



Level of Anxiety with COVID-19 Vaccine Screening Results in Jember Regency

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Abstract

Anxiety can decrease concentration, so it can be dangerous if it happens to someone who is going to do work that could pose a risk of injury. This research aims to identify anxiety levels, identify vaccine screening results COVID-19, and analyze the relationship between anxiety levels and vaccine screening results COVID-19. The independent variable in this study was the level of anxiety, while the dependent variable was the results of vaccine screening for COVID-19. This research had 115 respondents using a sampling technique, namely consecutive sampling. This research design uses a cross-sectional correlation type approach. Use bivariate statistical tests. The results of this study were that most of the vaccine participants' anxiety levels were high, COVID-19 was mild anxiety 54.8%, most respondents had vaccine screening results for COVID-19, namely passing the screening at 92.2%, and there is a relationship between the level of anxiety and the results of the vaccine screening COVID-19 with a value of $p=0.000$ ($p<0.05$). It is hoped that this research can provide input and additional information for nursing education regarding people's anxiety levels.

Keywords: Anxiety, COVID-19, Vaccine Screening

1. BACKGROUND

Coronavirus is an RNA virus with a particle size of 120-160 nm. This virus mainly infects animals, including bats and camels. Before the outbreak COVID-19, there are 6 types of corona virus that can infect humans, namely alpha coronavirus 229E, alphacoronavirus NL63, beta coronavirus OC43, beta coronavirus HKU1, Severe Acute Respiratory Illness

Coronavirus (SARS-CoV), and Middle East Respiratory Syndrome Coronavirus (MERS-CoV) (Susilo et al., 2020). So, the side effects of this virus can cause a decrease in immunity. Other impacts can cause excessive anxiety due to fear of contracting the COVID-19 virus (Afandi et al., 2021). To reduce the number of cases, the government is carrying out vaccinations. Providing vaccines is one of

the efforts considered to be the most effective in overcoming the pandemic COVID-19. Vaccination or immunization is a procedure of administering a disease antigen, usually in the form of a weakened or dead virus or bacteria. The goal is to make the body's immune system recognize and be able to fight when exposed to the disease (Nareza., 2021).

Vaccinations have been given in all countries, a total of 595,923,114 vaccine doses (7.6%). In Indonesia, the target number of vaccinations is 181,554,465, with the number of vaccine targets for health workers, public officials, and the elderly reaching 40,349,051. The number of those receiving the 1st vaccination is 6,389,837, and as many as 2,941,016 have received the 2nd vaccination (WHO., 2021). During the vaccination process, screening is carried out to confirm the vaccine COVID-19 given to the appropriate group, eliminates contraindications to vaccination, and minimizes the risk of post-immunization adverse events (AEFI). After passing the screening, potential recipients will receive a vaccination injection. Each hospital can be a health facility providing vaccination services for COVID-19 (Putri et al., 2021). Based on interviews with the vaccine plan community in March 2021, it was found that 4 out of 5 vaccine plan patients

experienced anxiety problems characterized by difficulty sleeping, waking up feeling dizzy in the morning, nausea, and decreased appetite. The patient appeared to be pacing back and forth in front of the registration area. Of the 4 patients who experienced anxiety disorders, 1 patient experienced an increase in blood pressure, so the vaccine had to be postponed.

Anxiety is an emotional disorder (affective) characterized by feelings of deep and ongoing fear or worry, not experiencing disturbances in assessing reality (reality testing ability), the personality still remains intact (does not suffer from personality cracks/splitting of personality), behavior may be disturbed but still within normal limits. Everyone's views on vaccination are different, so responses are different. Every time facing surgery it causes fear and anxiety in patients. Anxiety often appears before the age of 30 years (Afandi et al., 2023). Someone who is so anxious that they cannot speak and tries to adjust to anxiety often becomes an obstacle, the patient becomes irritable, confused, and more irritable due to psychological reactions, compared to mildly anxious people (Afandi et al., 2023).

COVID-19 causes emotional stress, such as anxiety, in everyone. All individuals and groups experience feelings of hopelessness, excessive sadness, and loss of purpose in life due to anxiety during the pandemic (Yuliyanti et al., 2023). Some groups are more vulnerable to experiencing emotional stress due to the pandemic, such as the elderly, people with impaired immune function, and those who live, give or receive care in hospitals, such as health workers. This is because health workers have a high risk of exposure to the virus due to close contact with patient COVID-19, feelings of worry about transmitting the disease to the family, lack of personal protective equipment and increased working hours (Nur et al., 2022).

