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## MILLENNIAL WILLINGNESS TO WEAR A FACE MASK (WTW) AFTER THE COVID-19 VACCINATION

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### Abstract:

The COVID-19 pandemic has had a profound effect on communities worldwide, with governments imposing restrictions on movement, global vaccination, quarantine, social distance measures, stay-at-home policies, and other preventative measures such as mandatory use of face masks. Despite widespread agreement that symptomatic individuals and those working in healthcare settings should continue to use the face mask following COVID-19 vaccination, discrepancies were observed in the public and societies raising awareness among Malaysian millennials. Global efforts to develop a vaccine have been accelerated to alleviate the growing burden of COVID-19. Thus, vaccination significantly decreased adverse outcomes such as non-ICU hospitalisation, as well as ICU hospitalisation and death, in several countries. Similarly, during the COVID-19 pandemic, the use of face masks by the Malaysian population, particularly the millennial generation, became widespread. However, few studies have been conducted on the millennials' willingness to continue using face masks following their COVID-19 vaccination programme in Malaysia. The purpose of this study is to gain insight into the factors that influence millennials' willingness to wear face masks following their COVID-19 vaccination programme in Malaysia. The application of the Theory of Planned Behaviour (TPB) as the guiding principle relationship enables an understanding of the millennials' continued intention to use a face mask following the COVID-19 vaccination. The hypotheses were tested using a partial Least Squares-Structural Equation Modeling (PLS-SEM) approach. The study's significance is that it advances the theoretical methodology and has practical implications for the public, scholars and practitioners, marketers, healthcare, and government in terms of prioritising willingness to continue using face masks following COVID-19 vaccination among Malaysian millennials.

**Keywords:**

COVID-19, Millennials, WTW, Vaccination, Face Mask, Willingness

**Introduction**

The COVID-19 pandemic has had a huge impact across societies, with governments worldwide imposing restrictions on movement, global vaccination, quarantine, social distance measures, stay-at-home and other measures such as mandatory use of face masks to prevent the spread of the virus. Despite widespread agreement that symptomatic individuals and those working in healthcare settings should continue to use the face mask following COVID-19 vaccination, discrepancies were observed in the general public and societies raising awareness among Malaysian millennials. Global efforts to develop a vaccine have been accelerated to alleviate the growing burden of COVID-19. Thus, vaccination significantly decreased adverse outcomes such as non-ICU hospitalisation, as well as ICU hospitalisation and death, in several countries. Similarly, during the COVID-19 pandemic, the use of face masks by the Malaysian population, particularly the millennial generation, became widespread (Irfan, Akhtar, Ahmad, Shahzad, Elavarasan, Wu, Yang (2021). However, few studies have been conducted on the millennials' intention to continue using face masks following their COVID-19 vaccination programme in Malaysia. The COVID-19 pandemic named by World Health Organization has become a significant public health issue and seriously impacted 216 nations in total since the year 2020. The novel coronavirus (COVID-19) emerged in December 2019 from Wuhan City, Hubei Province, China and spread to the rest of the world. The number of COVID-10 positive cases reported to date (17<sup>th</sup> April 2020) a total of 2,230,439 cases of COVID-19; 150,810 cases of death and 564,210 recovered reported by World Organization Organization (Elengoe, 2020). Nevertheless, the Malaysian government reported the first three confirmed COVID-19 cases started on January 25 to February 15, 2020, detected from the imported case of Chinese nationality travelled into Johor Bahru, Malaysia. As reported by the Ministry of Malaysia (MOH), there were 5,251 COVID-19 cases, 86 deaths and 2,967 cases of recovery as of 17<sup>th</sup> April 2020 (Elengoe, 2020). The ongoing progression of the COVID-19 outbreak followed by the first to the third wave (Med J, 2021) and until the present has become a threat to the healthcare system in the Malaysia Ministry of Health (MOH) government (Rampal, Liew (2021).

