# Factors Influencing Student Confidence in Covid-19 Vaccination

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**Abstract**
The COVID-19 pandemic is a global health problem, including in Indonesia. Rapid handling and widespread vaccination are urgently needed. However, BPS 2022 data shows that 26% of Indonesians have not been vaccinated, with daily growth of only 2,000-7,000 vaccine recipients. The lack of public trust in vaccines, influenced by various social factors, is the main cause. Students as agents of change are expected to be able to encourage the implementation of a more effective vaccination program. Method: The study will be divided into three stages, namely: the first stage is to collect data and analyze the characteristics of respondents, the second is to conduct a bivariate test using the 2x2 chi-square method to see the relationship between independent variables and dependent variables and to determine variables that pass the multivariate test, the third is to conduct a multivariate test using the multiple logistic regression method of the risk factor model which will later obtain the most influential variables on the dependent variable. Results: The factors that influence students' confidence in COVID-19 vaccination consist of Knowledge Factors, Education Factors, Gender, Religion/Belief Factors, Culture/Ethnicity, Medical History and Vaccination History. Then it is also known that there is a significant relationship between the level of knowledge and students' confidence in COVID-19 vaccination, through the final modeling it is known that the level of knowledge with the confounding variable Vaccination History can explain the level of confidence variable by 20.1%. Conclusion: the results of this study indicate that the level of students' confidence in COVID-19 vaccination is influenced by the level of knowledge controlled by the confounding variable, namely Vaccination History.

**Keyword:**
Level of Trust, Level of Knowledge, COVID-19 Vaccination

## 1. INTRODUCTION

A vaccine is a biological product containing antigens that aims to increase a person's immunity to a disease. History has recorded the impact of vaccination in suppressing the spread and transmission of a disease. The COVID-19 vaccine has been researched since the first confirmed case in Wuhan. In December 2020, various countries carried out mass vaccination programs for their communities. In Indonesia, on January 13, 2021, the COVID-19 vaccination program began and was symbolically carried out on President Joko Widodo. Since the first time until now, the government has been massively carrying out vaccinations. In implementing vaccinations, the government has prepared a scheme for vaccine recipients in Indonesia by dividing them into several priority groups and all of this is stated in Presidential Regulation No. 14 of 2021 which aims to ensure that the vaccination program can run smoothly. According to data from the Ministry of Health as of July 17, 2022, the number of vaccine recipients in Indonesia was 201,947,530 (96.7% of the provincial target) for the first dose with an increase of 2,090 doses per day, 169,567,482 (81.42% of the provincial target) for the second dose with an increase of 1,605 doses per day, and 53,062,295 for the third dose (25.48% of the provincial target) with an increase of 7,948 doses per day. In North Sumatra Province, as of July 17, 2022, the number of vaccine recipients was 11,050,944 (96.77% of the provincial target) for the first dose, 9,470,271 (82.93% of the provincial target) for the second dose with an increase of 221 doses per day, and 3,126,863 (27.38% of the provincial target) for the third dose with an increase of 1,702 doses per day. Vaccination is one of the programs used as a strategy by the government to suppress the spread and

transmission of COVID-19, but in its implementation there are many obstacles. This is due to the many hoaxes circulating on social media that explain that COVID-19 is a biological weapon that was deliberately released, vaccines that have chips installed in them, vaccines that can cause serious side effects, vaccines that have not been properly tested, and vaccines can cause death. In addition to hoax news, government policies that appear to be taken unilaterally, such as making vaccination a requirement to be able to carry out activities outside, also have an impact on the level of public trust in the government. It is especially important to achieve high levels of COVID-19 vaccine coverage among young adults, as they are at higher risk of being infected and transmitting the novel virus, under the mistaken assumption that they are immune to infection. There is an urgent need to understand the level of trust and factors influencing students to get vaccinated so that high uptake rates are achieved to achieve herd immunity. In addition, the need to assess the impact of educational curricula on students' attitudes towards vaccination is equally important so that reformed educational strategies can be implemented to address misconceptions. Based on the background description above, the researcher considers it important to know and analyze the factors that influence students' confidence in the implementation of the COVID-19 vaccination.

