

Do Perceived Risk and Non-pharmaceutical Intervention Affect Consumers' Intention to Visit Shopping Mall during the Covid-19 Pandemic?

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ABSTRACT

Most research on mall visit intention emphasized the store atmosphere and shopping values. In the current situation of the COVID-19 pandemic, consumers may postpone visiting shopping malls due to health risks. A limited number of studies consider risk perception as the antecedent of shopping mall visit intention. Furthermore, even though the role of non-pharmaceutical intervention is relevant to the context of the COVID-19 pandemic, only a few studies are looking at this variable as the antecedent of behavioural intention. This paper aims to understand customer intention to shop in malls despite the COVID-19 social restrictions. This research extends the theory of reasoned action by attaching two dimensions of perceived risk, namely cognitive and affective perceived risks, and non-pharmaceutical intervention. Samples

of 180 respondents in Greater Jakarta, Indonesia, were selected using snowball sampling. Their responses were analyzed using partial least square structural equation modeling. The findings showed that attitude was the most potent influencing variable to mall visit intention. Moreover, this study found that cognitive perceived risk influences attitude, subjective norms, and non-pharmaceutical intervention, while affective perceived risk only influences non-pharmaceutical intervention.

Keywords: COVID-19, Non-pharmaceutical intervention, Risk perception, Theory of Reasoned Action (TRA)

INTRODUCTION

The COVID-19 is notorious for its high contagious characteristic compared to two past Coronavirus, Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) and the Middle East Respiratory Syndrome Coronavirus (MERS-CoV). The first case of COVID-19 was found in Wuhan, China. Within months cases have been reported in every continent except Antarctica. This situation has forced WHO to declare it as a global pandemic. Due to this concern, many countries implement social restrictions to minimize the spread of this virus. For instance, Japan's Prime Minister Office and the Ministry of Health, Labor, and Welfare recommend people to avoid three C's: crowded places, close contact, and closed spaces with poor ventilation to decrease the possibility of getting infected with COVID-19 (Furuse et al., 2020).

The number of confirmed cases keeps increasing significantly as people in some countries, such as Indonesia, seem to ignore this postulation. The first COVID-19 case in Indonesia was confirmed on March 2, 2020 (Nuraini, 2020). To respond swiftly to COVID-19, the government took a range of policies, including mass gathering restriction by national police and accelerating socialization COVID-19 prevention by the Ministry of Communication and Information (AHK Indonesia, 2020). On April 3, the government implemented the large-scale social restriction, Indonesia's version of partial lockdown.

The implementation of the large-scale social restriction brought a negative effect on the national economy. Indonesia's economy grew 2.97 percent in the first quarter of 2020, its weakest growth from 2001 and almost half of 2019's growth rate (Akhlis & Rahman, 2020). Indonesia's GDP growth for the second quarter fell to -5.32 percent (Badan Pusat Statistik, 2020). Due to this adverse effect of the pandemic on the economy, the government started to loosen the COVID-19 social restrictions by allowing some businesses to open gradually despite the continuously growing number of cases (Akhlis & Rahman, 2020). Beginning on June 5, 2020, the government allowed business activities, public spaces, houses of worship, recreational places,

weddings, traditional markets and supermarkets, restaurants, and transportation services with a maximum 50% capacity while applying the health protocols issued by the government.

Indonesia is well-known for its dynamic growth of shopping malls due to the shortage of outdoor recreational spaces, especially in Jakarta, that makes shopping malls not just to be a place for shopping purposes but as a destination for recreation and social gatherings (Jeffreys et al., 2013; Lamb, 2016). There were 80 shopping malls in Jakarta, which is still rising (Databoks, 2019). Nielsen Indonesia reported that 84% of daily visitors would revisit shopping malls after the COVID-19 pandemic. In comparison, 67% of visitors would visit shopping malls after the COVID-19 large-scale social restrictions in Jakarta are lifted (Parama, 2020).

Visiting malls becomes a concern as the clusters of COVID-19 in Japan, for example, are associated with risky behaviors such as cheering at clubs, doing karaoke, having conversations in bars, and exercising in fitness centers, which all have the criteria of the 3 C's, closed spaces with poor ventilation, close and crowded contact environment. In these places, the exposure risk is higher (Sugiyama, 2020). Although people are encouraged to stay away from crowded places during the new normal (Bramasta, 2020), many Indonesians have started going back to shopping malls and other public spaces without following the strict health protocols (Paat & Wijayaka, 2020). As a result, the number of COVID-19 cases in Jakarta keeps increasing (Jakarta Smart City, 2020).

This phenomenon raises the question of what makes people have the intention of going to the mall. Earlier studies for mall visit intention focused on merits, such as the attractiveness, convenience, and design of shopping malls (Kusumowidagdo et al., 2016; Prisilla & Kurnia, 2020; Sebastian & Purwanegara, 2014). Although these variables are still relevant to understanding consumers' intention to go shopping malls, other variables may exist during the pandemic. Consumers' malls visit intention during the pandemic can be understood from a psychological perspective. Among several psychological theories, the theory of reasoned action is commonly used to explain human behavior. According to this theory, individual behavior is predicted through behavioral intention shaped by the attitude and subjective norms (Ajzen & Fishbein, 1980).

The COVID-19 pandemic has similarities with the SARS and MERS pandemics. During the pandemic, people tend to evade risk by avoiding crowded places (Bramasta, 2020), reducing travel (Bae & Chang, 2021), and implementing a non-pharmaceutical intervention strategy (Lee et al., 2012). Bae and Chang (2021) stated that individuals' risk perception might influence their attitude and subjective norms during uncertain conditions, which affect behavioral intention later. Even though individuals' cognitions

and emotions impact their behavior, previous studies tended to focus only on the cognitive risk perception (e.g., Jin, Line, & Merkebu, 2016; Lee et al., 2012; Zhang, Tao, Qu, Zhang, Lin, & Zhang, 2019) or the study did not include the influence on the intention (Jang et al., 2020). Besides, individuals' behavioral intention during the pandemic may also be affected by non-pharmaceutical intervention, as Lee et al. (2012) reported during the H1N1 pandemic. This variable is relevant to the context of the COVID-19 pandemic, but there are only a few studies are looking at non-pharmaceutical intervention. Therefore, this research aims to examine the effect of risk perceptions and non-pharmaceutical intervention on consumers' intention to visit shopping malls during the COVID-19 pandemic by extending the theory of reasoned action.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Theory of Reasoned Action (TRA)

Fishbein and Ajzen developed the theory of reasoned action (TRA) that assumes the intention to engage in a particular behavior may predict an individual's behavior (Ajzen & Fishbein, 1980). TRA hypothesizes that individuals are motivated by behavioral intention when they decide to do a specific action. The intention is influenced by individual attitudes and subjective norms toward specific behaviors (Ajzen & Fishbein, 1980; Vrontzos & Duquenne, 2014).