There are many people who may experience panic when they are about to receive a vaccine injection COVID-19. Moreover, there is a lot of news about the side effects of vaccines, which can cause dangerous things, including death. The pandemic is a time of great uncertainty and unanswered questions, so, naturally, some of us are more prone to anxiety. Anxiety when getting a vaccine injection and afterward takes various forms. You can have cold sweats, body tremors, dizziness, and even nausea. Excessive anxiety will have an impact on increasing blood

pressure, which can affect vaccine screening results COVID-19 did not pass, and in the end, vaccination was postponed. Several things that need to be done to reduce anxiety before taking the vaccine are using breathing strategies, shifting attention, and visualization exercises to imagine yourself feeling good (Afandi & Putri, 2023; Voss et al., 2023).

Based on the description above, the author is interested in researching the relationship between anxiety levels and vaccine screening results COVID-19 at the Hospital in Jember Regency

2. METHODS

The design of this research uses a quantitative design with a cross-sectional approach. The population of this study was nurses who were active in treating COVID-19 patients at one of the hospitals in Jember. The selected sample was 115 using a consecutive sampling technique with the criteria being that the respondent was aged (17-60 years), could communicate well, had had their first vaccination, and was willing to be a respondent. Data collection was carried out using a questionnaire sheet. The assessment of community anxiety levels was carried out when respondents visited the hospital and screened the results of the COVID-19 vaccination. Data interpretation

is carried out after the results of the questionnaire review have been obtained. The hospital team carried out the ethical suitability test where the data was taken.

3. RESULTS

The results of this research are presented through data on respondent characteristics such as gender, age,

education, occupation, and history of illness. Apart from that, the results of identifying the level of anxiety and the results of the COVID-19 vaccine screening are also presented, as well as the results of the cross-tabulation between the level of anxiety and the results of the COVID-19 vaccine screening.

Table 1. Characteristics of Respondents (n=115)

Characteristics	Parameter	Frequency	Percentage
Gender	Man	55	47,8%
	Woman	60	52,2%
Age	17 – 25 years	32	27,8%
	26 – 45 years	63	54,8%
	>45 years	20	17,4%
Education	Junior High School	14	27%
	Senior High School	70	60,8 %
	College	31	12,2%
Work	Student	8	7 %
	Private	60	52,2 %
	Self-employed	35	30,4 %
Disease history	State Civil Apparatus	12	10,4 %
	Hypertension	5	4,3%
	Diabetes mellitus	0	0
	Nothing	110	95,7%

Respondent characteristics data based on gender, the majority of respondents were female, namely 60 respondents (52.2%). Data on the characteristics of respondents based on age shows that the majority of respondents were aged 26-45 years, namely 63 respondents (54.8%). Data on the characteristics of respondents based on education shows that the majority of respondents, namely 70

respondents (60.8%), have a high school education. Data on the characteristics of respondents based on work shows that the majority of respondents have private jobs, namely 60 respondents (52.2%). Data on the characteristics of respondents based on disease history shows that the majority of respondents, namely 110 respondents (95.7%), had no previous history of disease.

Table 2. Anxiety Level of COVID-19 Vaccine Participants

No.	Emergency level	Amount	Percentage
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1. Normal/not anxious	37	32,2%
2. Mild anxiety	63	54,8%
3. Moderately anxious	15	13%
Total	115	100%

From Table 2, it can be seen that most of the respondents' levels of anxiety were vaccine participants COVID-19 63

respondents (54.8%) were mildly anxious.

Table 3. COVID-19 Vaccine screening results.

Table 3. COVID-19 vaccine screening results

No.	Screening results	Amount	Percentage
1.	Passed screening	106	92,2%
2.	Did not pass screening	9	7,8%
	Total	115	100%

From Table 3 it is explained that the majority of respondents had passed the vaccine screening results COVID-19 as many as 106 respondents (92.2%), with a

mean of 1.08. This can be interpreted as the average vaccine screening results COVID-19. Respondents are asking for vaccine screening COVID-19.

Table 4. Cross tabulation of anxiety and COVID-19 vaccine screening results

Emergency level	Screening results		Total	p-value
	Passed screening	Did not pass screening		
Normal/not anxious	37	0	37	
Mild anxiety	60	3	63	0,000
Moderately anxious	9	6	15	
Total	106	9	115	

In table 4, all respondents who were not worried about their screening results passed. Meanwhile, the majority of respondents with mild anxiety passed the screening results, amounting to 60 respondents. And of respondents with moderate anxiety, 9 respondents were declared to have passed the screening. Significance value Kendalls Tau 0.000 α ($\alpha= 0.05$), then there is a relationship

between anxiety level and vaccine screening results COVID-19.