## 2. RESEARCH METHODOLOGY

The research will be divided into three stages, namely: the first stage is conducting data collection and analysis of respondent characteristics, after the data is obtained, a bivariate test will be carried out using the 2x2 chi-square method to see the relationship between independent variables and dependent variables and to determine variables that pass the multivariate test, third, a multivariate test is carried out using the multiple logistic regression method of the risk factor model which will later obtain the variables that have the most influence on the dependent variable.

## 3. RESULT AND DISCUSSION

*Validity Test*

The testing technique used in this study is using the Pearson Bivariate correlation (Pearson Moment Product). In the test regarding the Level of Student Knowledge of the COVID-19 Vaccine, the results showed that all question items were declared valid using the r table through the formula df = n (30) --> r table = 0.361, more details can be seen from the following data:

**Table 1 Results of the Validity Test of the Variable Level of Student Knowledge of the COVID-19 Vaccine**

| Question | R count | R table | Information |
|---|---|---|---|
| P1 | 0.597 | 0.361 | Valid |
| P2 | 0.412 | 0.361 | Valid |
| P3 | 0.734 | 0.361 | Valid |
| P4 | 0.623 | 0.361 | Valid |
| P5 | 0.688 | 0.361 | Valid |
| P6 | 0, 734 | 0.361 | Valid |
| P7 | 0.518 | 0.361 | Valid |
| P8 | 0.658 | 0.361 | Valid |
| P9 | 0.645 | 0.361 | Valid |
| P10 | 0.481 | 0.361 | Valid |

Meanwhile, for testing the questionnaire related to the Level of Student Confidence in COVID-19 Vaccination, it was found that the results of the entire Validity test were declared Valid using the r table through the formula df=n (30) --> rtable = 0.361, more details can be seen from the following data:

**Table 2 Results of the Validity Test of the Variable of Student Confidence Levels in the COVID-19 Vaccine**

| Question | R count | R table | Information |
|---|---|---|---|
| P1 | 0.776 | 0.361 | Valid |
| P2 | 0.899 | 0.361 | Valid |
| P3 | 0.770 | 0.361 | Valid |
| P4 | 0.662 | 0.361 | Valid |
| P5 | 0.750 | 0.361 | Valid |
| P6 | 0.720 | 0.361 | Valid |
| P7 | 0.899 | 0.361 | Valid |
| P8 | 0.720 | 0.361 | Valid |
| P9 | 0.899 | 0.361 | Valid |
| P10 | 0.649 | 0.361 | Valid |
| P11 | 0.662 | 0.361 | Valid |
| P12 | 0.736 | 0.361 | Valid |

*Reliability Test*

Instrument reliability testing using the Cronbach Alpha formula because this research instrument is in the form of a questionnaire and a graded scale. The decision-making for reliability testing is that a construct or variable is said to be reliable if it provides a Cronbach's Alpha value> 0.70 (Nunnally, 1994). The basis for decision-making is as follows:

a. A construct/variable is said to be reliable if it provides a Cronbach Alpha value > 0.70 (Nunnally, 1994)
b. A construct/variable is said to be unreliable if it gives a Cronbach Alpha value < 0.70 (Nunnally, 1994)

The Cronbach's Alpha formula is as follows:

$$r_{11} = \left(\frac{n}{n-1}\right)\left(1 - \frac{\sum \sigma_t^2}{\sigma_t^2}\right)$$

Based on this formula, the results of the reliability test on the knowledge questionnaire were found to have a valid result of 0.638 and the level of confidence questionnaire had a valid result of 0.933.

*Frequency Distribution of Respondent Characteristics*

Description of frequency distribution of characteristics based on Gender, knowledge, education, gender, religion/belief, culture, medical history, vaccination history and level of student trust in COVID-19 vaccination. Depicted in the table below:

**Table 3 Frequency Distribution of Respondent Characteristics**

| Characteristics | Frequency | Percentage |
|---|---|---|
| **Gender** | | |
| Man | 42 | 40.4% |
| Woman | 62 | 59.6% |
| Total | 104 | 100% |
| **Knowledge** | | |
| Good | 75 | 72.1% |
| Not good | 29 | 27.1% |
| Total | 104 | 100% |
| **Education** | | |
| medical School | 52 | 50% |
| Non-Medical Faculty | 52 | 50% |
| Total | 104 | 100% |

| | | |
|---|---|---|
| **Religion/Belief** | | |
| Islam | 104 | 100% |
| Total | 104 | 100% |
| **Culture/Ethnicity** | | |
| Batak | 16 | 15.4.1% |
| Malay | 17 | 16.3% |
| Java | 36 | 34.6% |
| Minang | 11 | 10.6% |
| Etc | 24 | 22.9% |
| Total | 104 | 100% |
| **Medical History** | | |
| Yes | 29 | 27.9% |
| No | 75 | 72.1% |
| Total | 104 | 100% |
| **Vaccine History** | | |
| Yes | 94 | 90.4% |
| No | 10 | 9.6% |
| Total | 104 | 100% |
| **Trust** | | |
| Tall | 64 | 61.5% |
| Low | 50 | 38.5% |
| Total | 104 | 100% |

