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ORIGINAL RESEARCH

COVID-19 Vaccine Perspective Among University Lecturers and Students: A Qualitative Study of Pre Implementation of Vaccination

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Background: The determinants of vaccine preferences and hesitancy varied by time and place.

Objective: The aim of this study was to assess the perspective of a COVID-19 vaccine among university-based groups.

Methodology: This qualitative research involved lecturers and students, and a selection of online focused group discussion was conducted based on the following criteria, including representatives of the health and non-health faculties, with at least 8 attendees in lecturer groups, and 8 participants in student groups.

Results: This study is described in 8 themes covering various issues about COVID-19 vaccine, such as views on COVID-19 vaccine, fake news, vaccine implementation by government.

Conclusion: The assessment of vaccine perspective shows that although awaited by some people, it also creates contradictions. This is due to the massive amount of information available regarding the vaccine descriptions. The role of the government as the main policy maker is to provide the right information and to make the right decisions about vaccines and vaccination implementation.

Keywords: acceptance, COVID-19, hesitancy, vaccine

Introduction

The severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is the cause of COVID-19.[1] The effects of being infected with SARS-CoV-2 virus can make a person experience respiratory problems, which cause mild to moderate illness and recover without requiring special treatment. Older people and those with co-morbid conditions such as chronic respiratory disease, cancer, diabetes, and cardiovascular disease can develop severe illnesses. Anyone can be exposed to SARS-CoV-2 virus and suffer seriousness or death.[2]

The COVID-19 pandemic situation has led to new steps in terms of providing the COVID-19 vaccine as a prevention for individuals, groups or communities. However, there are several studies related to vaccine acceptance in general that still discuss differences in acceptance.[3–5]

Based on research conducted in Indonesia at the start of the pandemic, the effectiveness of the COVID-19 action affected the public acceptance of the COVID-19 vaccine. Most 93.3% of respondents were willing to be vaccinated. Public acceptance is relatively high when vaccine effectiveness is high, but public acceptance decreases to 67.0% when vaccine efficacy is 50%.[6]

According to a study carried out in Jordan, 67.4% of non-vaccinated individuals were either unsure or unwilling to obtain the COVID-19 vaccination. Family protection, self-protection, international efforts to combat the virus, and local limits were the major justifications for getting the vaccine, with some variation between those who got it and those who did not. Limited

research, vaccine efficacy, and vaccine side effects were the main causes of COVID-19 vaccine fear.[7] Other studies on the effects of vaccine hesitancy on women showed that pregnant women's awareness of the COVID-19 vaccination after receiving a tele-education session about it reduced their hesitation and increased their willingness to receive the vaccination.[8] In this study, respondents who agreed to the vaccine were motivated by the risk of morbidity and possible risk of death. These results were supported by findings from several other studies that focused on willingness to be vaccinated against COVID-19.

In theory, there are many factors that contribute to vaccine decisions, starting from the study of health, social, economic and social and spiritual perspectives. One thing that can be studied from government policies is implementing the Community Diffusion Model which was implemented in mid-2020. The handling of COVID-19 is not only the responsibility of the government, but the responsibility of all levels of society, bearing in mind that the transmission and spread of this virus is very fast if there is high social contact among the people.

The implementation of the concept of public health plays an important role in fighting dangers to human life to prevent the risk of spreading the infection of SARS-CoV-2 virus which is very fast and massive. The significant increase in the incidence of COVID-19 that occurred every day in Indonesia illustrates the importance of implementing social distancing, physical distancing, hand washing with soap, maintaining health and hygiene, as well as adding a vaccination program as an opportunity to reduce transmission of COVID-19.

Seeing the challenges associated with the public health situation, the entire community's participation is needed to maintain optimal public health status. Universities play a role in a pandemic by developing vaccine research, providing health protocol guidelines, educating the public, and representing academic groups regarding vaccine attitudes. However, there are many problems regarding the COVID-19 vaccine. This research aim to explore the situation associated with university-based groups from a vaccine perspective.

Study Design

This qualitative research involved lecturers and students, and a selection of focused group discussion (FDG) was conducted. FGD was a forum for finding the "unexpected" as they allow for negotiation and evaluation of any issues and findings between stakeholders, including non-sedentary households. It also helps capture people's experiences with similar backgrounds, bringing new perspectives.[9]

Participants

Sampling was taken by purposive sampling based on the following criteria, namely representatives from the health and non-health faculties, with at least 8 attendees in lecturer groups, and 8 participants in student groups. The profiles of the participants were 8 male students aged 17–21, 3 male and 5 female lecturers aged 40–55, 3 male and 5 female health workers from a research university, aged 28–50. While there are no clear and fast rules regarding the number of participants in qualitative research, some researchers believe that between 10 and 50 participants are sufficient, depending on the type of research and the research question.[10]

In qualitative health research, the provision of sample size justifications is limited, independent of the number of interviews, and relevant to the journal of publication. In the context of study limitations, qualitative sample sizes were frequently characterized as insufficient (ie, "small") and frequently without justification. Insufficient sample size was viewed as a threat to the validity and generalizability of study results, with the latter often conceived of in nomothetic terms.[11]

A small sample size enables the researcher to concentrate on gaining an in-depth understanding of a specific social and cultural context, which is generally not possible when examining larger samples. Since knowledge is constructed by the researcher and the participants, the constructivist methodology is utilized in qualitative research.[12]

The recruitment process started at the university level to convey information to all faculties, both health and non-health faculties, regarding who would be involved in the study process. The participants were representatives from 8 faculties who sent the names of lecturers and students. Next, a request for availability was submitted.

