

## PERCEIVED RELIGIOSITY AND COVID-19 VACCINATION ACCEPTANCE AMONG MELAKA TENGAH POPULATION, MALAYSIA

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**Abstract:** Global life has changed as a result of the COVID-19 pandemic. COVID-19 vaccination is the main key to stop the spread of the disease and build up herd immunity. Nonetheless, the legality of the chemicals in COVID-19 vaccines has raised doubts, especially among Muslims, making it challenging to win over the public's trust in taking the vaccine. This study aims to identify the relationship between perceived religiosity and COVID-19 vaccination in Melaka Tengah, the most populated area in Melaka, Malaysia. A quantitative survey was employed among 411 respondents using a purposive non-probability approach. Questionnaires were distributed online via Google Form. The data was analysed using the Statistical Package for Social Sciences, version 26. The findings showed a significant regression between perceived religiosity and COVID-19 vaccine acceptance ( $\beta = .38$ ,  $p < .000$ ). Most respondents agreed that religion is their life guidance and that religion does influence their life choices. The acceptance level for COVID-19 vaccination was high, at 3.27 ( $SD = .89$ ). Concerns on choosing to take up COVID-19 vaccinations include factors such as safety and halal status. Furthermore, by examining perceived religiosity in the context of COVID-19 vaccine acceptance, this study contributes significantly in adding literature on health, disease, and vaccination.

**Keywords:** Acceptance, COVID-19 Vaccination, Disease, Malaysia, Religiosity.

### 1. Introduction

The COVID-19 pandemic has altered the way of life for everyone in the world. In 2020, COVID-19 infections hit various states in Malaysia. Consequently, the number of infections and fatalities was alarming the nation. In April 11, 2020, the number of new positive cases rose to 184, bringing the total number of infections to 4,530 (Md Shah et al., 2020). Despite being the second smallest state in Malaysia, Melaka is one of the five highest population density areas affected by the disease (Abdul Majid, 2021). In fact, Melaka Tengah is one of the districts in Melaka with a high number of infections.

Malaysia has taken ample measures to advise Malaysians to accept COVID-19 vaccinations to prevent the spread of the illness and develop herd immunity. Based on a survey done by an international market research firm and a Malaysian research team, both parties

found that the first wave's acceptance rate for COVID-19 vaccination was relatively high, ranging from 85% to 94%. However, acceptance levels dropped to 67% by December 2020, in the midst of the third wave and the approaching vaccination implementation, in stark contrast to the prior number (Lau et al., 2021). In fact, in September 2021, the MySejahtera programme spotted nearly 70,000 COVID-19 vaccine registrars in Melaka who failed to show up at vaccination centres. A total of 54,000 people gave various reasons, including not wanting to receive the injections. However, these names were registered by their children (Zakarya, 2021).

Previous researchers have revealed that vaccination acceptance is a worldwide problem. Vaccination acceptance is a personal behaviour and belief in immunisation (Feemster, 2013). In Malaysia, a majority of 61.3% of the nation's population are Muslims. Findings showed that perceived religiosity appeared to be a significant factor influencing vaccine acceptance (Abdul Aziz et al., 2021). Some of the most popular explanations were religiosity, risks versus benefits, and a lack of education and awareness (Garcia & Yap, 2021). Religiosity is the attitude and actions of an individual which are built upon their religious beliefs. People who have strong religious beliefs are restrained by this faith in whatever they do. A study conducted in Pakistan found that the level of religiosity of Muslims affected how they behaved when making purchases of goods and services (Sudarsono et al., 2023). Religiosity was previously incorporated into the Technology Acceptance Model (TAM) among Indonesian respondents. Furthermore, previous studies highlighted that parents' concerns towards health management were significantly influenced by their level of religiosity (Faturrohman et al., 2021). In Malaysia, concerns regarding religiosity are important in terms of the public's acceptance towards the vaccine. Essentially, concerns on halal vaccines were one of the reasons for vaccine hesitancy (Lau et al., 2021).

