



Factors Influencing Intention to Follow the Preventive COVID-19 Protocols Among Thai People

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ABSTRACT

The study uses the TPB model to identify the factors that influence Thai people's intention to follow the preventive COVID-19 protocols. The research model had employed convenience sampling from 506 respondents in Thailand. The data were analysed using SPSS-Trial Version and the structural equation model (SEM). It reveals that attitude, subjective norm, and perceived behavioural control significantly influences Thai's intention to follow the preventive COVID-19 protocols. Perceived behavioural control highest impacted Thai citizen intent to follow the preventive COVID-19 protocols, followed by attitude and subjective norm. This study may benefit healthcare providers to implement the appropriate strategies increasing the intention to follow the preventive COVID-19 protocols among Thai people. Moreover, the results could apply the TPB model to improve Thai perceptions about their behavioural intention, such as getting COVID-19 vaccination and wearing face masks.

Keywords: *theory of planned behaviour (TPB), attitude, subjective norm, perceived behavioural control, intention to follow, preventive COVID-19 protocols.*

1. INTRODUCTION

1.1. Background of the Research

Many countries' healthcare systems are nearing their breaking point due to the daily demands. As a result, action must be taken as soon as possible to plan for this increase in demand and identify how services can be reconfigured to accommodate it. Most of the population may contract the nova coronavirus, so healthcare providers should plan for this possibility while utilising critical healthcare resources (Watkins, 2020). Any outbreak of an infectious disease is characterised by the psychological reactions of the population, which have a significant influence on the disease spreading. Typically, insufficient resources are allocated to managing or attenuating the effects of pandemics on people's mental health and well-being (Cullen & Kelly, 2020). According to experts, compliance with behavioural guidelines and rules that reduce the risk of infection will be critical in attempts to mitigate the unprecedented health,

economic, and social disruptions caused by the COVID-19 pandemic (Thoma et al., 2021). Due to the lack of a vaccine for the COVID-19 pandemic, the most effective method of reducing virus transmission is social distancing practices. It is critical to understand the factors that influence whether people adopt social distancing measures to slow the spread of the virus (Adiyoso, 2021). Therefore, people worldwide were forced to implement a series of preventive hygiene and distancing measures for the COVID-19 pandemic, which significantly altered their way of life. The effectiveness of adopting the theory of planned behaviour on preventive behaviour against COVID-19 is crucial (Bronfman et al., 2021).

1.2. Problem Statement

Effective therapeutics and vaccines are not always readily available when contagious viruses emerge. It is critical to identify psychosocial determinants to reduce strain on the healthcare system and prevent severe illness and death. Targeting individuals' attitudes, social norms, and perceived behavioural control (PBC) may promote protective behaviours (e.g., social distancing). Strategies to close the behavioural intention gap targeted at critical groups should be developed (Gibson et al., 2021). It is vital to consider increasing preventive COVID-19 protocols, such as reducing social isolation to enhance compliance with COVID-19 preventive behaviours. Also, education to promote relevant factors is required because perceptions of the TPB model are related to preventive intention behaviours (Park & Oh, 2021). Intention to follow preventive behaviour is crucial during the pandemic (Chambon et al., 2022). Still, few studies support the factors influencing the preventive COVID-19 protocols adopting the TPB model, especially in Thailand. This study explains the determinants of Thai people's intention to follow the preventive COVID-19 protocols. The results could be applied and benefit healthcare strategic planners in creating appropriate strategies. The spreading and its severity of COVID-19 could be decreased. Consequently, the cost-saving of healthcare resources will incur.

1.3. Research Objective

The study investigates the factors that affect the intention to follow the preventive COVID-19 protocols among Thai people.

1.4. Research Question

What are the significant factors that affect the intention to follow the preventive COVID-19 protocols among Thai people?

