

## COVID-19 Vaccine Acceptance in A Private Islamic Boarding School, West Nusa Tenggara

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### ABSTRACT

The COVID-19 vaccination program began in Indonesia in 2020, but it is still unknown how well it has been received by particular communities in places like the West Nusa Tenggara region's Islamic boarding schools. This research aimed to identify the characteristics and factors that contribute to the COVID-19 vaccine's acceptance at the Nurul Islam Sekarbela Islamic Boarding School. In August 2022, a cross-sectional survey was conducted on a stratified random sample of chosen boarding school students using a validated questionnaire. Data on demographic factors, COVID-19 history, religious acceptance, and opinions were all examined descriptively. A total of 124 students, or 62%, gave their informed permission. Based on the findings, it was determined that the Nurul Islam Sekarbela Islamic Boarding School's level of acceptance of the COVID-19 vaccine is still considered low (35%) and in doubt (65%). Acceptance of vaccines is mostly influenced by efficacy, safety, and family recommendations. Acceptance of vaccines is impeded by the dominant fatalistic religious mindset.

### INTRODUCTION

WHO has established COVID-19 as a health problem with a global emergency status and the highest level of alert (Ghebreyesus, 2020). The spread of COVID-19 cases occurred rapidly until January 26, 2020, globally, with 1,320 confirmed cases in 10 countries and 41 deaths (case fatality rate of 3.1%). At the regional level, the Eastern Mediterranean (24%), Western Pacific (37%), and European Region all reported an increase in the number of new cases, whereas the Americas Region (20%) and Southeast Asia Region (8%) recorded a decrease (WHO, 2022). On March 2, 2020, two cases of COVID-19 were initially discovered in Indonesia, and on March 24, 2020, one case was discovered in Nusa Tenggara Barat (NTB). NTB COVID-19 data, as of February 8, 2022, reported 28.977 confirmed cases with 922 deaths (Dinas Kesehatan NTB, 2022).

COVID-19 has impacted various fields such as health, tourism, economy, education, and social (Sukmana et al., 2020). In the health sector, the death rate for COVID-19 is around 3.4

percent, compared to only 0.1 percent for the seasonal flu. This virus is at least twice as contagious as the common cold, and it can take up to 14 days for symptoms to develop (Resnick & Animashaun, 2020). Meanwhile, people with this virus can often unknowingly infect other people. That results in high hospitalization rates, leading to new health service problems (Alirol et al., 2011). Therefore, various attempts have been made to stop the spread of COVID-19, one of which is by launching a vaccination program.

COVID-19 vaccination is a government policy program worldwide that aims to reduce transmission of COVID-19, reduce morbidity and mortality due to COVID-19, achieve herd immunity in the community, and protect people from COVID-19 disease so that they remain productive socially and economically. Herd immunity can only form if vaccination coverage is high and evenly distributed throughout the region (Ministry of Health, 2021). In January 2021, the Food and Drug Supervisory Agency, as quoted by Dewi et al. (2021), issued an

Emergency Use Authorization (EUA) for the Coronavac vaccine produced by Sinovac, taking into account the emergency and limited evidence of the efficacy and safety of the vaccine (Dewi et al., 2021).

Perspective and acceptance studies are significant because they offer vital information that health education programs can use to target particular groups and increase vaccination rates (Fadloli Mubarak et al., 2021; Maulana et al., 2021; Trepanowski & Drazkowski, 2022). The differences in perspective and acceptance regarding the COVID-19 vaccination program have occurred in various countries (Alqudeimat et al., 2021; Raja et al., 2022; Munaa et al., 2021; Sharun et al., 2020; Zilhada et al., 2022). In India, of the 351 participants, 86.3% planned to receive the COVID-19 vaccination, while 13.7% confessed to having second thoughts (Sharun et al., 2020). The lowest percentages of respondents who firmly agree that they would embrace COVID-19 are in France (26%) and the Democratic Republic of the Congo (15%) (de Figueiredo et al., 2023). We discovered a number of variables affecting the degree of approval. Since vaccination looks to be a crucial preventive step that can stop the COVID-19 pandemic, public health strategies must immediately address the issues that lead to low vaccine acceptance (Alqudeimat et al., 2021). Participant views in the FGD revealed that there were differences in COVID-19 vaccine acceptance, vaccination status as mandatory or optional, vaccine refusal, and COVID-19 barrier vaccinations. The willingness of participants to receive vaccinations varies, and some participants are willing to help society become more vaccinated (Setyawati et al., 2022).

