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THE LEVEL OF PUBLIC ACCEPTANCE OF VACCINE BOOSTER SHOT

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ABSTRACT

Vaccine booster shot is an additional COVID-19 vaccine dose given to a person who has already received two COVID-19 immunizations. The goal of a COVID-19 booster is to protect those who have been fully vaccinated against COVID-19, especially from severe symptoms and, in some circumstances, death. However, over time, this protection becomes less effective. As a result, a booster is administered to improve the protection. Although a booster is not required, it is strongly advised to have one to ensure the best protection against COVID-19 infection, particularly from severe symptoms and, in some cases, death. The number of people that have already received vaccination is increasing day by day. However, mild arm discomfort, a headache, and body pains plagued one of the patients. Mild weariness and achiness were mentioned by two of the participants. One of them had a headache. Not knowing that the vaccine has mild side effects towards our body such as fever and headache, people still take the vaccine shots eventually thanks to the effort of campaigns by the government. Those side effects are affecting the emotion of the public until their faith in vaccination fades away slowly. The aim of this study is to determine the level of public acceptance of vaccine booster shot and the level of public trust in vaccine booster shot. The study is using a quantitative method through Google Form platform involving 400 respondents from various backgrounds. The result shows that most of the respondents are accepting the booster dose vaccination. (M=3.35). The level of public acceptance is very high (M=3.36) and the level of public trust of vaccine booster shot is also high (M=3.34).

KEYWORDS

Covid-19, Vaccination, Booster Shot, Public Acceptance.

INTRODUCTION

The most effective method for countering the COVID19 pandemic, according to specialists around the world, is mass vaccination of communities all around the world. The development of the COVID19 vaccine has served as a convincing example of how significant public finances, strong focus, and unprecedented levels of scientific collaboration may assist foster innovation to solve global public needs in a relatively short period of time. The approval and implementation of vaccinations, on the other hand, do not indicate a speedy resolution to the health problem, because achieving herd immunity will necessitate the vaccination of a large portion of the population, which will be a challenging task. Governments must prioritise issues of trust, both in vaccines and in the institutions in charge of the vaccination campaign, in order to be successful in the worldwide drive to immunise billions of people as quickly as possible. They must increase public trust in vaccine efficacy and safety, as well as governments' ability to handle logistical issues effectively (Enhancing public confidence in the COVID-19 vaccine, 2021).

The Ministry of Health Malaysia, (MOH) has decided to extend the booster dose to individuals who have received a complete dose of Sinovac vaccine at least 3 months ago where they will be given a booster dose of Comirnaty vaccine heterological. Preference to seniors 60 years and above. The Ministry of Health Malaysia (MOH) is very encouraging so that each individual is eligible to take the dose booster dose to get a dose injection booster, This is so that the optimal level of protection can be achieved against COVID-19 infection. Execution of grants booster doses, (booster doses) have been initiated nationwide on October 13, 2021 using the Camirnaty vaccine. Currently giving a booster dose implemented for Comirnaty vaccine recipients at least at least 6 months ago with priority to frontline members (health and safety), seniors aged 60 and over and individuals with comorbidities. As of October 19, 2021, a total of 47, 728 has received a booster dose. Recently, the MOH has decided to extend this booster dose to individuals who have received a complete dose of Sinovac vaccine at least 3 months ago, where they will be given a booster dose of Comirnaty vaccine heterological (MOH ,2021).

For a start, this heterologous booster dose will be given to individuals aged 60 years and above. Based on the recommendations of the Strategic Advisory Group of Experts (SAGE) on

Immunization from the World Health Organization (WHO) meeting on 4 to 7 October 2021. Booster dose administration this heterologous is by way of off-label use and was used as a branch of the study (subgroup) in The study Real World Evaluation of COVID-19 Vaccination (RECoVaM) and the study of serious adverse effects after vaccination (SAFECOVAC), i.e. for all booster dose recipients. Booster dose is given voluntary and free under the COVID-19 Immunization Program Nationality (PICK). The objective of giving a booster dose of COVID-19 vaccine is to ensure duration optimal protection is obtained by the vaccine manufacturer COVID-19 in Malaysia (MOH ,2021).