An attitude is an assessment of a specific behavior involving an attitude object, such as purchasing a product (Kass, 1959). Also, once an attitude is formed, it tends to persist for a long time, so it can be used to predict an individual's behavioral intention (Hsu & Huang, 2012). A subjective norm refers to social pressure from people around an individual that affects a particular behavior (Ajzen, 2012). A few studies found that subjective norms affect behavioral intention, but they showed a moderate role in forming the individual intention (Chuchinprakarn, 2005; Hasbullah et al., 2016).

As TRA can predict an individual's actions with some limitations, such as volitional control, the mere creation of an intention is insufficient to explain and predict behavior. Theory of planned behavior (TPB) extends TRA by adding perceived behavioral control that may better explain behaviors with some execution difficulties. However, the selection of the appropriate theory between TRA and TPB depends on the characteristics of the action. TRA could be considered appropriate if the individual believes that he or she has perfect volitional control over the behavior (Ajzen, 2020).

In this study context, visiting shopping malls for many Indonesians has become a general and frequent activity due to its function as a public space (Lamb, 2016). Their act to visit shopping malls does not require specific skills, knowledge, supports from others, and resources, so it is assumed that they have volitional control over their actions.

As stated by Ajzen (2020), when individuals strongly believe that they can do the action if they really want it, then perceived behavioral control is no longer relevant. Rather than using TPB, this study takes an individual's emotion into account, namely affective perceived risk, as TRA has been debated due to its tendency to disregard the affective element as a predictor of behavior (Ajzen, 2011; Armitage & Conner, 2001). As such, TRA is used in this study to explain the intention to go to a shopping mall with additional variables relevant to the pandemic context.

Risk Perception, TRA, and the COVID-19 Pandemic

Risk perception is an individual's recognition or value assessment about uncertain conditions regarding a particular risk (Bauer, 2001). People utilize the available methods to measure potential incidents' probability in varying conditions to measure risks (Butler & Mathews, 1987). As a result, instead of concentrating on the actual risk, many studies have looked at the idea of perceived risk because human behavior is highly affected by an individual's risk perception (Dillard et al., 2012).

Many scholars analyze perceived risk by separating it into cognitive and affective dimensions (Brug et al., 2004). Cognitive perceived risk refers to the sensitivity and severity of an individual's risk, while affective perceived risk refers to anxieties or fears about exposure to a particular risk (Sjöberg, 1998). In the early stage of research on this idea, cognitive risk perception was the main focus of many studies (Shim & You, 2015). However, the introduction of the risk-as-feelings theory has given more prominence to affective risk perception (Loewenstein et al., 2001). The affective risk perception became a more critical determinant to explain individual behavior, especially when faced with a fearful risk (Peters & Slovic, 1996).

Weyman and Kelly (1999) attained an indistinguishable conclusion of risk perception. To understand people's reactions towards a risk, it needs a social and cultural context in arising hazards, in which the variables shape the attitudes, beliefs, and behaviors of people. Previous studies found that perceived risk influences attitudes, which in turn affecting behavioral intention (Ajzen, 1985; Quintal et al., 2010). Studies from Lee (2009) and Choi et al. (2013) showed that a high degree of risk perception affects attitude and, as a result, influences the behavioral intention of individuals. Bae and Chang (2021) observed that cognitive risk affected the subjective norms that eventually increase an individual's preference towards 'untact' tourism, which refers to safer travel during the pandemic based on in-travel social distancing. In this research context, when individuals perceive COVID-19 as dangerous, they are likely to have a negative attitude toward visiting crowded places, such as shopping malls, and decrease the tendency to follow others' suggestions to visit the malls during the pandemic. These relationships are presented as follows:

H1. (a) cognitive and (b) affective risk perception exert a significant negative influence on attitude.

H2. (a) cognitive and (b) affective risk perception exert a significant negative influence on subjective norms.

Risk perception is also a significant antecedent of subjective standards and perceived behavioral controls (Lee, 2009). Risk perception is one of the strong predictors of adapting the non-pharmaceutical interventions (NPIs) (McCusker et al., 1989; Xu et al., 2020). Many researchers have found that risk perception is linked to the adoption of protective behaviors for health, such as keeping a social distance and washing one's hands are often linked to social distancing (Caley et al., 2008; Pistone et al., 2007; Poletti et al., 2012). Besides, Leppin and Aro (2009) showed a correlation between risk perceptions and individuals' protective behaviors, such as wearing a face mask and frequent hand washing.

Altarawneh, Mackee, & Gajendran (2018) also revealed that higher cognitive and affective risk perception results in a higher intention to perform more prevention activities. This finding is in line with a previous study by Lee et al. (2012), which shows an association between the understanding of the coronavirus pandemic shock and individuals' perceptions of health risk and non-pharmaceutical intervention. Previous research found out that hand-washing motivation is due to the cholera epidemics' fear (Curtis et al., 2009). Therefore, this assumes that those who have a higher risk perception of COVID-19 may have stricter and more frequent NPIs. Therefore, we hypothesize as follows:

H3. (a) cognitive and (b) affective risk perception exert a significant positive influence on non-pharmaceutical intervention.

Many studies have found that risk perception is an essential factor in decision-making (Stefani et al., 2008; Visschers & Siegrist, 2008). The risk perceptions and benefit perceptions speed up customer attitude orientation and behavior intention (Jarvenpaa et al., 2000). Perceived risks change a person's emotions, altering the behavioral intention to a large degree since the perceived risk could form an obstacle for a specific behavior (Kim et al., 2008). Therefore, in this study, we argue that higher risk perception will urge individuals not to visit shopping malls, that hypothesize as follows:

H4. (a) cognitive and (b) affective risk perception will exert a significant negative influence on mall visit intention.

