing travelling between alliance countries without compulsory quarantine period requirement. Such a measure is expected alleviate problems brought about by COVID-19 for the tourism industry, as individuals may refrain from travelling due to the stringent requirement of quarantine restriction (normally 14 days to 21 days in arrival cities/areas depending on the situation). Travel bubbles have been proposed. For example, travelling between Australia and New Zealand have is allowed on the condition that the pandemic is under control. Hong Kong and Singapore established an agreement earlier on to allow people to travel between the two cities for leisure purposes in year 2021. It had been postponed twice in November 2020 and May 2021 due to the rise in COVID-19 cases in Hong Kong and Singapore respectively. Travel restrictions between Macao and mainland China have eased in the beginning of 2021. Travel restrictions between Hong Kong and mainland China will be eased in the year 2022. There are more challenges for long-haul cross-broader travel. This paper adds to the literature by proposing a new model which is an emerging area of research in the present tourism landscape based on the theory of planned behaviour. Consequently, there are two research questions worth asking. First, what are the factors affecting tourists' attitudes toward travel after COVID-19? Second, what are the factors affecting tourists' behavioural intention after COVID-19? Finally, what are the boundary conditions on the relationships for the research model?

LITERATURE REVIEW

The theory of planned behaviour (TPB) is a well-established model. Attitude, subjective norm and perceived

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behavioural control were regarded as variables affecting behavioural intention (Lapkin et al., 2015). The model has been applied in risk-oriented behaviour (Quinlan et al., 2006). More than two hundred studies have applied TPB in tourism context (Ulker-Demirel and Ciftci, 2020). The model has been extended to the tourism context (Han et al., 2020). According to Ajzen (1991), attitude toward a behaviour is affected by behavioural belief; subject norm is determined by normative beliefs about other people's perception; and perceived behaviour control is influenced by control belief (Ajzen, 1991). In this study, we introduce the antecedents to those predictors: protection motivation to attitudes toward travel after COVID-19; safety climate and perceived psychological risk to subjective norms; and psychological resilience to perceived behavioural control (Zhang et al., 2021; Low et al., 2017). Protection motivation is a behavioural belief. Safety climate and perceived psychological risk are normative beliefs. Psychological resilience is an example of control belief. When tourists are aware of possible risks pertaining to their upcoming trip, they will consider cancelling the journey. If tourists decide to go ahead with the trip, they will usually adopt protective measures to prevent infections (Lwin et al., 2010). This is called protection motivation. A hypothesis was proposed as follows:

Hypothesis 1: A positive correlation exists between protection motivation and attitudes toward travel after COVID-19.

Perceived safety climate refers to people's perception of the pandemic situation. In this context, perceived pandemic situation may be influenced by the opinions of family and peers. A hypothesis was proposed as below:

Hypothesis 2: A positive correlation exists between safety climate and subjective norms

Perceived psychological risk refers to travel concern, fear, and anxiety which are more personal (Han et al., 2020). A hypothesis was proposed as follows:

Hypothesis 3: A positive correlation exists between perceived psychological risk and subjective norms

Higher perceived psychological risks may be associated with more stress and discomfort when travelling, particularly after COVID-19. It is expected that individuals with high perceived psychological risk are likely to be more seriously affected by other people's opinions. Tourists' psychological resilience is defined as the ability to cope with adversity and bounce back swiftly (Singh and Yu, 2010). Perceived behavioral control is one's belief that a particular behavior is under his or her control, based on the perceived difficulty level of the behavior (Ajzen, 1991). People with greater internal capacity would overcome difficulties to move forward. It is expected that people with greater psychological resilience would have higher perceived behavioral control.