2. LITERATURE REVIEW

2.1. The Theory of Planned Behaviour (TPB)

Several general behaviour theories have been developed to explain how people engage in certain behaviours by identifying the specific antecedents of behavioural outcomes. The theory of planned behaviour (TPB) is one of the most well-known approaches to studying health behaviours. It has been widely used to predict various health behaviours (Gibson et al., 2021; Trifiletti et al., 2021). Alhamad and Donyai (2021) examined the validity of the TPB for understanding people's intentions to engage in medication reuse by comparing it to other long-standing health-related psychological theories of behavioural change. Because of its more comprehensive application outside of health behaviours and the apparent relevance of its constructs, the TPB was found to be more valuable and critical in studying medicine reuse behaviour (Alhamad & Donyai, 2021). Furthermore, Breslin et al. (2021) used the TPB to investigate COVID-19 vaccine uptake and hesitancy surveys in Northern Ireland and the

Republic of Ireland. The TPB can help make recommendations for public health when encouraging vaccine uptake and reducing vaccine hesitancy (Breslin et al., 2021). The TPB model has been widely used both within and outside health-related research. Besides, it has been discovered to have more precisely defined constructs in studying an individual's behaviour (Alhamad & Donyai, 2021; Shmueli, 2021). It is hypothesised that attitude, subjective norm, and perceived behavioural control (PBC) have linear associations with intention and behaviour following the TPB model (Rhodes & Courneya, 2005). In this study, the theory of planned behaviour (attitude, subjective norm, and perceived behavioural control) is used to investigate Thai people's intention to follow the COVID-19 preventive protocols.

2.1.1. Attitude (AT)

Attitude refers to the emotions associated with performing a particular behaviour. These sentiments can be rated positively or negatively. A person's attitude is one's belief about a specific object, and as a result, they act following that belief (Vatunyou et al., 2022). Attitude influences behaviour via intentions. When applied to medication reuse, the TPB may be able to predict. If people believe that reusing their medicines will benefit them, they will intend to do so (Alhamad & Donyai, 2021). The TPB model was used in many studies to predict behavioural intention. The intention to receive the COVID-19 vaccination through the influence of attitude had been confirmed. The attitude can indicate the willingness to get the COVID-19 vaccine. It was confirmed that having a positive attitude toward vaccination is a significant factor in getting vaccinated against COVID-19 (Fan et al., 2021; Guidry et al., 2021; Shmueli, 2021). The attitude toward COVID-19 demonstrated people's willingness to follow government guidelines regarding quarantine and social distancing (Roy et al., 2020).

2.1.2. Subjective Norm (SN)

Subjective norms are social beliefs that influence how people behave. They are derived from an individual's social network. One's subjective norms would be more similar to those of the people they associate (Khuram et al., 2021). The concept of subjective norms is central to many decision-making theories, including TPB (Winter et al., 2021). Many studies used the TPB model to predict an individual's intention to receive the COVID-19 vaccination. Subjective norms were discovered to be a significant predictor of vaccine intention (Adiyoso, 2021; Shah et al., 2021; Shmueli, 2021). Subjective norm was an essential predictor of face mask-wearing in public (Zhao & Knobel, 2021). Subjective norm is associated with behavioural intention in social science research (Utami, 2017; Sia & Jose, 2019; Li & Li, 2020). Furthermore, subjective norms positively and significantly affect attitudes and behaviour in the continuous use of medical masks during the COVID-19 pandemic (Yasa et al., 2021). In psychology, subjective norms are a person's beliefs about what essential social others think about someone engaging in a particular behaviour and whether they would approve of it. Involvement in a specific behaviour reveals an individual's beliefs about how their reference groups will perceive them if they engage in that behaviour (Smelser & Baltes, 2001; Al-Swidi et al., 2014; Limna et al., 2022).

