

## Parents' perceptions and expectations of COVID-19 vaccination for children in Banda Aceh

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### Abstract

**Background** Parents usually make the decisions on COVID-19 vaccinations for their children under the age of 18.

**Objective** To explore parents' perceptions and expectations of COVID-19 vaccination for children in Banda Aceh.

**Methods** This study used a qualitative design with a phenomenological approach. Data were collected through in-depth interviews of 36 parents in Banda Aceh. The data were analyzed qualitatively through thematic analysis.

**Results** Three themes were studied: (1) perceptions of parents willing to have their children vaccinated against COVID-19, (2) perceptions of parents who refused or delayed their children's vaccination against COVID-19, and (3) parents' expectations regarding COVID-19 vaccination in children. Benefits of the vaccine and government policy were among the reasons that parents were willing to have their children vaccinated. Vaccine safety concerns, lack of information, strong immunity, healthy lifestyle, and religious beliefs were the main reasons for parental refusal or delay in vaccinating their children. Reduced cases of COVID-19 and the end of the pandemic, not being infected, developing immunity, and no adverse events following immunization, face-to-face learning in schools, as well as increased education and socialization from the government, society that was critical and selective in receiving information were the expectation of parents regarding COVID-19 vaccination in children.

**Conclusion** The perception of vaccine benefits and government policy influence parents to have their children vaccinated, while perception of vaccine safety concerns, lack of information, strong immunity, healthy lifestyle, and religious beliefs influence parents to refuse or delay their children being vaccinated. Parents' expectations regarding COVID-19 illness, their children's response to the vaccine and education, as well as the government's and society's roles during the pandemic are qualitatively elucidated. [Paediatr Indones. 2023;63:256-66; DOI: <https://doi.org/10.14238/pi63.4.2023.256-66> ].

**Keywords:** COVID-19 vaccine; perceptions; expectations; parents; children

At the end of December 2019, a group of patients with pneumonia of unknown etiology was reported in Wuhan City, China.<sup>1</sup> On February 11, 2020 the World Health Organization (WHO) officially declared the name of this disease to be COVID-19, while the viral etiology was named *severe acute respiratory syndrome-Coronavirus-2* (SARS-CoV-2).<sup>2,3</sup> On March 11, 2020, COVID-19 was declared a pandemic and as of July 31, 2021, there were 196,637,854 confirmed cases of COVID-19, with 4,201,009 deaths in 204 countries reported by the WHO. The United States reported 34,659,540 million cases, India 31,613,993 million, and Brazil reported 19,839,369 confirmed cases of COVID 19.<sup>4,5</sup> COVID-19 became a global problem requiring joint handling. The COVID-19 pandemic impacted lives of people around the world.<sup>6</sup> The global spread of the virus overwhelmed the health system, and brought many activities, both social and economic, to a standstill.<sup>7</sup> On March 2, 2020, the first two cases were reported in Indonesia.<sup>8</sup> On July 31, 2021, Indonesia ranked first in the reported number of cases in Southeast Asia, namely, 3,409,658 confirmed

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positive cases of COVID-19, and the number of deaths reached 94,119 people. The case fatality rate (CFR) was 2.8%.<sup>5</sup> The Aceh Health Service reported on August 8, 2021 that there were 25,212 cases with 1,069 deaths. The city of Banda Aceh recorded 7,401 confirmed cases, of whom 181 died.<sup>9</sup>

Positive cases of COVID-19 in Indonesian children aged 0-18 years amounted to 12.6%, meaning that 1 in 8 people infected with COVID-19 were children. Positive COVID-19 cases of children 1 to 5-year-olds accounted for 2.9%, while school age/adolescents 6-to 18-year-olds accounted for 9.7%. The mortality rate was 0.6% in children 1-to 5-year-olds, and is 0.6% in those 6-to 18-year-olds.<sup>10</sup> Until August 8, 2021, there were a total of 2,334 children with COVID-19 in Aceh, of whom 1,216 had positive confirmations, 1,045 people with suspected COVID-19, and 75 people with clinically probable COVID-19.<sup>11</sup>