Scholars agree that behavioral attitudes positively impact a person's behavior (Baker et al., 2007; Cheng et al., 2006). They noted that the positive impact of emotional responses rose, which formed a positive attitude that motivated customers to visit shopping malls and spread positive opinions (Das & Varshneya, 2017). Lower levels of risk result in a positive attitude, an increase in individuals' expectation that their family or friends would demonstrate a positive attitude to their intended behavior, and an increase in perception of their ability to perform the intended action (Jarvenpaa et al., 1999). Therefore, we proposed:

H5. An attitude will exert a significant positive influence on mall visit intention.

A subjective norm is customers concerned by people's important opinions and from an economic perspective that collaborates quantitatively to the shopping mall (Kumar et al., 2016). The subjective norms positively correlate with behavioral intention (Ajzen & Fishbein, 1980; Tsai, 2010). Based on this, we believe that stronger subjective norms lead to a higher intention to visit a mall. Therefore, we postulated:

H6. Subjective norms will exert a significant positive influence on visiting mall intention.

Non-pharmaceutical Intervention

As seen during the past influenza pandemics such as MERS and SARS, vaccination was the most effective mitigation method. However, considering the period taken for the development, production, and distribution of the vaccine during the H1N1 outbreak in 2009 (Aunins et al., 2011; Halder et al., 2010). Non-pharmaceutical intervention is a public mitigation action to reduce the spread of the disease. Although non-pharmaceutical interventions (NPIs) have no treatment function, they have the advantage of more comfortable and faster utilization in the early stages of a pandemic outbreak. By implementing and encouraging strict NPIs, the spread of a virus slows down so that the healthcare system and government can have time to deal with the pandemic and research, develop, produce, and distribute vaccines antivirals (Kelso et al., 2009). Besides that, NPIs are sometimes the only containment measures used for developing and underdeveloped countries that do not have enough medical systems and resources in responding to the pandemic outbreak (Oshitani et al., 2008).

According to the Center for Disease Control and Prevention (2020), there are three types of NPI: (1) personal NPIs (everyday preventive actions such as washing hands with soap and water), (2) community NPIs (policies and strategies such as social distancing, closures), and (3) environmental NPIs (routine surface cleaning at home, school, work, and large gatherings) Personal NPIs regarding mall visit may be similar to the hygiene activities during traveling which is explained by Nicoll (2006). These

NPIs include gaining a better understanding of the epidemic or pandemic, strengthening personal hygiene practices, avoiding suspicious people or areas by keeping social distancing and checking health before and after the travel. The NPIs in most countries are quite similar. For example, the CDC's personal NPIs are not only implemented in the US but also in other countries, including Indonesia, by implementing health protocols such as wearing a mask, keeping distance, and washing hands frequently to prevent COVID-19 transmission (Sulistyawati, 2020).

An individual's intention to take NPIs depends on personal risk perception that includes knowledge of COVID-19. For example, today, many people are informed by credible sources, such as the Center for Disease Control and Prevention (CDC), that indoor spaces are riskier than outdoor spaces for getting infected by the COVID-19. Insightful information from COVID-19 transmission simulation results for indoor-based customers, in which the first result is the personal protection policy, could reduce infection risks. Secondly, the opening hour restriction policy may increase transmission risk, which can cause increasing customer traffic. Thirdly, the people's capacity policy may reduce the transmission risk if managers can control customer numbers indoors and outdoors. Therefore, the combined performance of non-pharmaceutical intervention will be effective through good coordination from decision-makers (Xiao et al., 2020).

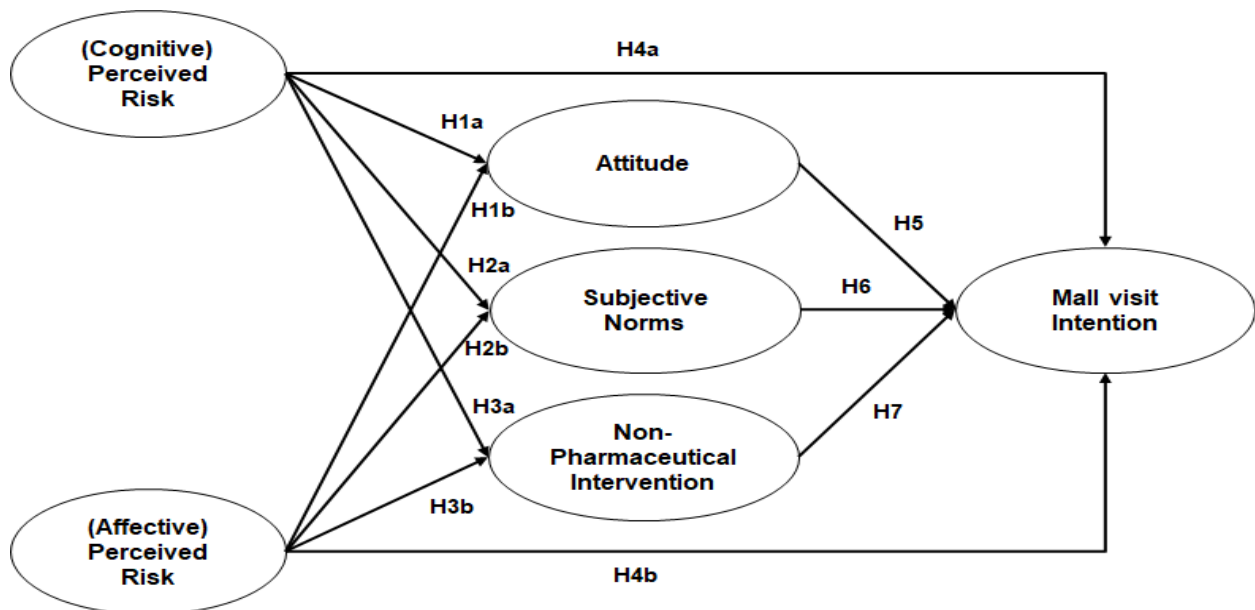
Previous studies on non-pharmaceutical intervention are mostly on the health sector that provides science-based evidence to help policymakers with modeling (Aledort et al., 2007; Davies et al., 2020) because NPIs considered as an efficient method to reduce the speed of spreading the virus during the pandemic (Benkouiten et al., 2014; Lee et al., 2012; Oshitani, 2006). Despite its usefulness during the pandemic, to the best of our knowledge, only a few researchers have studied the effect of NPI regarding behavioral intention, such as the study by Lee et al. (2012) that shows the importance of NPI to prevent travelers from H1N1. However, research by Kement et al. (2020) found that NPI was not enough to reduce the risk of travel as it did not have a significant effect on behavioral intention. These studies were conducted on different types of viruses, different levels of contagious, different countries, and different timelines. It justifies the need to test the relationship between NPI and behavioural intention. Therefore, we postulated:

H7. Non-pharmaceutical intervention will exert a significant positive influence on mall visit intention.