Based on table 3 , the gender characteristics show that female respondents, namely 62 (59.6%), are more than male respondents, namely 42 (40.4%). In terms of knowledge, the majority of respondents have good knowledge with a total of 75 respondents (72.1%). The education characteristics show balanced results for the number of medical and non-medical respondents. In terms of religion/belief, all respondents are Muslim (100%). In terms of culture/ethnicity, it is known that the majority of respondents come from the Javanese ethnic group, namely 36 respondents (34.6%), the Batak ethnic group 16 respondents (15.41%), the Malay ethnic group 17 respondents (16.34%), the Minang ethnic group 11 respondents (10.6%), and 24 respondents (22.9%) come from various ethnic groups including Acehnese, Sundanese, and Chinese. In terms of medical history, the majority of respondents do not have a medical history, namely 75 respondents (72.1%) and as many as 29 respondents (27.9%) have a medical history. In the characteristics of vaccine history, the majority of respondents have been vaccinated, namely 71 respondents (68.3%) and 33 respondents (31.7%) have not been vaccinated. In the characteristics of trust, the majority of respondents have a high level of trust, namely 64 respondents (61.5%) and 50 respondents (38.5%) have a low level of trust.

*Factors Which Influencing Trust Student against Vaccination COVID-19*

To see the relationship between independent variables and dependent variables, a bivariate test was conducted using the chi-square method. In addition to seeing the relationship between variables, the bivariate test was used to determine which variables could be continued to perform multivariate analysis using a simple logistic regression test with the provision that the p value <0.1. After the analysis process was carried out, the following results were obtained:

**Table 4 Factors Influencing Student Confidence in COVID-19 Vaccination**

| **Variables** | COVID-19 **Vaccination** | | **P Value** |
|---|---|---|---|
| | **Tall** | **Low** | |
| **Gender** | | | 0.444 |
| Man | 21 (21%) | 21 (21%) | |
| Woman | 36 (58%) | 26 (42%) | |
| **Knowledge** | | | 0.034 |
| Good | 39 (52.7%) | 35 (47.3%) | |

| | | | |
|---|---|---|---|
| Not good | 18 (60%) | 12 (40%) | |
| **Education** | | | 0,000 |
| medical School | 36 (69.2%) | 16 (30.8%) | |
| Non-Medical Faculty | 21 (40.4%) | 31 (59.6%) | |
| **Religion/Belief** | | | 0.376 |
| Islam | 57 (54.8%) | 47 (45.2% | |
| **Culture/Ethnicity** | | | 0.471 |
| Batak | 11 (36.7%) | 19 (63.3%) | |
| Malay | 11 (64.7% | 6 (35.3%) | |
| Java | 21 (58.3%) | 15 (41.7%) | |
| Minang | 6 (54.5%) | 5 (45.5%) | |
| Aceh | 6 (75%) | 2 (25%) | |
| Sunda | 2 (100%) | 0 0% | |
| Mandailing | 3 (27.3%) | 8 (72.7%) | |
| Karo | 0 (0%) | 3 (100%) | |
| **Medical History** | | | 0.054 |
| Yes | 7 (43.8%) | 9 (56.2%) | |
| No | 50 (56.8%) | 38 (43.2%) | |
| **Vaccine History** | | | 0.003 |
| Yes | 50 (53%) | 44 (47%) | |
| No | 7 (70%) | 3 (30%) | |