Hence, this paper seeks to answer the research question of determining the relationship between perceived religiosity and COVID-19 vaccine acceptance among the public in Melaka Tengah. Moreover, this study also seeks to identify a research objective: (1) to determine the relationship between perceived religiosity and COVID-19 vaccine acceptance among the public in Melaka Tengah.

The solution was discovered by testing the hypothesis using direct effect analysis (linear regression). The research hypothesis is as following:

H1: The more perceived religiosity, the higher the COVID-19 vaccine acceptance.

## **2. Methodology**

### **2.1 Research Design and Sample**

This research is a quantitative cross-sectional survey which was carried out in Melaka Tengah, Malaysia. A set of self-administered questionnaires were developed using Google Forms and distributed online through various social networking sites such as Facebook, WhatsApp, Telegram, and e-mail. Purposive sampling was used in this study. Respondents were aged 18 years and above. Respondents were vaccinated, resided in Melaka Tengah, and have knowledge about COVID-19 vaccine. Based on Krejcie and Morgan's (1970) sample size calculation of 571,200 persons (Mahidin, 2022) with a 95% confidence level and a 5% significance level, the total number of respondents was 384. This survey received responses from 411 participants.

## 2.2 Research Instrument and Data Analysis

Most items were adopted from instruments used by previous authors (Faturohman et al., 2021; Kalam et al., 2021). Suitable questions were then adapted and administered via Google Forms. Local experts, comprising academicians and healthcare professionals, had checked and validated the items in the questionnaire. The questionnaire consisted of three sections. Section A had nine questions regarding demographic background with a single multiple-choice (sex, age range, race, marital status, religion, place of residence, education level, occupation, and household income). Section B consisted of eight questions which relate to perceived religiosity items, and Section C consisted of 17 items on COVID-19 vaccine acceptance based on a four-point Likert scale ("strongly disagree", "disagree", "agree", and "strongly agree"). The IBM Statistical Package for Social Science (SPSS) software version 26 programme was used to analyse the descriptive statistics on mean, frequency, percentage, and standard deviation. Meanwhile, inferential statistics was used for regression analysis.

## 3. Discussion and Conclusion

### 3.1 Demographic Background

The demographic characteristics of respondents are illustrated in Table 1.0. The data indicated that 94.4% of respondents were Malay (388 people), and 95.4% were Muslims (392 people). Concerns over the vaccine's safety and halal status were particularly acute for Muslim participants (Abdul Aziz et al., 2021). This might be because Malay and Muslim respondents were the majority population involved in the survey.

Table 1.0 Demographic Characteristics of Respondent

Demographic Characteristics	Frequency (n=411)	Percentage (%)
<b>Sex</b>		
Female	212	51.6
Male	199	48.4
<b>Race</b>		
Malay	388	94.4
Chinese	15	3.6
Indian	7	1.7
Other	1	0.2
<b>Marital Status</b>		
Married	292	71.0
Single	106	25.8
Widow	9	2.2
Divorced	4	1.0
<b>Religion</b>		
Islam	392	95.4
Buddhism	13	3.2
Christian	4	1.0
Other	2	0.5
<b>Level of Education</b>		
Malaysian Certificate of Education (MCE) / Higher School Certificate (HSC)	177	43.1
Certificate / Diploma	104	25.3
Bachelor's Degree	101	24.6
Master's / Doctoral Degree	29	7.1
<b>Age Groupings</b>		

Demographic Characteristics	Frequency (n=411)	Percentage (%)
40-49 years old	119	29.0
30-39 years old	115	28.0
18-29 years old	99	24.0
50-59 years old	74	18.0
60 years old and above	4	1.0
Total	411	100

Furthermore, 51.6%, were female (212 people), and 71% were married couples (292 people). In addition, 43.1% have a formal Malaysian Certificate of Education, or SPM, and a Higher School Certificate of Education, or STPM, representing 177 people. All age groups took part in the survey. The data showed that the majority of the respondents were middle-aged adults, between the ages of 40 and 49. This age range demonstrated their sensitivity to the vaccine problem, which was being emphasised as the primary issue in society. A research done by Amzah et al. (2022) reported that among the citizens in the Duyong area, which was part of Melaka Tengah district, showed that the elder age groups were concerned about the COVID-19 vaccine. Respondents believed that the national vaccination programme was part of the government's agenda. In terms of location, the Melaka Tengah area is divided into 29 areas (Mukim). At least one representative from each location (Mukim) was represented in the survey and had provided his or her responses.

