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Family Support and The Role of Health Professionals on Parent's Perspectives of Covid-19 Vaccination in Child

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ABSTRACT
Background: The administration of Covid-19 immunization is one of the measures taken to prevent Covid-19 infectious diseases among vulnerable groups, such as children aged 6 to 11 years. However, the majority of parents continue to have a poor opinion of the safety of the Covid-19 vaccine and its side effects, since just 5.7% of parents of 564,833 children in West Sumatra allow their children to get vaccinated.
Purpose: This study aimed to investigate the determinants of parents' perception towards vaccinating their children against COVID-19.
Methods: This study employed a quantitative methodology and a Cross Sectional design. This research was conducted at an elementary school in Bukittinggi. The study population consisted of 466 children. In this study, 100 respondents were consecutively selected as samples. The tool employed was a valid and reliable questionnaire, and the data were analyzed using a chi-square test with a significance level of 0.05.
Results: the results of the statistical test of bivariate analysis stated that there was a relationship between family support and perspective, p Value 0.05 (< 0.05), and there was no relationship between the role of health workers and perspective p Value 0.318 (> 0.05).
Conclusion: it is important to increase the positive perspective of parents regarding vaccination, this can be done through health promotion by using various media so that not only parents get but also increase the perception of family support.

Keywords: *Child; Covid-19 Vaccination; Family support; Role of Health Professionals*

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BACKGROUND

The COVID-19 pandemic, which is caused by a new type of virus called Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), has become a global health threat since December 2019 and has been classified as a pandemic disease by the World Health Organization (WHO) since the end of the first quarter of 2020. Even in a relatively short time, COVID-19 has proven to be a lethal disease that causes substantial damage to health. In addition, each case continues to increase daily, resulting in a health emergency (Darulis et al., 2021). The majority of the reported clinical signs and symptoms were fever, with some instances also exhibiting trouble breathing, and X-rays revealing severe pneumonia infiltrates in both lungs. According to preliminary epidemiological investigation findings, the majority of Wuhan's cases had worked, handled, or visited the Huanan Seafood Wholesale Market often. The actual cause of transmission is yet unknown (Cucinotta & Vanelli, 2020). There is a notion regarding how the public views the Covid-19 vaccine in youngsters. Skinner's Theory of Stimulus-Organism-Response Model is one of the ideas concerning perception (SOR). This model illustrates the interaction between the three primary components, namely stimuli, organisms, and responses to stimuli (reactions). According to Eroglu, stimulus or stimulation can be understood as a factor that changes the interior state of an individual (Nobari et al., 2021).

For others, this vaccine method is problematic. First, there are worries over vaccine development because the time required to create a vaccine is relatively short, roughly one year. This is unlike other vaccinations, which may take years to develop. This therefore increases public concern on the side effects or influence of vaccines on vaccine providers, such that people's perceptions and attitudes serve as a baseline for public knowledge. Community members and health professionals must engage in proactive and preventative measures (Montalti et al., 2021). Based on the findings of Arundanti Shinta and Zaid's study about parents' views as predictors of interest in the COVID-19 vaccination in children, they conclude that the perception of a greater risk of infection with COVID-19 enables parents to support vaccination in their children. Obviously, this also applies to parents with a higher perceived risk of contracting COVID-19 than their children, as parents with a higher perceived risk choose to vaccinate their children more frequently. In a separate study, it was also found that risk factors and parental perceptions were prioritized and correlated with a greater interest in COVID-18 vaccination among parents (Luyben et al., 2020a).

In addition, on December 13, 2021, the Minister of Health issued Decree of the Minister of Health of the Republic of Indonesia (KMK) Number HK.01.07/MENKES/6688/2021 concerning the Implementation of Vaccination for Corona Virus Disease 2019 (COVID-19) for Children Aged 6 to 11 Years in Elementary Schools. The Sinovac vaccine or other vaccinations that already have an Emergency Use Authorization (EUA) from BPOM are administered to children aged 6 to 11 years old. The gap between doses 1 and 2 of the Sinovac vaccine is 28 days and must be preceded by a health screening according to the applicable standard format (Liu et al., 2020).