Hypothesis 4: A positive correlation exists between psychological resilience and perceived behavioral control

Attitude was defined in the theory of planned behavior as "the extent to which one has a positive or negative opinion of the behavior (Ajzen, 1991, 188). That is to say, the more positive one's opinion is toward a certain behavior, the stronger one's intention to perform the behavior. In the travel context after COVID-19, we hypothesised that if a prospective tourist has a favorable attitude towards travel, he or she would have higher intention to travel:

Hypothesis 5: A positive correlation exists between tourist's attitudes toward travel and tourists' intention to travel

Subjective norm was defined as "the perceived social pressure to perform the behavior (Ajzen, 1991, 188)." Other people's opinions are associated with one's behavioral intention. Individuals usually travel with friends and family members. One usually studies reviews online when planning their trip and booking hotel accommodation (Schuckert et al., 2015). Past literature shows that subject norms may explain up to 40% of the variance in intention (Lapkin et al., 2015). Thus, we could have the following hypothesis:

Hypothesis 6: A positive correlation exists between subjective norms and tourist's intention to travel

Perceived behavioral control was defined as "the perceived difficulty of engaging a behavior (Ajzen, 1991, 188). When some behaviors are perceived as difficult to perform, such as travelling after COVID-19, perceived behavioral control becomes a determining factor. When a prospective traveler has higher perceived control, the more likely he or she has higher intention to travel to the destination.

Hypothesis 7: A positive correlation exists between perceived behavioral control and tourists' intention to travel

An individual's attitude might be affected by other people's opinion (Jalilvand and Samiei, 2012). Social pressure could influence our attitude towards travel behavior. Thus, we have the following hypothesis:

Hypothesis 8: A positive correlation exists between subjective norms and tourist's attitude towards travel

Finally, comparison were made between gender and age on our mode. Thus our research framework is presented as below:

METHODOLOGY
Quantitative method was used and the survey was administrated in March 2021online due to the pandemic. Residents in Hong Kong were contacted by electronic email using convenience sampling. Before the pandemic, people in Hong Kong enjoyed travelling abroad and usually more than three times a year before the pandemic (Census and Statistics Department, 2020). Hong Kong is a small cosmopolitan city. Convenience sampling method was used in view of homogeneous nature of the population. Pre-determined limits were set regarding demographics of the population including age, gender,

education level and occupation level to ensure the representativeness of the sample in the region. All measurement items are from established valid and reliable scales. Safety climate items are obtained from Cooper (2000).

Psychological Risk items are adapted from Law (2006). Protection motivation items are from Connor and Davidson (2003) and psychological resilience items are from Mahoney et al. (2018). Other constructs were adapted from Theory of Planned Behaviour (Ajzen, 1991) and (Han et al., 2020). These items were adapted to suit the research context (Table 1).

There are two parts in the questionnaire. Part A is related to main questions. Part B refers to the questions on demographic data.
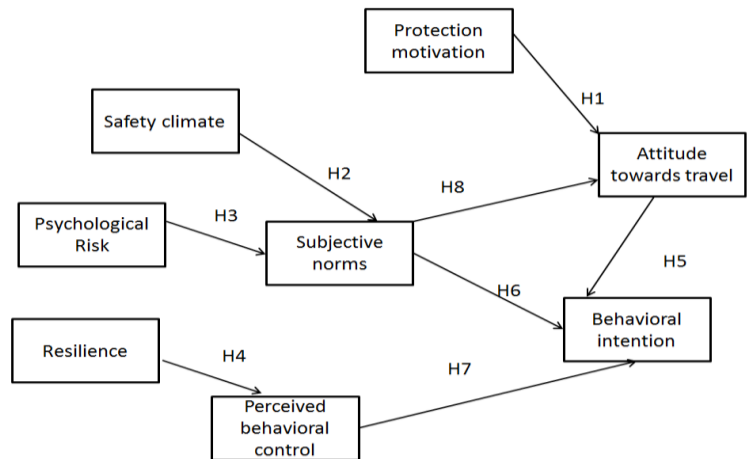

Figure 1 Research framework (Source: authors)