Coronavirus impacts the everyday schedules of millennials worldwide, especially Malaysian millennials. The millennials generation is the most active and fast-growing population group who were between 18 to 38 years old (Molinillo, Vidal-Branco & Japutra, 2020; Dimock 2018; Knowles 2017). The objective of this study is to examine the willingness to use face masks after vaccination among millennials in Malaysia. Furthermore, the millennial generation was born in the emerging world and their population are growing up to 75% of the global workforce by the year 2025. They possess strong characteristics such as demanding, impatient and having a short attention span (Hoxha & Zeqirai, 2019; Francis & Hoefel, 2018; Majid, Said & Daud, 2017; Noor, 2016; Suh & Hargis, 2016; Black, 2010). As such, the millennial generation in this country has a different mindset of open-minded individuals, who uphold freedom, critical, brave, lifestyle choices, purchasing behaviours, intention behaviours, preferences and goals (Hoxha, & Zeqiraj, 2019; Wijayaningtyas, 2017; Junker, Walcher & Blazek, 2016). To understand millennials' intention behaviour of using the face masks after their vaccination, this study employs the theory of Theory Planned Behavior (TPB) from Ajzen (1985).

This study expanded the behavioural framework of the theory of planned behaviour (TPB) Ajzen (1985) by integrating three novel dimensions to deepen the critical analysis of the COVID-10 pandemic. By identifying the determinants factors and how they shape the millennial's intention, this research can help government institutions and policymakers implement statutory regulations for the prevention of pandemics. This current study conceptualizes that factors constitute behavioural willingness to wear a face mask (WTW). These include i) attitude toward behaviour (ATT), ii) subjective norm (SN), iii) cost of face mask (COST), iv) risk perception (RP), v) perceived benefits of face mask (PBFM), vi) unavailability of face mask (UFM) and vii) social media (SocMed).

This proposed study focuses on examining the millennial willingness to use a face mask after the COVID 19 vaccination by considering the following two research questions:

- (i) To what extent are the determinants factors affected millennials' willingness to use the face mask after the COVID-19 vaccination?
- (ii) How do these determinants factors shape the millennials' willingness to use the face mask after the COVID-19 vaccination?

The research objectives proposed to accommodate the research questions are as follows:

- (i) To examine the determinants of millennials' willingness to use the face mask after the COVID-19 vaccination.
- ii) To examine how these determinants factors shape the millennial's willingness to use the face mask after the COVID-19 vaccination.

## Literature Review

### *Theory of Planned Behavior (TPB)*

The theory of planned behaviour is an extension of the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) dealing with the behaviours over which people have incomplete volitional control (Ajzen, 1991). The TPB is applied in various research areas of information technology, tourism, marketing, online shopping, online banking, education, stock trading, etc. However, little research has been done in assessing the willingness (WTW) face mask following the vaccination program among the millennials and has been conducted mostly in the western part of the countries. Overall, the TPB explains that when a person perceives activities as enjoyable and providing good benefits, the person receives support and encouragement from others who are already engaged in that behaviour. In addition, the person makes assumptions concerning his or her own ability to accomplish the task. Then, there is a stronger willingness to perform that task, which leads to the actual execution of that specific task (Ajzen & Fishbein, 1980).

### *Attitude Toward Behavior (ATT)*

Attitude reflects how people think and believe, which relates to expectations of behaviour. In the healthcare context, ATT is an important element of TPB that is explained as a person's positive or negative assessment of a specific behaviour (Jabeen, Yan, Ahmad, Fatima & Qamar, 2019). This research devises the first hypothesis as follows:

***Hypothesis 1. Attitude positively influences public willingness to wear face masks.******Subjective Norm (SN)***

Subjective norm relates to the support provided or not provided by an individual's family, friends or significant other who significantly influences that individual's behaviour (Irfan, Akhtar, Ahmad, Shahzad, Elavarasan, Wu & Yang, 2021; MacIntyre, Cauchemez, Dwyer, Seale, Cheung, Browne, Fasher, Wood & Gao, Booy, 2009). One major reason is possible that the millennial generation is well integrated, and inputs from family and friends have a strong lasting impact on people's minds. This research devises the second hypothesis as follows:

***Hypothesis 2. Social norms positively influence public willingness to wear face masks.******Cost Of Face Mask (Cost)***

The cost of the mask is a vital factor concerning the economic deficit related to the buying process and confirmed the negative association between the cost of the mask (COST) and the individual willingness to wear a face mask (Ahmad, Akhtar, Jabeen, Irfan, Khalid Anser, Wu & Işık, 2021). This research devises the third hypothesis as follows:

***Hypothesis 3. The cost of face masks negatively influences public willingness to wear face masks.******Risk Perception (RP)***

