



# AISCH 2023

## The 4<sup>th</sup> Al Insyirah International Scientific Conference on Health

### THE RELATIONSHIP OF THE LEVEL OF KNOWLEDGE WITH THE LEVEL OF ANXIETY FOR IMPLEMENTING BOOSTER VACCINE COVID-19

<sup>1</sup>Sri Wahyuningsih, <sup>2</sup>Arya Ramadia, <sup>3</sup>Mersi Ekaputri  
<sup>1,2,3</sup>Nursing Study Program, Al Insyirah Pekanbaru Health College  
Street. Parit Indah No. 38, Pekanbaru City  
[aryaramadia@gmail.com](mailto:aryaramadia@gmail.com)

#### ABSTRACT

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS CoV-2). The policy pursued by the government is to implement the COVID-19 vaccination program which consists of primary and booster vaccinations. The lack of knowledge in the community about booster vaccines causes anxiety which results in slow implementation of this vaccine program. The general objective of this study was to determine the relationship between knowledge level and anxiety level for implementing the COVID-19 booster vaccine in the Sikes Yonarhanud 13/PBY Pekanbaru Working Area. This type of research uses quantitative research which is descriptive correlative in nature, with a cross sectional approach. The research site was conducted at the Sikes Yonarhanud 13/PBY Pekanbaru Clinic. The time of the research started in September 2022 - February 2023 with a total sample of 78 people who were determined by the accidental sampling technique. The results showed that the majority of people's knowledge about the implementation of the COVID-19 Booster Vaccine had sufficient and good knowledge, namely as many as 30 people or 38.5%, while the majority of people's anxiety about booster vaccines was moderate anxiety, namely as many as 24 people or 30.8%. Based on the results of statistical tests, it showed that there was a relationship between public knowledge and anxiety about the implementation of the COVID-19 Booster Vaccine with a P-Value of 0.009 ( $P < 0.05$ ). Suggestions for research sites are to be able to provide counseling about the COVID-19 Booster Vaccine to people visiting the Sikes Yonarhanud 13/PBY Pekanbaru Working Area.

Keywords: Knowledge, anxiety, booster vaccine covid-19

#### INTRODUCTION

Coronavirus Diseases 2019 (Covid-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS CoV-2). SARS-CoV-2 is a new type of corona virus that has never appeared before in humans (Yulianto Diyan, 2021). The effort to avoid the spread of the Covid-19 virus is by administering a vaccine (Vaccination) (WHO,2021). The results of the study show that there is a decrease in antibodies 6 months after receiving a complete dose of vaccination so that a follow up or booster dose of vaccination is needed to increase individual protection, especially in vulnerable groups.

Booster vaccination is covid-19 after a person has received a complete dose of primary vaccination which is aimed at maintaining the

level of immunity and extending the protection period. Booster vaccination is organized by the government, targeting people aged 18 years and over with priority groups namely the elderly and immunocompromised (Ministry of Health, 2022).

The number of Indonesian residents who received a booster vaccine dose in January 2022 was reported to be 4,204,640 people or 2.03% of the national target. The largest booster vaccination achievement in Indonesia was West Java province, namely 9.3 million doses. Meanwhile, Riau province is in 9<sup>th</sup> position with a booster dose of 1.43 million doses. The highest achievement of covid booster vaccination in Riau province is in the Meranti Islands, namely 54.37%, followed by Siak district, namely 39.50%, while the city of

Pekanbaru is 3<sup>rd</sup> position, namely 36.57%. Nationally, the target for the third vaccine is 50%. Meanwhile, the national booster vaccine capacity is still low at around 25.78% (Kemenkes, 2022). This shows that Indonesia has not yet reached the standards of World Health Organization (WHO).

The main aim of all types of vaccines is to stimulate the body's immune system to produce antibodies in the body that remain long enough to be able to fight antigens from certain pathogens that have entered the body (John and Samuel, 2000). The realization of 3<sup>rd</sup> dose of booster Covid -19 Vaccination in Pekanbaru City is still quite low, although various efforts have been made by the government to encourage the achievement of booster vaccination but have not yet achieved maximum results. The achievement of booster vaccination is still at 25.78% of the vaccine acceptance target in Indonesia, the Pekanbaru City government continues to encourage the implementation of follow-up vaccinations.