Based on the results of the analysis of the relationship between gender and the level of student trust in COVID-19 vaccination, it shows that females tend to have a high level of trust in COVID-19 vaccination as many as 36 (58%) and 26 (42%) have a low level of trust. In the male gender, the results were balanced between high and low levels of trust in COVID-19 vaccination. In this analysis, the PR for males was also higher than for females, which was 0.908, which means that men tend to be 0.9 times more difficult to believe in COVID-19 vaccination. From the data above, it can also be concluded that there is no relationship between gender and the level of trust in COVID-19 vaccination. Based on the results of the analysis of the relationship between religion/belief and students' level of trust in COVID-19 vaccination, it shows that the Islamic religion/belief tends to have a high level of trust in COVID-19 vaccination as many as 57 (54.8%) and 47 (45.2%) have a low level of trust, but there is no relationship between religion and level of trust. Based on the results of the analysis of the relationship between culture/ethnicity and the level of student trust in COVID-19 vaccination, it shows that Javanese, Malay, Minang, Acehnese, and Sundanese cultures/ethnicities tend to have a high level of trust in COVID-19 vaccination compared to Batak and Mandailing cultures/ethnicities. This analysis also obtained the PR value of the Batak, Mandailing, and Karo tribes, namely 1.541, this can be interpreted that the Batak, Mandailing, and Karo tribes are 1.5 times more difficult to believe in COVID-19 vaccination. There is no relationship between religion and level of trust.

Based on the results of the analysis of the relationship between education and the level of student trust in the COVID-19 vaccination, the majority of respondents were from the medical faculty, as many as 36 (69.2%). The analysis that has been carried out also found a PR value for non-medical faculty respondents of 0.772, this can be interpreted that non-medical faculty respondents are 0.7 times more difficult to believe in the COVID-19 vaccination. There is a relationship between religion and level of trust. Based on the results of the analysis of the relationship between medical history and students' level of trust in COVID-19 vaccination, it shows that respondents who do not have a history of illness still have a high level of trust in COVID-19 vaccination, which is 50 (56.8%). This analysis also obtained a PR value for respondents who do not have a history of illness of 1.067, this can be interpreted that although the level of trust in vaccination in respondents is high, in fact respondents who do not have a history of illness are 1 times more difficult to believe in COVID-19 vaccination. There is a relationship between religion and level of trust. Based on the results of the analysis of the relationship between vaccine history and students' level of trust in COVID-19 vaccination, it shows that respondents who already have a history of vaccination still have a high level of trust in COVID-19 vaccination, namely 50 (53%) of respondents have a history of vaccination and 7 (70%) of respondents who do not have a history of vaccination. In this analysis, the PR value for respondents who

do not have a history of vaccination was also obtained at 2.06, this can be interpreted that respondents who do not have a history of vaccination find it difficult to believe in COVID-19 vaccination. There is a relationship between religion and level of trust. The next step is to carry out complete modeling that includes the main variables, all confounding variables and candidate interactions (between the main variables and all confounding variables).

**Table 5 Complete Modeling Results and Results After Elimination**

| No. | Variables | B | Sig. | Exp (B) | 95.0% CIfor Exp(b) | |
|---|---|---|---|---|---|---|
| | | | | | Lower | Upper |
| | The first stage | | | | | |
| 1. 2 | Knowledge | -.359 | 0.034 | .698 | .256 | 1,902 |
| 2. 3 | Education Factor | .237 | 0.000 | 1.268 | 1,072 | 1,500 |
| 3. | Gender | -.359 | 0.444 | .699 | .284 | 1,720 |
| 4. | Religion / Belief Factors | .984 | 0.376 | 2,676 | 1..041 | 6,882 |
| 5. | Culture/Ethnicity | .172 | 0.471 | 1.187 | .922 | 1,530 |
| 6. | Medical history | -.457 | 0.054 | .633 | .196 | 2,047 |
| 7. | Vaccination history | -.645 | 0.003 | .525 | .107 | 2,565 |
| | After Elimination | | | | | |
| 1. | Knowledge | .389 | .560 | 1,476 | .009 | 93,262 |
| 2. | Education Factor | 19,532 | .997 | 3.0378 | .000 | . |
| 3. | Medical history | 1.219 | .287 | 3.383 | .364 | 33.141 |
| 4. | Vaccination history | .848 | .232 | 2,334 | .019 | 114,764 |