A COVID booster shot is a second dose of immunisation administered when the protection provided by the initial injection(s) has begun to diminish over time. The booster aids in maintaining good resistance against severe coronavirus infection (Booster Shots, n.d). The COVID-19 vaccine, which is administered in two doses, offers significant protection, particularly against severe disease. A booster dose will ensure that the first dose's protection is far greater and lasts longer, potentially preventing the virus from spreading. A booster dose strengthens your resistance against infection by the COVID-19 virus, as well as serious illness and death from COVID-19. You, your loved ones, and the rest of your community will be safe from COVID-19 with a booster dose. Booster doses will be given to everyone for free (COVID-19 booster vaccine advice, n.d).

After the initial vaccine, a booster dosage is given to give you an extra boost of immunity. This is advised because there is evidence that the vaccine's effectiveness diminishes with time. People who are immunocompromised and have had the Pfizer or Moderna vaccine series should obtain a third dose. This is indicated since there is evidence that after two doses of mRNA vaccine, this group does not develop the same level of immunity (What You Need to Know About Third Doses , n.d).

The booster doses are recommended as the body's antibody levels decline, some vaccines' protection diminishes with time. An extra dose of vaccine can replenish the antibody tank and improve the immunological response in these circumstances. That's why booster doses for tetanus, for example, are suggested. Even against the Delta form, the COVID-19 vaccines are still effective in reducing the risk of severe sickness, hospitalization, and death. The CDC has discovered,

however, that the COVID-19 vaccinations' protection against mild to moderate disease diminishes over time. Based on this information, the immunizations' protection against serious disease, hospitalization, and death may deteriorate in the coming months (What You Need to Know About Third Doses , n.d).

Some immunizations require a booster dose in addition to the original (or primary) dose. With the first dose, the immune system is primed to recognise and produce antibodies against the virus it was supposed to combat. Immune system booster shots are given to remind the body's immune system of the virus it must fight. The immune system is strengthened or boosted as a result of this (Coon, 2021).

PROBLEM STATEMENT

The goal of this study is to determine the public's acceptability of vaccination booster doses. The delay, according to Datuk Dr Mohd Asri Zainul Abidin, Mufti of Perlis, should include a clear declaration on who or which group should not take the medication. He recommended that the MOH postpone the administration of the third dose until it is evident who should not take it owing to major adverse effects. He also could not rule out the impact of earlier immunizations in reducing the risk of COVID-19, but he spoke about what many people are experiencing with the third dosage. . He further stated that several indicated that death occurred abruptly after the third dose was given, and that they had no formal complaint route to submit because they were peasants. Although the number of individuals who are damaged is lower than the percentage of those who are healthy, he noted that the government is responsible for the people's safety and health. Previously, the public, including Dr Mohd Asri, had expressed worry when his father was brought to the hospital more than a week ago, after his father's health condition appeared to be deteriorating after obtaining a booster dose of Covid-19 vaccination. Dr. Mohd Asri reported that after getting the third injection of the COVID-19 booster dosage, his father vomited and became very weak. Indeed, a doctor informed him that his father had had another stroke in the sensitive area of his brain. This problem has raised widespread concerns about the vaccination booster shot's efficacy (Sharif, 2022).

On the first trial of the government's vaccination programme, many individuals throughout the world are asking whether or not vaccine use will have adverse impacts on our bodies. Mild arm discomfort, a headache, and body aches affected one of the patients, according to Melinda (2021). Two of the individuals mentioned mild exhaustion and achiness. One of them was suffering from a headache. Despite the fact that the vaccination produces minor adverse effects on our bodies, such as fever and headache, individuals finally get vaccine doses thanks to government advertisements.

Nonetheless, in the case of public acceptance for the third, or as most people refer to it, vaccination booster shot, there will be people who would like to consider getting the booster shot because they know they will experience the same side effects as they did with the first and second shots, which are fever and headache. Malaysians should be aware of this topic because it is a common one that the media will cover. When there is a difficulty with public acceptance of this booster injection, the media wants to highlight it since it helps viewers to understand more about the situation. People must be prepared to face the repercussions and be prepared in whatever manner possible since our health is at stake, not just for ourselves but also for those closest to us.

RESEARCH QUESTIONS

- 1) What is the level of acceptance of vaccine booster shot?
- 2) What is the level of trust in vaccine booster shot?

RESEARCH OBJECTIVES

- 1) To identify the level of acceptance of vaccine booster shot.
- 2) To identify the level of trust in vaccine booster shot.