This study extends the TRA framework (Figure 1) to understand consumer intention to go to shopping malls while managing COVID-19 risk perceptions. Also, we include non-pharmaceutical intervention to understand consumer intention to go to

shopping malls during the COVID-19 pandemic.

Figure 1 *Conceptual Model*



METHODOLOGY

This research employed a quantitative approach to examine the relationship between the variables of interest. An online survey was constructed through an online form in Google Form. The Google Form link was distributed through social media platforms such as WhatsApp, Line app, Instagram, and Twitter. After the respondents finished the survey, we also asked the respondents to share the survey link to their circle of friends and their social media.

This research population was residents of Greater Jakarta who visited shopping malls after the large-scale social restrictions were loosened. Because there was no exact number of how big the population was, this study used a snowball sampling technique. We managed to collect data from 180 respondents. The measurement of each variable was adopted from the literature. Stone and Grønhaug (1993) classified perceived risk into psychological, social, financial, performance, physical, and time-related categories. In this research, we emphasized the dimensions of perceived health risk: affective and cognitive perceived risk. Each perceived risk dimension was assessed with four questions adapted from Bae and Chang (2021) and Lee et al. (2012). Attitude, subjective norm, non-pharmaceutical intervention, and mall visit intention were assessed by questions that were adopted from Lee et al. (2012). The attitude was assessed with five items, subjective norm with six items, non-pharmaceutical with six items, and mall visit intention with five items. The questionnaires were measured by a 5-point Likert scale.

A structural equation model (SEM) was used to test the hypothesis (Hair et al., 2011). PLS-SEM is suitable for the research goal that aims to predict the critical factor that affects the dependent variable, and PLS is ideal for research with a complex model with many indicators and constructs. Using SEM, multiple and interrelated dependence relationships can be estimated, create an ability to stand for observable variables in the framework and account for measurement, and define a model to explain the relationships of variables.

RESULTS

Sample Profile

We gathered 180 responses from the online survey, where 148 patrons had visited shopping malls during the transition period. Almost 60 per cent of respondents were males, with most (91.6%) of them 20-39 years old. For monthly income, more than half (61.2%) of the respondents were between IDR5,000,000 (USD 339) and IDR14,999,999 (USD 1,016). Most of the respondents visited shopping malls to buy things (63.2%) or to eat (15.9%) with their family (38.5%), friends (29.7%), or alone (24.3%). Considering the shopping mall closure due to the large-scale social distancing and the survey period, over half of the respondents (63.5%) visited a shopping mall less than three times during about four months.

Table 1 *Demographic Information*

Characteristics	Categories	Frequency	Percentage
Gender	Male	106	58.9
	Female	74	41.1
Age	15-19	5	2.8
	20-29	103	57.2
	30-39	62	34.4
	40-49	7	3.9
	50-59	3	1.7
Monthly Income (IDR)*	Less than 5 million	31	17.2
	5 - 9.9 million	64	35.6
	10 - 14.9 million	46	25.6
	15 - 19.9 million	18	10.0
	20 - 24.9 million	9	5.0
	Over 25 million	6	3.3
	No answer	6	3.3
Education level	Junior high school	1	0.6
	High school	17	9.4
	Bachelor's degree	148	82.2
	Master's degree	10	5.6
	Doctoral degree	1	0.6
	No answer	3	1.7
Number of visits	Less than 3 times	94	63.5
	3-5 times	41	27.7
	6-8 times	8	5.4
	More than 8 times	5	3.4
Companion	Alone	36	24.3
	Family with no child	44	29.7
	Family with child	13	8.8
	Friend	44	29.7

* Note: As of October 20, 2020, IDR 1 million equals USD67.71

Reliability and Validity

Structural equation modeling (SEM) was adopted for an analysis of the survey. Before analyzing through SEM, a validity and reliability analysis and correlation analysis were conducted to verify whether the survey results displayed meaningful results. Based on the findings, three items were not valid or had a factor loading value of below 0.4 (Hair et al., 2011). After recalculation, all remaining items were valid with a factor loading range from 0.561 to 0.917. After that, the results showed that all valid items met the minimum requirement for the AVE value and the composite reliability, which was 0.5 for AVE and 0.7 for composite reliability (Hair et al., 2011). Table 2 presents the findings of the measurement model.

Table 2 *Validity and Reliability Findings*

Variable	Descriptive Statistic		Convergent Validity		Composite Reliability
	Mean	Standard Deviation	Factor Loading	AVE	
Cognitive perceived risk				0.624	0.832
CPR1	4.161	0.877	0.813		
CPR3	3.950	0.950	0.821		
CPR4	3.850	1.072	0.732		
Affective perceived risk				0.719	0.911
APR1	4.117	0.927	0.858		
APR2	4.411	0.881	0.837		
APR3	4.272	0.887	0.873		
APR4	4.278	0.796	0.823		
Attitude				0.742	0.935
ATI1	2.517	0.997	0.802		
ATI2	2.161	0.973	0.885		
ATI3	2.211	1.054	0.877		
ATI4	2.306	0.967	0.892		
ATI5	2.189	1.099	0.847		
Non-pharmaceutical intervention				0.546	0.878
NPI1	4.817	0.477	0.812		
NPI2	4.861	0.377	0.765		
NPI3	4.711	0.628	0.731		
NPI4	4.856	0.473	0.714		
NPI5	4.728	0.585	0.673		
NPI6	4.633	0.657	0.733		
Subjective norms				0.617	0.889
SJN1	2.450	1.076	0.784		
SJN2	2.139	0.924	0.886		
SJN3	3.156	1.163	0.751		
SJN4	2.817	1.118	0.794		
SJN5	2.006	0.946	0.701		
Mall visit intention				0.629	0.891
INT1	2.444	1.107	0.910		
INT2	2.356	1.083	0.917		
INT3	1.572	0.843	0.561		
INT4	2.544	1.117	0.889		
INT5	2.294	1.172	0.610		

As presented in Table 3, the square root of the AVE of each variable was greater than its correlation to other variables. Hence, all the variables passed the discriminant validity test. This finding was supported by the validity test results based on HTMT that showed none of the constructs had an HTMT ratio greater than 0.9 (Table 4) and the outer model multicollinearity test with VIF values less than 3.3 (Table 5).