Concern about safety and halal aspects was the reason respondents rejected the program (UNICEF Indonesia, 2020), and this resistance was quite common among Islamic boarding schools (Zilhada et al., 2022). At the Islamic boarding school, the COVID-19 immunization was mostly rejected. Fifteen Islamic boarding schools in Jakarta, Banten, and West Java had their survey findings from PPIM UIN Jakarta published in 2021. Up to 36% of students claimed they were unsure or uninterested in getting the COVID-19 immunization, and 5% of students denied vaccination due to religious beliefs (PPIM UIN Jakarta, 2021).

The implementation of the COVID-19 vaccine in Islamic boarding schools has been highly strategically planned, given the significant number of Islamic boarding schools in Indonesia. This is in line with the statement

made by the Deputy Minister of Religion on August 14, 2021, which aims to stimulate the acceleration of the COVID-19 immunization program in Islamic boarding schools (KOMPAS, 2021). The location of Islamic boarding schools was cited as a top priority in the implementation of the COVID-19 vaccination by the Minister of State-Owned Enterprise on August 30, 2021 (VOI, 2023).

One of the Islamic boarding schools in West Nusa Tenggara is Nurul Islam, a conventional Islamic boarding school in the center of Mataram. Several studies in the area of health have been carried out in Nurul Islam (Aini et al., 2019; Pratama et al., 2019; Aini et al., 2020; Hidayat et al., 2020); however, no studies have ever been done on the COVID-19 vaccine acceptance. Therefore, the study aimed to identify the factors influencing the acceptance of the COVID-19 vaccine at the Nurul Islam Sekarbela Islamic Boarding School.

## METHODS

A cross-sectional descriptive research design was used in this study to obtain an overview of the academic community's acceptance of the COVID-19 vaccination. This research was conducted for six months at the Nurul Islam Sekarbela Islamic Boarding School, Indonesia, after obtaining approval for ethical eligibility under number 205/UN18.F7/ETIK/2022 from the Research Ethics Committee, Faculty of Medicine, University of Mataram.

The reachable population in this study is the entire academic community of the Nurul Islam Sekarbela Islamic Boarding School. Stratified random sampling uses a heterogeneous population arranged in several strata. Study participants were the civitas academica of Nurul Islam Sekarbela Islamic Boarding School who registered with the following criteria: male or female had or were subjects who received the COVID-19 vaccine. Subjects who could not participate and did not give informed consent were excluded from this study.

Data on the subject's acceptance of the COVID-19 vaccine was carried out through a survey using a validated questionnaire as an instrument with a slight modification. The questionnaire covers several aspects: sociodemographics, willingness to pay, requests for information, and halal. The draft of the results of preparing the questionnaire was compiled in Indonesian and transcribed using a

Google Form. Validity and reliability are indicated by the values of the correlation coefficient and Cronbach's alpha that meet the requirements (1 and 0.615), respectively. Data analysis, both as a whole and for each aspect of the questionnaire, was carried out qualitatively and quantitatively using appropriate descriptive statistical techniques using Microsoft Excel tools.

## RESULTS AND DISCUSSION

The research instrument was developed through a literature review. An initial draft of 21 items was obtained, consisting of 8 items related to demographics, two items related to COVID-19 history, six aspects related to acceptance, and five aspects related to religious attitudes. The validity of the contents and face of the instrument was assessed by eight experts in the fields of vaccines and community pharmacy. According to the reliability test results, the Cronbach's alpha coefficient value is 0.615.

A total of 124 respondents agreed to take part in this study. The age range of the respondents ranged from 14 to 20 years, with the highest percentage being at the age of 17. Female respondents are more dominant in this study. Respondents came from the islands of Lombok and Sumbawa, with the majority coming from Mataram. Most parents' education is in elementary school and senior high school. The majority of parents' occupations are laborers and self-employed. A small number of respondents needed to fill in the parents' education and work sections and the parents' place of residence. In filling it out, the respondents possibly needed more confidence in conveying conditions related to this aspect. The majority of respondents live in private or family homes. Respondent demographic data is illustrated in Table 1.

A total of 117 (94.35%) respondents answered that they had never been infected with COVID-19. Meanwhile, 3 (2.41%) had been infected with COVID-19. Three people (2.41%) were unsure, and one person (0.80%) did not fill it out. Doubts regarding the status of Covid-19 can be caused because the respondent has experienced the same symptoms as Covid-19 but has yet to check himself with the Covid-19 examination, so the respondent cannot decide whether he is infected with Covid-19 or not. This result is in line with the study conducted by Ellimat et al. (2021), in which some participants indicated that they might have been infected with COVID-19 but could not confirm that

through any laboratory testing (El-Elimat et al., 2021).