In the gold standard model, the Exp B (OR) value of knowledge with the level of trust is considered the most valid value of 1.476 to assess the relationship between knowledge and the level of trust. After that, a simplification of confounders was carried out which did not have a significant effect on the OR of knowledge with the level of trust of students in the COVID-19 vaccination. In this study, to determine the size of the OR value, it was assessed based on changes in the OR of the gold standard OR value, which was 1.476. In the table above, it is known that the standard OR value issued to determine the change in the OR value of the confounder variable is the education variable. The results were found as follows: Table 6 Results of modeling changes in OR values of confounder variables of Education From the table above, it is known that after the education variable is removed, the change in the OR value is 3.038 and is added using the formula $\text{OR Perubahan} = \frac{(3.038-1.476)}{1.476} \text{x} 100 = 2.03$ which means the change in OR is not more than 10% which illustrates that education does not change the OR value of the level of knowledge with the level of confidence, therefore education is removed from the next modeling. Furthermore, the largest p-value is removed, namely the history of the disease and the results are obtained as follows:

**Table 6. Results of modeling changes in OR values of confounder variables of Disease History**

| No. | Variables | B | Sig. | Exp(B) | 95.0% CIfor Exp(b) | |
|---|---|---|---|---|---|---|
| | | | | | Lower | Upper |
| 1. | Level of Knowledge | | | | | |
| | | 1,070 | .000 | 2.915 | .833 | 10,192 |
| 2. | Vaccination History | | | | | |
| | | 1,697 | .010 | 5..458 | 1,501 | 19,846 |

From the data above, it is known that after the disease history variable was removed, the OR change value obtained was 2.915 and was added using the formula $\text{OR Change} = \frac{(2.915-1.476)}{1.476} x100 = 1.95$ which means that the change in OR is no more than 10%, which shows that the history of the disease does not change the OR value of the level of knowledge with the level of confidence. Based on the presentation of the results of the data processing, it can be seen that there is a significant relationship between the level of knowledge (P <0.001) and students' trust in COVID-19 vaccination. An OR value of 2.915 was obtained, meaning that the level of students' trust in COVID-19 vaccination is influenced by the level of knowledge controlled by the confounding variable, namely vaccination history. The resulting model meets the significance of the model, with reference to the omnibus p-value (<0.1). Then the Nagelkerke R Square value = 0.201 was obtained, meaning that the model formed with the level of knowledge with the confounding variable of vaccination history can explain the level of confidence variable by 20.1%. A person's level of trust in vaccination will affect a person's actions to get vaccinated. In this study, 68.8% of students have been vaccinated against COVID-19. This is in line with the level of student trust in COVID-19 vaccination, most of which are high (61.5%). This study is in line with the study of Arina N Rahmani [32] who analyzed the influence of trust in COVID-19 vaccination on Magelang students, which showed that trust in vaccines greatly influenced vaccination intentions among students. This is also supported by research conducted by Muhammad Marizal [33] , which explains that the high level of trust in students is influenced by the level of knowledge.

The difference between this study and the studies above is that this study analyzes the factors that influence the level of student trust in COVID-19 vaccination. The results of this study based on bivariate tests found 4 factors related to the level of trust, namely: knowledge, education, vaccination history, and medical history. In this study, the knowledge factor is the factor that most influences the level of student trust while vaccination history is a confounding factor that must be controlled because it also affects the level of student trust in COVID-19 vaccination. From this study, table 4.4 shows that the knowledge variable has an influence on the level of student trust of 52.7%, where the results of this study are in line with research conducted by Putra Benny Hosiana [34] who said that knowledge is a factor that can determine a person's trust in vaccination. In the study, it was found that 52.95% of respondents had a level of knowledge about the COVID-19 vaccine and the results of the study also found that 87.26% of respondents had a high level of trust in the COVID-19 vaccine. This is also in line with research conducted by Muhammad Marizal 33 who concluded in his research that the level of knowledge affects the level of trust in the COVID-19 vaccine. Where in the study, the ODS Ratio value of the *variable to trust* was found to be 0.059, which means that every one unit increase in the value of the knowledge variable will have a 0.059-fold effect on the level of trust. In this study, education is also a factor that has a relationship with the level of student trust in COVID-19 vaccination. Table 4.4 shows *a p-value of* 0.000, this can be interpreted that both medical and non-medical students have a constant probability of influencing the level of student trust in COVID-19 vaccination. This is in line with research conducted by Paul [2535] , in the study conducted, only 16% of respondents refused COVID-19 vaccination and it came from respondents who had low education. In research conducted by Wahyuni Arumsari [36] and Tasnim [37] showed the opposite, in the study conducted stated that there was no relationship between education and a person's level of trust in COVID-19 vaccination. In the study, *a p-value of* 0.302 was obtained. This may be related to other factors that influence the individual to believe in COVID-19 vaccination.