Risk perceptions (RP) positively contribute to shaping individual WTW face masks. Public WTW face masks increase when individuals perceive their susceptibility to the pandemic and its severity (Irfan, Akhtar, Ahmad, Shahzad, Elavarasan, Wu & Yang, 2021). This research devises the fourth hypothesis as follows:

***Hypothesis 4. Risk perceptions of the pandemic positively influence public willingness to wear face masks.******Perceived Benefits of face Mask (PBFM)***

Desai and Aronoff (2019) found that the purchasing decisions of individuals begin with the optimistic belief in the effects of a specific product that they intend to purchase. This research devises the fifth hypothesis as follows:

***Hypothesis 5. The perceived benefits of face masks positively influence public willingness to wear face masks.******Unavailability of Face Mask (UFM)***

The unavailability of face masks (UFM) is defined as an individual is not capable of obtaining a specific behaviour, and the corresponding intention will not occur (Wu, Liao, Wang & Chen, 2019). This research devises the sixth hypothesis as follows:

***Hypothesis 6. The unavailability of face masks negatively influences public willingness to wear face masks.***

#### ***Social Media (SocMed)***

Assessing the social media related to the COVID-19 pandemic among the general public would be helpful to provide better insight to address the disease and the developing of preventive strategies and health promotional activities (Wright 2021; Azlan, Hamzah, Sern, Ayub & Mohamad, 2020). This research devises the seventh hypothesis as follows:

***Hypothesis 7. Social media face masks positively influence public willingness to wear face masks.***

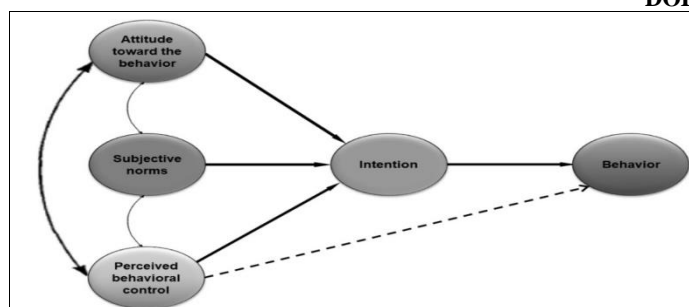
#### **Methodology**

The samples will be selected among millennials in Malaysia in the age bracket of 18 to 38 years old which we intend to approach using non-probability purposive sampling. The sample size was estimated using G\*power 3.0 software, with the effect size of the f square 0.15,  $\alpha$  error pro-0.05, and power Gf 0.95 with four tested predictors. Consequently, the minimum sampling necessary for this study was 129 respondents. Therefore 500 online surveys will be emailed to the respondents as a precaution measure during the COVID-19 pandemic. The capability of online consumers to respond fast and minimise costs has encouraged researchers to use online surveys to conduct research topics of interest (Wright, 2015). Using a five-point Likert scale from 1= disagree to 5 = agree. Firstly, the data screening and cleaning will be prepared using Statistical Package for Social Sciences (SPSS) Version 23. We will perform descriptive analysis to understand the respondents' demographic. Subsequently, reliability analysis and confirmatory factor analysis tests were conducted to test each variable's reliability and validity. Partial Least Squares-Structural Equation Modelling (PLS-SEM) approach will be employed to analyse the hypotheses (Chin et al., 2003; Chin, 1998; Ringle, 2015).

#### **Theoretical Framework**

In 1975, Fishbein and Ajzen invented TRA (Martin & Ajzen, 1975). However, TRA placed a greater emphasis on voluntary actions motivated by subjective norms and personal attitudes. While the action is not always voluntary, it is still monitored. To address this issue, Ajzen proposed TPB (Ajzen, 1985). The TPB stipulates that people's behaviour is determined by their behavioural intentions (Irfan, Zhao, Li, & Rehman, 2020). When individuals weigh the consequences of their actions, they engage in behaviour that results in the desired outcome. Unlike contextual studies, this research focuses exclusively on millennials' WTW face masks. TPB has been widely used in the healthcare domain to describe and forecast the behaviour of millennials when it comes to their WTW face masks (Ahmad, Iram, & Jabeen, 2020). They believe that TPB conducts a more thorough examination of public behaviour than other theories. As a result, TPB is used to develop the research framework for this study, following the prior literature (Jabeen, Ahmad, & Zhang, 2021). The original TPB model is described in detail in Figure 1.