DEFINITION OF BOOSTER SHOT

A booster shot is one that provides you with an additional dosage of an immunising agent. It's also known as a booster injection or a booster dosage. After the initial round of injections, an injection of a vaccine or other antigen is given to maintain immunity. Increasing the dose For patients with compromised immune systems, such as those who have had an organ transplant, the CDC advises a third dose of an mRNA COVID-19 vaccination. After two doses of an mRNA COVID-19 vaccine, those with compromised immune systems may not get enough protection. A second dosage might help them guard against COVID-19. Individuals who have been fully immunised but have not had a robust enough immunological response should receive an additional dose of COVID-19 vaccine. (Mayo Clinic Staff, 2021).

A booster dose, on the other hand, is recommended for some people who have already been completely vaccinated but have seen their immune response deteriorate over time. At least 28 days after the second dose, the third dose of an mRNA COVID-19 immunisation should be given. The brand of the additional dosage of mRNA COVID-19 immunisation should be the same as the previous two doses. A third dose of either brand of mRNA COVID-19 vaccination can be given if the brand of COVID-19 vaccine used is uncertain. As a booster shot, you have an option in which vaccine you receive. You can get a booster shot from the same company that made your previous shot or shots, or you can get one from a new company (Mayo Clinic Staff, 2021).

FACTORS OF PUBLIC ACCEPTANCE IN VACCINE BOOSTER SHOT

1. Immunity is slowly fading.

There has yet to be established an immunological correlate of protection or an immune correlate for the duration of protection. Studies imply a link between vaccine efficacy against symptomatic disease and mean neutralizing antibody titers elicited by those vaccines, but it's uncertain if diminishing titers over time since vaccination are indicative of declining vaccine effectiveness, particularly against VOCs. While data on vaccine immunogenicity suggests that antibodies last at least 6 months, neutralizing antibodies have been found to wane. Due to cell mediated immunity,

protection against SARS-CoV-2 infections may be lost, but protection against severe disease is likely to be maintained (World Health Organization, 2021).

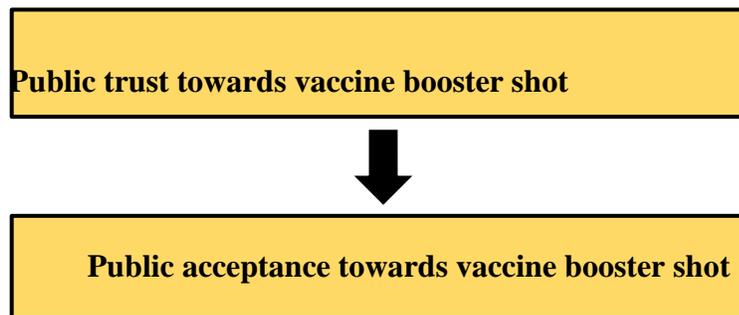
2. Vaccine effectiveness

There is currently insufficient data to assess if vaccine effectiveness against any kind of clinical illness caused by SARS-CoV-2 infection declines significantly beyond 6 months. However, some VOCs have been linked to a decrease in vaccine effectiveness. According to Israeli data, over 40% of breakthrough infections occur in immunocompromised people. While outbreaks are still possible, the great majority are less severe than those seen in the unvaccinated (World Health Organization, 2021).

3. Global vaccination supply at global levels

Adding a booster dose to a national immunization programme should be based on the quality of evidence for the necessity for these doses as well as global vaccine availability. Offering booster doses to a substantial percentage of the population when many have yet to receive a first dosage violates the principle of national and global equality. Prioritizing booster doses over speed and breadth in the initial dose coverage may jeopardise global pandemic mitigation efforts, with serious consequences for people's health, social, and economic well-being (World Health Organization, 2021).

FIGURE 1.0 RESEARCH FRAMEWORK



RESEARCH METHODOLOGY

Research Design

Quantitative research is being used in this study. Online surveys were employed, and the survey's link was shared with the public using social media platforms such as WhatsApp, Facebook, Instagram, and Twitter. It is easier for the researcher to reach and get respondents by using all of these platforms, especially the public, as this study is required and focuses on public response in order to gather the findings and results of the topic covered (Ridzuan, Ridzuan and Ridzuan, 2015).

Sampling Technique

In this investigation, the researcher utilized a non-probability sampling approach called convenient sampling. The study used non-probability sampling, which is a handy sampling approach. Individuals are picked based on non-random criteria in a non-probability sample, according to McCombes (2021), and not every individual has a chance of being included. The respondents in this survey are drawn from the general population and work in a variety of vocations, including government and private sector jobs, self-employment, students, full-time housewives, retirees, and the jobless (Ridzuan, Ridzuan and Ridzuan, 2018).