Table 1. Questionnaire items

Construct Name and abbreviation	Adapted Items
Resilience (RES), Mahoney et al., 2018; Zhang et al., 2021, 104261.	
RES1	"I am able to adapt to change in travel."
RES2	"I can deal with whatever comes in travel."
RES3	"I can see the humorous side of problems in travel."
RES4	"I can cope with stress in travel that can strengthen me."
RES5	"I can handle unpleasant feelings in travel."
Protection Motivation (PM), Connor and Davidson, 2003; Zhang et al., 2021, 104261	
PM1	"I protect myself from being infected by COVID-19 when travelling."
PM2	"I engage in activities that protect myself from being infected by COVID-19."
PM3	"I expend effort to protect myself from being infected by COVID-19."
PM4	"I obey polices to protect myself from being infected by COVID-19."
Safety Climate (SC), Cooper, 2000.	
SC1	The government of the country that I plan to travel provides adequate safety measures.
SC2	The government of the country that I plan to travel has a firm commitment to safety by monitoring safety.
SC3	My friends are very concerned about my own safety situation.
SC4	I feel great satisfaction whenever I am in high safety situation
Attitude toward the travel behavior (AT), Ajzen, 1991; Han et al., 2020, 6485.	
AT1	"Traveling to a country that is not seriously affected by the COVID-19 outbreak for my next vacation trip is good."
AT2	"Traveling to a country that is not seriously affected by the COVID-19 outbreak for my next vacation trip is wise."
AT3	"Traveling to a country that is not seriously affected by the COVID-19 outbreak for my next vacation trip is pleasant."
Behavioral intention (BI), Ajzen, 1991; Han et al., 2020, 6485	
BI1	"I plan to visit a country that is not seriously affected by the COVID-19 outbreak for my next vacation trip after the pandemic has ceased."
BI2	"I will exert effort to travel to a country that is not seriously affected by the COVID-19 outbreak for my next vacation trip after the pandemic has ceased."
BI3	"I am willing to visit a country that is not seriously affected by the COVID-19 outbreak for my next vacation trip after the pandemic has ceased."
Subjective Norm (SN), Ajzen, 1991; Han et al., 2020, 6485	
SN1	"Most people who are important to me think I should travel to a country that is not seriously affected by the COVID-19 outbreak for my next vacation trip."
SN2	"Most people who are important to me want me to travel to a country that is not seriously affected by the COVID-19 outbreak for my next vacation trip."
SN3	"People whose opinions I value prefer that I choose a country that is not seriously affected by the COVID-19 outbreak for my next vacation trip."
Perceived Behavioral Control (PBC), Ajzen, 1991; Han et al., 2020, 6485	
PBC1	"Whether I travel to a tourist destination in a country that is not seriously affected by the COVID-19 outbreak is entirely up to me."
PBC2	"I am confident that I can travel to a tourist destination that is not seriously affected by the COVID-19 outbreak."
PBC3	"I have sufficient resources, time, and opportunities to visit a tourist destination in a country that is not seriously affected by the COVID-19 outbreak."
Psychological Risk (PR), Law, 2006; Han et al., 2020, 6485	
PR1	"The thought of traveling to tourist destinations in countries seriously affected by the COVID-19 outbreak makes me nervous."
PR2	"The thought of traveling to tourist destinations in countries seriously affected by the COVID-19 outbreak makes me feel psychologically uncomfortable."

Partial least square structural equation modelling (PLS-SEM) was used with SmartPLS software. PLS-SEM has been used in recent studies in tourism marketing (Harrigan et al., 2018; Ting et al., 2019). The greatest number of paths points a construct is three in the study. Given minimum R square is 0.10 and significant level is 6%, the sample size is 124. Thus, sample size requirement is met to this study (Hair et al., 2019).

RESULTS AND DISCUSSION

There are 132 valid respondents, of which 58% were female and the rest were male. 65.9% were 18–30 years old, 20.5% were 31–40 years old and 13.5% were 41 years old or above. Amongst them, 28.8% were students, others are professionals (12.9%), executive and management (13.6%), administration and clerical (20.5%), civil servant (3.8%), teacher (3.0%), self-employed (3.0%), retired or in career break (11.4%) (Table 2).