Ethical Consideration

This research obtained permission through the Padjadjaran University Ethics Commission with ethical approval Number: 1137/UN6.KEP/EC/2020). Data was collected before the implementation of the COVID-19 vaccination program in

Indonesia. Focus Group Discussions were conducted and implemented under these conditions and situations. All participants in this study provided informed consent, which included publication of anonymized responses.

Data Collection

During the FGD process, probes will be inserted into the FGD and interview guide to invite participants to share their views on the agenda. All answers from qualitative data (interviews and FGDs) will be recorded and transferred to the verbatim. The verbatim will be explored to identify key themes from the verbal cues, to be analyzed by theme and content. Qualitative data analysis was carried out through content analysis. The stages of content analysis consist of; 1) Researchers preparing all relevant information for the FGD process; 2) Identifying and contacting participants to arrange time and virtual meetings; 3) Preparing facilities and equipment; 4) Developing FGD guidelines including: Sharing research objectives, identifying 8 participants for each FGD (health workers, students, lecturers), and important information about them, developing a special topic: "Do you have information about the COVID-19 Vaccine in Indonesia?"

Group discussions are managed by one note taker, one moderator, and one virtual meeting host/technical support. A focus group moderator uses the natural features of conversation as well as focused discussion throughout the one-hour session. Well-designed guides help group members relax, open up, think deeply. Audio recordings and transcripts are provided to illustrate a reasonable flow of discussion with probing: 1) What do you think if you received the COVID-19 vaccine? Can you explain your opinion in more detail? Where will you get the COVID-19 Vaccine? What would you think if you had to pay for vaccines? In your opinion, who is the priority for the right to get a vaccine?

The next stage is to write contextual interview notes, complete the face sheet information and enter it into the database, send the tapes for transcription, check and edit the transcripts. After that, it is followed up by telephone/face to face meeting if necessary. The final stage is to enter factual content information from interviews into the database (key people: moments, dates and events).

Results

Based on this research analysis, there is an overview of the perspective assessment of the COVID-19 vaccine. This description is depicted in 8 themes. The first theme is positive and negative feelings about the COVID-19 vaccine. The second theme is fake news on social media related to the COVID-19 vaccine. Then, the third theme is the government's challenge in implementing the COVID-19 vaccine. The fourth theme is internal and external factors that affect individual attitudes towards acceptance and rejection of the COVID-19 vaccine, while the fifth theme is the importance of socialization, education and health promotion related to the COVID-19 vaccine. The sixth theme is the establishment of a vaccination policy by the government for the community which is mandatory, optional and a combination of both. Furthermore, the seventh theme is the willingness to implement the COVID-19 vaccine, namely agreeing to be vaccinated against COVID-19, not agreeing to do the COVID-19 vaccine, and doubting the COVID-19 vaccine. The last theme, the eighth theme, is the hope regarding the implementation of the COVID-19 vaccine.

The pattern of vaccine assessment themes can be seen in Figure 1.

Positive and Negative Feelings About the COVID-19 Vaccine

Based on the results of the analysis, there were positive and negative responses to the COVID-19 vaccine. "Currently we work from home, and in the group we never discuss vaccines, but in other groups the positivity and negativity are extremely high, right?" There was a positive response saying that this vaccine could be a solution to deal with the SARS-CoV-2 virus. "This vaccine is one solution and this vaccine has indeed been tested and is suitable for use".

Apart from positive responses, participants also expressed several negative responses to the COVID-19 vaccine where they felt doubt about the COVID-19 vaccine.

