The Determinants of Perceived Behavior of Face Mask Usage: A Mediating Effect of Culture

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ABSTRACT

Purpose: This study examined the psychological determinants affecting perceived behavior in Malaysians when using face masks. An integrated model composed of the Theory of Planned Behavior (TPB) and Value-Belief Norm (VBN) was employed alongside cultural influence.

Design/methodology/approach: The quantitative survey method and convenience sampling collected data from the Malaysian public. By utilizing a questionnaire survey approach, 404 respondents completed an online survey. Structural equation modeling was used to analyse the data.

Findings: The results revealed that attitudes, environmental consciousness, and social norms contribute to the respondents' perceived behavior of face mask usage. The extended variable, which is culture, improves the relationship between attitudes, environmental consciousness, social norms, and perceived behavior.

Research, Practical & Social implications: Based on this study's findings, insightful consequences for environmental collaboration between environmental groups and society and suggestions for future research are presented.

Originality/value: The study is among the pioneer study that looks at macro and meso perspectives that examines the effect of culture as mediator that could affect the individual pro environmental behavior.

Keywords: attitude; environmental consciousness; social norms; culture; perceived behaviour

INTRODUCTION

The prevalent use of face masks during COVID-19 has resulted in the rise of non-biodegradable waste. According to Selvarajan et al. (2021), surgical waste such as face masks should have been considered further as they significantly contribute to the environment as hazardous or radioactive. Additionally, improper chemical waste management contributes to global warming as the carbon dioxide (CO_2) gas released causes a massive impact on the atmosphere.

The dramatic rise in the production of surgical face masks during the pandemic emerged due to the government imposing mandatory rules on wearing face masks during COVID-19 and hygienic aspects. On the other hand, an alternative to surgical face masks is reusable or washable face masks. This type of face mask was in high demand during the peak of COVID-19. Nevertheless, this face mask has gained low consumption, particularly in the current situation. Researchers in engineering and health suggest that a biodegradable face mask is one of the modern sustainable alternatives to reduce the usage of masks that contribute to plastic waste chemical and non-biodegradable components.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Theoretical Background

The theory of planned behaviour (TPB) posits that behavioral intention mediates the relationship between attitudes, subjective norms, and perceived behavioral control, ultimately influencing behavior (Ajzen, 1991; Jain et al., 2020; Lu et al., 2011). The efficiency of TPB has been demonstrated in diverse contexts such as health-related behaviors (Hamilton et al., 2020), tax evasion (Fadhilah, 2019), online shopping behavior (Sutisna & Handra, 2022), continuous learning (Liu et al., 2020), COVID-19 prevention (Yastica et al., 2020), sports spectator behavior (Lu et al., 2011), and community-based programs for promoting traffic behaviors and safe road crossing behaviors in youth (Mostafavi et al., 2021). The theory's broad framework, which includes attitudes, subjective norms, and perceived behavioral control, has made it an invaluable resource for scholars and professionals across a range of disciplines. It provides an understanding of the variables that affect people's behavior and aids in the development of effective interventions and strategies.

The Value-Belief-Norm (VBN) theory is a widely used approach in social psychology to examine the influence of values and attitudes on individual environmental behaviors. According to the theory, an individual's values shape their attitudes and beliefs about the environment, which, in turn, influence their behavioral intentions and, ultimately, their actions toward environmental conservation and sustainability. The theory proposes that individuals with strong environmental values are more likely to develop positive attitudes toward the environment and demonstrate a deep concern for its well-being. As a result, they are more likely to engage in pro-environmental behaviors such as recycling, conserving energy and water, reducing waste (Kuger et al., 2016), and supporting environmentally friendly policies.

Hypotheses Development

Attitude and Perceived Behavior of Face Mask Usage

The TPB theoretical framework can be used to analyze and forecast facemask usage behavior. The TPB postulates that behavioral intention mediates the relationship between these elements and behavior. In this context, behavioral intention is impacted by attitudes, subjective standards, and perceived behavioral control (Ajzen, 1991). Guo et al. (2023) further stressed that TPB examines how behavioral intentions are influenced by attitudes, subjective norms, and perceived behavioral control. Lao et al. (2021) demonstrated that self-efficacy and risk perception predicted behavioral intention in facemask usage during the COVID-

19 pandemic. Additionally, intention and facemask use were mediated by planning and action control. Furthermore, by utilizing TPB, Duan et al. (2021) identified motivating components, such as attitude, subjective norm, and perceived behavioral control. Based on the discussion above, the following hypothesis has been suggested.