2.1.3. Perceived Behavioural Control (PBC)

Perceived behavioural control refers to a person's perception of the ease or difficulty of performing the target behaviour and any limitations that may prevent the behaviour from being executed. PBC is the third factor that forms the TPB model (Husain et al., 2021; Yee et al., 2021). Many studies used perceived behavioural control to predict behavioural intention. Perceived behavioural control strongly influenced the intent to purchase well-being foods (Lim

& An, 2021). Furthermore, perceived behavioural control emerged as the most important determinant of consumer green restaurant patronage (Moon, 2021). Perceived behavioural control is also crucial in determining an individual's intention to receive COVID-19 vaccination. Through a mediating effect of attitude, perceived behavioural control indirectly influences the willingness to receive COVID-19 vaccination (Limna et al., 2022). Therefore, perceived behavioural control is the individual perception to perform or limitation to prevent their behaviour.

2.2. Intention to Follow the Preventive COVID-19 Protocols

According to the TPB model, a person's intentions serve as the primary precursor to actual behaviours because intentions reflect a person's willingness to behave in a specific manner. It has discovered a positive correlation between the two variables under consideration. When it comes to the first one (intention), it sends a strong signal about how the customer's behaviour will ultimately be expressed (Casaló et al., 2017). The TPB model was used in many studies to predict an individual's intention to receive the COVID-19 vaccination. The three factors of the original theory of planned behaviour and fear of COVID-19 were positively related to their intention to receive COVID-19 vaccination (Ullah et al., 2021). Fear and perceived infectability, perceived behavioural control, subjective norm and attitude are related to behavioural intention to get COVID-19 vaccination through mediating effect of attitude (Limna et al., 2022). The preventive COVID-19 protocols in this study include wearing the mask, social distancing, alcohol sanitiser etc., following the Thai Government's policy. Thus, intention to follow the preventive COVID-19 protocols regarding the Thai Government's policy.

2.3. Research Hypotheses Development

2.3.1. The relationship between attitude and behavioural intention

Many studies confirmed there is a positive association between attitude and behavioural intention. Such as attitude influences household energy-saving intention (Liu et al., 2020), attitude influences consumers' online shopping intention (Ha, 2020). Improved attitude will increase adherence to COVID-19 public health guidelines (Moran et al., 2020). In the TPB model, the attitude was the most potent predictor of behavioural intention. In other words, attitude was the most powerful predictor of follow-up dieting and fasting (Nejad et al., 2005). Attitude has a significant influence on intention to receive COVID-19 vaccination and is an effective mediator between fear and perceived COVID-19 infectability, perceived behavioural control, subjective norm, and the intention to receive COVID-19 vaccination (Limna et al., 2022). Furthermore, attitude is positively related to the intention to follow the COVID-19 preventive protocols (Praseto et al., 2020)

H1: There is a significant influence of attitude on intention to follow the preventive COVID-19 protocols.

2.3.2. The relationship between subjective norm and behavioural intention

Subjective norm plays a role in motivating recycling behaviours. Furthermore, a subjective norm could increase the likelihood of recycling for people who have a positive experiential attitude toward recycling and encourage people who have little knowledge about the benefits of recycling to engage in recycling behaviours (Wan et al., 2017). The subjective norm is related to behavioural intention. However, the study of Leung and Jiang (2017) argue that neither attitude toward the destination nor attitude toward messages were significantly associated with

visit intention (Leung & Jiang, 2017). Subjective norm is positively related to the intention to follow the COVID-19 preventive protocols (Praseto et al., 2020)

H2: There is a significant influence of subjective norm on intention to follow the preventive COVID-19 protocols.

2.3.3. The relationship between perceived behavioural control and behavioural intention

During the COVID-19 pandemic, perceived behavioural control influenced the intention to follow the "Stay at Home" policy in a positive and statistically significant result (Sumaedi et al., 2020). Perceived behavioural control is vital as determinants of social distancing intention and habit as behavioural determinants (Hagger et al., 2020). Perceived behavioural control was the most potent mediator, and it was positively related to people's intention to receive COVID-19 vaccination (Ullah et al., 2021). Perceived behavioural control is positively associated with citizens' intent to follow the COVID-19 preventive protocols (Praseto et al., 2020)

H3: There is a significant influence of perceived behavioural control on intention to follow the preventive COVID-19 protocols.

