

Education as Predictor to COVID19 Vaccine Acceptance: Parents' Point of View

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ABSTRACT

Purpose: The purpose of this study was to determine how parents accepted and viewed COVID-19 vaccine for their children. **Methods:** A descriptive observational research design based on a cross-sectional survey was employed in this study. The participants in this study were parents of children under the age of eighteen. The questionnaire used in this study was adapted from a study titled "Attitudes of Parents with Regard to Vaccination of Children against COVID-19 in Poland". Data was gathered through sending survey over the internet and through social media. **Results:** The total number of final samples available for this investigation is 106. Several factors can influence parental acceptance of the COVID-19 vaccine for children, including the age of the child, whether or not parents have seen a COVID-19 vaccination campaign for adults, whether COVID-19 vaccination is mandatory for children, the level of knowledge of parents about COVID-19 vaccination for children, and parents' opinions about the danger of COVID-19 vaccination for children. The probability of vaccinating children against COVID-19 is positively related to the level of parental information regarding COVID-19 vaccination for children. **Implications:** The result of this study are expected to be used to improve parent education regarding the COVID-19 vaccine.

Keywords: COVID-19, COVID-19 vaccine, acceptance towards vaccines, attitude towards vaccine

1. INTRODUCTION

COVID-19 (Coronavirus Disease 2019) is a global health issue right now. This is an infectious disease caused by the SARS-CoV-2 virus (Severe Acute Respiratory Syndrome Coronavirus 2). This sickness was first detected in the Chinese city of Wuhan around the end of 2019. (Farina, 2021; Makmun & Hazhiyah, 2020)

Only a few children were infected with COVID-19 at the start of the pandemic. Children that are infected are asymptomatic or have relatively minor symptoms (Yılmaz & Sahin, 2021). According to the Covid-19 Handling Task Force's report "National Data Update and Analysis of Covid-19 Instances in Children" as of June 24, 2020, 250 thousand cases (12.6 percent) were reported from children (Kementrian Kesehatan Direktorat Promosi Kesehatan dan Pemberdayaan Masyarakat, 2021).

COVID-19 immunization aims to reduce COVID-19 transmission/transmission, reduce COVID-19 morbidity and mortality, achieve herd immunity, and protect the community from COVID-19 in order to remain healthy in the midst of the COVID-19 pandemic, and socially and economically productive (Kementerian Kesehatan Republik Indonesia, 2021). The development of an effective vaccine to treat coronavirus infection is a major research priority in 2019. (COVID-19). Vaccine development itself, however, will not be adequate because a huge sufficient number of individuals will need to be vaccinated to achieve widespread immunity (Salali & Uysal, 2020).

COVID-19 vaccinations are urgently needed all across the world, yet need varies by population. Vaccines would almost certainly be prioritized for health-care personnel and those most at risk of serious illness and death (Yamey et al., 2020). Many countries with full access to vaccines have introduced recommendations for vaccination of not only people at risk of severe COVID-19, such as the elderly and chronically ill, but all parts of society, including children aged 12 and higher, as the currently registered preparations can be used beyond that age (Babicki, Pokorna-Kałwak, Doniec, & Mastalerz-Migas, 2021). Vaccine hesitancy is unfortunately a

worldwide phenomenon that has gained increasing attention and concern, despite compelling scientific evidence of vaccinations' efficacy in reducing disease and disability (Hadjipanayis et al., 2020).

Belief in the natural source of COVID-19 vaccination significantly increased the possibilities of it being accepted (Salali & Uysal, 2020). The major reasons for vaccination, or 'pros,' were to prevent the individual receiving the vaccine against COVID-19, followed by protecting others from the disease. The most common reasons for COVID-19 vaccine refusal were questions about vaccine safety, efficacy, and the benefits of vaccinating children (Bell, Clarke, Mounier-Jack, Walker, & Paterson, 2020).

Apart from the advantages and disadvantages of administering vaccines, particularly in the group of children which is still growing around the world, the authors are interested in learning how parents react to the COVID-19 vaccine.