For answers that do not fill in, there is a possibility that the respondent has been infected with COVID-19 but is worried about being identified because people exposed to COVID-19 still get a negative stigma from society. As we know, patients, as well as those around them, experience anxiety due to fear. These individuals avoid getting the necessary medical care (Rewerska-Juško & Rejda, 2022).

Most respondents (72%) had not been vaccinated. Meanwhile, 8 percent of respondents were vaccinated for the first time, 18 percent were vaccinated for the second, and 1 percent received a booster. Of most respondents, 70 people (57%) were not willing to receive the vaccine, and 31 people (25%) were willing to receive the vaccine. Thus, the respondent's rejection status is still high. Based on the 2015 WHO definition, rejection status is included in vaccine hesitancy, namely reluctance or refusal to vaccinate even though a vaccine is available. However, 13 people (18%) were hesitant to receive the vaccine, so there is still a chance to improve their vaccine acceptance status. The reasons for accepting and rejecting vaccines are illustrated in Table 2.

The reasons for receiving vaccines are efficacy, safety, and recommendations. The primary motive for 27% of respondents to participate in the COVID-19 vaccination program was vaccine efficacy, which includes milder side effects, increased immunity, and infection prevention. The safety element, specifically the use's safety and use in an emergency, was cited by 12% of respondents as their top justification for vaccine acceptance. Due to the government's policy of providing vaccines free of charge, 4% of respondents indicated that they did not consider the cost aspect when participating. Environmental aspects are essential in selecting decisions, equal to 26%, or 32 respondents, especially in the cottage. On the other hand, 23% of respondents chose to abstain from explaining the reasons for their refusal, namely 28 respondents.

Social media, interestingly, in this case, has no effect. This is different from Kanyike et al.'s (2021) research on health students, which shows that sources of information play an essential role in spreading inaccurate vaccine information, mainly because of the infodemic. Access to gadgets is not restricted at the boarding school, but it could be due to students' limited knowledge of educational content or respondents who are not interested in it.

The reasons for vaccine rejection can be grouped into efficacy, safety, and recommendations. The highest reason for rejection related to vaccines is the effect of vaccines suspected of not curing patients affected by COVID-19. In addition, the side effects of vaccines and fear of needles are reasons why children are reluctant to receive vaccines. Environmental aspects (family, school, social media, and family) significantly influence more than security aspects (21%, or 26

respondents). This illustrates that environmental values play a significant role in determining the attitude toward vaccine acceptance in children. In Table 1, it is explained that the family plays the most dominant role in vaccine rejection. It can be understood that in childhood and adolescence, the family has a significant role in making decisions made by children. On the other hand, there were still students who chose to abstain from explaining the reasons for refusal, 13% (16 respondents).

**Table 1.** Respondent demographic data (n = 124)

Variable	Number of Respondents (n)	Percentage (%)
Age (years)		
14	1	0.80
15	14	11.29
16	37	29.83
17	38	30.64
18	24	19.35
19	6	4.83
20	4	3.22
Gender		
Male	47	37.90
Female	77	62.09
Location origin		
Mataram city	111	89.51
North lombok regency	1	0.80
West lombok regency	5	4.03
Center lombok regency	4	3.22
East lombok regency	2	1.61
West sumbawa regency	1	0.80
Parents' educational status		
Have no education	10	8.06
Primary school	40	32.25
Junior high school	25	20.16
Senior high school/Vocational high school	43	34.67
Diploma	1	0.80
Bachelor degree	1	0.80
Master degree	1	0.80
Doctoral degree	1	0.80
Not filling	2	1.61
Parent's employment		
Laborer	33	26.61
Trader	5	4.03
Entrepreneur	41	33.06
Housewife	26	20.96
Fisherman	2	1.61
Teacher	1	0.80
Farmer	5	4.03
Tailor	1	0.80
Government employees	3	2.41
Female migrant worker	1	0.80
State-owned enterprise employees	1	0.80
Groceries	1	0.80
Doesn't work	2	1.61
Not filling	2	1.61
Respondent's place of residence		
Private/family house	112	90.32
Hostel	9	7.25
Not filling	3	2.41