Table 3 *Discriminant Validity Based on Fornell-Larcker Criterion*

	Affective Perceived Risk (APR)	Attitude (ATI)	Cognitive Perceived Risk (CPR)	Mall Visit Intention (INT)	Non-Pharmaceutical Intervention (NPI)	Subjective Norm (SJN)
APR	0.848					
ATI	-0.239	0.861				
CPR	0.611	-0.294	0.790			
INT	-0.144	0.767	-0.250	0.793		
NPI	0.372	-0.238	0.388	-0.197	0.739	
SJN	-0.197	0.704	-0.269	0.605	-0.196	0.786

Table 4 *Discriminant Validity based on HTMT*

	Affective Perceived Risk (APR)	Attitude (ATI)	Cognitive Perceived Risk (CPR)	Mall Visit Intention (INT)	Non-Pharmaceutical Intervention (NPI)	Subjective Norm (SJN)
APR						
ATI	0.263					
CPR	0.763	0.327				
INT	0.180	0.867	0.319			
NPI	0.426	0.270	0.486	0.258		
SJN	0.219	0.788	0.321	0.694	0.235	

Table 5 *Multicollinearity Testing*

	Affective Perceived Risk (APR)	Attitude (ATI)	Cognitive Perceived Risk (CPR)	Mall Visit Intention (INT)	Non-Pharmaceutical Intervention (NPI)	Subjective Norm (SJN)
APR		1.596		1.658	1.596	1.596
ATI				2.054		
CPR		1.596		1.733	1.596	1.596
INT						
NPI				1.240		
SJN				2.000		

Hypothesis Testing

This research tests the hypotheses using PLS-SEM (bootstrapping into 5,000 samples). Due to the small sample size, this study looked at both the p-value, confidence interval, and effect size to determine the significance of the relationship. During the pandemic, individuals' perceived health risk may affect their intention to visit shopping malls. This study aims to extend TRA in predicting mall visit intention during the pandemic by integrating perceived risk and non-pharmaceutical intervention. In addition to the conceptual model presented in Figure 1, we also prepare two competing models to examine the relative importance of perceived risk, non-pharmaceutical intervention, attitude, and subjective norms in explaining mall visit intention. All path diagrams are presented in Figure 2.

Model 1 only examined the effect of cognitive and affective perceived risk on consumers' intention to visit shopping malls. Both dimensions of perceived risk could explain the variability of mall visit intention by 9 percent. However, cognitive perceived risk was the only variable affecting mall visit intention ($\beta = -0.299$, $p < 0.001$).

Model 2 used TRA to predict mall visit intention and showed that attitude and subjective norms explained mall visit intention by 59.7 percent. The path analysis gave evidence that TRA was a suitable model to predict consumers' intention to visit shopping malls due to its high R-square. Attitude toward mall visit intention had a significantly greater influence on mall visit intention ($\beta = 0.675$, $p < 0.001$) than subjective norms ($\beta = 0.131$, $p < 0.05$).

Model 3 integrated TRA with perceived risk and non-pharmaceutical intervention. All antecedents could explain the mall visit intention by 60.2 percent. This model was significantly superior to Model 1 as it increased the R-square by 51.2 percent. Compared to Model 2, the third model did not substantially increase the R-square since the direct effects of perceived risk and non-pharmaceutical intervention on mall visit intention were not significant. However, this model showed the significance of perceived risk in affecting TRA and non-pharmaceutical intervention. The perceived risk explained the variability of attitude by 9.2 percent, subjective norms by 7.4 percent, and non-pharmaceutical intervention by 18 percent. This model showed that the presence of attitude and subjective norms as mediating variables caused the direct effect of cognitive risk on mall visit intention to turn non-significant. It indicated that attitude and subjective norms fully mediate the relationship between cognitive perceived risk and mall visit intention.

As presented in Table 6, five hypotheses were supported. Between two dimensions of perceived risk, only cognitive perceived risk had a significant negative influence on the attitude toward visiting shopping malls ($\beta = -0.236$, $p < 0.05$), subjective norms ($\beta = -0.237$, $p < 0.05$), and a positive effect on non-pharmaceutical intervention ($\beta = 0.256$, $p < 0.05$), while the effect of affective perceived risk on attitude towards visiting shopping malls ($\beta = -0.095$, $p = 0.141$) and subjective norms ($\beta = -0.053$, $p = 0.282$) were not significant. The output showed that affective perceived risk only had a significant positive effect on non-pharmaceutical intervention ($\beta = 0.216$, $p < 0.05$). For the relationship between perceived risk and mall visit intention, this study found that neither cognitive perceived risk ($\beta = -0.064$, $p = 0.187$) nor affective perceived risk ($\beta = 0.088$, $p = 0.067$) had a significant direct effect on mall visit intention. For the mediating variable, attitude towards visiting a shopping mall ($\beta = 0.677$, $p < 0.001$) had a significant positive effect on mall visit intention. The other two mediators, subjective norms ($\beta = 0.125$, $p = 0.058$) and non-pharmaceutical intervention ($\beta = -0.019$, $p = 0.319$) did not affect mall visit intention. Based on these findings, this study provides a

competing model (Model 4) by excluding affective perceived risk as most of its effect on other variables in Models 1 and 3 were not significant. The results of the competing model were similar to Model 3, and the omission of affective perceived risk only had a small effect on the changes of R^2 .