2. METHODS

A descriptive observational research design based on a cross-sectional survey was applied in this study. The objective of observational descriptive research is to provide a broad picture of a phenomenon. As a result of this research design, researchers can learn more about parents' acceptance and views concerning the COVID-19 vaccine for children.

Parental acceptability, parental attitudes, and predicting factors for acceptance of the COVID-19 vaccine for children were all investigated in this research. The participants in this study were parents of children under the age of eighteen.

During the COVID-19 pandemic, data was collected through distributing questionnaires over the internet as well as through social media. Then, in order to become respondents of the study, participants were required to send a questionnaire to their friends or colleagues. As a result, the amount of data collected will expand.

Univariate analysis will be used in the data analysis technique, which means that each variable will be analyzed separately to determine its qualities without being related to other variables. Data with frequency and percentage distributions will be presented in this univariate analysis.

To assess the association between the variables and the average difference between the groups of tested variable categories, bivariate analysis will be used. Using the Chi-Square Test and Cramer's V Test, determine the correlation between ordinal variables. The Spearman Correlation Test is used to determine the relationship between quantitative variables. Then, using the Mann Whitney Test, determine the difference in mean between two groups of categories, and the Kruskal Wallis Test on variables with more than two groups of categories.

In addition, multivariate analysis will be performed on variables with a statistically significant association. The Ordinal Logistics Regression Test was used to determine the acceptance prediction factor, which was then reported as an Odds Ratio (OR) and p value.

3. RESULTS AND DISCUSSION

History of vaccination

It can be noticed in this study that the majority of the parents who participated in it had received the COVID-19 vaccination (96.2 percent). The majority of people who had been vaccinated said they had no side effects (53.9%), mild side effects (41.2%), or moderate side effects (4.9 percent). In terms of their children's vaccination history, there still are parents who do not vaccinate their children (15.1%), followed by parents who vaccinate their children, for mandatory vaccinations (31.1%), and then parents who vaccinate their children for recommended and mandatory vaccinations (53.8 percent). Meanwhile, when asked if their children had suffered any side effects as a result of vaccination, the majority of parents said no (52.2%), mild side effects (45.6%), and moderate side effects (2.2 percent).

Source of Vaccine Information

A COVID-19 vaccine awareness campaign for parents (75.5 percent) and a COVID-19 vaccination awareness campaign for children were both reported by most parents (66.0 percent). The internet is the most widely used source of information regarding COVID-19 vaccines for children by parents (67.0 percent), and it was also the most widely used source of information in earlier research conducted in Poland (78.6 percent) (Babicki et al., 2021). This study differs slightly from that conducted in Jordan where they found that the health

service provider was chosen as the most trustworthy source of information related to the COVID-19 vaccine (45.4 percent), while the internet placing in fourth (17.4%) (El-Elimat, AbuAlSamen, Almomani, Al-Sawalha, & Alali, 2021).

Vaccination plan

Parents who plan to vaccinate their child against COVID-19 as soon as possible (63.2%) or within a few months (10.4%), compared to those who would never vaccinate their child (1.9 percent). In a recent study in Poland, parents who would immediately vaccinate their child (44.1 percent), within a few months (4.8 percent), and never vaccinate (44.1 percent) were shown to be the most likely (25.8 percent) (Babicki et al., 2021). In a survey conducted in Turkey, 36.3 percent of parents were willing to vaccinate their children against COVID-19, followed by 35.6 percent of parents who were hesitant, and finally parents who refused to vaccinate their children (28.1 percent) (Yilmaz & Sahin, 2021).

Age of children and vaccination

According to the analysis's results, a child's age and willingness to receive vaccinations have a significant correlation. The average amount of willingness to vaccinate children varies depending on the age group of children. One of the factors that predicts whether or not parents would consent to their children receiving the COVID-19 vaccine is the child's age. In comparison to parents of older children, parents of younger children are typically less ready or likely to have their children receive vaccinations.

In particular for children under the age of 18, parents decide whether to vaccinate their children (Yilmaz & Sahin, 2021). One of the predicting factors that is related to parents' willingness to vaccinate their children is the age of the child. The likelihood that parents will desire to vaccinate their child against COVID-19 decreases with the child's age. In comparison to parents whose children are 6 to 11 years old, those whose children are less than 6 years old are less willing to vaccinate them against COVID-19. Likewise, for children aged 6 to 11 years, the readiness to vaccinate children against COVID-19 is lower than with children aged 12 to 17 years.