> But what I caught from some of my neighborhood, the reason why they are still a little hesitant about vaccines…. make the public still a little doubt about whether to get a vaccine or not and moreover there are issues before this vaccine reached Indonesia
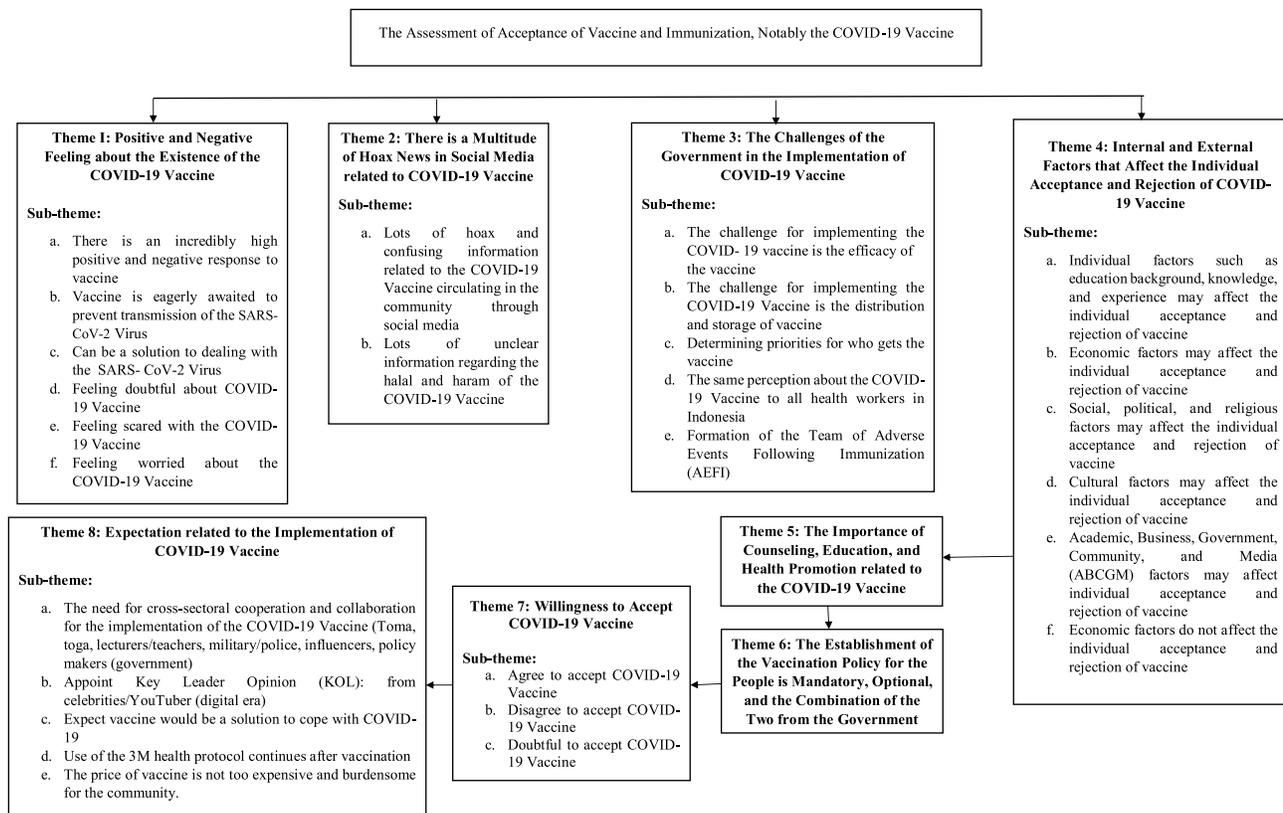
Figure 1 Assessment of COVID-19 Vaccines Acceptance (University Participants).

Participants were afraid and worried about the COVID-19 vaccine, especially regarding the impact of the vaccine itself. "Looking at the majority, it is more likely that my environment is afraid of side effects or Adverse Event Following Immunization (AEFI) from the vaccine itself" Also, a person's unpleasant experiences with vaccines in the past could traumatize that person. "I am among those who have experienced trauma from vaccines".

Infodemic on Social Media Regarding the COVID-19 Vaccine

During this pandemic, there was a lot of confusing information about the COVID-19 virus, but fake and confusing information regarding the COVID-19 vaccine was also circulating in the community through social media. "…in the use of vaccines in the community, but this lies in the hoax issues that is more devastating". One of the unclear information circulating on social media was about halal and haram from the COVID-19 vaccine.

> The information came from WhatsApp groups, whether or not it is true, we really don't understand, for example someone said it was not halal. I see, so I doubt it. For myself, this is true or not, it's not halal, so then it is said that we became a guinea pig because it was not clear, because the clinical trials have not finished yet…. not to mention it is said that our vaccines are from China while China also imports from other countries, and Indonesia is a guinea pig. this information circulated very widely. Information is disseminated by parties who should have the authority to convey the truth.

Challenges in Implementing the COVID-19 Vaccine by the Government

In running a program, especially a new program, of course there would be challenges that must be faced. Based on the research results, there were participants who experienced challenges in the implementation of the COVID-19 vaccine by the Government. Among the challenges was the efficacy of the vaccine. "Another challenge in this vaccine is the efficacy or ability of the SARS-CoV-2 virus to prevent COVID-19 disease".

What the government had to do was to determine the priority of which parties received the vaccine first.

> Who are the priorities for getting vaccines if in political terms it becomes politicized, the ones who must accept first are ASN (state civil apparatus) because ASN carries out public services all day long.

In addition to the challenges related to the vaccine itself, the government also needed to share common perceptions about the COVID-19 vaccine with all health workers in Indonesia.

> Maybe this is the front line, health workers, the information should be the same, which they have to receive well, so. uh. what is it… related to the distribution of the vaccine

The COVID-19 vaccine was fairly new to be carried out in Indonesia, and the government had to be able to anticipate the impact of this vaccine. For that reason, the government needed to form a Preventive Team for Adverse Event Following Immunization (AEFI)

> I think the government can anticipate this, so hopefully the government has formed a team to prevent Adverse Event Following Immunization (AEFI) because this is massive in nature.

Internal and External Factors That Affect Individual Attitudes Towards Acceptance and Rejection of the COVID-19 Vaccine

In the implementation of the COVID-19 vaccine, many factors influenced an individual's assessment of the acceptance and rejection of the COVID-19 vaccine, both internal factors within the individual and external factors outside the individual. One of the statements was:

> Starting from individual opinions about individuals, if we relate it to the level of education of the community, of course each education level has a different opinion. Elementary school graduates, junior high school graduates and high school graduates as well as university graduates have different opinions on this vaccine.