Table 6 Results of Hypothesis Testing

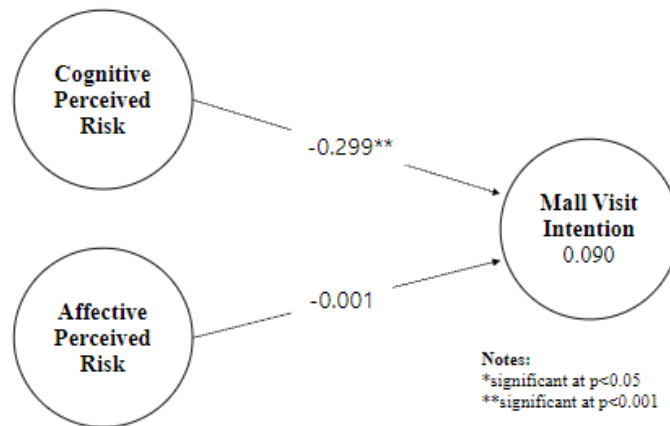
Hypothesis	Path Coefficient	Standard Error	t-value	Confidence Interval		f^2	Remark
				5%	95%		
Model 1:							
CPR → INT	-0.299	0.084	3.543**	-0.438	-0.181	0.06	Supported
APR → INT	-0.001	0.095	0.006	-0.175	0.128	0.00	Not supported
R ² INT = 0.090							
Model 2:							
ATI → INT	0.675	0.083	8.111**	0.525	0.801	0.572	Supported
SJN → INT	0.131	0.077	1.705*	0.011	0.264	0.021	Supported
R ² INT = 0.597							
Model 3:							
CPR → ATI	-0.236	0.083	2.849*	-0.378	-0.100	0.039	Supported
APR → ATI	-0.095	0.088	1.074	-0.240	0.050	0.006	Not supported
CPR → SJN	-0.237	0.085	2.784*	-0.386	-0.107	0.038	Supported
APR → SJN	-0.053	0.091	0.577	-0.202	0.105	0.002	Not supported
CPR → NPI	0.256	0.093	2.745*	0.106	0.411	0.050	Supported
APR → NPI	0.216	0.103	2.103*	0.049	0.394	0.036	Supported
CPR → INT	-0.064	-0.072	0.890	-0.171	0.061	0.006	Not supported
APR → INT	0.088	0.059	1.497	-0.080	0.186	0.012	Not supported
ATI → INT	0.677	0.083	8.119**	0.531	0.803	0.560	Supported
SJN → INT	0.125	0.080	1.576	0.000	0.263	0.020	Not supported
NPI → INT	-0.019	-0.041	0.471	-0.091	0.043	0.001	Not supported
R ² ATI = 0.092							
R ² SJN = 0.074							
R ² NPI = 0.180							
R ² INT = 0.602							
Model 4:							
CPR → ATI	-0.333	0.063	5.276**	-0.448	-0.242	0.125	Supported
CPR → SJN	-0.270	0.071	3.791**	-0.390	-0.153	0.079	Supported
CPR → NPI	0.463	0.063	7.358**	0.359	0.563	0.273	Supported
CPR → INT	-0.030	0.062	0.485	-0.132	0.066	0.002	Not supported
ATI → INT	0.667	0.082	7.722**	0.518	0.801	0.532	Supported
SJN → INT	0.127	0.082	1.551	-0.003	0.260	0.020	Not supported
NPI → INT	-0.002	0.044	0.039	-0.083	0.064	0.000	Not supported
R ² ATI = 0.111							
R ² SJN = 0.073							
R ² NPI = 0.214							
R ² INT = 0.598							

*significant at 0.05

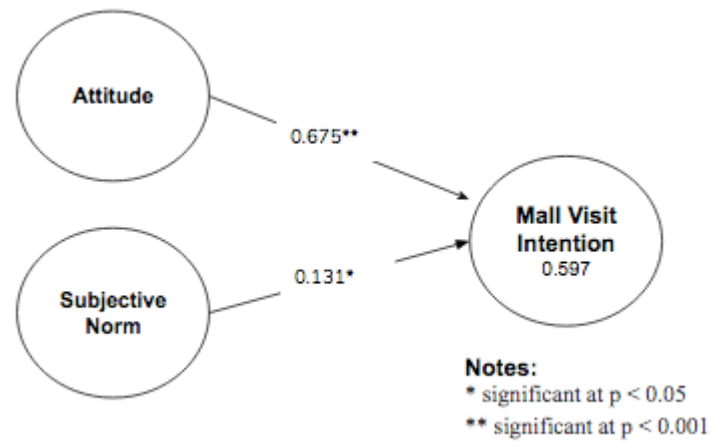
**significant at 0.001

Note: CPR: cognitive perceived risk, APR: affective perceived risk, ATI: attitude toward visiting a shopping mall, SJN: subjective norm, NPI: non-pharmaceutical intervention, INT: mall visit intention