Research Measurement

There are 25 questions in the demographic part of the questionnaire. The questionnaire is linked to the study's research objectives. Multiple choice questions (MCQs), rating scales 1 to 4 (strongly disagree (1) , disagree (2) , agree (3) , strongly agree (4) , true or false questions, and matrix questions are all used in the questions. The questions are credible and legitimate, making it simple for respondents to comprehend and reply to them. It was also set out in a logical way to avoid any misunderstanding during the question-and-answer session.

Data Analysis

The Statistical Package of Social Science (SPSS) software version 23 was used to analyze the data. Creating a survey and uploading data are both part of the data analysis process. The survey is created with questions that are related to the research objectives which are the level of public acceptance of vaccine booster shot and the level of public trust in vaccine booster shot. The questionnaire is distributed to the first 50 respondents in order to identify the reliability of the research. The survey is continued to complete the data of 400 responses and the data collected transferred to SPSS software for analysis and finding purposes (Ridzuan, Ridzuan and Ridzuan, 2018). Researchers used descriptive statistics to see frequency, percentage and mean.

FINDINGS: RESULTS AND DISCUSSIONS

a) The demographic of the sample is discussed in terms of sex, age, occupation, household income, current residing state, current residing area, race and 5 of general questions regarding the public acceptance of vaccine booster shot.

Table 1: Distribution of the respondents by demographic (n=400)

DEMOGRAPHIC	FREQUENCY	PERCENTAGE (%)
Sex:		
● Female	192	48
● Male	208	52
Age:		
● 18 – 23	222	55.6
● 24 – 29	80	20
● 30 – 35	31	7.8
● 36 - 41	21	5.2
● 42 - 47	11	2.7
● 48 - 53	15	3.7
● 54 years and above	20	5
Occupation :		
● Working in government sector	94	23.6
● Working in private sector	65	16.2
● Self-employed	38	9.5
● Student	164	41
● Full time housewife	13	3.2
● Retiree	18	4.5
● Unemployed	8	2
Household Income:		
● B40 (<RM4,360)	268	67
● M40 (>RM4,360 - RM9,619)	98	24.5
● T20 (>RM9,619)	34	8.5
Current residing state:		
● East Coast (Pahang, Kelantan, Terengganu)	119	29.7
● Northern Region (Perak, Penang, Perlis And Kedah)	57	14.2
● Central Region (Kuala Lumpur, Selangor And Putrajaya)	139	34.8
	50	12.5

● Southern Region (Melaka, Negeri Sembilan and Johor)	35	8.8
● East Malaysia (Sabah and Sarawak)		
Current residing area :		
● Urban area	280	70
● Rural area	120	30
Race :		
● Malay	273	68.4
● Chinese	87	21.9
● Indian	33	8.3
● Others (Melanau, Bumiputera Sabah, Kadazandusun, Bidayuh, Orang Asli, Iban)	7	1.4

Table 1 above shows the demographic of 400 respondents. Based on the findings, most of the respondents who answered the questionnaires are female (48%) aged between 18-23 years old (55.6%), Malay (68.4%), East Coast, (Pahang, Kelantan, Terengganu) (29.8%). Most of the respondents are from urban areas (70%), and students (41%).

b) Respondent's opinion towards vaccine booster shot.

There are five questions that were asked in this section. The reason for asking these questions to the respondents is to know about their opinion and experience regarding the vaccine booster shot.

Table 2: Respondent's opinion toward vaccine booster shot

Questions	Frequency	Percentage (%)
Have you taken your vaccine shot ?		
● Yes	382	95.5
● No	18	4.5
Have you taken your vaccine booster shot?		
● Yes	227	56.8

• No	173	43.2
Do you want to receive an additional dose (booster shot)?		
• Yes	331	82.8
• No	69	17.2
Do you have any medical issue before ?		
• Yes	209	52.3
• No	191	47.8

Table 2 above shows the respondent's opinion towards the vaccine booster shot. Based on the findings, most of the respondents who answered the questionnaires stated that they have taken their vaccine shot (95.5%). They also stated that they have taken their vaccine booster shot (56.8%). Most of the respondents also agree that they want to receive an additional dose (booster shot) (82.8%). Last but not least, (52.3%) of respondents stated that they have had a medical issue before. However, according to the COVIDNOW in Malaysia, the percentage of Malaysians who take this booster vaccine is only 36.8%, which is only 12,022,117 people out of the total populations in Malaysia (COVIDNOW, 2022).