2.4. Conceptual Framework

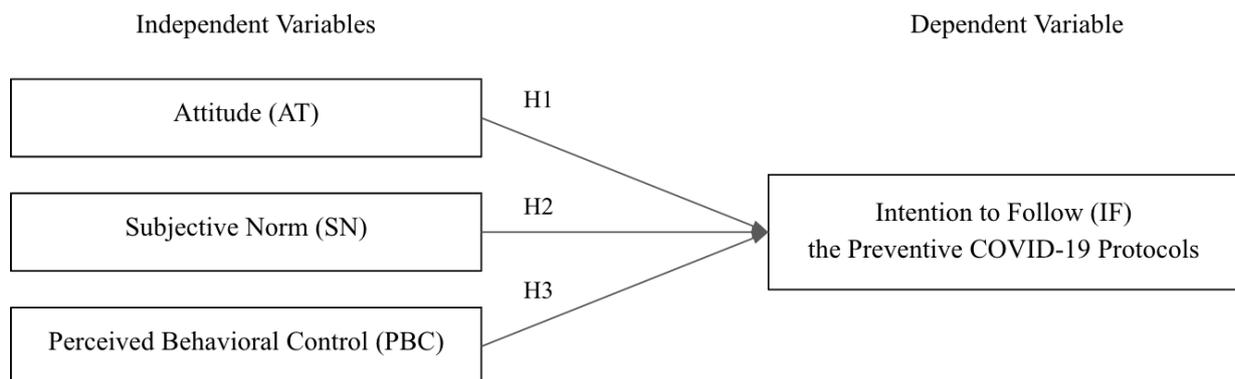


Figure 1. Conceptual Framework

3. RESEARCH METHODOLOGY

3.1. Population & Sample

The study's target population is unknown. A typical survey has a confidence level of 95% (Limna et al., 2022). Data collection employed non-probability sampling with a sample error of 5%, precision level of 95%, a minimum of 385 cases at $p=0.5$. The total number of participants (convenience sampling) in the study was five hundred and six (506) of Thai people from five regions (the Northern, the Eastern, the Southern, Northeastern, and Central in Thailand).

3.2. Research Instrumentation

The main variables in this study were evaluated using a five-point Likert Scale ranging from 5 (strongly agree) to 1 (strongly disagree). The demographics of those who responded to the survey questions were based on the study of Phetnoi et al. (2021) and Kanyama et al. (2022). The questionnaire items in the theory of planned behaviour model and intention to follow the preventive COVID-19 protocols were based on Praseto et al. (2020)

3.3. Data Collection

The researchers gathered the information through self-administered questionnaires. The study's purpose was explained to the respondents before online questionnaire distribution to participate. Data collection duration was between 1st November to 1st December 2021.

3.4. Data Analysis

Data were analysed with the SPSS-Trial Version and ADANCO 2.3. Descriptive statistics were used to investigate the demographic characteristics of the survey participants (frequency and percentage). Each variable's mean and standard deviation and questionnaire items were calculated using mean and standard deviation. Factor loadings were calculated for testing the validity of the instrument. The Cronbach's Alpha was used to determine the reliability of the data set at 0.6. The validity test was carried out using the factor analysis and was set at 0.6 following the recommendation of Morgan et al. (2004) and Bootsamran et al. (2022). The completed data was analysed using a structural equation model (SEM) to test the hypotheses.

4. RESULTS

Table 1. Demographic Characteristics of the Respondents (n= 506)

Demographics		Frequency	Percentage
Gender	Female	252	49.8%
	Male	254	50.2%
Status	Single	317	62.6%
	Married	165	32.6%
	Divorced	24	4.7%
Age	18-25 years old	138	27.3%
	26-30 years old	84	16.6%
	31-35 years old	73	14.4%
	36-40 years old	66	13.0%
	41-45 years old	71	14.0%
	46-50 years old	35	6.9%
	51 years old or over	39	7.75%
Education	Below bachelor's degree	242	47.8%
	Bachelor's degree	216	42.7%
	Master's degree	40	7.9%
	Doctoral degree	8	1.6%
Occupation	Student	83	16.4%
	Civil servant	43	8.5%
	Employees	151	29.8%
	Business Owners	94	18.6%