Efforts to prevent transmission included wearing masks, keeping a distance from crowds, washing hands with soap, testing, tracing, and follow-up. The COVID-19 vaccine gave a lot of hope for the community to emerge from the pandemic. The combination of all mitigation tactics and vaccination efforts were important interventions that supported each other and could not be separated from each other.<sup>12</sup>

The survey on acceptance of the COVID-19 vaccine in Indonesia by the Ministry of Health of the Republic of Indonesia, WHO, *United Nations Children's Fund* (UNICEF), and *Indonesian Technical Advisory Group on Immunization* (ITAGI) in September 2020, showed that Aceh and West Sumatra were provinces with the lowest acceptance in Indonesia, at below 50%.<sup>13</sup> The COVID-19 vaccination for adolescents in Aceh began July 1, 2021. As of September 20, 2021, 19,842 school-age adolescents in Aceh received the first dose of the COVID-19 vaccine, or 3.4% of the target of 577,071 people.<sup>14</sup> Based on available data and phenomena that could be observed in the community, Aceh is still the province with the lowest vaccination uptake in Indonesia. In addition, the perception of parents about COVID-19 vaccinations for children in Banda Aceh was not yet known. As such, we aimed to explore the perceptions and expectations of parents regarding COVID-19 vaccination for children in Banda Aceh.

## Methods

Our study used a qualitative design with a phenomenological approach and involved parents with children aged 12-18 years in Banda Aceh. Inclusion was carried out by a purposive sampling method until data saturation was reached. The number of participants in this study was 36 parents, which were divided into 4 parents in each sub-district in Banda Aceh city. The interview in the nine sub-districts was expected to increase the demographic variation of the participants. Inclusion criteria were (1) population in one of the nine sub-districts in Banda Aceh City, (2) parents who have children aged 12-18 years, (3) able to communicate well, (4) willing to participate in the study. Parents were excluded if they had one or more symptoms of cough, runny nose, or fever. In-depth interviews were conducted using a semi-structured guide by the researcher (**Appendix 1**). The interviews were conducted from November 2021 to January 2022. The results of the study were analyzed qualitatively through thematic analysis. The average duration for each interview was approximately about 30-40 minutes. After conducting interviews with the participants, the researcher transcribed audio recordings and analyzed them by encoding and categorizing the participants' answers.

Parental perception was defined as the process of organizing and interpreting something stimulus carried out by parents in order to understand it well. Educational level was divided into basic, middle, and higher education. Basic education was defined as the level of education that underlies secondary education. Basic education took the form of elementary schools and *madrrasah ibtidaiyah* (Islamic elementary school) or other equivalent forms as well as junior high schools and *madrrasah tsanawiyah* (Islamic junior high schools), or other equivalent forms. Middle education was defined as continuation of basic education that consists of general secondary education and vocational secondary education. Middle education took the form of senior high school (SMA), *madrrasah aliyah* (Islamic senior high school), vocational high school, and vocational *madrrasah aliyah* (Islamic vocational high school), or other equivalent forms. Higher education was defined as the level of education after secondary education which included diploma, undergraduate, masters, specialist, and doctoral education programs

organized by universities. Parental expectation was defined as parental hope, something to be hoped for; wish that become reality; expected or trusted person. This study was approved by the Universitas Syiah Kuala Research Ethics Committee.

## Results

Participants were 36 parents with children aged 12-18 years, from nine sub-districts in Banda Aceh City. The frequency distribution of participant characteristics are shown in Table 1.

Table 1 shows that 30/36 of participants were female, 11/36 were 47-51 years of age, and 1/36 were >56 years; 19/36 had higher education and 4/36 had basic education; 12/36 worked as civil servants, and 1/36 had other employment. Participants with monthly income of IDR 1.5-2.5 million and IDR >3.5 million each amounted to 12/36, while monthly income <IDR 1,500,000 amounted to 4/36. In addition, ethnicities of participants were 31/36 Aceh, and 1/36 each from Sunda, Nias, and Minangkabau. Twenty seven out of 36 of participants also had one child in the 12-15-year-old range. Also, 23/36 of parents and 24/36 of children were vaccinated against COVID-19.