In addition, many external factors could influence individual attitudes towards individual acceptance and rejection of vaccines such as economic factors. "It is influenced by several more factors, namely economy, politics, and the environment itself and religion may be a very important aspect". "So for those factors, I think there are the biggest ones, maybe it is more related to social and religious factors, I think those 2 things are quite big".
Indonesia is a multi-cultural country so that cultural factors can influence the attitude of individual acceptance and rejection of vaccines.

> There are many factors that influence how this vaccine finally has a high carrying capacity and acceptance in the community. Therefore, in my opinion, various approaches are necessary. One of them is a cultural approach in which there is a socio-cultural aspect, and then there are religious issues which I think must be put forward.

Furthermore, there are also Academic, Business, Government, Community, and Media (ABGCM) factors that can influence individual acceptance and rejection of vaccines. "To connect the views of the industry. On campus there are 5 terms ABGCM, Academic, Business, Government, Community, Media".
However, one participant stated that economic factors did not affect individual acceptance and rejection of vaccines. "The economy is not so influential because there are also people with a low economy who can seek information",

Socialization, Education and Health Promotion Related to the COVID-19 Vaccine

In the study, it was found that almost all participants expressed the importance of socialization, education and health promotion related to the COVID-19 Vaccine, one of which was by increasing public knowledge. "The first recommendation is socialization, education and provision of clear information, both through formal and non-formal channels".

Determination of Vaccination Policies That are Mandatory, Optional and a Combination of Both by the Government to the Community

In running a program, there must be a policy made by the government. Based on the results of this study, participants expressed that the government needed to make policies related to this vaccine.

> In my opinion, this is mandatory, ma'am, because it is related to the health of a country, so don't let it., if it's optional, maybe someone has a lack of understanding so that he becomes a burden on the community, while he can save other people. So it is mandatory ma'am, it is obligatory.

In addition, there were also those who revealed that the government needed to make a vaccination policy which was initially made mandatory and then later, optional.

> Well maybe in Indonesia, it can be announced gradually as optional. Hopefully, if for example it started with the mandatory, I hope the government has enough capacity to ensure that the mandatory can be carried out properly

Acceptance or Hesitancy to Do a COVID-19 Vaccine

Based on the results of the analysis, participants agreed to carry out the COVID-19 vaccine. However, there were also participants who expressed disapproval of the COVID-19 vaccine.

> So we really consider whether it could be not, or it could be yes but it is more inclined to no, because it is more devoted to friends (people) who need it more.

Lastly, there were also participants who were hesitant about the COVID-19 vaccine. "So I am among those who doubt".

Expectations Regarding the Implementation of the COVID-19 Vaccine

In this research, there were results in the form of hopes, especially for the government regarding the implementation of the COVID-19 vaccine program. The government needs to collaborate with and across sectors for the implementation of the COVID-19 vaccine (community leaders, religious leaders, lecturers/teachers, army/police, influencers, government policy makers). "One last word, I think now is the time for us to collaborate, not compete".

In this digital era, the government needs to determine a Key Opinion Leader (KOL) from celebrities or YouTubers. "First to determine who can be the key opinion leader (KOL) to convey the COVID vaccine issue in a credible and comprehensive manner, and trusted by the public".

In addition, participants also hoped that vaccines could be a solution to overcome COVID-19.

> We hope a lot with this vaccine and whether it is effective, how effective it is for us to come out or be an antidote for the COVID-19 problem because it is true that by spreading it, if you use simple logic it seems very difficult to eradicate because it is so widespread.

Even though vaccinations have been carried out, it is hoped that the community still has to implement the 3M health protocol (washing hands, wearing masks, and maintaining distance). "I personally provide input related to vaccine programs or other COVID management programs where health protocols are still being implemented".

With regard to the price of vaccines, from the results of the analysis of this study, it is hoped that the government will not determine the price of vaccines that is too expensive and burdensome for the community, and even hoped that the community does not have to pay for the vaccines in this pandemic situation.

> To be honest, I think it should be free…. Even a penny does not need to be paid because this is a pandemic not in a certain place but a pandemic experienced throughout the world, so it should be free as proof that the country is here to save its people.

Discussion

Quantitative studies show that most respondents belong to the group receiving the vaccine. These results indicate that most Indonesian people are included in the vaccine recipient group according to the survey on receiving the COVID-19 vaccine in Indonesia.[13] These qualitative studies explore various perspectives regarding the COVID-19 vaccine.