H1: Attitude significantly influences the perceived behavior of face mask usage.

Environmental Consciousness and Perceived Behavior of Face Mask Usage

Environmental consciousness and perceived behavior of face mask usage are important topics, especially in public health and environmental sustainability. Face masks have become a critical preventive measure during the COVID-19 pandemic. Environmental consciousness, which encompasses individuals' awareness and concern for the environment, can significantly influence their behavior, including the consistent and appropriate use of face masks. According to Sim et al. (2014), environmental factors, such as perceived pressure from family members, doctors, and schools, can contribute to improving compliance with mask-wearing. Additionally, TPB emphasizes the role of perceived behavioral control, which is influenced by environmental factors, in shaping individuals' intentions and behaviors (Mostafavi et al., 2021; Oldmeadow, 2021; Yastica et al., 2020). Therefore, it is plausible to hypothesize that environmental consciousness significantly influences the perceived behavior of face mask usage, as individuals' concern for the environment may impact their attitudes, subjective norms, and perceived behavioral control, ultimately influencing their intentions and actions related to face mask usage. The following hypothesis has been posited based on the discussion above.

H2: Environmental consciousness significantly influences the perceived behavior of face mask usage.

Social Norms Toward and Perceived Behavior of Face Mask Usage

In the context of the COVID-19 pandemic, social norms are especially important in shaping how people interpret the use of face masks. The TPB emphasizes the influence of subjective norms, which reflect an individual's perception of the social pressure to engage in a particular behavior, on behavioral intentions and actions (Fauk et al., 2022; Liang et al., 2022; Villani et al., 2022). Venkatesh and Davis (2000) found that social influence processes, including subjective norms, significantly influenced user acceptance. Moreover, Villani et al. (2022) highlighted the internalization of social norms regarding wearing masks and maintaining social distancing imposed by the pandemic. This internalization has led to judging mask-wearers as more responsible and socially compliant.. Furthermore, Fauk et al. (2022) identified subjective norms, including negative social pressure and concerns of social rejection, as barriers to community adherence to COVID-19 prevention guidelines. Liang et al. (2022) examined the influence of social attitudes and subjective norms on the intention to purchase face masks. The study discovered that social attitudes and subjective norms significantly influenced the intention to purchase face masks. Moreover, social norms have been shown to affect individuals' risk perception and preventive behaviors during the pandemic (Duong et al., 2021). The asymmetrical normative effect of perceived injunctive norms positively predicted intentions to wear face masks (Cheng et al., 2021). Additionally, the internalized social norm of wearing a mask suppresses automatic mistrust caused by not seeing the whole face (Oldmeadow, 2021). Therefore, the following hypothesis has been suggested.

H3: Social norms significantly influence the perceived behavior of face mask usage.

The Mediation Role of Culture

The role of culture in face mask usage during the COVID-19 pandemic has been a subject of significant interest and study. The uptake of face masks has been found to vary across different cultural contexts,

reflecting the influence of cultural norms and practices on individuals' behaviors. For example, Barceló and Sheen (2020) highlighted that in nations where face masks are not ingrained in the culture, face mask use is still far from universal. This finding suggests that cultural norms and historical practices are pivotal in shaping individuals' attitudes and behaviors related to face mask usage. Furthermore, Siu's (2016) study emphasized the changing social connotations of face masks in Hong Kong following the severe acute respiratory syndrome (SARS) outbreak, highlighting the masks' evolving cultural relevance and implications for infection management in the post-SARS era. This finding underscores the dynamic nature of cultural norms and their impact on public health behaviors. cultural and regional factors in understanding and promoting face mask usage. Phau et al. (2022) also shed light on the desirability of "upcycled" luxury face masks, highlighting the intersection of culture, fashion, and public health behaviors. This finding underscores the multifaceted nature of cultural influences on face mask usage, encompassing elements of desirability, fashion, and consumer behavior. Thus, this study developed the following hypotheses:

H4: Culture mediates the influence of (a) attitude, (b) environmental consciousness, and (c) social norms, toward the perceived behavior of face mask usage.