Measurement model

The constructs in the study meet recommended guidelines of 0.70 on Cronbach's alpha & composite reliabilities and of 0.50 on average variance extracted (AVE) requirements (Table 3) (Hair et al., 2019). The HTMT scores were not greater than 0.85 (Table 4). Thus, all constructs were reliable and valid. Then the structural model was assessed subsequently.

Table 3. Measurement Model Assessment (Source: authors)

Construct	Item	Loading	Cronbach's alpha	Composite Reliability	AVE
Attitude toward travel	AT1	0.905	0.924	0.952	0.869
	AT2	0.946			
	AT3	0.944			
Behavioural intention	BI1	0.941	0.922	0.950	0.865
	BI2	0.932			
	BI3	0.916			
Perceived behavioural control	PBC1	0.848	0.855	0.912	0.776
	PBC2	0.918			
	PBC3	0.875			
Subjective norms	SN1	0.926	0.909	0.943	0.846
	SN2	0.915			
	SN3	0.918			
Protection motivation	PM1	0.809	0.870	0.911	0.720
	PM2	0.871			
	PM3	0.896			
	PM4	0.814			
Psychological risk	PR1	0.972	0.943	0.968	0.938
	PR2	0.965			
Resilience	RES1	0.816	0.848	0.891	0.621
	RES2	0.843			
	RES3	0.670			
	RES4	0.817			
	RES5	0.783			
Safety Climate	SC1	0.754	0.792	0.852	0.590
	SC2	0.759			
	SC3	0.748			
	SC4	0.811			

Table 2. Demographic data of respondents (Source: authors)

Category		Frequency	Percentage %
Gender	Male	56	42.4
	Female	76	57.6
Age	18-30	87	65.9
	31-40	27	20.5
	41-50	5	3.8
	51-60	7	5.3
	61 or above	8	4.5
Education Level	Secondary or below	6	4.5
	Higher Diploma/Ass Deg	54	40.9
	Bachelor degree	61	46.2
	Master degree or above	11	8.3
Occupation	Professionals	17	12.9
	Self-employed	4	3.0
	Civil servant	5	3.8
	Education	4	3.0
	Executive/Management	18	13.6
	Clerical/administration	27	20.5
	Retired/career break	15	11.4
	Full time student	38	28.8
	Others	4	3.0
	Total	132	100

Table 4. Assessing Discriminant Validity (HTMT) (Source: authors)

Construct	Attitude	Behavioural intention	Perceived behavioural control	Protection motivation	Psychological risk	Resilience	Safety climate	Subjective norms
Attitude								
Behavioural intention	0.567							
Perceived behavioural control	0.474	0.805						
Protection motivation	0.414	0.356	0.262					
Psychological risk	0.313	0.317	0.255	0.451				
Resilience	0.271	0.460	0.586	0.614	0.329			
Safety climate	0.515	0.572	0.588	0.700	0.404	0.773		
Subjective norms	0.579	0.546	0.504	0.372	0.624	0.135	0.486	

Table 5. Result of hypotheses testing

Hypothesis	Item	(β) Path Coefficient	t-value	p-value	Result
H1	Protection motivation >> Attitude toward travel	0.220	2.132	0.033*	Supported
H2	Safety climate >> Subjective norms	0.292	3.367	0.001**	Supported
H3	Psychological risk >> Subjective norms	0.458	4.870	0.000***	Supported
H4	Resilience >> Perceived behavioural control	0.516	4.870	0.000***	Supported
H5	Attitude toward travel >> Behavioural intention to travel	0.214	2.340	0.019*	Supported
H6	Subjective norms >> Behavioural intention to travel	0.135	1.197	0.231	Unsupported
H7	Perceived behavioural control >> Behavioural intention to travel	0.563	4.651	0.000***	Supported
H8	Subjective norms >> Attitude toward travel	0.462	4.171	0.000***	Supported