**Table 2.** Reasons for accepting and refusing vaccines (n = 124)

Variable	Number of Respondents (n)	Percentage (%)
<b>Accepting</b>		
Government recommendations/ travel requirements	28	23%
No answer	26	21%
Able to prevent	23	19%
Endurance enhancer	19	15%
Cottage recommendation	19	15%
Safe to use	13	11%
Family recommendation	14	11%
Crisis conditions	11	9%
Easy at no cost	10	8%
Friends recommendation	8	7%
Milder symptoms	8	7%
<b>Refusing</b>		
Vaccines do not necessarily cure	42	34%
Fear of needles	18	15%
Vaccines cause side effects	17	14%
No answer	16	13%
Family recommendation	14	11%
Recommendation school/cottage/ustadz	6	5%
Friends recommendation	4	3%
Already vaccinated	3	2%
Social media recommendations	1	1%

**Table 3.** Respondents Religious Attitudes (n = 124)

No.	Indicator	Number of Respondent (Percentage /%)			
		Strongly Agree	Agree	Disagree	Totally disagree
1.	You think you can overcome illnesses such as cough, flu, and fever, but only Allah can heal illnesses. Covid-19.	72 (57.8)	37 (29.8)	6 (4.83)	4 (3.22)
2.	If your family is exposed to the disease Covid-19, you also feel that you will be exposed to the disease.	5 (4.03)	44 (35.48)	57 (45.94)	12 (9.67)
3.	If you get Covid-19, you will change lifestyle habits to maintain health.	41 (33.06)	70 (56.45)	9 (7.25)	2 (1.61)
4.	You think that there is no need to take care of your health because you have surrendered to Allah.	14 (11.29)	29 (23.38)	69 (55.64)	9 (7.25)
5.	You think that all difficulties must have a way out so you just have to surrender to Allah so that Covid-19 will pass soon.	42 (33.87)	54 (43.54)	22 (17.74)	3 (2.41)

The following description can be obtained based on the reasons for acceptance and rejection: The aspect of efficacy is the leading choice. Furthermore, the safety aspect is considered even though the classic problem supports it in the form of a child's fear of needles. Environmental factors in acceptance are dominantly influenced by the cottage, while the family dominantly influences rejection. This is an opportunity to promote the use of vaccines through approaches taken by families and Islamic boarding schools. Interestingly, social media has no significant influence on respondents' acceptance of vaccines.

Respondents mainly chose the place to get the vaccine at school, or 47% (58 respondents). Several others chose healthcare facilities, successively covering 24% of public health centers (29 respondents), 8% of hospitals (9 respondents), and 1% of clinics (1 respondent). Some respondents chose to stay at home (1%, one person) or at a mosque (2%, two). Convenience and safety collectively form the basis of respondents' choice of location for vaccine selection. On the other hand, 19% (23 respondents) did not answer the question, and some even added a statement not to be

vaccinated. The religious attitude of the respondents is illustrated in Table 3.

Statements about religious attitudes are classified into two parts: positive (2 and 3) and negative (1, 4, 5). Negative statements show fatalism regarding COVID-19. From 3 consecutive negative statements, 87%, 89.5%, and 77.4% of respondents chose strongly agree and agree on statements. On the other hand, the two positive statements (2 and 4) show that 39.53% and 34.7% chose the statements that strongly agree and agree. Boarding school managers need to revitalize the teaching of the concept of trustworthiness, especially its application in the health sector.

The recommendations are that Islamic boarding schools can work together with relevant agencies to ensure the effectiveness and safety of vaccines for children. This promotional effort must be adapted to the conditions of the boarding school and the age of the students and use a variety of methods accepted by the target audience, especially the millennial generation (e.g., utilizing technological developments and the role of influencers). The negative stigma about syringes needs to get more serious attention when administering vaccines to children at the school or madrasah level.

Peer groups in the internal environment are needed to provide a sense of security and trust in the target, for example, through forming pesantren cadres or internal socialization among the pesantren academic community. The development of social media can be accessed quickly and has exciting content for respondents as part of the promotion effort. development of regulations relating to respondents' interests, hoping this will become an attraction for receiving vaccines.

The study sample was obtained from a boarding school in West Nusa Tenggara. In contrast, the style of Islamic boarding schools varied quite a lot, ranging from Salafiyah (traditional) to modern. This research may not represent the overall situation or show a precise picture of the problem. Furthermore, no assessment of respondents' knowledge about COVID-19 and how it affects vaccine acceptance would make the instrument reasonably acceptable with an adequate response.

## CONCLUSIONS

Based on the findings, it was determined that the Nurul Islam Sekarbela Islamic Boarding School's level of acceptance of the COVID-19 vaccine is still considered low (35%) and in doubt (65%). Acceptance of vaccines is mostly

influenced by their effectiveness, safety, and family recommendations. Acceptance of vaccines is impeded by the dominant fatalistic religious mindset.

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## CONFLICT OF INTEREST

None to declare.

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