Figure 1 exhibits the study's conceptual model, which was formed based on the research hypotheses.

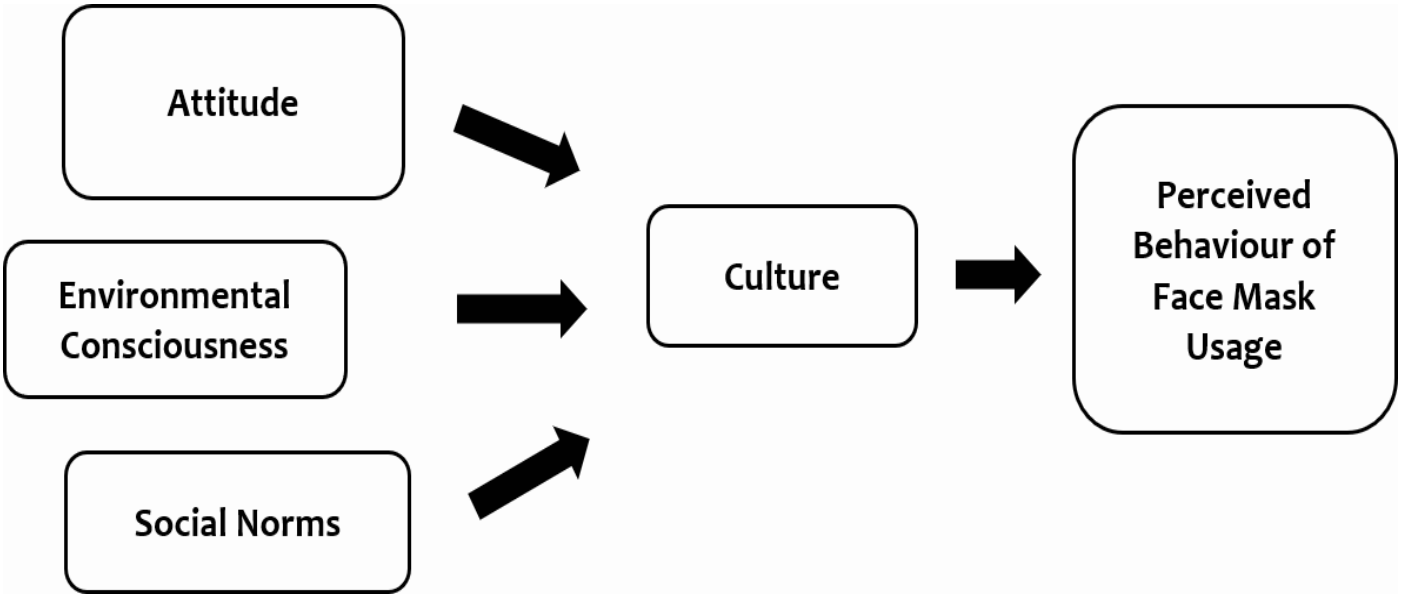

Figure 1. Conceptual model (Source: Authors' illustration)

METHODS

This study utilized a cross-sectional survey design by applying a quantitative approach. The study's population is the Malaysian public from all states in Malaysia. Based on the Monte Carlo study, the minimum sample size required to reduce bias in all structural equation modeling estimates is 200 (Loehlin, 1998). Thus, the study used a combination of cluster random and convenience sampling techniques, resulting in a sample size of 500 members of the Malaysian public. Research data was collected using a modified questionnaire with items adapted from previous studies such as Irfan et al. (2021), Ates (2020), and Al Naam et al. (2021) (refer to Table 1). A Likert scale from 1 (strongly disagree) to 5 (strongly agree) was utilized to measure each item in the questionnaire. In addition, Cronbach's alpha value was determined for all variables. Cronbach's alpha is explained as excellent when the value is more than 0.9, followed by good ($0.8 \leq \alpha < 0.9$), acceptable ($0.7 \leq \alpha < 0.8$), questionable ($0.6 \leq \alpha < 0.7$), poor ($0.5 \leq \alpha < 0.6$), and unacceptable ($\alpha < 0.5$) (Montshiwa & Moroke, 2014). The reliability requirement for the variables was good and acceptable, and their respective values are depicted in Table 1.