	Homemakers	28	5.5%
	Unemployed	45	8.9 %
	Freelance	62	12.3%
Salary	≤ 10,000 baht	196	38.7%
	10,001-20,000 baht	131	25.9%
	20,001-30,000 baht	72	14.2%
	30,001-40,000 baht	56	11.1%
	40,001-50,000 baht	19	3.8%
	> 50,001 baht	32	6.3%
	Total	506	100%

Five hundred and six (506) respondents were Thai citizens who completed online questionnaires that were coded and analysed. The findings revealed that most respondents were female (49.8 %), age ranged between 18 and 25 (27.3 %), the educational level was below bachelor's degree (47.8 %), who were employees (29.8 %), and earned monthly income less than 10,000 baht (38.7 %). The demographics represented the Thai citizens from five regions (Northern, Central, Eastern, Northeastern and Southern) of Thailand.

4.1. PLS-SEM Results

Table 2. Factor Loadings, Cronbach's Alpha, and Average Variance Extracted ($n=506$)

Items	Factor Loadings	Cronbach's Alpha	AVE
1. Attitude (AT)		0.806	0.563
1. I feel worried and stressed about the number of infected during the COVID -19 outbreak. (Mean=4.20, SD.=0.981)	0.693		
2. I am afraid that one of my family members will get infected with COVID-19. (Mean=4.27, SD.=1.082)	0.680		
3. I feel unsafe if someone stands too close to me during COVID -19 outbreak. (Mean=4.20, SD.=0.872)	0.805		
4. I feel unsafe if someone is not wearing a mask during the COVID-19 outbreak. (Mean=4.58, SD.=0.613)	0.803		
5. I feel unsafe if someone sneezes or coughs next to me. (Mean=4.61, SD.=0.516)	0.761		
Items	Factor Loadings	Cronbach's Alpha	AVE

2. Subjective Norm (SN)		0.817	0.580
6. Most people I know follow the preventive protocols given by the medical team. (Mean=4.40, SD.=0.612)	0.785		
7. Most people I know wear face masks when going outside. (Mean=4.65, SD.=0.403)	0.755		
8. Most people I know stay at home and work from home when lockdown. (Mean= 4.14, SD.=0.933)	0.656		
9. Most people I know use hand sanitiser. (Mean=4.44, SD.=0.624)	0.794		
10. Most people I know keep distancing. (Mean=4.24, SD.=0.768)	0.807		
Items	Factor Loadings	Cronbach's Alpha	AVE
3. Perceived Behavioural Control (PBC)		0.744	0.564
11. The preventive COVID-19 protocols are essential for everyone. (Mean=4.77, SD.=0.365)	0.740		
12. I think the preventive COVID-19 protocols are easy to implement. (Mean=4.43, SD.=0.641)	0.816		
13. I am confident that I can prevent getting an infection by COVID-19. (Mean=4.27, SD.=0.743)	0.729		
14. I am confident that I have enough knowledge about COVID-19. (Mean=4.18, SD.=0.684)	0.715		
Items	Factor Loadings	Cronbach's Alpha	AVE
4. Intention to Follow (IF)		0.825	0.656
15. I intend to follow the recommended precautions until the end of the COVID-19 outbreak. (Mean=4.66, SD.=0.426)	0.831		
16. I have a willingness to stay at home during the lockdown. (Mean=4.39, SD.=0.780)	0.754		
17. I intend to follow every rule the Thai medical team made during the COVID-19 outbreak. (Mean=4.61, SD.=0.451)	0.880		

18. I have a willingness to reschedule my travel plans. 0.768
(Mean=4.51, SD.=0.567)

Table 3. The Goodness of Model Fit (n=506)

Saturated Model	SRMR=0.0790
Estimated Model	SRMR=0.0790

Table 4: R-Squared (n=506)

Construct	Coefficient of Determination (R ²)	Adjusted R ²
Intention to Follow (IF)	0.5401	0.5374