The West Sumatra Regional State Intelligence Agency announced that 32,503 children between the ages of 6 and 11 have been vaccinated, representing 5.7% of the total target of 564,833 children. This suggests that West Sumatra ranks sixth in terms of COVID-19 vaccination coverage among children. Contributing to this accomplishment was the late release of the vaccine and the fact that West Sumatra did not reach 70% immunization coverage until early January of 2022 (Luyben et al., 2020b). Based on the

results of an initial survey conducted by the Ministry of Health Office of Bukittinggi, it was determined that the number of COVID-19 vaccinations administered to children in Bukittinggi, with the objective of vaccinating 12,289 children in the first dose, reached 20.95%, or 2,574 children, while the second dose reached 10.34%, or 1,274 children. In Bukittinggi City, the vaccination rate for COVID-19 among children aged 6 to 11 is still relatively low. The vaccination rate against COVID-19 among children in Bukittinggi is still relatively low (Goldman et al., 2021; Lebel et al., 2020).

Prior research has examined parental reluctance to get the COVID-19 immunization in a restricted manner, mostly using quantitative assessments. 42% of parents of children 18 years old were cautious about COVID-19 vaccination, and just 56% of parents of children 12 to 17 wanted to vaccinate their adolescent against COVID-19, according to surveys. Health officials and providers were recognized as credible vaccine information sources. In addition, parents' own opinions and experiences were recognized as essential sources of vaccine information. Concerns over safety, efficacy, and adverse effects were prevalent (Goulding et al., 2022b).

Parents identified healthcare practitioners as the most reliable source of information regarding COVID-19 vaccination; however a number of other sources were cited. The majority of parents indicated that their decision to vaccinate their child would be affected by interactions with their child's physician who was familiar with their child's medical history and could make individualized recommendations. In addition, many parents noted a wish to hear about COVID-19 vaccination from all physicians and healthcare experts, not just their child's provider. They were particularly interested in knowing about providers' personal experiences with COVID-19 immunization and considered this as a means to gain confidence in the safety and efficacy of the COVID-19 vaccine (Goulding et al., 2022a).

Vaccinating this crucial age group against COVID-19 is a promising step in preventing its spread. The decision to vaccinate children (older than 12 years) rests with their parents, as signed agreement is required to provide vaccinations. This identifies parents as a crucial component of a successful vaccination campaign, as parental views and subsequently the intention to vaccinate children will have a significant impact on their vaccination status (Alsulaiman et al., 2022a). The aim of this study was to investigate the determinants of parents' perception towards vaccinating their children against COVID-19.

METHODS

This research was a quantitatively study by using a cross-sectional study approach. The findings were derived from an analysis of primary data, which may be utilized to how family support and health professional's role related to parents' perspectives of COVID-19 immunization in children at an elementary school in Bukittinggi. In this study, the independent variables were family support and the role of health professional. In this study, the dependent variable was parents' perspectives toward the COVID-19 vaccination of children at an elementary school in Bukittinggi.

In this study, the population of parents at an Elementary School in Bukittinggi, where 466 students were the target of the COVID-19 Vaccination. The sampling technique utilized in this study was consecutives sampling which; as many as 100 individuals included as sample by using this sample size formula.

$$n = \frac{N}{1 + N\ (d)^2}$$
$$n = \frac{466}{1 + \ 466\ (0{,}1)^2}$$
$$n = \frac{466}{467\ (0{,}01)}$$
$$n = \frac{466}{4{,}67}$$

The eligibility criteria are one of the parents at the elementary school or guardian of a student attending elementary school and familiar enough and capable to input data in Google forms. Data obtained included respondents' background characteristics (gender, age, educational level, employment status), variables impacting perspective to vaccinate children including family support and role of health professionals. On a four-point Likert scale, responses to the question on a parent's perspectives to vaccinate his or her child were rated (strongly agree, agree, agree, disagree, and in doubt). The research instrument has been examined for validity and reliability testing where each question item is reported to be valid and reliable with r for validity test for every item was lowet than 0.361 (r table) and r for reliability test by Cronbach's Alpha 0.84 which was bigger than 0.60 . This research has been given an ethical review by the Ethics Commission of Prima Nusantara Bukittinggi by number 022/KEPK/IKESPNB/III/2022. In the bivariate analysis, the chi-square test was done with a confidence level of 95% CI, or 0.05, therefore the value of p (0.05) is anticipated.

RESULTS

Table 1. Family support on Parent's perspectives about Covid-19 Vaccination in Child (n=100)

Family support	Parent's Perspectives				Total		p-value	POR (95%)
	Negative		Positive					
	n	%	n	%	n	%		
Low	27	67.5	13	32.5	40	100	0.05	3.587 (1.542-8.349)
High	22	36.6	38	63.3	60	100		
Total	49	49	51	51	100	100		

Based on table 1, it is known that, among the sixty respondents with strong family support, 38 (63.3%) had a favorable opinion of COVID-19 vaccination in children. In contrast, 13 (67.5%) of the forty respondents with low family support held favorable attitudes. In addition, 22 (36.6%) of the 60 respondents with good family support and 27 (67.5%) of the 40 respondents with low family support had an unfavorable perception. The statistical test yielded a POR value of 3.587 with a confidence interval of 1.542–8.349. This indicates that parents were three times more likely to view COVID-19 vaccination in children favorably. And a P-value of 0.05 (0.05) was obtained from the statistical test analysis (Chi Square), therefore it can be inferred that there was a significant association between family support and parents' perspectives at the elementary school.