Table 1. Measurement of the Variable

Variable	Cronbach's Alpha
Perceived Behavior of Face Mask Usage	0.803
Attitude	0.934
Environmental Consciousness	0.713
Social Norms	0.917
Culture	0.904

Source: Authors' work

The data analysis technique used in this research was structural equation modeling (SEM). The goodness-of-fit test is used for path analysis, which uses the following measurements (Hair et al., 2017):

- Goodness-of-Fit Index (GFI) (≥ 0.90)
- Tucker-Lewis Index (TLI) (≥ 0.90)
- Comparative Fit Index (CFI) (≥ 0.90)
- Normed Fit Index (NFI) (≥ 0.90)
- Root Mean Square Error of Approximation (RMSEA) (< 0.08)
- Chi-Square/degree of freedom ratio ($\chi 2$/df) (< 5.0)

This study further assessed convergent and discriminant validity. Convergent validity indicates whether a test designed to assess a particular construct correlates with other tests that assess the same construct. According to Hair et al. (2017), convergent validity is established when composite reliability (CR) and average variance extracted (AVE) are more than 0.70 and 0.50, respectively.

Subsequently, the Fornell-Larcker (1981) criterion and cross-loading examination were referred to in determining the discriminant validity. Discriminant validity is established when the square root of AVE is greater than the correlation. The correlation value between the constructs is more than 0.50 and below 0.85 (Fornell & Larcker, 1981). Subsequently, structural model analysis was used to test the mediation effect in the final step.

RESULTS

Demographic Profile

Although data was collected from 500 participants, the final valid responses were only 404. As shown in Table 2, 287 females (71.0%) and 117 males (29.0%) participated in the survey. Regarding age group, most respondents were 21-30 years old (n = 132, 32.7%). Most participants were married (n = 222, 55.0%), followed by not married (n = 169, 41.8%), divorced (n = 8, 2.0%), and widowed (n = 5, 1.2%). In terms of education level, most of the participants (42.8%) possessed a bachelor's degree qualification (n = 173).

Table 2. Demographic Profile

Profile		Frequency (n)	Percentage (%)
Gender	Male	117	29.0
	Female	287	71.0
Age	18-20	19	4.7

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	21-30	132	32.7
	31-40	95	23.5
	41-50	113	28.0
	51-60	36	8.9
	61 and above	9	2.2
Status	Not married	169	41.8
	Married	222	55.0
	Widowed	5	1.2
	Divorced	8	2.0
Highest Academic Qualifications	Secondary level	44	10.9
	Diploma level	57	14.1
	Bachelor's degree level	173	42.8
	Master's degree level	79	19.6
	PhD or DBA level	45	11.1
	Others	6	1.5

Source: Authors' work

Measurement Model

The confirmatory factor analysis (CFA) outcome revealed that the model met the recommended fit requirements (Chisq/df = 2.100, CFI = 0.93, GFI = 0.95, TLI = 0.96, RMSEA = 0.014). Convergent validity is tested based on the average variance extracted (AVE) and composite reliability (CR). The values of AVE must be greater than 0.50, and the value of CR must be greater than 0.70 (Fornell & Larcker, 1981). The results indicate that all the values meet the requirements (Refer to Table 3).