Table 5: Effect Overview (n=506)

Effect	Beta	Total Effect	Cohen's f ²
Attitude → Intention to Follow	0.2304	0.2304	0.0955
Subjective Norm → Intention to Follow	0.1612	0.1612	0.0310
Perceived Behavioural Control → Intention to Follow	0.4889	0.4889	0.2624

Table 6: Total Effects Inference (n=506)

Effect	Original Coefficient	Standard Bootstrap Results					Percentile Bootstrap Quantiles			
		Mean Value	Standard Error	T-Value	P-Value (2-Sided)	P-Value (1-Sided)	0.5%	2.5%	97.5%	99.5%
AT → IF	0.2304	0.2299	0.0460	5.0129	0.0000	0.0000	0.1125	0.1447	0.3202	0.3457
SN → IF	0.1612	0.1607	0.0510	3.1599	0.0016	0.0008	0.0216	0.0515	0.2579	0.2804
PBC → IF	0.4889	0.4900	0.0510	9.5878	0.0000	0.0000	0.3642	0.3838	0.5853	0.6068

Perceived Behavioural Control (PBC), Subjective Norm (SN), Attitude (AT), Intention to Follow (FI)

Attitude can predict intention to follow the preventive COVID-19 protocols at $\beta=0.230$, $p<0.001$ (Two tails at 0.000 and one tail at 0.000). Thus, H1 is supported. Subjective norm can indicate the intention to follow the preventive COVID-19 protocol at $\beta=0.161$ and $p<0.01$ (Two sides at 0.0016 and one side at 0.0008). Thus, H2 is supported. Perceived behavioural control can predict intention to follow the preventive COVID-19 protocol at $\beta=0.489$ and $p<0.001$ (Two tails at 0.000 and one tail at 0.000). Thus, H3 is supported.

4.2. Assumptions

Table 7: Summary of Hypothesis Testing

Hypotheses	Results	Actions
H1: Attitude → Intention to Follow	$\beta=0.230$ at $p<0.001$	Accepted
H2: Subjective Norm → Intention to Follow	$\beta=0.161$ at $p<0.01$	Accepted
H3: Perceived Behavioural Control → Intention to Follow	$\beta=0.489$ at $p<0.001$	Accepted

Therefore, perceived behavioural control is the highest predictor, followed by attitude and subjective norm, respectively ($R^2=0.54$). In other words, the conceptual framework can explain the relationship phenomenon by 54%.