Table 2. Role of Health Professionals on Parent's perspectives about Covid-19 Vaccination in Child (n=100)

Role of Health Professionals	Parent's Perspectives				Total		p-value	POR (95%)
	Negative		Positive					
	n	%	n	%	n	%		
Low	18	58.1	13	41.9	31	100	0.318	1.697 (0.721-8.998)
High	41	44.9	58	55.1	69	100		
Total	49	49	51	51	100	100		

According to table 2, it is known that among the 69 respondents who had a high role from health professionals, 38 (55.1%) had a positive impression of COVID-19 immunization in children, whereas among the 31 respondents who received a poor role, 13 (58.1%) had a negative perception. And of the 69 respondents who had a positive opinion of health professionals, 41 (44.9%) held a positive perception, whereas 18 (58.1%) of the 31 respondents who held an unfavorable opinion of health workers held a bad perception. The statistical test yielded a POR value of 1.69 with a confidence interval ranging from 0.721 to 8.998, indicating that this number cannot be understood. The statistical test analysis (Chi Square) yielded a P-value of 0.318 (> 0.05), indicating that there was no correlation between the role of health workers and the attitudes of parents at the elementary school.

Table 3. Dispersion of respondents' answers

Variable		n	%
Family Support			
	Information about Covid-19 in Child	74	74
	Call for vaccination in child	52	52
	Understanding of vaccination in child	75.5	75.5
	Communication of family member	88	88
	Neighborhood involvement	66	66
	Assistance of guardian or parent in vaccination	81	81
	Assumption of vaccine's safety	63	63
The Role of Health Professionals			
	Education about Covid-19 Vaccination in child	83	83
	Impact of education	83	83
	Screening of Covid-19 Vaccination in Child	90	90
	Attitude of Health Professionals	86	86
	Sources if information	73	73
Parents' Perspectives			
	Perceptions related to vaccine administration	64	64
	Opinions of vaccines' effect on children	68	68

Using the questionnaire analysis presented in Table 3, the majority of respondents stated that communication within family members (88%), guardian and parent assistance in vaccination (81%), and an understanding of vaccination in children (75.5%) impact their perspectives to vaccinate their children. In addition, the majority of respondents said that screening for COVID-19 vaccination in children (91%) and the attitude of health professionals (86%) influenced their decision to vaccinate their children. Two-thirds of parents agreed with the statement about perceptions connected to vaccine administration and their thoughts about vaccines' effect on children.

DISCUSSION

This study aimed to investigate the determinants of parents' perception towards vaccinating their children against COVID-19. The findings of this study was in line with Kundari et al study (2020), which were obtained from 211 respondents with inadequate family support: 31.1% of people with good prevention behavior and 68.9% with bad prevention behavior; and from 183 respondents with adequate family support: 66.1% had good preventive behavior and 33.5% had bad preventive behavior. According to these findings, there were still a significant number of individuals with poor preventative behavior. As for family sources, they can provide assistance beginning at the lowest scale, in the form of informational, emotional, and concrete action support to jointly adopt COVID-19 preventative behaviors, including immunizations for children (Ravens-Sieberer et al., 2021).

According to Frediman (Akseer et al., 2020), "family support" is an attitude and an act of family acceptance of family members, manifesting as informational support, appraisal support, instrumental support, and emotional support. Therefore, family support is a type of interpersonal interaction that consists of the attitudes, actions, and acceptance of family members so that they feel as though someone is paying attention. Family support is believed to decrease or buffer the impact of an individual's mental health problems. As a result, those who have a supportive social environment tend to be in better health than those who lack these advantages.

This research also found similar findings with previous research that showed social support (family, friends, and health workers) has a significant effect on behavior to prevent the transmission of COVID-19 in the community in the metropolis area (p value = 0.05), with family support being the most influential factor(Kundari et al., 2020). In this study, the researchers also obtained a p value of 0.05, while sources from the family can provide support beginning at the smallest scale, both in the form of informational, emotional, and concrete action support to jointly implement COVID-19 prevention behavior, particularly for children in vaccination administration.