Next, Table 2.0 illustrates the household income according to occupation. Results showed 68.4%, or 281 respondents, were government servants, 17.3% were from the private sector, and 6.3% were unemployed. The findings showed that the residents of Melaka Tengah had a high level of confidence towards the government's choice on immunisation. According to Mohamed et al. (2021), the participants believed that getting the right vaccinations would enable them to live normal lives. This was the result of the Ministry of Health's (MOH) serious efforts to publicise the immunisation initiatives via traditional and internet media platforms, particularly through the MOH's official social media profiles.

Table 2.0 Household Income According to Occupation

		Occupation						Total
		Unemployed	Government Sector	Private Sector	Self-employed	Housewife	Retiree	
Household B40 Income	Count	21	154	49	14	8	1	247
	% within Household Income	8.5%	62.3%	19.8%	5.7%	3.2%	0.4%	100.0%
	% within Occupation	80.8%	54.8%	69.0%	73.7%	80.0%	25.0%	60.1%
	% of Total	5.1%	37.5%	11.9%	3.4%	1.9%	0.2%	60.1%
M40	Count	5	109	18	4	2	3	141
	% within Household Income	3.5%	77.3%	12.8%	2.8%	1.4%	2.1%	100.0%
	% within Occupation	19.2%	38.8%	25.4%	21.1%	20.0%	75.0%	34.3%
	% of Total	1.2%	26.5%	4.4%	1.0%	0.5%	0.7%	34.3%
T20	Count	0	18	4	1	0	0	23
	% within Household Income	0.0%	78.3%	17.4%	4.3%	0.0%	0.0%	100.0%
	% within Occupation							

		Occupation						Total
		Unemployed	Government Sector	Private Sector	Self-employed	Housewife	Retiree	
	% within Occupation	0.0%	6.4%	5.6%	5.3%	0.0%	0.0%	5.6%
	% of Total	0.0%	4.4%	1.0%	0.2%	0.0%	0.0%	5.6%
Total	Count	26	281	71	19	10	4	411
	% within Household Income	6.3%	68.4%	17.3%	4.6%	2.4%	1.0%	100.0%
	% within Occupation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	6.3%	68.4%	17.3%	4.6%	2.4%	1.0%	100.0%

The majority of respondents in this study were in the income category of the B40 group, representing 247 people, or 60.1%, with a household income of less than RM5,110. Furthermore, the pandemic had negative socioeconomic effects on the B40 group in Melaka Tengah. This was explained by the Chief Minister of Melaka during that time, Datuk Seri Sulaiman Md Ali, that the COVID-19 pandemic had negatively impacted 10,585 workers in the state (Murali, 2021). Ridzuan, Saidin et al. (2022) stated that the level of stress among the B40 income category was worrisome during COVID-19. In fact, those in the B40 were more worried and felt more stressful than those from other income groups such as the M40 and T20 family income categories.

### 3.2 Regression Analysis on the Relationship Between Perceived Religiosity and COVID-19 Vaccine Acceptance

Table 3.0 shows the linear regression result on the relationship between perceived religiosity and COVID-19 vaccine acceptance. The findings showed a significant regression between perceived religiosity and COVID-19 vaccine acceptance ( $\beta = .38, \rho < .000$ ). In brief, 38% of the variance in dependent variables was explained by the independent variable. This means that there were another 62%, which could be explained by other factors that were not covered in the survey. For Muslim respondents, each time a discussion on the topic of COVID-19 vaccination was brought up, the subject of its unlawful halal status was certainly brought up as well (Abdul Aziz et al., 2021). In Indonesia, due to the limited dose availability and difficulty of selection, the Indonesian Council of Ulama allowed the use of AstraZeneca in emergency situations, although these vaccine types had used pig trypsin during AstraZeneca's manufacturing (Sudarsono et al., 2023).