Vaccine hesitancy, anxiety and misinformation create barriers to achieving vaccine coverage. Study of potential Covid-19 vaccine acceptability in 13,426 randomly selected people in 19 countries, most with high Covid-19 burden. From 13,426 People, 71.5% answered that they would take the vaccine if it was proven safe and effective, and 48.1% said that they would give birth if the agency were associated with recommended it. The far from universal willingness to receive a covid-19 vaccine is concern. The spread of misinformation through various channels can have a major impact on acceptance of the Covid-19 Vaccine (Lushington 2020).

Anxiety can be caused by various factors, one of which is knowledge (Suwandi and Malinti, 2020). According to. In (Maulida et al., 2020) said that the very fast spread of Covid-19 can cause mental health and psychosocial problems in individuals, families and even health workers.

Knowledge is the ability to receive, retain and use information, which is influenced by experience and skills. Most of the knowledge a person has comes from formal and informal education, personal and other people's

experiences, the environment, and mass media (Syakurah & Moudy, 2020).

Meanwhile, according to Notoatmodjo (2014) in (Usman et al., 2020), a person's level of education influences thinking ability, and individuals will think more rationally. One of the factors that influence education is external factors, namely information, social, cultural and environmental. Knowledge is not only obtained from the level of education taken but is also supported by information received such as mass media, newspapers, magazines, the internet and television. The aim of the research is to determine the relationship between the level of knowledge and the level of anxiety in implementing the COVID-19 booster vaccine in the Sikes Yonarhanud 13/PBY Pekanbaru work area.

## **RESEARCH METHODS**

This type of research uses quantitative research with a cross sectional approach to determine the relationship between knowledge level variables and anxiety level variables using questionnaires distributed to respondents. The sampling technique used in this research was accidental sampling with a total of 78 respondents. Data collection techniques used a knowledge level questionnaire and the HRS-A anxiety questionnaire.

## RESULT AND DISCUSSIONS

Table 1. Frequency distribution of respondent characteristics based on gender, education, occupation, religion and age

No	Characteristics of Respondens	Amount(n)	Percentage (%)
1	Gender		
	Man	50	64,1
	Woman	28	35,9
2	Education		
	Senior High School	58	74,4
	S1/Bachelor Elementary School	19	24,4
	School	1	1,3
3	Work		
	TNI	36	46,2
	IRT	15	19,2
	Self Employed	13	16,7
	Student	10	12,8
	PNS	4	5,1
4	Religion		
	Islam	74	98,9
	Christian	4	5,1
5	Aged		
	Late teewns (17-25 Years)	40	51,3
	Earlyadulthood (23-35 Years)	18	23,1
	Late adulthood (36-45 Years)	11	14,1
	Early Elderly (46-55 Years)	3	3,8
	Late Elderly (56-65 Years)	6	7,7

Based on table 1, the results show that the majority of respondents' gender is male, 50 people (64.1%), the majority of respondents' education is high school, 58 people (74.4%), the majority of respondents' occupation is TNI, 36 people (46.2%), the religion of the majority of respondents is Islam as many as 74 people (98.9%), then the age of the majority of respondents is late teens (17-25 years) as many as 40 people (51.3%).

Table 2. Frequency distribution of public knowledge regarding the implementation of the COVID-19 Booster Vaccine

Category	Amoun (n)	Presentage (%)
Not Anxious	23	29,5
Mild Anxiety	24	30,8
Middle Anxiety	14	17,9
Severe Anxiety	17	21,8
Very Heavy Anxiety	0	0%
Total	78	100,0

Based on table 2, it is found that the dominant community's knowledge regarding the implementation of the COVID-19 Booster Vaccine is fairly knowledgeable and good knowledge, namely 30 people each (38.5%).

According to Notoadmojo, 2018, one of the factors that influences knowledge is the level of education. Education is an effort to provide confirmation so that positive behavioral changes occur after a COVID-19 booster is given, so many experience anxiety.