Table 3. Measurement of Variables

Variable	**Items**	**Item Loadings**	**AVE**	**CR**
Perceived Behavior of Face Mask Usage	PB1	0.719	0.819	0.770
	PB2	0.767		
	PB3	0.825		
	PB4	0.803		
	PB5	0.819		
	PB6	0.700		
	PB7	0.809		
	PB8	0.821		
	PB9	0.711		
	PB10	0.700		
	PB11	0.800		
Attitude	A1	0.820	0.822	0.785
	A2	0.813		
	A3	0.802		
	A4	0.810		
	A5	0.805		

	A6	0.706		
	A7	0.708		
	A8	0.734		
Environmental Consciousness	EC1	0.734	0.840	0.745
	EC2	0.705		
	EC3	0.727		
	EC4	0.706		
	EC5	0.712		
	EC6	0.738		
	EC7	0.735		
	EC8	0.740		
	EC9	0.750		
	EC10	0.752		
Social Norms	SN1	0.699	0.816	0.789
	SN2	0.687		
	SN3	0.702		
	SN4	0.718		
	SN5	0.733		
	SN6	0.746		
Culture	C1	0.601	0.836	0.800
	C2	0.655		
	C3	0.692		
	C4	0.637		
	C5	0.699		
	C6	0.684		
	C7	0.603		
	C8	0.679		
	C9	0.726		
	C10	0.700		

Source: Authors' work

The Fornell-Larcker (1981) criterion and cross-loading examination were referred to in determining the discriminant validity. Discriminant validity is established when the square root of AVE is greater than the correlation. The correlation value between the constructs must be more than 0.50 and below 0.85 (Fornell & Larcker, 1981). The discriminant validity assessment ensures that the constructs have the most robust relationships with their indicators (Hair et al., 2017). As demonstrated in Table 4, this study has met the prescribed criteria. Thus, the variables are unrelated to each other.

Table 4. Discrimination Validity Assessment

No.		**1**	**2**	**3**	**4**	**5**
1	Perceived Behavior of Face Mask Usage	**0.905**				
2	Attitude	0.647	**0.907**			
3	Environmental Consciousness	0.576	0.714	**0.917**		

4	Social Norms	0.693	0.653	0.700	**0.903**	
5	Culture	0.585	0.611	0.689	0.756	**0.914**

Note: Values in the diagonal show the square root of AVE

Source: Authors' work

Structural Model

Table 5. Direct, Indirect, and Total Effects in the Structural Model

Standardized Direct Effects			**Std. Estimate *β***
Perceived Behavior of Face Mask Usage	⟸	Attitude	0.339***
Perceived Behavior of Face Mask Usage	⟸	Environmental Consciousness	0.276***
Perceived Behavior of Face Mask Usage	⟸	Social Norms	0.311***
Perceived Behavior of Face Mask Usage	⟸	Culture	0.329***
Culture	⟸	Attitude	0.348***
Culture	⟸	Environmental Consciousness	0.271***
Culture	⟸	Social Norms	0.390***
Standardized Indirect Effects (Mediation Effect)			
Perceived Behavior of Face Mask Usage	⟸	Attitude	0.114***
Perceived Behavior of Face Mask Usage	⟸	Environmental Consciousness	0.089***
Perceived Behavior of Face Mask Usage	⟸	Social Norms	0.128***
Standardized Total Effects (Direct Effect + Indirect Effect)			
Perceived Behavior of Face Mask Usage	⟸	Attitude	0.453***
Perceived Behavior of Face Mask Usage	⟸	Environmental Consciousness	0.365***
Perceived Behavior of Face Mask Usage	⟸	Social Norms	0.439***

Source: Authors' work

As shown in Table 5, it was discovered that attitude ($\beta = 0.339$, $p < 0.001$), environmental consciousness ($\beta = 0.276$, $p < 0.001$), and social norms ($\beta = 0.311$, $p < 0.001$) have a significant influence on perceived behavior of face mask usage. Thus, H1, H2, and H3 were accepted. Thus, perceived behavior of face mask usage increases per unit and is associated with attitude, environmental consciousness, and social norms when other predictors are constant. Proper face masks disposal is closely related to a person's attitude towards the environment. Attitude strongly influence pro-environmental behavior and it is important to assess attitudes in the behavioral research (Duon et al., 2021). Environmental attitude plays an importantrole in influencing and motivating human behavior towards the environment (Guo et al., 2023). The psychological factor that could influencing individual attitudes are personal values, knowledge, close friends, family and social groups. In addition, proper face masks disposal also can be maintained through civic awareness and environmental consciousness. Through awareness, the community will be made aware to keep the environment clean (Mostafavi et al., 2021). Environmental consciousness can be promoted through awareness campaign to make people aware of the importance of protecting the environment through proper face masks disposal (Yastica et al., 2020). Finally, a person environmentally acts by fulfillingnormative expectations and past experiences. For instance, if a person sees others doing face masks recycling activities, they will be more likely to engage in the behavior as well (Fauk et al., 2022).