When compared to a national research group about acceptance of COVID-19 vaccine such as in China, the expectation of getting a vaccine is around 53%.[3,4] This qualitative research does not look at how much, but rather the reasons for getting the vaccine or not, or the doubts in between. In majority, they stated that they agreed to get the vaccine, although there were some who refused because of negative experiences when immunizing children. Another reason is that there is so much news and it makes them doubt about how vaccines are made, so it influences the decision to accept it or not. The challenge of the vaccine program due to the circulation of confusing information in the community also occurs in Pakistan.[14] Italy also requires a national policy for administering vaccines to health care workers, although among university students in Italy, the acceptance of vaccines is around 86% and 13% strongly reject vaccines.[15–17]

It is not unexpected that the health professionals taking the COVID-19 training course have high awareness and readiness. However, there are distinctions based on gender and the nature of the healthcare worker. The disproportionate burden of SARS-CoV-2 disease by sex or kind of healthcare worker may have been influenced by disparities in COVID-19 readiness that we discovered early in the epidemic, but this has not been proven.[18]

Regarding vaccine acceptance in the US, overall, 107 respondents (10.8%) were vaccinated, 571 respondents (57.6%) intended to be vaccinated, and 313 respondents (31.6%) felt unsure. According to this, resistance to the presence of vaccines is still high. Studies in France show that survey respondents receiving vaccine admissions and volunteering in the clinical trial phase of the COVID-19 vaccine were nearly 75% and 48%, respectively. Vaccine doubt will be the major barrier to getting a COVID-19 vaccine.[19–22]

The results of the study by Rosiello et al on the acceptability of the COVID-19 vaccine in ten countries in Asia, Africa, and South America showed that, across four different safety and efficacy scenarios, Brazil and Chile had the highest levels of acceptance of the COVID-19 vaccine, respectively. Concerning low safety scenarios (20% side effects) and low efficacy scenarios (50% efficacy), Egypt and Tunisia reported the lowest acceptance rates for the COVID-19 vaccination.[23] The study showed a potential relationship between vaccine efficacy and safety and vaccination intention for COVID-19. The COVID-19 vaccination acceptance rate significantly declines at the same efficacy level due to a greater likelihood of side effects. This demonstrates how accurate communication about vaccine safety and efficacy influences attitudes about the vaccine and intentions to get vaccinated. There were noted regional disparities in the acceptability of the COVID-19 vaccination, with the Middle East/North African countries having the lowest rates and the South American countries presenting the greatest rates.[23]

According to Sallam et al's study, 89% of respondents indicated a willingness to pay for the COVID-19 vaccine, albeit the mean and maximum values varied based on the respondent's place of origin, monthly income, job, and previous flu vaccination history within the preceding 12 months. The study's discovery that the average price respondents were willing to pay for the COVID-19 vaccination was $87.9, with a range of $5 to $200, was another important finding.[24] The perceived risk of contracting COVID-19 and dying from it was that 36.4% of participants had a high perceived risk of infection, but only 22.4% had a perceived risk of death.[25]

In several other studies, the percentage of vaccine rejection among medical students was 23%, while the expectation of getting the vaccine was 53%.[26] Although not openly disclosed, the dynamics of opinion among the health and non-health student groups was very visible compared to the lecturer group. Some expressed doubts about the effectiveness of vaccines, and some were concerned about Adverse Event Following Immunization. When compared to other countries, there was also doubt about vaccines due to conspiracy opinions, so 27% expressed their disapproval.[27]

The vaccine acceptance in this qualitative study showed differences in the groups of lecturers and students from various faculties, both from the health and non-health faculties. There is a tendency for many critical inquiries or questions that arises from lecturers and students from non-health faculties groups. This is possible because the main character of health students in Indonesia is generally more orderly and they follow the rules made at the University.

Health faculty students have a higher level of approval of the safety of the COVID-19 vaccine than non-health faculty students. Health faculty students believe more that the COVID-19 vaccination has an effect than non-health faculty students. The actual clinical situation in a clinical setting may be why health faculty students trust COVID-19 vaccination more than non-health faculty students. In addition, students of health faculties can get information about COVID-19 when in contact with patients and practical learning. In addition, for health faculty students who have received systematic health education, their acceptance of vaccines is higher than non-health faculty students.[28]

In a study by Chen et al, teachers (37.1%) had higher doubts about the COVID-19 vaccine than students (23.8%). Thus, vaccine hesitancy in students mainly depends on perceptions of vaccine safety rather than subjective norms (ie, teacher vaccine hesitancy).[29]

Another factor that influences vaccination is educational background. Zhang et al showed that people with higher educational backgrounds were more reluctant to do the COVID-19 vaccine than those with lower educational backgrounds (ie students in this study vs teachers).[30] Furthermore, a further reason for doubts arises due to the different methods used by teachers and students in obtaining information.[31]

Observing a research in America, nationally, data showed differences in the vaccine hesitancy group where the difference was higher among Hispanics (29%), African-Americans (34%), Hispanics (29%), rural dwellers (29%), those with children at home (25%), those in the northeastern US (25%), and those who identified as Republicans (29%).[32] Qualitatively, the student group showed relatively no differences in terms of ethnicity or regional origin, but rather in the direction of understanding and deepening information on the existence of vaccines in Indonesia. In another study in Indonesia, in terms of receiving the COVID-19 vaccine, there were significant results stating that knowledge influences behavior towards the prevention of the COVID-19 vaccine.[33]

Doubts about vaccines that arise among lecturers and students are not shown based on ethnicity or regional origin, but individual backgrounds such as experience, environmental influences and other social aspects. However, in this qualitative research it is not specific to get results related to economics with vaccine acceptance. Other studies show that trust in national health authorities, scientists, and personal health concerns are critical drivers of individual-level predictors of COVID-19 vaccine acceptance. This result is consistent with similar findings.[34]