4. DISCUSSION

Based on data on the characteristics of respondents based on gender, most respondents are female. In line with Tasnim's research (2020), the gender of the community regarding the perception of the COVID-19 vaccine is 146 respondents (69.5%) women (Tasnim, 2021). In another

study, 143 respondents (76%) showed that women were willing to get the COVID-19 vaccine. Women have a more careful attitude and can receive information well. The COVID-19 vaccine, which is given free of charge, makes people move quickly to get it (Widayanti & Kusumawati, 2021). Women are needed more when caring for their families, so they must get vaccines to look after family members.

Based on data on the characteristics of respondents based on age, most respondents were aged 26-45 years. In line with the results of other research, respondents aged 20-40 years were 90 respondents (84.7%). This is because this age is most exposed to COVID-19 (Khairunnisa & Ghinanda, 2022). Vaccination is carried out at an early stage for health workers and continues with people aged 18-59 years. Vaccines at this age will produce a strong immune response (Safira et al., 2021). Neutralizing antibody titers decrease in proportion to increasing age. Young respondents in the 18-39 years age group had higher titer neutralizing antibodies (Safira et al., 2021). One of the requirements for getting the vaccine is being over 12 years of age. At the age of 18-59 years, antibody immunity will be produced. Vaccines will protect the body from viruses or bacteria that infect the

body. Because the body has previously formed antibodies against a disease.

Based on data on the educational characteristics of respondents, it was found that most respondents had a high school education. Vaccine participants had higher education, namely upper secondary and tertiary education, at 93.6%. Education is an effort for someone to develop something or information to make it better. The higher a person's educational background, the more knowledge they gain. However, this does not mean that low education will decrease knowledge, all of which depends on each individual's cognitive personality. A person's education certainly influences the perception of receiving a vaccine, whereas highly educated people tend to have a positive perception of the COVID-19 vaccine. This may be related to the experience factors possessed by the individual himself, thus influencing perceptions and then influencing a person's level of acceptance of carrying out the COVID-19 vaccination (Martoredjo, 2020; Putri et al., 2020).

Based on data on job characteristics of respondents, the majority of respondents have private jobs. Another study found that 58.9% of the recipients of the COVID-19 vaccine were respondents who had jobs. Work is one of the factors that influences a

person's level of perception. In other research, it was found that there is a relationship between work and a person's health status. People carry out vaccines for activities. As more and more people receive vaccines, private companies also require their employees to receive at least the first dose of the vaccine. The vaccine will increase the body's immunity and reduce the risk of worsening when infected with COVID-19 (Djamaludin et al., 2022; Solon et al., 2021; Masitha et al., 2021).

Based on data on the characteristics of respondents with disease history, most respondents had no previous history of disease. In line with other research, it was found that the frequency of respondents with a history of disease that did not have infectious diseases was 93%. Non-communicable diseases are diseases that cannot be transmitted from one person to another through any form of contact (Masitha et al., 2021). A person who has a history of non-communicable diseases is suffering from heart disease, hypertension, diabetes, rheumatism, cancer or tumors, stroke, traffic accidents, and osteoporosis or bone fractures. Someone with a history of non-communicable diseases tends to have a positive perception as do people who do not have a history of non-communicable diseases. Where people

who have congenital diseases are more unwilling to vaccinate because they are worried about the side effects they will experience. This is because their bodies cannot withstand the pain of the side effects of the COVID-19 vaccine, and this will then cause complications between congenital diseases. or comorbid with the COVID-19 vaccine. Therefore, people with a history of non-communicable diseases are advised to maintain their health by implementing health protocols and consuming nutritious food (Ardiansyah & Lestari, 2023).