The results also confirmed that culture significantly influences the perceived behavior of face mask usage (β

= 0.329, $p < 0.001$). This result proved that effectiveness of the face masks disposal and recycling process is occurs due partly to the attitude of the Malaysian public. In Malaysia, the culture is favors on the community more than the individual. Therefore, the Malaysian attitude is more inclined to maintain the harmony in community life and help each other so that they can live in a better atmosphere. Therefore, for the Malaysian, it is important to take care of the environment because it is a common right in society. Subsequently, the findings also confirmed that attitude ($\beta = 0.348$, $p < 0.001$), environmental consciousness ($\beta = 0.271$, $p < 0.001$), and social norms ($\beta = 0.390$, $p < 0.001$) have a significant influence on culture.

The mediation effect was also tested. As shown in Table 5, the results confirm that the relationship between attitude ($\beta = 0.114$, $p < 0.001$), environmental consciousness ($\beta = 0.089$, $p < 0.001$), social norms ($\beta = 0.128$, $p < 0.001$), and perceived behavior of face mask usage are partially mediated by culture. Hence, H4a, H4b, and H4c were accepted. The total effects were also calculated for mediating paths, adding indirect and direct effects (Hayes & Preacher, 2013). These results have proved that in order to lend the influence of attitude, environmental consciousness, and social norms on perceived behavior of face masks usage, the culture must exist to acts as a catalyst for the enablers. The recycling process in Malaysian society is not only done by the responsible body, but it is needs to done by all levels of society. In order to maintain the environmental sustainability, we must consider it as a shared responsibility for all Malaysians to protect the environment from any pollutions. Figure 2 summarizes the final model of the research.

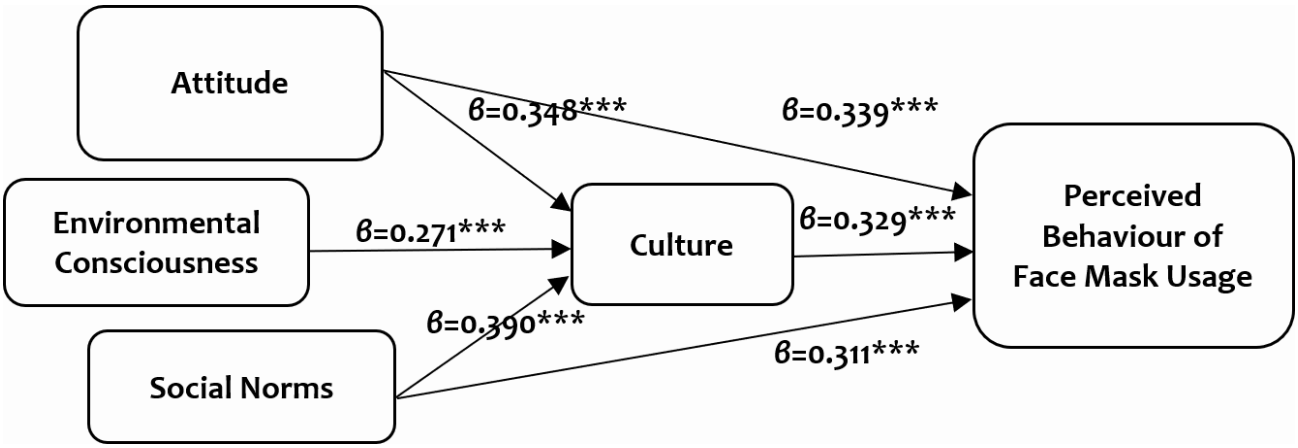

Figure 2. Final Model

DISCUSSION

Based on the results shown in Table 5, H1, H2, and H3 are accepted. The independent variables, namely attitude, environmental consciousness, and social norms, significantly contribute to the respondents' perceived behavior of using face masks as the dependent variable. Generally, respondents with a positive attitude toward wearing face masks, awareness of waste generation and management, ability to choose the type of masks used, and adherence to social norms are likely to understand the broader impacts of wearing face masks as effective precautionary measures for well-being, health, and curbing contagious diseases.