Table 3.0 Linear Regression Analysis

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	670.656	1	670.656	256.314	.000 <sup>b</sup>
	Residual	1070.165	409	2.617		
	Total	1740.821	410			

a. Dependent Variable: VA b. Predictors: (Constant), PR R-Square = .385

Most respondents strongly agreed with the statement in the instruments, as illustrated in Table 4.0, that religion is their guidance in life, 3.55 (SD =.83), and religion influences their life decisions, 3.30 (SD =.93). Given that the majority of respondents were Malay and Muslims, this issue raises additional concerns about the safety and halal status of vaccination products. On the other hand, the Melaka Tengah citizens strongly agreed that religion has encouraged them to seek medicine to cure illnesses.

Table 4.0 Descriptive Statistics on Perceived Religiosity

Perceived Religiosity	Mean	Std. Deviation
Religion is my life guide.	3.55	.83
I believe every religion encourages its practitioners to find medicine for any disease.	3.48	.83
Religion influences all of my life decisions.	3.30	.93
I often read articles about my religion.	3.17	.91
I often read books about my religion.	3.12	.91
Religion encourages me to take the COVID-19 vaccines.	3.05	.92
Overall	3.27	.89

Notes: High (3.00-4.00), Medium (2.00-2.99), Low (1.00-1.99)

Source: (Pallant, 2020)

Islam advises its people to always look for a cure for the disease they suffer from because every disease has a cure that needs to be found, explored, and studied. Abu Darda Radiallahuanhu, Prophet Muhammad SAW (Peace and Blessing Be Upon Him, PBUH) said: *"Allah has sent down both the disease and the cure, and He has appointed a cure for every disease, so treat yourselves medically, but use nothing unlawful."* Sunan Abu Daud (3874) [Syeikh Syu'aib al-Arna'outh states that this hadith is sahih li ghairihi] (Ab Latiff and Che Omar, 2019; Mohamad al-Bakri, 2015). The lowest mean score for this item was 3.05 (SD=.92), which was high. This indicated that the people of Melaka Tengah believed that religion encourages them to take COVID-19 vaccines. In comparison, a recent survey conducted by Faturhman et al. (2021) and Sudarsono et al. (2023) showed that perceived religiosity did not affect the intention of COVID-19 vaccination among Indonesians.

Hence, religion appears to have an impact on Melaka Tengah citizens decision to accept the COVID-19 vaccine. This demonstrates that perceived religiosity  $\beta=.38$ ,  $\rho <.000$  is one of the biggest drivers of change in terms of COVID-19 vaccine acceptance. Results demonstrated that H1 supported the prediction. In brief, the more they perceived religiosity, the higher their COVID-19 vaccine acceptance. Most respondents agreed that religion is the guide in their lives and it influences their whole life. Their acceptance level for COVID-19 vaccination was high, at 3.27 (SD =.89). Their concerns regarding vaccination included aspects such as safety and halal status.

Practically, this study contributes in adding knowledge regarding COVID-19 and vaccination uptake in Melaka, particularly in Melaka Tengah region. In terms of policy aspects, this study provides an opportunity for the Malaysian authorities to take an advanced step or implement a new policy to increase public acceptance towards COVID-19 vaccine. Although researchers were unable to generalise the findings to other populations in Melaka, according to Baxter and Babbie (2003), researchers have some insights into the specific sample of people from which the data were acquired. Furthermore, by examining perceived religiosity in the context of COVID-19 vaccine acceptance, this study makes a significant contribution to the literature on health, disease and vaccination.

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