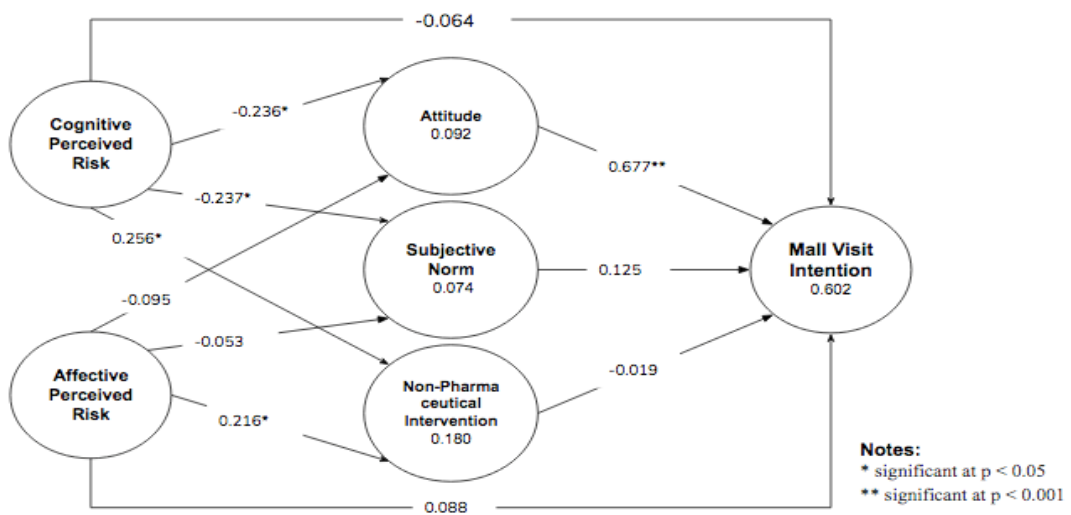
Figure 2 Path Diagrams of All Models



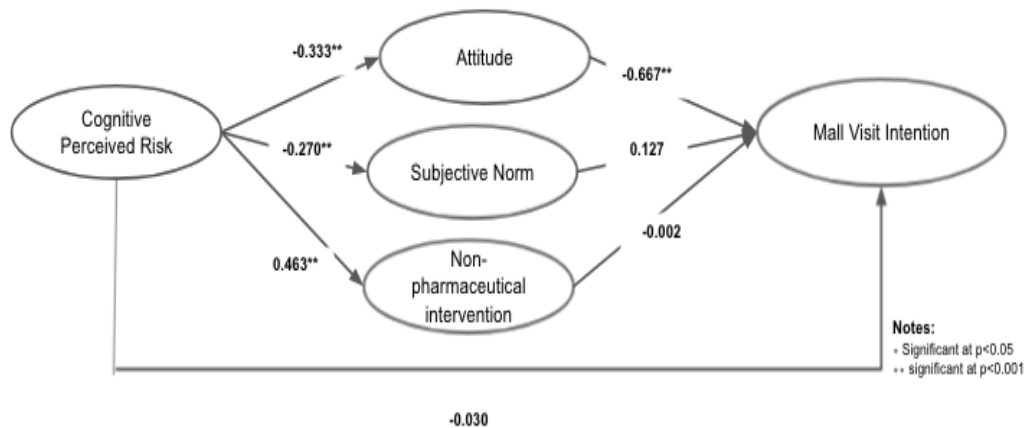
<Model 1>



<Model 2>



<Model 3>



<Model 4>

As this study had an uneven distribution of samples based on age, gender, and mall visit frequency, we performed a multigroup analysis. Due to the great difference in the number of samples based on age and mall visit frequency, this study classified them into two groups only to make the proportion become slightly balanced. Table 7 shows that almost all groups do not have a significant difference of effects, except mall visit frequency. Respondents who visit shopping malls more frequently had a significantly greater effect of affective risk perception on their attitude toward visiting the shopping mall.

Table 7 Results of Multigroup Analysis

Path	Age (Younger – Older*)		Gender (Female - Male)		Mall visit frequency/month (High – Low*)	
	Path coefficient	p-value	Path coefficient	p-value	Path coefficient	p-value
CPR → ATI	0.140	0.221	0.064	0.333	-0.270	0.803
APR → ATI	0.189	0.137	0.042	0.407	0.346	0.038*
CPR → SJN	0.249	0.151	0.122	0.224	-0.163	0.803
APR → SJN	0.043	0.415	-0.063	0.645	0.218	0.133
CPR → NPI	-0.023	0.515	0.306	0.116	-0.034	0.543
APR → NPI	0.031	0.446	-0.103	0.716	-0.142	0.670
CPR → INT	0.028	0.425	-0.045	0.617	-0.110	0.688
APR → INT	-0.146	0.853	0.048	0.340	0.244	0.090
ATI → INT	0.295	0.068	-0.192	0.893	-0.018	0.547
SJN → INT	-0.221	0.874	0.091	0.269	-0.023	0.537
NPI → INT	0.131	0.097	-0.072	0.772	0.143	0.128

*Younger age = 15-29 years old; Older age = 30-50 years old

** Low frequency = less than 3 times; High frequency = 3 times and above

DISCUSSION AND CONCLUSION

For Indonesia, it is the first time to implement a high level of a social distancing policy, including closing shopping malls, even with the adverse effects on the economy. Moreover, there is no precedent for whether consumers will return to shopping malls and engage in the same consumption behavior as before when social distancing is eased with a similar risk of getting infected from COVID-19. Previous research about the behaviors during the pandemic era was about leisure and outdoor recreation activities (Marafa & Tung, 2004) or the change of shopping behavior such as online grocery shopping (Eriksson & Stenius, 2020). To the best of our knowledge, it is one of the very few studies on the factors that negatively affect consumers' intention to visit shopping malls during the pandemic era by extending the theory of reasoned action.

This study partially supports the theory of reasoned action as only attitude is substantially significant in affecting consumers' intention to visit shopping malls during the pandemic. Ajzen (1985) explains that an individual tends to be motivated to perform a certain behavior if he or she holds a positive attitude toward the behavior and when supported by the expectation of important others to do such behavior. Our findings partially support previous studies in different study contexts (Bae & Chang, 2021; Li et al., 2021). It seems that attitude has a more significant effect than subjective norms in influencing mall visit intention, which is in line with Chuchinprakarn's (2005) and Hasbullah et al.'s (2016) studies.

Before the pandemic, Indonesian consumers generally had a favorable attitude towards visiting shopping malls as they like to go to shopping malls not only for shopping but also for recreation, dining, and socializing. This behavior is changed during the pandemic, as presented in the descriptive statistics. Respondents are likely to have a negative attitude toward visiting shopping malls during the pandemic. As a result, respondents tend to postpone visiting the shopping malls during the pandemic unless they need to buy something. Even if they go to the mall, they are less likely to bring their children when visiting the malls to reduce the possibility of getting infected by COVID-19. Most respondents are educated so that they acknowledge the danger of visiting crowded places during the pandemic as presented by the cognitive risk perception. Even though Indonesians are a collectivistic society, the survey was performed in Greater Jakarta. Like in other collectivist countries, people who live in urban areas tend to be individualistic. As a result, advice from important others becomes less significant in directing the individuals' behavior.

From the two dimensions of risk perception, only cognitive perceived risk has a significant negative effect on attitude, which contradicts Bae and Chang's (2021) study in a different context, which found affective perceived risk as to the influencing factor. Respondents in this research hold a moderate level of affective perceived risk toward

the COVID-19. The insignificant effect and different results with Bae and Chang (2021) may be related to the cultural difference, particularly in terms of uncertainty avoidance. Indonesians tend to be more risk-taker than Koreans, as presented by the uncertainty avoidance index by Hofstede Insights (2020). The uncertainty avoidance of Indonesia was almost half of South Korea that indicates the lower preference of Indonesians to avoid uncertainties compared to Koreans. Indonesians tend not to believe that they may be exposed to COVID-19 until they witness COVID-19 confirmed cases around their circle (TheJakarta Post, 2020).

Even though respondents are afraid of the COVID-19, this feeling is not strong enough to direct an unfavorable attitude toward visiting shopping malls during the pandemic. It seems that their tendency to postpone visiting shopping malls is more driven by other factors such as their knowledge of the danger of the COVID-19 that shapes their cognitive perceived risk. Gender may be related to the insignificant potential effect of affective risk perception on attitude and subjective norms. Even though the MGA based on gender shows the differences are not significant, gender may still play a role in causing the insignificant effects of affective risk perception. Male respondents were slightly more significant than females. Males tend to be more rational, which triggers their behavior. In addition, the dominant respondents hold university degrees that may stimulate them to determine their behavior based on facts and their knowledge. As a result, their negative attitude and subjective norms toward visiting shopping malls are more triggered by their cognitive perceived risk toward the COVID-19 than their affective perceived risk.