However, the specific argument of two participants regarding hesitancy is related to the conspiracy theory. The same result of study was to link vaccine hesitancy with conspiracy beliefs. The higher Vaccine Conspiracy Belief Scale (VCBS) score is the level of vaccine hesitancy. These results were independent of other covariates, reflecting one harmful effect of belief that is vaccine skepticism. While there is no evidence to support some claims, about a quarter of the study sample did not believe the information was incorrect, such beliefs may seem harmless; however, our results clearly show that this can cause a large negative impact on public health, because it is associated with vaccine hesitancy.[27]

The perspective of rejecting COVID-19 Vaccine, especially among students, is based on side effect and efficacy. The same study stated the Vaccination side effects and risk levels are the main reasons they avoid vaccination. Therefore they prefer other people to be vaccinated first.[35]

While individual reactions to the SARS-CoV-2 virus are continuous and varied such as extreme fear or anxiety, so-called corona phobia has been observed in society. A person's quality of life is affected by this negative experience and hurts the function of daily life. Matters related to a person's experience of experiencing excessive anxiety and fear due to the potential for coronavirus infection are psychological factors; physical symptoms associated with coronavirus phobia become psychosomatic factors; matters relating to the hoarding behaviour of some people as a result of excessive fear of running out of stock becomes an economic factor that is influenced; and social factors such as measuring the degree to which a person experiences social phobia due to COVID-19.[36]

Other studies show that men show the highest phobic reactions on the psycho-somatic subscale, while women show the highest phobic reactions on the economic subscale. In each geographic region, there is a pattern of differences that varies in general. The eastern region scores higher than the western region. Significant differences were also observed by educational attainment; the highest score on all subscales is indicated by the lower middle class.[37]

The trust in vaccines in this study is influenced by several factors such as socio-culture, educational, and economic factors. This is as stated in the following quantitative research; Public trust in vaccination programs depends on their work for society — political, social and moral, and biological.[3,6,38]

The current existence of normative values is more difficult to predict, due to several shifts in different normative standards. So that in the community there are those who agree and disagree with vaccinations based on general opinion, and not necessarily on personal beliefs that this is the right step to take or the wrong step. This condition is also found in the following situations.

The primary agent responsible is the community institution to distribute scripts and exclude "counter scripts" that will undermine the hegemonic community order. This is because the adoption of "normative scripts" conforms to communal belief systems, and "community scripts" function to reproduce communal orders.[39]

Individual community script choices mark three distinct levels: the first — at the personal level; the second - for families, communities or other groups - at a broader level; the third—at the external and community level—in the areas that give meaning to their actions (whether related to the State, the Nation, or the embodiment of a particular ideology).[40] The way that will become the dominant communal reflection, this reflection will eventually also be adopted by individuals who hold "Communal Sense Making" through which actions and decisions are evaluated. As written by Shaw et al on the assumption of sense making: individuals who perceive "Communal Sense Making" for their actions do so as part of "Communal Sense Making".[41] This process occurs today largely through informal discourse in messages distributed through WhatsApp groups and online videos — where individual actions, trends, and modes of activity are framed, and the "community message" gained in this way is more powerful than can be obtained from traditional media.[40]

In the implementation of policies, both at the national level and at the implemental level, there is still no integration between the national and regional levels. A study shows that there are several stages and strategies in building health programs that are based on the needs and interests of institutions and society. In addition, vaccine acceptance is associated with trust in governments in a global survey of potential acceptance of COVID-19 vaccine.[42–44]

Specifically, the results of this study indicate that the most contributing factor to the acceptance and hesitance of the vaccine program is the existence of a tsunami of broad information to all circles, making it easier to sort out which ones are appropriate and inappropriate. In addition, individual background factors, both internal and external, also affect the acceptance or contra of the vaccine program. Also, policy factors play a major role in the acceptance of the vaccine program.

Conclusion

The assessment of vaccine perspective shows that the existence of the vaccine, although awaited by some people, also creates contradictions. This is due to the large variety of information about vaccine descriptions. Apart from that, the internal and external aspects of the individual will also influence vaccine acceptance. Social and environmental factors also play a role in acceptance, hesitation and resistance to the COVID-19 vaccine.

When COVID-19 was declared a pandemic, there was no conclusive cure, so a preventative approach seemed to be the only viable option to reduce the spread. Therefore, giving vaccines is considered as an alternative to reduce the severity of the disease and the number of deaths.

Meanwhile, the information channel model in a pandemic condition can be Top-Down or Bottom-Up. The Bottom-Up model is rooted in the ideas and work practiced in the local community and can be used as a general guide in the village and district areas.

While the Top-Down model that is generally applied, both for quarantine, independent isolation, family and health services follows national regulations. In the community, information from the Health Service in collaboration with related sectors including Padjadjaran University academics is to be forwarded to the village heads.

However, various situations and conditions in the community make a situation cannot always be controlled in one management step, where geographical conditions, ethnic, social and economic backgrounds contribute to a program implementation. This is a potential as well as a challenge faced by a multicultural government in Indonesia which emphasizes the importance of tolerance and respect for the choices made by its citizens. Not to forget that the most important thing is the role of the government as the main policy maker in providing the right information and making the right decisions about vaccines and vaccination implementation.