Table 3. Relationship between Level of Knowledge and Level of Anxiety for Implementing the COVID-19 Booster Vaccine

Knowledge	Kecemasan										Total	P-Value	
	Not Anxious		Mild Anxiety		Middle Anxiety		Severe Anxiety		Very Heavy Anxiety				
	n	%	n	%	n	%	n	%	n	%			
Not Good	2	5,3	5	5,5	6	3,2	5	3,9	0	0	18	23	0,009
Enough	5	8,8	13	9,2	6	5,4	6	6,5	0	0	30	38,5	
Good	16	8,8	6	9,2	2	5,4	6	6,5	0	0	30	38,5	
Total	23	29,5	24	30,8	14	17,9	17	21,8	0	0	78	100	

In table 3, the results of the chi-square statistical test obtained p-value = 0.009 or < 0.05, so it was found that there was a relationship between the level of knowledge and the level of anxiety regarding the implementation of the COVID-19 Booster vaccine. This research is in line with Rambu Herlianti's 2021 research, namely that there is a relationship between the level of knowledge and the level of anxiety of parents regarding the accuracy of immunization during the COVID-19 pandemic in the Galesong Baru village area in 2021.

This research is also in line with research conducted by Zamli in 2021, namely that there is There is a significant relationship between the level of public knowledge and the COVID-19 vaccine and there is a significant relationship between the level of public anxiety and the COVID-19 vaccine, which is also in line with research conducted by Rahmi Sartika 2022, namely that there is a relationship between knowledge and the level of public anxiety regarding the COVID-19 vaccine. 19 with a p-value of 0.026. This is in accordance with research conducted by Angelina Bella, 2022, which concluded that there is a relationship between staff support and public anxiety regarding the willingness to take the COVID-19 Boster vaccine.

## CONCLUSION

The results of research conducted on 78 respondents showed that the gender of the majority of respondents was male, 50 people (64.1%), the education of the most respondents was high school, 58 people (74.4%), the highest occupation of respondents was TNI, namely 36

people (46.2%), the religion of the majority of respondents was Islam, 74 people (98.9%), then the age of the majority of respondents was late teens (17-25 years) with 40 people (51.3%).

The dominant public knowledge regarding the implementation of the COVID-19 Booster Vaccine is sufficient and good, namely 30 people (38.5%). The dominant public's anxiety regarding the implementation of the COVID-19 Booster Vaccine is mild, namely 24 people (30.8%). Based on the results of the chi-square statistical test, it was obtained that p-value = 0.009 or < 0.05, it was found that there was a relationship between the level of knowledge and the level of anxiety regarding the implementation of the COVID-19 Booster vaccine.

## REFERENCES

- [1]. Agus Eko, 2022. Public Attitudes towards the Covid -19 Booster Vaccination Program. Dian Husada Nursing Academy Mojokerto. Mojokerto
- [2]. Jarmi and S. I. Rahayuningsih, "The relationship between gadget use and sleep quality in adolescents," J. Nursing, pp. 1–7, 2017.
- [3]. Arami Win, nopiyanti full moon sari, sri rahayu (2022). Analysis that Influences Health Workers' Decisions to Carry Out Advanced Doses of Covid-19 Vaccination (Booster). Kalimantan Islamic University Muhammad Arsyad Al-Banjari. Banjarmasin
- [4]. Dinar Rizki, (2021). Covid-19 vaccine. Yogyakarta : CV. Andi Offset
- [5]. Djauzi Samsuridjal, Epi yuni Hastuti, Ansari. S. Hasibuan, (2021). Covid -19 Booster Vaccine. Jakarta: PAPDI