(Bootstrap samples = 5000, $n = 132$ cases); *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Assessment of Structural Model Fit

First, the R^2 values of attitude to travel, subjective norms, perceived behavioural control and behavioral intention were 0.330, 0.403, 0.266 and 0.583 respectively. They indicated 26.6% to 58.3% variances were explained, and resulted as a weak to moderate result. Second, the Q^2 values ranged from 0.186 to 0.461, which almost showed rather large predictive relevance of our model. f^2 effect sizes were ranged from 0.029 to 0.573 of construct, which showed from large to small effect on the

dependent variable. Figure 2 shows the PLS model result (Figure 2). All the relationship paths, except the one from subjective norms to travel intention, were significant. Our proposed structural model was well supported (Table 5).

Multi-group analysis was used to compare subgroups in the research model according to age and gender. There are two subgroups for age: younger age group (age equal or less than 30, n = 87) and older age group (age greater than 30, n =45).

It was found that safety climate was associated with subjective norms in young people (path coefficient = 0.331, t value = 3.114, and p value = 0.002 which is smaller than 0.01) but not the mature age group (path coefficient = 0.231, t value = 1.329 and p value = 0.184 which is larger than 0.1).

It was also found that

Figure 2. Partial least square-SEM result (Source: authors)

protection motivation was associated with attitude toward travel in mature people (path coefficient = 0.610, t value = 4.416, and p value is less than 0.001) but not the younger age group (path coefficient = 0.073, t value = 0.757 and p value = 0.449 which is larger than 0.1). Regarding gender, it was found that protection motivation was associated with attitude towards travel in female group (path coefficient = 0.327, t value = 2.773, and p value = 0.006 value is smaller than 0.01) but not the male group (path coefficient = 0.151, t value = 0.897 and p value = 0.370 which is larger than 0.1). It was also found that psychological risk was associated with subjective norms in female group (path coefficient = 0.559, t value = 6.281, and p value is smaller than 0.001) but not male group (path coefficient = 0.241, t value = 1.593 and p value = 0.111 which is larger than 0.1).

It is expected that subject norms affect tourists' behavioural intention to travel from Theory of Planned Behavior. In our study, the effect was eliminated by a mediator 'Attitude towards travel.' Hypothesis 6, which proposed that subjective norms and intention to travel are associated, was not supported. The effect of subjective norms on behavioral intention to travel is via 'attitude towards travel', with a full mediation effect (Figure 3).

Previous literature proposes that protection motivation

Figure 3. Mediation effect (Source: authors)

influences travel intention but underlying mechanism or boundary conditions are ignored (Zhang et al., 2021). The study adds to the existing knowledge by suggesting a mediator "attitude toward travel" between protection motivation and behavioral intention to travel. Also, it was found that female tourists aged 30 years and older would seek more protective measures in order to form higher 'attitude toward travel' after COVID-19 period.

In contrast, providing more protective measures do not affect young male tourists' attitude toward travel. This concurs with previous result men and young people are more willing to take risks (Znajmiecka-Sikora and Salagacka, 2020). Female tourists' perceived psychological risk influenced perceived social pressure.

We would interpret this as selected listening. Young people's perceived safety climate affects perceived social pressure. One is bombarded with information everyday, but we are inclined to process only fraction of the information which is relevant to us. Young people's perceived safety climate affects their perceived social pressure.

There are important implications to travel agencies and tourism practitioners when engaging prospective tourists in post-COVID period. Travel agencies and companies should first identify possible destinations for their customers. Then they need to make sure safety measures are in place for those destinations so that a good climate could be cultivated. Second, travel companies need to demonstrate they facilitate their prospective customers to obtain sufficient protective information and also how to have full gear to protect themselves from COVID virus during travel.