Mandatory vaccination

The readiness of parents to vaccinate their children against COVID-19 is strongly correlated with their views on whether COVID-19 vaccination is necessary for children. The average chance of vaccinating children varies amongst the categories as well. Compared to parents who respond that COVID-19 vaccination is certainly required, parents who give less attention to the question of whether COVID-19 vaccination is required for children are less ready to vaccinate their children. This is consistent with earlier study carried out in Poland (Babicki et al., 2021).

Risk or side effect of vaccine

The probability of vaccinating their children is negatively correlated with parents' views of the degree of risk associated with the COVID-19 vaccination for children. Parents are less likely to vaccinate their children if they consider the COVID-19 vaccine as being very risky for their kids. Additionally, this is consistent with Polish study (Babicki et al., 2021).

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Table 1. Predictors of parental acceptance of vaccinating children against COVID-19

Predictor variable	Planning to vaccinate		Chance to vaccinate		
	OR	P	OR	P	
Amount of children	1	5,912	0,336	-	-
	2	36,215	0,040	-	-
	3	28,885	0,064	-	-
	4	380,784	0,023	-	-
	5	1,855	0,790	-	-
	>5	1		-	
Age of children	<6 years	0,053	0,001	0,288	0,019
	6 – 11 years	0,104	0,006	0,235	0,006
	12 – 17 years	1		1	
Parental vaccination	No, I will not vaccinate	0,000	0,876	0,000	0,910
	Not Yet, Still waiting the schedule	0,379	0,517	0,443	0,531
	Yes	1		1	
Have you ever found COVID-19 campaign for adults/parents?	Yes	13,169	0,001	1,677	0,386
	No	1		1	
Have you ever found COVID-19 campaign for children ?	Yes	1,106	0,893	1,187	0,772
	No	1		1	
Level of Knowledge about COVID-19		0,922	0,632	1,338	0,022
Is it mandatory for adults/parents ?	Absolutely No	0,000	0,828	0,000	0,875
	Maybe No	0,017	0,042	0,318	0,339
	Yes or No	0,234	0,135	0,339	0,189
	Maybe Yes	2,294	0,215	1,157	0,776
	Absolutely Yes	1		1	
Is it mandatory for children?	Absolutely No	0,006	0,008	0,149	0,193
	Maybe No	0,036	0,008	0,024	0,001
	Yes or No	0,064	0,006	0,259	0,092
	Maybe Yes	0,181	0,043	0,322	0,045
	Absolutely Yes	1		1	
Degree of COVID-19 severity for children		1,171	0,239	1,056	0,550
Degree of COVID-19 vaccination risk for children		0,959	0,738	0,791	0,013

The previous analysis is complemented by this acceptance predictor table. The test was conducted in the meantime for factors that had a statistically significant correlation with the readiness to vaccinate children against COVID-19.

According to Table 1, parents are less likely to vaccinate their younger children than they are their older children. Parents who have heard about or learned about COVID-19 are ready to vaccinate their kids.

Consequently, parents who are better informed with COVID-19 are more willing to vaccinate their kids. However, there is a decline in parental willingness as a result of vaccine side effects awareness.

The age of the child, whether or not parents have discovered a COVID-19 vaccination awareness campaign for adults, whether or not COVID-19 vaccination is required for children, the level of parental knowledge regarding COVID-19 vaccination for children, and parents' opinions regarding the degree of danger associated with COVID-19 vaccination for children are some of the things that can predict parents' acceptance of the COVID-19 vaccine for children.

4. CONCLUSION

The motivation to vaccinate their children is mainly driven by campaigns informing of the risks of covid-19 and vaccinations as well as their negative effects. This campaign is a necessary kind of education to spread the message about the benefits of vaccines.

In addition to providing or educating others to receive the COVID-19 vaccination, it is anticipated that this study will provide a real image of the information regarding the significance of the COVID-19 vaccination.

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