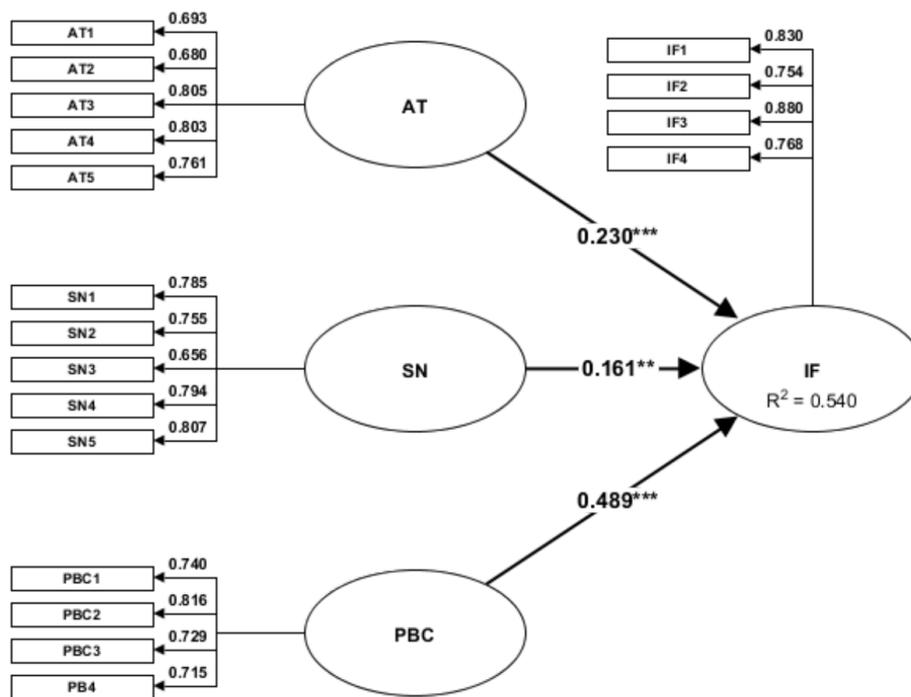


Figure 2. PLS-Structural Equation Model of the Study.

5. DISCUSSION AND CONCLUSION

5.1. Discussion of the Research Finding

The study's objective explores the factors influencing the intention to follow the preventive COVID-19 protocols among Thai people. The PLS-SEM model confirmed the proposed conceptual framework. The findings revealed that the theory of planned behaviour (TPB model: attitude, subjective norm, and perceived behavioural control) significantly influence Thai's intention to follow the preventive COVID-19 protocols. The findings supported the previous research of Ha (2020), Liu et al. (2020), Moran et al. (2020), Praseto et al. (2020) and Limna et al. (2022) that attitude is positively related to an individual's intention. There is a significant

influence of attitude on intention to follow the preventive COVID-19 protocols. The findings supported the previous research of Leung & Jiang (2017) and Wan et al. (2017) that there is a relationship between subjective norm and an individual's intention. Also, the findings supported the previous research of Praseto et al. (2020) that the subjective norm is positively related to the intention to follow the COVID-19 preventive protocols. The findings supported the previous research of Hagger et al. (2020), Praseto et al. (2020), Sumaedi et al. (2020) and Ullah et al. (2021) that perceived behavioural control is positively related to an individual's intention. The perceived behavioural control significantly impacts the intention to follow the COVID-19 preventive protocols.

5.2. Conclusions

The findings reveal that the theory of planned behaviour (TPB) significantly impacts Thais' intention to follow the COVID-19 preventive protocols. Perceived behavioural control had the most significant influence on Thai citizens intent to follow the COVID-19 preventive protocols, followed by attitude and subjective norm. Therefore, healthcare providers should pay attention to these factors. The intention to follow the COVID-19 preventive protocols can be explained by the theory of planned behaviour model (attitude, subjective norm, and perceived behavioural control). These factors directly affect Thai people's intention to follow the COVID-19 preventive protocols. Strategic planners can increase Thai people's intention to follow the COVID-19 preventive protocols through attitude, such as attitude being unsafe if someone sneezes or coughs next to them. Thus, all should wear a mask when going to the community. Strategic planners can increase the subjective norm that most people around their friends and family wear face masks when in a crowded area; finally, enhance perceived behavioural control by educating all people that preventive COVID-19 protocols are essential for everyone. Consequently, the COVID-19 preventive behaviour following the protocols will incur and accomplish Thailand's strategic plan's goal in the healthcare sector during the COVID-19 pandemic.

5.3. Research Contribution

This study may aid healthcare providers to implement appropriate strategies to increase Thai people's intention to follow preventive COVID-19 protocols. Furthermore, the findings suggest that the TPB model could be used to improve Thai perceptions of their behavioural intentions, such as getting COVID-19 vaccinations and wearing face masks. The results could be applied to all countries to develop strategic management adopting the TPB model (psychological factors), enhancing healthcare management through changing their behaviours.

5.4. Limitations & Recommendations

The nature of this study is a self-administered questionnaire. Qualitative research, such as interviews and focus groups, could provide more insight into future research. Furthermore, his study used only attitude, subjective norm, and perceived behavioural control to investigate the factors that affect the intention to follow the preventive COVID-19 protocols among Thai people. Other factors such as fear and perceived infectability of COVID-19 (Limna et al., 2022), trust in government, citizens' trust in science (Pagliaro et al., 2021) are recommended for further study because these factors are related to psychological factors and behavioural intention in the healthcare management context.

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