Not only affecting attitude toward visiting a shopping mall, but cognitive perceived risk also affects subjective norms. It is in line with studies conducted by Bae and Chang (2021) and Murray and Schaller (2012). As people become more aware of the risks of COVID-19, which has a highly contagious virus, individuals assume that their friends and family will have a negative perception of visiting shopping malls where maintaining social distancing is more complicated than when outside. The significance of the cognitive perceived risk confirms the information-processing continuum approach that supports an individual's process and evaluates the information before engaging in the behavior. The information held by the individual will determine one's beliefs and attitudes and also predict others' expectations toward such behaviour, which in turn shapes one's intention toward the behaviour (Ajzen & Dasgupta, 2015). The significance of cognitive perceived risk in our study justifies Ajzen's (2011) argument about the small incremental explanatory power of an individual's emotions in the overall model of TRA.

Even though affective perceived risk does not affect attitude and subjective norms, it has a significant effect on non-pharmaceutical intervention (NPI). This finding

indicates that the respondents are more rational and less emotional when determining their behavior in the pandemic situation. This finding supports previous research by Lee et al. (2012) and Raude et al. (2019). Respondents tend to adopt non-pharmaceutical preventive actions during and after visiting a mall. This study was performed when the vaccine was still under research so that people were encouraged to take NPI to prevent them from getting infected by the COVID-19. Their cognition and negative emotions toward the COVID-19 lead respondents to obey the government's policy to perform NPI when visiting public spaces, such as shopping malls.

Despite the significant effects of cognitive and affective perceived risk on NPI, non-pharmaceutical intervention (NPI) does not influence consumers' intention to visit shopping malls during the pandemic. This result supports Kement et al. (2020) that considering the high contagious characteristic of COVID-19 compared to the previous Coronavirus leads people to believe that NPI is not enough to protect themselves. It seems that respondents perceived that performing NPI during the pandemic is a must, especially when the number of confirmed cases is still increasing significantly. This study involves shopping mall visitors in Greater Jakarta with many confirmed cases and strict regulations to protect its citizens from the COVID-19. Furthermore, our respondents are mostly educated people who consciously perform NPI due to their knowledge of the harm of the COVID-19. They understand that they are still prone to get infected by the COVID-19 even though they already perform NPI as verified in previous health sector studies about reduced rates of influenza-like illness (Aiello et al., 2012) and influenza transmission among households (Cowling et al., 2009). As NPI alone cannot protect them from COVID-19, it is not strong enough to justify their intention to visit the mall during the pandemic.

MANAGERIAL IMPLICATIONS AND SUGGESTIONS FOR FUTURE STUDIES

Generally, this research contributes to developing the theory of reasoned action to understand consumer intention to visit shopping malls during the COVID-19 pandemic in Greater Jakarta. This study provides insights into the situation of a shopping mall visit intention, in which non-pharmaceutical intervention may reduce individuals' fear of visiting shopping malls during the pandemic. First, shopping malls should apply hygiene activities such as temperature checking when entering shopping malls and providing hand sanitizer that is easy to reach by customers and good air circulation for indoor areas. Second, shopping malls should apply strict protocols such as wearing masks, having maximum capacity control, social distancing, and others determined by the health ministry and the local government. Third, the shopping malls need to advertise more public services to ease the cognitive perceived risk. That is also because

affective perceived risk and non-pharmaceutical intervention did not show a high relationship towards shopping mall visit intention. Lastly, the government should encourage people to adopt non-pharmaceutical preventive actions to slow down the spread of infectious diseases in the pandemic without a vaccination. In addition, as consumers' behavior is more affected by cognitive perceived risk than the affective perceived risk, the government or health department should be more focused on making the public know about the information about the pandemic, not worrying about rumors or fears about the pandemic.

Besides contributions to the theory and practice, this research still has possibilities for future researchers due to its various limitations. First, this study focused on the Greater Jakarta area, which limits getting significant results. Future research should do the study nationwide or in other Southeast Asian countries. Second, most respondents were young between 20 - 39 years old. Future research should consider the demographic factors such as age group, gender, and equal age distribution between young and mature ages to gain a more in-depth insight into mall visit intentions in the future. Third, the condition caused by COVID-19 might change. For example, the government will stop or loosen the large-scale social restrictions, or when a vaccine is on the market, it will significantly affect these study results. Future researchers could follow up on these study results by applying them with a new situation after the COVID-19 pandemic or after the vaccine situation is resolved. It will get more updated information and insights into the industry.

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Appendix: Measurement items of the variables

Construct	Measurement items
Cognitive perceived risk	<p>It is dangerous to go outside because of COVID-19.</p> <p>I am more prone to catching COVID-19 than other people.</p> <p>COVID-19 is a scary disease.</p> <p>Compared to SARS and bird flu, COVID-19 is more dangerous.</p> <p>I have a lot of information about COVID-19.</p>
Affective perceived risk	<p>I am worried that I will contract COVID-19.</p> <p>I am worried about my family members contracting COVID-19.</p> <p>I am worried about COVID-19 occurring in my region.</p> <p>I am worried about COVID-19 emerging as a health issue.</p>
Attitude toward visiting shopping malls	<p>I think that visiting shopping malls is safe.</p> <p>I feel that visiting shopping malls is a positive thing.</p> <p>I find it fun to visit shopping malls.</p> <p>I find it useful to visit shopping malls.</p> <p>I feel that visiting shopping malls is valuable.</p>
Subjective norms	<p>Most people who are important to me think it is okay for me to visit shopping malls.</p> <p>Most people who are important to me support that I visit shopping malls.</p> <p>Most people who are important to me understand that I visit shopping malls.</p> <p>Most people who are important to me agree with me about visiting shopping malls.</p> <p>Most people who are important to me recommend visiting shopping malls.</p>
Non-pharmaceutical intervention	<p>I often clean my hands with water/sanitizer when I visit the shopping mall.</p> <p>I will wash my hands immediately after visiting the shopping mall.</p> <p>I try not to touch my eyes, nose, and mouth when visiting shopping malls.</p> <p>I will always wear a mask when I am at the shopping mall.</p> <p>I avoid people with COVID-19 symptoms while at the mall.</p> <p>I pay attention to my health condition after visiting the shopping mall.</p>
Mall visit intention	<p>I intend to visit shopping malls during the large-scale social restriction.</p> <p>I am planning to visit a shopping mall in the near future.</p> <p>My time spent in shopping malls during the large-scale social restriction will be the same as before COVID-19.</p> <p>I am willing to visit shopping malls during the large-scale social restriction.</p> <p>I will be more often to visit shopping malls during the large-scale social restriction.</p>

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