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Disclosure

References

1. Lai CC, Shih TP, Ko WC, Tang HJ, Hsueh PR. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): the epidemic and the challenges. *Brain Behav Immun*. 2020;55(3):105924.
2. World Health Organization. Coronavirus disease (COVID-19) weekly epidemiological updates and monthly operational updates; 2020. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports. Accessed March 2, 2020.
3. Lin Y, Hu Z, Zhao Q, Alias H, Danaee M, Wong LP. Understanding COVID-19 vaccine demand and hesitancy: a nationwide online survey in China. *PLoS Negl Trop Dis*. 2020;14(12):e0008961. doi:10.1371/journal.pntd.0008961
4. Zhang M, Zhou M, Tang F, et al. Knowledge, attitude, and practice regarding COVID-19 among healthcare workers in Henan, China. *J Hosp Infect*. 2020;105(2):183–187. doi:10.1016/j.jhin.2020.04.012
5. Yigit M, Ozkaya-Parlakay A, Senel E. Evaluation of COVID-19 vaccine refusal in parents. *Pediatr Infect Dis J*. 2021;40(4):E134–E136. doi:10.1097/INF.0000000000003042
6. Harapan H, Wagner AL, Yufika A, et al. Acceptance of a COVID-19 vaccine in Southeast Asia: a cross-sectional study in Indonesia. *Front Public Heal*. 2020;8(July):1–8. doi:10.3389/fpubh.2020.00381
7. Alnatour D, Nassar RI, Salhi Y, Thiab S, Alsayed AR. Perception and attitudes toward COVID-19 vaccines in Jordan: lessons for future pandemics. *Pharm Pract*. 2023;21(1):1–9. doi:10.18549/PharmPract.2023.1.2781
8. Momani A, Hamaideh SH, Masadeh AB, et al. The effect of COVID-19 vaccine tele-educational program on vaccine hesitancy and receiving the vaccine among women planning for pregnancy, pregnant or breastfeeding mothers. *PLoS One*. 2023;18(3 March):1–11. doi:10.1371/journal.pone.0282627
9. O.Nyumba T, Wilson K, Derrick CJ, Mukherjee N. The use of focus group discussion methodology: insights from two decades of application in conservation. *Methods Ecol Evol*. 2018;9(1):20–32. doi:10.1111/2041-210X.12860
10. Creswell JW, Creswell J. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. 5th ed. Sage; 2018.
11. Vasileiou K, Barnett J, Thorpe S, Young T. Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Med Res Methodol*. 2018;18(1):1–18. doi:10.1186/s12874-018-0594-7
12. Subedi KR. Determining the sample in qualitative research. *Sch J*. 2021;4(December):1–13. doi:10.3126/scholars.v4i1.42457
13. Yanto TA, Octavius GS, Heriyanto RS, Ienawi C, Nisa H, Pasai HE. Psychological factors affecting COVID-19 vaccine acceptance in Indonesia. *Egypt J Neurol Psychiatry Neurosurg*. 2021;57(1). doi:10.1186/s41983-021-00436-8
14. Khan YH, Mallhi TH, Alotaibi NH, et al. Threat of COVID-19 vaccine hesitancy in Pakistan: the need for measures to neutralize misleading narratives. *Am J Trop Med Hyg*. 2020;103(2):603–604. doi:10.4269/ajtmh.20-0654
15. Odone A, Bucci D, Croci R, Riccò M, Affanni P, Signorelli C. Vaccine hesitancy in COVID-19 times. An update from Italy before flu season starts. *Acta Biomed*. 2020;91(3):1–5. doi:10.23750/abm.v91i3.10549
16. Barello S, Nania T, Dellafiore F, Graffigna G, Caruso R. 'Vaccine hesitancy' among university students in Italy during the COVID-19 pandemic. *Eur J Epidemiol*. 2020;35(8):781–783. doi:10.1007/s10654-020-00670-z
17. Wilson SL, Wiysonge C. Social media and vaccine hesitancy. *BMJ Glob Heal*. 2020;5(10):1–7. doi:10.1136/bmjgh-2020-004206
18. Huy NT, Chico RM, Huan VT, et al. Awareness and preparedness of healthcare workers against the first wave of the COVID-19 pandemic: a cross-sectional survey across 57 countries. *PLoS One*. 2021;16(12 December):1–29. doi:10.1371/journal.pone.0258348
19. Reuben RC, Danladi MMA, Saleh DA, Ejembi PE. Knowledge, attitudes and practices towards COVID-19: an epidemiological survey in North-Central Nigeria. *J Community Health*. 2020;0123456789. doi:10.1007/s10900-020-00881-1
20. Fisher KA, Bloomstone SJ, Walder J, Crawford S, Fouayzi H, Mazor KM. Attitudes toward a potential SARS-CoV-2 vaccine: a survey of US adults. *Ann Intern Med*. 2020;173(12):964–973. doi:10.7326/M20-3569
21. Rey D, Fressard L, Cortaredona S, et al. Vaccine hesitancy in the French population in 2016, and its association with vaccine uptake and perceived vaccine risk–benefit balance. *Eurosurveillance*. 2018;23(17):1–10. doi:10.2807/1560-7917.es.2018.23.17.17-00816
22. Detoc M, Bruel S, Frappe P, Tardy B, Botelho-nevers E. Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information; 2020.
23. Rosiello DF, Anwar S, Yufika A, et al. Acceptance of COVID-19 vaccination at different hypothetical efficacy and safety levels in ten countries in Asia, Africa, and South America. *Narra J*. 2021;1(3):1–16. doi:10.52225/narra.v1i3.55
24. Sallam M, Anwar S, Yufika A, et al. Willingness-to-pay for COVID-19 vaccine in ten low-middle-income countries in Asia, Africa and South America: a cross-sectional study. *Narra J*. 2022;2(1):1–16.
25. Harapan H, Gachabayov M, Sharun K, et al. Perceived risk of infection and death from COVID-19 among community members of low- and middle-income countries: a cross-sectional study. *F1000 Res*. 2022;11:1–24. doi:10.12688/f1000research.109575.2
26. Lucia VC, Kelekar A, Afonso NM. COVID-19 vaccine hesitancy among medical students. *J Public Health*. 2020;1–5. doi:10.1093/pubmed/fdaa230
27. Sallam M, Dababseh D, Eid H, et al. High rates of covid-19 vaccine hesitancy and its association with conspiracy beliefs: a study in Jordan and Kuwait among other Arab countries. *Vaccines*. 2021;9(1):1–16. doi:10.3390/vaccines9010042
28. Gao L, Su S, Du N, et al. Medical and non-medical students' knowledge, attitude and willingness towards the COVID-19 vaccine in China: a cross-sectional online survey. *Hum Vaccines Immunother*. 2022;18(5). doi:10.1080/21645515.2022.2073757