The results also showed that culture has a significant influence on perceived behavior of face mask usage, as shown in Table 5. The results confirmed that the relationship between attitude, environmental consciousness, social norms, and perceived behavior of face mask usage is partially mediated by culture. Hence, H4a, H4b, and H4c are accepted. Culture as the mediating factor helps explain how the independent variables affect the respondents' perceived behavior of face mask usage.

The questions related to "culture" revolved around the respondents' beliefs and values influenced by their cultural upbringing. Although the extensive use of face masks is relatively new in Malaysia, the general

collectivistic Asian cultural upbringing could have likely influenced the high adherence to social standards. In this research, questions related to civic capital were questioned as part of the culture. The result concurs with the research findings by Durante et al. (2020) on civic capital, social distancing, and disease control in Italy. According to the study, reactions to the social distancing measures implemented by the government were greater in communities with high levels of civic capital as more civic-minded people adhered more to the health rules.

The relationship between attitude, environmental consciousness, social norms, and perceived behavior of face mask usage has several research implications. Firstly, understanding the relationship between attitudes, environmental consciousness, social norms, and face mask usage could assist health authorities in designing more efficient public health policies and interventions. Prioritizing the environmental benefits of face mask usage or utilizing social customs to promote compliance could steer to higher adherence to mask requirements during public health emergencies. Secondly, regarding behavioral change strategies, this finding suggests that interventions to increase face mask usage should emphasize changing attitudes toward mask-wearing. Emphasizing the societal responsibility of wearing masks could influence and promote effective behavior rather than simply accentuating health benefits. Thirdly, in terms of incorporating behavioral insights for future crises, this finding suggests the importance of considering psychological and social aspects when addressing public health emergencies. This finding indicates that future crisis management strategies should include attitudes, environmental concerns, and social norms.

The influence of culture on the perceived behavior of face mask usage has several practical implications. Firstly, regarding customized public health communication, acknowledging cultural influences on mask-wearing behavior is crucial for planning culturally sensitive public health initiatives. Approaches must consider cultural customs, values, beliefs, and procedures to efficiently convey the importance of mask usage. Secondly, in terms of adherence to public health mandates, recognizing the influence of culture assists the higher authorities in anticipating and addressing potential opposition related to mask-wearing requirements. Subsequently, collective responsibility could be promoted. Thirdly, mutual cultural understanding, which fosters trust between authorities and communities, could be enhanced. Engaging community leaders from diverse cultural backgrounds could assist in disseminating accurate information and promoting mask-wearing as a cultural norm within specific groups. The relationship between attitude, environmental consciousness, social norms, and perceived behavior of face mask usage, which is partially mediated by environmental value, has several implications. Smart partnerships with environmental groups or initiatives focusing on sustainability could improve communication regarding the benefits of wearing face masks, influencing social norms within communities.

Society could adjust their actions to associate with social interaction and communicative customs in public. As a result of considering the advantages and disadvantages of face masks, people could ascertain that the benefits of wearing masks would be mutual as a mask could shield the individual wearing it. Hence this could be considered as a cultural norm if obeyed by everyone, benefits the whole people obviously (Esmaeilzadeh, 2022).

National cultures form society's actions (Triands, 1989; Hofstede, 2001) and have been proven to influence society's happiness during the pandemic. As cited by Nair et. al. (2022), culture is influencing people to comply fully with prevailing social norms. Culture has been extensively researched and one the most prominent framework is Hofstede's cultural diversity model (Nair et. al., 2022). Hofstede theorized cultural diversity developing from differences in values classified beside specific dimensions (Hofstede, 1988). The earliest four dimensions of diversity within cultures were acknowledged as individualism versus collectivism, power distance, uncertainty avoidance, and masculinity versus femininity (Hofstede, 1988). This paper uses the Individualism versus collectivism dimension to explain how cultures mediate the relationship between predictor variables and the face mask wearing during the pandemic in Malaysia.