a) ACCEPTANCE OF VACCINE BOOSTER SHOT

ACCEPTANCE	Mean
I believe it is necessary to take the booster shot	3.52
I strongly believe that the vaccine booster shot will give benefits to my physical health	3.45
I believe that by taking the vaccine booster shot will increase my immunity level.	3.39
I believe that by taking the vaccine booster shot will make me feel comfortable going anywhere I want.	3.38
I believe that by taking the vaccine booster shot can defend myself from being infected by Covid-19 in the future.	3.32
I believe that by taking the vaccine booster shot will make me feel safe.	3.32

I believe implementation of booster shot is the best way to fight Covid-19.	3.19
Overall	3.36

Table 3: Acceptance Of Vaccine Booster Shot

From Table 3, (M=3.52) is the highest mean for the acceptance of the vaccine booster shot. This can be proven with a study by the Ministry Of Health (2022) booster dose is to restore protection that may have waned over time to the point that it is no longer considered adequate in those who initially reacted well to a full main vaccination series. The second highest mean is respondents believe that the vaccine booster shot will give benefits to physical health (M=3.45). The statements are supported by a study from Jennifer (2022) stating that COVID-19 boosters have a 90 percent to 95 percent relative efficiency against serious sickness or death. The overall mean for acceptance of vaccine booster shots is (M= 3.36) which is very high. This also can be found by a study from Xianzhen (2021) saying that COVID-19 booster vaccine was found to be accepted by 84.80% of respondents, with the rate of acceptability varying by sociodemographic category.

b) TRUST IN VACCINE BOOSTER SHOT

TRUST	Mean
I believe in vaccine booster shots to add extra protection.	3.58
I'm confident enough about the advantages of taking the vaccine booster shot.	3.39
I personally encouraged my parents to take the vaccine booster shot.	3.38
I advise my friends to take the vaccine booster shot.	3.33
I'm sure that the vaccine booster shot will not affect my health.	3.23
I agree that booster shot is halal	3.18
Overall	3.34

Table 4: Trust In Vaccine Booster Shot

From Table 4, the data indicates that most respondents believe in vaccine booster shots to add extra protection (M=3.58) and it is the highest mean. It can be proven by CNBC (2021) booster doses, according to Pfizer and BioNTech, give a high level of protection against the omicron variant. The respondents also agree that they are confident enough about the advantages of taking the vaccine booster shot (M=3.39). This can be proven by CDC (2022), COVID 19 vaccinations are effective and can reduce your risk of contracting and transmitting the COVID-19 virus. Even if children and adults get the COVID-19 vaccination, it helps to avoid serious disease and death. Overall, the mean for trust in vaccine booster shots is (M=3.34) which is very high. The statement is supported by a study from WHO (2021) the final reason we would wish to provide a third dose is if the vaccine's performance against any of the emerging variations of concern is less than satisfactory.

CONCLUSION

Based on the findings, it can be conclude that the public were accepted and trusted the vaccine booster shot as the findings from the surveys shows the total of mean score is more than (M= 2.5) as the level of acceptance of vaccine booster shot score the highest mean (M=3.36) followed by the level of trust in vaccine booster shot (M=3.34). The overall mean score conducted by the researchers in this survey (M=3.35) is considered as a high mean score. This has been proved that the public still accepts and believes in the booster vaccine. So this has proven that the public does not have to worry about the safety of this booster shot vaccine so that we can increase levels of immune responses after these have naturally waned.

When a person has finished their vaccine series, a booster is provided because the virus's immune protection begins to wane with time, according to data. The third dose is used to improve the immune response of those who are moderately to severely immunocompromised, and it is included in their primary series. These people are particularly susceptible to COVID-19 and are at a higher risk of developing a serious, long-term illness. Following the two initial doses of the vaccine, they have a lower level of immunity than persons who are not immunocompromised. This isn't due to the vaccine's ineffectiveness. It's because these people's immune systems require the

extra dose as part of their primary series in order to attain the degree of immunity that best protects them against serious illness or hospitalization.

Item	N	Mean
The level of acceptance of vaccine booster shot	400	3.36
The level of trust in vaccine booster shot	400	3.34
Overall		3.35

Table 5 : Description of the level of public acceptance of vaccine booster shot

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