This study also shows that vaccine history affects students' level of trust in COVID-19 vaccination. In table 4.4, 53% of respondents who have been vaccinated have a high level of trust. This is in line with research conducted by Angelica Rawung [38] , in a survey she conducted, it showed that 77% of respondents had a high level of trust in the COVID-19 vaccination program. In this study, in table 4.3, there were 9.6% of respondents who had not received any COVID-19 vaccination at all. These results are in line with research conducted by Najmah [39] which states that a person's doubts about getting vaccinated come from the halalness and efficacy of the vaccine itself, this makes individuals not want to take risks by getting vaccinated against COVID. The study showed that medical history is also a factor that influences the level of student trust in COVID-19 vaccination. In this study, in table 4.4, 56.8% of respondents who did not have a medical history had a high level of trust in COVID-19 vaccination. In the multivariate test, medical history did not show a change in OR> 10%, which means that although in the bivariate test, medical history was related to the level of trust, it did not show a significant relationship with the level of student trust. This is in line with research conducted by Wang [40] which stated that there was no relationship between medical history and the level of trust in COVID-19 vaccination. Research conducted by Rahmawati [41] explained that the factors that influence public confidence in COVID-19 vaccination are age, education, knowledge, family support, government policy, perception of benefits, perception of barriers, towards compliance with COVID-19 vaccination with significant results, namely p-value <0.05, while the variable that has no effect is the gender variable with a p-value> 0.05. Likewise, research conducted by Saida S [42] stated that the factors that significantly influence the level of vaccine hesitancy are government policy in decision-making related to vaccination, geographical barriers, past vaccination experiences, beliefs and attitudes about health, knowledge and insight, personal beliefs and experiences towards health systems and services, and risks/benefits.

In this study, 3 factors were found that had no relationship to the level of student trust, namely gender, ethnicity/culture, and religion/belief. Research conducted by Putri SA [43] stated that factors that can influence public perception regarding COVID-19 vaccination are age, gender, last education, occupation, and domicile. In research conducted by Veronica Sihotang [44,] it was stated that this study concluded that students of Universitas Advent Indonesia have a positive perception of COVID-19 vaccination. Things that influence the perception of male and female students of Universitas Advent Indonesia in receiving COVID-19 vaccination include gender, educational background or knowledge, history of having non-communicable diseases, and history of having suffered from COVID-19. According to Putri SA [43] Knowledge influences a person in making decisions, one of which is in the health sector. A person if they get the right information, assess conditions and situations that threaten health, will form a behavioral pattern that leads to prevention and treatment efforts. Perception of health problems is influenced by demographic and psychological factors. Several studies have found factors that influence vaccination beliefs, namely social influences such as promoting vaccination by celebrities rather than promotions from the government and medical personnel, and convincing doubts about the safety and effectiveness of vaccines. This means that social factors are influences that come from other people, whether positive or negative. This is in line with the results of a study conducted by Zaid [45] which concluded that the stronger a person's social influence, the more it will increase the person's interest in COVID-19 vaccination. And the weaker the social influence, the weaker the person's interest in COVID-19 vaccination. Although not as strong as social norms, this study also indicates that social norms are predictors of interest in COVID-19 vaccination and at the same time determine the rise and fall of a person's interest in being vaccinated with the available COVID-19 vaccines.

## 4. CONCLUSION

Univariate Test Results: Of the 104 respondents, 75 (72.1%) had good knowledge about COVID-19, the majority were Javanese, female, and Muslim. Respondents consisted of medical and non-medical students in equal proportions. In addition, 75 (72.1%) had no history of illness, and 64 (61.5%) had a high level of confidence. However, 33 (31.7%) respondents had not been vaccinated. Bivariate Test Results: The analysis shows that knowledge, education, gender, religion, culture, medical history, and vaccination history influence students' confidence in COVID-19 vaccination. Multivariate Test Results: There is a significant relationship between knowledge level (P<0.001) and trust in vaccination, with an odds ratio (OR) of 2.915. This indicates that trust is influenced by knowledge, controlled by vaccination history. This model is significant (p-value <0.1) and explains 20.1% of the variation in trust levels (Nagelkerke R Square = 0.201).

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