- [6]. Devy, M. Harlie, U. Islam, and K. Muhammad, "CONCERNING THE INCIDENT OF COVID-19 IN THE WORKING AREA OF THE BASIRIH BARU PUSKESMAS, BANJARMASIN CITY," 2021.
- [7]. Cahyono and Darsini, "Cahyono's Community Attitude Towards," *Development. Science and Practice. Health.*, vol. 1, pp. 1–21, 2022.
- [8]. Farina, "The Relationship between Level of Knowledge and Willingness to Vaccinate Covid-19 among Residents of Dukuh Menanggal Subdistrict, Surabaya City," *Pelaks. Covid-19 Vaccination in Indonesia. Rights or Obligations of Citizens*, vol. 10, pp. 1–7, 2021, [Online]. Available: [file:///C:/Users/USER/AppData/Local/Temp/168-Article Text-499-1-10-20210424.pdf](file:///C:/Users/USER/AppData/Local/Temp/168-Article%20Text-499-1-10-20210424.pdf)
- [9]. Febrianti Noer, Maulivia Idham Cholic, Asri Wido Mukti (2021). *Relationship between Knowledge Level and Willingness to Vaccinate Covid-19 among Residents of Dukuh Menanggal Subdistrict, Surabaya City*. PGRI Adi Buana University. Surabaya
- [10]. Feronica Stefani, 2021. *Level of Public Knowledge About Covid -19*. Indonesian Adventist University. West Bandung
- [11]. Hidayati Siti, (2021). *The Relationship Between Levels of Knowledge and Community Behavior About Covid-19 During the COVID-19 Vandemic*. Ngudi Waluyo University. Central Java
- [12]. M. Ramdan, "Reliability and Validity Test of the Indonesian Version of the Hamilton Anxiety Rating Scale (HAM-A) to Measure Work-related Stress in Nursing," *J. Ners*, vol. 14, no. 1, p. 33, 2019, doi: 10.20473/jn.v13i2.10673.
- [13]. Julianto Dian (2021). *Covid-19 Update New Normal Vaccination*. Jogjakarta: Arruzz Media
- [14]. Faizal, K. Triaspedo, and R. Meilando, "Community Knowledge and Anxiety About Covid -19," *Citra Delima J. Ilm. STIKES Citra Delima Bangka Belitung*, vol. 5, no. 1, pp. 38–44, 2021, doi: 10.33862/citradelima.v5i1.234.
- [15]. Ministry of Health. (2021). *Technical Instructions for Implementing Vaccinations in the Context of Combating the 2019 Corona Virus Disease (Covid-19) Pandemic*. Ministry of Health of the Republic of Indonesia. *Technical Instructions for Implementing Vaccinations in the Context of Handling the 2019 Corona Virus Disease (Covid-19) Pandemic*
- [16]. Livana, Amin Kuncoro, Dona Yanuar Agus Santoso (2022). *The level of public knowledge is related to compliance with health protocols during the Covid-19 pandemic*. Kendal College of Health Sciences. Central Java
- [17]. Livana, S. Resa Hadi, F. Terri, Dani, Kushindarto, and A. Firman, "Indonesian Journal of Nursing and Health Sciences," *Indonesia. J. Nurs. Heal. Sci.*, vol. 1, no. 1, pp. 37–48, 2020.
- [18]. Rambu Herlianti, (2020). *The relationship between the level of knowledge and the level of parental anxiety regarding the speed of providing immunizations during the Covid-19 pandemic*. Makassar Amana Stickers. Macassar
- [19]. Nugroho, B. Istiqomah, and F. Rohanisa, "The Relationship between Level of Knowledge and Self-Efficacy of Covid-19 Vaccination among Students at the Faculty of Health, Nurul Jadid University," *J. Nursing Prof.*, vol. 9, no. 2, pp. 108–123, 2021, doi: 10.33650/jkp.v9i2.2768.
- [20]. Purba and D. Ricky, "PUBLIC'S LEVEL OF KNOWLEDGE ABOUT COVID-19 Stevani," *J. Perelit. Nurse Prof.*, vol. 1, no. November, pp. 89–94, 2019, [Online]. Available: <http://jurnal.globalhealthsciencegroup.com/index.php/JPPP/article/download/83/65>
- [21]. Hidayati Mukhlis, S. Retno Karminingtyas, P. Pharmacy Studies, and F. Health, "Indonesian Journal of Pharmacy and Natural Products Relationship between Knowledge Level and Community Behavior about Covid-19 during the Covid-19 Pandemic," vol. 04, no. April, pp. 79–87, 2021, [Online].

Available:

<http://jurnal.unw.ac.id/index.php/ijpnp>

- [22]. Sujarweni, (2021). Research methodology. Yogyakarta: New Library
- [23]. Suparyanto and Rosad (2015, COVID-19. Suparyanto and Rosad (2015, vol. 5, no. 3, pp. 248–253, 2020.

- [24]. Umbu Daha, (2021). The Relationship between Knowledge Level and Community Anxiety in Preventing Corona Disease (COVID-19) in Mojolangu Village, Malang. Sikes Widyagama Husada. Poor