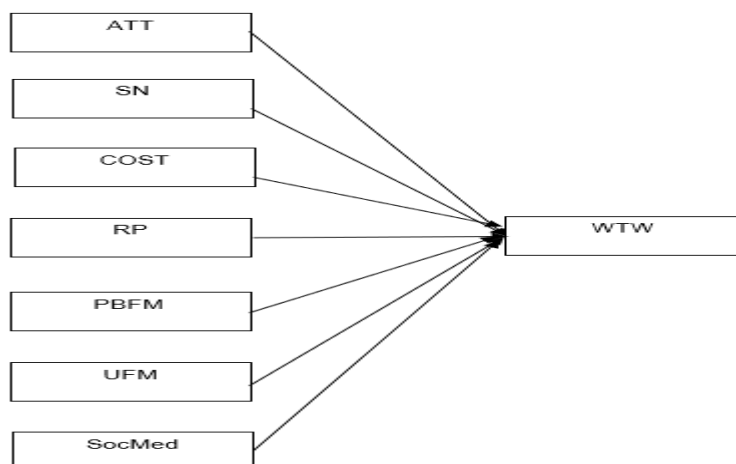




**Figure 1. Description Of the Original TPB Model Ajzen (1991).**

Three factors contribute to the formation of behavioural intention. These include i) attitudes towards behaviour, (ii) subjective norms, and (iii) perceived behavioural control. The general favourable or unfavourable feelings a person has toward a particular behaviour are referred to as their attitude toward the behaviour (Ajzen, 1980). Individuals' attitudes are shaped by their strong convictions and the outcomes associated with a particular behaviour (Yan et al., 2021), whereas the aggregate of prominent individuals' and groups' beliefs about a product constitutes subjective norms, and they believe that an individual should follow this behaviour (Bang et al., 2000). Shakeel and Rahman (2018) define perceived behavioural control as individuals' perceptions of how easy or difficult it is to perform the desired behaviour based on their perceived enablers or impediments to behaviour (see Figure 1). TPB has sparked a significant amount of empirical research on health behaviour. Numerous researchers have hypothesised that a variety of factors influence the social, economic, and political acceptance of a particular product or service (Wüstenhagen et al., 2007, Olshavsky & Granbois, 1980). Additionally, people are concerned about the perceived risk of the pandemic, the perceived benefits of face masks, the unavailability of face masks, and social media. As a result, we improved TPB's structural framework by incorporating five novel dimensions. By including these dimensions, this framework enables a thorough examination of public WTW to face masks (Figure 2).

The use of social media platforms to gather information related to COVID-19 is expanding during the pandemic. Undeniable, social media provided an effective platform to disseminate information, however, past studies were concerned with the potential of misinformation provided and its influences on the general public (Goel & Gupta, 2020). There is a need to understand the influences of social media on the intention to take precautions actions after vaccination.



**Figure 2. Research Framework Presenting the Influencing Factors of Public WTW Face Masks. Notes: ATT: Attitude, SN: Social norms, COST: Cost of face masks, RP: Risk Perceptions of The Pandemic, PB: Perceived Benefits of Face Masks, UFM: Unavailability of Face Masks, Socmed: Social Media, WTW: Willingness to Wear Face Masks**

## Conclusion

This conceptual study can provide new insights of the theoretical methodology and practical implication for both scholars and practitioners. These findings will reveal interesting policy implications in terms of behavioural drivers that should be employed to steer millennials' support toward the awareness and concern, consequently wearing the face mask after the vaccination. The fact remains that, since individuals accept their responsibility toward the public health concern remain scarce. This study focuses on the healthcare domain to forecast the millennial behaviour regarding their intention to wear face masks following the COVID-19 vaccination. Previous studies supported that the TPB model successfully scrutinizes public behaviour more than other theories (Elengoe, 2020). Therefore, TPB is utilized to develop the research framework of this study, following the previous literature.

This research will reveal interesting policy implications in response to the COVID-19 pandemic in Malaysia. The results will highlight the importance of consistent messaging from health authorities and the government as well as the need for tailored health education programs to improve levels of awareness, concern, knowledge, attitudes, and practices consequently of wearing the face mask after the vaccination.

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