Based on the data, it can be seen the average level of anxiety among vaccine participant respondents COVID-19 is 46.5 with a minimum value of 25 and a maximum value of 72. It can be interpreted as the average level of anxiety of respondents, namely the level of mild anxiety. In line with research conducted by Kholidiyah, the public's anxiety when undergoing a vaccine in Bangkok Village, Lamongan Regency, most respondents had moderate anxiety, 80.3% (Kholidiyah et al, 2021). Anxiety is a feeling of fear that something will happen caused by anticipation of danger and is a signal that helps individuals to prepare to take action to face the threat. The influence of demands, competition, and disasters that

occur in life can impact physical and psychological health (Lidiana et al., 2022). Anxiety is a natural thing that every human being experiences. Anxiety is considered a part of everyday life. Anxiety is a general feeling where a person feels afraid or loses self-confidence whose origin or form is unclear (Putri & Afandi, 2022). Anxiety is something that affects almost everyone at some time in their lives. Anxiety is a normal reaction to situations that are very stressful in a person's life. Anxiety can appear alone or combined with other symptoms of various emotional disorders. The anxiety experienced by respondents is a natural thing, considering that the current COVID-19 pandemic is a type of disease that society has never experienced before (Putri et al., 2022). Anxious responses emerged as a result of the vaccine program being implemented and increasingly increased as time approached. Anxiety occurs because people have received information from the media that provides vaccination information daily. Anxiety increases when people receive information about AEFI (adverse events after immunization), COVID-19 regarding pain at the injection site, muscle pain, and headaches.

Based on the data, it can be seen that the majority of respondents passed the

vaccine screening results COVID-19 as many as 106 respondents (92.2%), with a mean of 1.08. This can be interpreted as the average of vaccine screening results COVID-19. Respondents are asking for vaccine screening COVID-19. Screening is a health examination to determine whether someone is at higher risk of experiencing a health problem (Khoirunisa, 2021). The goal is to ensure the COVID-19 vaccine is given to the appropriate group. Eliminate contraindications for vaccination. Minimizing the risk of adverse events after immunization and optimizing the effectiveness or benefits of vaccines. Screening must be carried out for the public before receiving the vaccine injection COVID-19. Because people who will receive the vaccine must ensure that their bodies are in good health. A healthy body condition and no complaints will cause these people to pass the vaccine screening stage COVID-19 (Gunawan, 2021).

Based on the data, it can be seen that the correlation coefficient value is 0.348, meaning the level of anxiety with the vaccine screening results. COVID-19 has a sufficient correlation coefficient. Significance value Kendall's Tau 0.000 α ($\alpha = 0.05$), then there is a relationship between anxiety level and vaccine

screening results COVID-19 at Bina Sehat Jember Hospital. The + (positive) value indicates that the anxiety level data corresponds to the vaccine screening results. COVID-19 is unidirectional. Vaccination turns out to cause anxiety in the community. Anxiety occurs during a pandemic COVID-19, and it is also felt when there is a vaccination program in the community (Putri et al., 2021). Source of public concern regarding vaccines COVID-19 is about the safety and efficacy of vaccines, vaccine side effects, misunderstanding of the need for vaccination, lack of trust in the health care system, and also the public's lack of knowledge of the disease COVID-19 can be prevented with vaccines. The feelings of anxiety experienced by people can make people hesitate or not be willing to get vaccinated. Public anxiety occurred during the early days of the pandemic COVID-19 and continues when there is a vaccination program for the community. The study results show that there is a relationship between willingness to vaccinate and anxiety (P-value: 0.001). In accordance with the results of other studies which state that there is a correlation between vaccine acceptance and COVID-19 with anxiety (Nurtanti & Husna, 2023; Afandi & Ardiana, 2020).

People willing to be vaccinated express that they believe vaccination can protect themselves, their families, and others. Meanwhile, people who refuse vaccines have doubts about vaccines. Doubts can be caused by the accuracy of the source of the information received. Group of students accessing information sources about Vaccination COVID-19 from the Ministry of Health, television programs, news, health workers, scientific journals, and websites have better knowledge than those who access information from social media platforms like Facebook, Instagram, WhatsApp, and Twitter. Accurate and reliable information can help individuals plan appropriate actions even if the situation seems vulnerable to the media presenting inaccurate information. On the other hand, wrong information will create an anxiety and panic response, which can hinder the individual's response in taking appropriate action (Asmaningrum & Afandi, 2022; Rifai et al., 2021). People experience anxiety before taking the vaccine because people can easily get information about vaccines from the media. When people get information from the right sources, they are better prepared to carry out vaccines. This results in lower levels of anxiety so that it does not affect their health and has the

effect of passing the vaccine acceptance screening COVID-19.

5. CONCLUSION

The results of this research showed that there was a significant relationship between anxiety and COVID-19 screening results. So, the mechanism for screening and educating patients needs to be modified. It is hoped that the anxiety of patients who will undergo screening can be reduced.

AUTHOR CONTRIBUTIONS

The author contribute all research activity such as conceptualization, data curation, analysis, writing & editing, manuscript revisions.

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CONFLICT OF INTEREST

The authors declare no conflict of interest for this publication.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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