Individualism versus collectivism apprehends the separation of independence versus interdependence, or devotion to oneself compared to that with regard to the group (Triands, 1995), signifies to which extent people associate loosely or strongly with united social groups (Triands, 1995). In regards to past studies, American has been regarded highly as the individualistic i.e. did not fully comply with the requirement to wear face mask (for example, Hahn & Bhaduri, 2021). According to MIT Sloan Assistant Professor Jackson Lu, people in these cultures might be more inclined to say that they are free to choose not to wear a mask, or in the case of some anti-mask protesters: "If I'm going to get COVID and die from it, then so be it." (Somers, 2021). Lu also added '"To curb the pandemic, it is critical that people prioritize the collective welfare over personal convenience." (Somers, 2021).

India, China (Hahn & Bhaduri, 2021), South Korea and Singapore (Nair et al., 2022) are regarded as collectivism countries in encouraging the use of face mask during the pandemic. There seems to be higher altruism and various useful regulation execution in a collectivistic dynamic, consequently resulting the successful implementation of COVID-19 policies such as mask wearing easier and homogeneously adopted across a society (Nair et. al., 2022). In line with other countries in the Asia region, Malaysia is also regarded as the collectivism country. According to Lu in his study "In collectivistic cultures, people consider wearing masks not only a responsibility or duty, but also, a symbol of solidarity — that we're standing together and fighting this pandemic together," (Dizikes, 2021). Being a multiracial country rich in culture and tradition, Malaysia is unique in many ways. One of the uniqueness is the festive celebrations such as Hari Raya, Chinese New Year, Deepavali, Christmas, and others. During the festive seasons, there are a lots of family gatherings. During the festivity, the Ministry of Health keeps reminding the people to wear face mask to prevent the widespread of pandemic (Health Pulse, 2024). This kind reminder definitely promotes the cultural behavior to wear face mask among the people in Malaysia. Alan Chong, Associate Professor at the S. Rajaratnam School of International Studies gave a statement on the Asean people "People here are still collectivist in orientation of thought, meaning even if a certain government is despised, they will still listen to instructions especially if they are reasonable,". He also added 'Ethnic Malay cultures in Malaysia and Indonesia promote banding together against common threats' (Jennings, 2020).

CONCLUSION

This paper aims to determine the mediating effect of culture on the relationship between attitude, environmental consciousness, social norms, and perceived behavior of face mask usage. The implications are provided for 1) the relationship between attitude, environmental consciousness, social norms, and perceived behavior of face mask usage; 2) the influence of culture on the perceived behavior of face mask usage; 3) the influence of culture on attitude, environmental consciousness, and social norms, and 4) the relationship between attitude, environmental consciousness, social norms, and perceived behavior of face mask usage mediated by culture. Additionally, the scope of this study does not cover the sociodemographic of the respondents which specifically define a certain respondent's demographic. According to Davidson and Freudenburg (1996), gender differences in pro-environmental behaviour are not universal because of socialisation patterns.

This paper is not without any limitations. Firstly, the findings may not be universally applicable across different cultural settings. Cultural differences in the perception of environmental values, as well as the influence of attitudes, consciousness, and social norms, might limit the generalizability of the study's findings. Secondly, the study may not reflect exact contextual factors that could influence the relationship between variables. Other social factors not considered in the study's design might affect the understanding of the findings. Thirdly, the study might potentially overlook other possible mediators or moderators that could affect the relationship between attitudes, environmental consciousness, social norms, and perceived behavior of face mask usage. Fourth, this study cannot generalized in terms of demographic factor due to the main aim of this study to examine culture as the mediating effect between the predicting variables. These

limitations offer several opportunities for future research. Future research could conduct cross-cultural studies to explore how the relationships between demographic, attitudes, environmental consciousness, social norms, environmental values, and behavior differ within diverse cultural settings. Subsequently, future research may consider contextual factors that might influence the relationships under study by analyzing how regional or social contexts affect the relationship between attitudes, environmental consciousness, social norms, environmental values, and behavior. Lastly, future research could employ qualitative research methods, such as interviews or focus groups, to obtain an in-depth understanding of respondents' views and cultural shades related to attitudes, environmental consciousness, social norms, environmental values, and behavior.

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