With the above effort, we aim to reduce perceived psychological risk. In particular, perceived psychological risk and protection motivation is important consideration for female tourist. Similarly, protection motivation is important for mature tourist and safety climate is crucial for young tourist. At the end of the day, more people would start their leisure travel. Third, travel agencies might encourage the tourist to publish their review on social media so that somewhat create a safety climate for certain destinations. Travelers can exchange their travel experience after COVID.
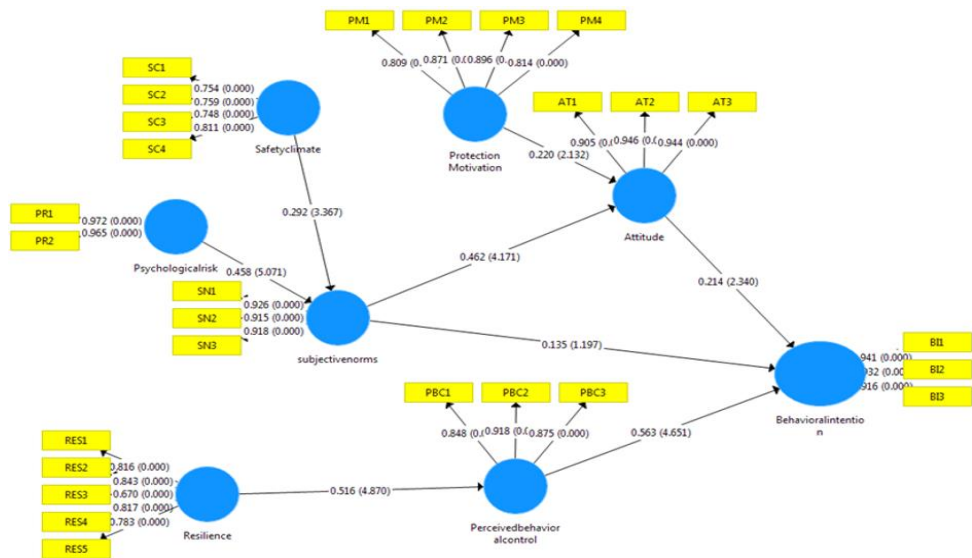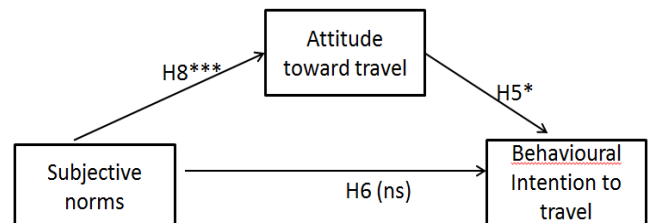
Their opinions might be more convincing as those travelers do not have conflict of interest. Finally, tourism practitioners have to facilitate the building of psychological resilience of people. Measures include stress handling workshop, full orientation and health seminar could be considered.

CONCLUSION

It was found that psychological risk and safety climate were associated with subjective norm. Protection motivation was associated with attitude toward travel and psychological resilience was associated with perceived behavioral control. Attitude toward travel is a mediator between the relationship of subjective norm and travel intention.

The study contributes an important extension of Theory of Planned Behavior. Attitude toward travel is a mediator between the relationship of subjective norm and travel intention. The relationship between protection motivation and attitude toward travel is significant for female tourists but not for male tourist. The same relationship is significant for mature people but not for young people. The relationship between psychological risk and subjective norm is significant for female tourist but not for male tourist. Tourism practitioners might consider to enhance resilience and protective measures of tourists in order to increase tourists' attitude toward travel.

Due to the extreme small number of people engaged in leisure travel in the beginning of the year 2021, measures on tourist travel behaviour after COVID-19 is not possible. Further research on tourist travel behaviour is needed. Other moderators such as past travel behaviour, travel countries and mode of travel could be included as well. Also, the sample used in the study was restricted to a small region. In the future, a more diverse sample could be employed.

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