29. Chen Y, Zhang MX, Lin XQ, Wu H, Tung TH, Zhu JS. COVID-19 vaccine hesitancy between teachers and students in a college, a cross-sectional study in China. *Hum Vaccines Immunother*. 2022;18(5). doi:10.1080/21645515.2022.2082171

30. Zhang MX, Lin XQ, Chen Y, Tung TH, Zhu JS. Determinants of parental hesitancy to vaccinate their children against COVID-19 in China. *Ann Med*. 2023;55(1):292–304. doi:10.1080/14760584.2021.1967147

31. Brauer E, Choi K, Chang J, et al. Health care providers' trusted sources for information about COVID-19 vaccines: mixed methods study. *JMIR Infodemiol*. 2021;1(1):1–10. doi:10.2196/33330

32. Khubchandani J, Sharma S, Price JH, Wiblishauser MJ, Sharma M, Webb FJ. COVID-19 vaccination hesitancy in the United States: a rapid national assessment. *J Community Health*. 2021;46(2):270–277. doi:10.1007/s10900-020-00958-x

33. Saefi M, Fauzi A, Kristiana E, et al. Survey data of COVID-19-related knowledge, attitude, and practices among Indonesian undergraduate students. *Data Br*. 2020:31. doi:10.1016/j.dib.2020.105855

34. Lindholt MF, Jørgensen F, Bor A, Petersen MB. Public acceptance of COVID-19 vaccines: cross-national evidence on levels and individual-level predictors using observational data. *BMJ Open*. 2021;11(6):1–12. doi:10.1136/bmjopen-2020-048172

35. Cerda AA, García LY. Hesitation and refusal factors in individuals' decision-making processes regarding a coronavirus disease 2019 vaccination. *Front Public Heal*. 2021;9(April). doi:10.3389/fpubh.2021.626852

36. Arpaci I, Karatas K, Baloglu M, Haktanir A. COVID-19 phobia in the United States: validation of the COVID-19 Phobia Scale (C19P-SE). *Death Stud*. 2022;46(3):553–559. doi:10.1080/07481187.2020.1848945

37. Baloglu M, Karatas K, Arpaci I. *Psychological and Socio-Economic Effects of the COVID-19 Pandemic on Turkish Population*. Springer International Publishing; 2021.

38. Hatabu A, Mao X, Zhou Y, et al. Knowledge, attitudes, and practices toward COVID-19 among university students in Japan and associated factors: an online cross-sectional survey. *PLoS One*. 2021;15(12 December):1–19. doi:10.1371/journal.pone.0244350

39. Hanitzsch T, Vos TP. Journalistic roles and the struggle over institutional identity: the discursive constitution of journalism. *Commun Theory*. 2017;27(2):115–135. doi:10.1111/comt.12112

40. Lebel U, Masad D. Life scripts, counter scripts and online videos: the struggle of religious-nationalist community epistemic authorities against military service for women. *Religions*. 2021;12(9):750. doi:10.3390/rel12090750

41. Shaw F, Burgess J, Crawford K, Bruns A. Sharing news, saying thanks, making sense. *Aust J Commun*. 2013;40:23–40.

42. French J, Deshpande S, Evans W, Obregon R. Key guidelines in developing a pre-emptive COVID-19 vaccination uptake promotion strategy. *Int J Environ Res Public Health*. 2020;17(16):1–14. doi:10.3390/ijerph17165893

43. Holt K, Zavala I, Quintero X, et al. Women's preferences for contraceptive counseling in Mexico: results from a focus group study. *Reprod Health*. 2018;15(1):1–11. doi:10.1186/s12978-018-0569-5

44. Latkin CA, Dayton L, Yi G, Konstantopoulos A, Boodram B. Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information; 2020.