This is also reinforced by Friedman's (2010) notion that family members are able to function and enhance their health with the assistance of knowledge, assessment, and emotional instruments. Family support is the provision of products, services, knowledge, and counsel to other family members in order to make them feel loved, appreciated, and at ease. Therefore, the following information is required for family members to obtain the COVID-19 vaccine (Nguyen et al., 2018).

This study was consistent with (Wong et al., 2022) examination of the association between the function of health professionals and baby immunization coverage during the COVID-19 outbreak in children (Singh et al., 2020; Tanjung, 2020). The relationship between the role of health workers and complete basic immunization coverage during the

COVID-19 pandemic in children, where health workers play a role in increasing community participation, particularly among mothers, but the success of the immunization program cannot be achieved without family support. This study also reveals that there is no correlation between the attitudes of parents and the function of health personnel; the success of the COVID-19 immunization in children is also influenced by family support.

According to (Al-Khlaiwi et al., 2022a) "health professionals" is someone who is responsible for delivering health services to individuals, their families, and communities. Health workers also play a significant role in enhancing the maximum quality of health services provided to the community so that the community can increase its awareness, willingness, and capacity to live healthily as an investment in the development of socially and economically productive human capital.

This study is consistent with analysis of the relationship between the role of health workers and infant immunization coverage during the COVID-19 epidemic in children, where the statistical test results obtained a p value of 0.21 (> 0.05), indicating that there is no relationship between the role of health workers and complete basic immunization coverage during the COVID-19 pandemic. Even though health workers play a role in enhancing community participation, particularly among mothers, the effectiveness of the immunization program cannot be realized without family support. By expressing the proper information, developing motivation and behavior, setting an example, and collaborating with medical colleagues or other parties, health care professionals can play a crucial role in overcoming public skepticism regarding the COVID-19 immunization and building herd immunity (Bell et al., 2020).

According to the analysis of the questionnaire and the results of the research conducted, it was determined that the majority of respondents obtained information about Covid-19 vaccination in children from health workers, indicating that the majority of respondents already knew about administering Covid-19 vaccination to children, as indicated by their responses to the questionnaire. There are at least three correct answers out of ten questions or statements, namely the statement that there is no comprehensive counseling about the Covid-19 vaccine for children, health workers who do not involve children in counseling, and health workers who are not a source of important information regarding Covid-19 vaccination in children. For family support, it was found that most of the respondents had high family support regarding COVID-19 vaccination in children, meaning that the respondents already understood about the prevention of COVID-19, which was known from their answers to the questionnaire's 10 questions or statements. Of the three questions or statements that received the least correct responses, those pertaining to families who do not want their children to be vaccinated, families who forbid giving COVID-19 vaccinations to their children, and families who continue to believe that the safety of COVID-19 vaccinations cannot be guaranteed received the least correct responses.

In Bukittinggi, parental attitudes for vaccination their children against COVID-19 appear to be less favorable than in other countries. About 60% of parents in Italy were encouraged to vaccinate their children, and 29.6percent were "considering the opportunity"(Alsulaiman et al., 2022b; Montalti et al., 2021). A high rate of parental acceptability was also found in China (72.6%) (Zhang, 2020). In England, most parents demonstrated acceptance of the COVID-19 immunization for their children (certainly 48.2%, doubtful but leaning towards yes, 40.9%). In Canada and Israel, parents with

children under 12 years old showed comparable outcomes (Goldman et al., 2021). 53.7 percent of Saudi Arabian parents were willing to vaccinate their children under the age of 18 in one research, and 46.9 percent were willing to vaccinate their children between the ages of 5 and 12 (Al-Khlaiwi et al., 2022b). In Malaysia, which is close to Indonesia, 15.7% reported being very willing, 38.9% reported being somewhat willing, and 33.8% reported being undecided (Wong, 2020).

Limitation of this study was the research sample was taken using the Google form because the area where each respondent lived was quite difficult to reach by researchers, and this was to collect respondents in a location that was difficult to do because of limited time and activities by the research location, therefore this research was carried out by distributing questionnaires via Google form which is shared online via the WhatsApp Group. In that particular case, parents who were not willing to vaccinate their children is quite difficult to follow up to educate them about the impact.

CONCLUSION

This study investigates the perspectives of Bukittinggi parents towards the COVID-19 vaccination for their children. Vaccine hesitancy appears to be impacted by a variety of variables. Contrary to the involvement of health professionals, family support for COVID-19 immunization in children is a strong predictor of parental opinion. Considering these elements is essential of health professionals for guiding the development of future campaigns to enhance immunization rates and strengthen family support for the Covid-19 vaccine. In that case, it is necessary for the future researcher to broaden the research area and study at the impact on unvaccinated children.

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