Three themes were identified: (1) Perceptions of parents who were willing to have their children vaccinated against COVID-19; (2) Perceptions of parents who refused or delayed their children's vaccination against COVID-19; (3) Parents' expectations regarding COVID-19 vaccination for children.

Most of the participants were willing to have their children vaccinated against COVID-19 because of the benefits of the COVID-19 vaccine.

"First is to protect himself, second is to protect family." (P2)

"It's good to be vaccinated, so that we can avoid Corona. So it doesn't spread. The vaccine was implemented to prevent it in children. Totally agree." (P9)

In addition to reducing the risk of transmission, the benefits of the COVID-19 vaccine were also to stimulate a person's immune system and reduce the severe impact of the virus.

"This disease can happen at any age. Children can be infected and make other people sick too. If the child has been vaccinated, this automatically means that the spread

**Table 1.** The frequency distribution of participant characteristics

Characteristics	(N=36)
Gender, n	
Male	6
Female	30
Age group, n	
<37 years	2
37-41 years	5
42-46 years	9
47-51 years	11
52-56 years	8
>56 years	1
Education, n	
Basic education	4
Middle education	13
Higher education	19
Profession, n	
Civil servant	12
Entrepreneur	9
Contract worker	3
Housewife	11
Others	1
Monthly income, n	
< IDR 1,500,000	4
IDR 1,500,000-2,500,000	12
IDR 2,500,000-3,500,000	8
> IDR 3,500,000	12
Ethnic group, n (%)	
Aceh	31
Jawa	2
Sunda	1
Nias	1
Minangkabau	1
Number of children aged 12-18 years, n (%)	
1	27
2	9
Parental COVID-19 vaccination status, n (%)	
Vaccinated	23
Unvaccinated	13
Children's COVID-19 vaccination status, n (%)	
Vaccinated	24
Unvaccinated	12

of the virus may be somewhat hampered because the body already has immunity, the virus becomes difficult to enter the body and spread to other people." (P10)

"This is one way to prevent the bad effects of the virus, for example if your child is sick from COVID-19, then if your child has been vaccinated, this can reduce the impact of the virus on the child." (P27)

The government's policy of vaccinating students against COVID-19 so that learning can be carried out face-to-face during the pandemic was another factor

in parents wanting to have their children vaccinated against COVID-19.

"The first is to prevent the disease, the second is because of the government ordering children to be vaccinated. It is also related to education. If children are not vaccinated, they cannot carry out face-to-face learning." (P3)

Participants also revealed that the government's policy of imposing vaccine certificates as an administrative requirement.

"Yes, the first is for health, the second is that we may be asked for vaccine documents later. I got information, I don't know if this is the mode or not, there is no vaccine certificate, you can't travel out of town." (P6)

Most of the participants refused or delayed vaccinating their children for COVID-19 due to vaccine safety concerns

"I'm afraid of the effect, even though she has no congenital disease, I mean, I saw people who had been vaccinated, nothing happened, but they said they had pain from the injection site. I was worried that she had a fever, or some other disease will appear later, that's all." (P5)

Some participants also stated that the lack of information about vaccines.

"Maybe I was not educated about vaccines, what are the effects after being vaccinated, and why are they vaccinated? Children have been vaccinated since childhood and when children are older they are vaccinated again." (P1)

"I don't agree, why? I mean, we don't really understand how the COVID vaccine will react. We don't really understand what the side effects are." (P8)

Some participants also thought that children had strong immunity as illustrated in the following comment:

"...For me, the child's immune system is strong, so why should the child be vaccinated again." (P1)

"Children's immunity is still strong, there is no need for such a vaccine. Except as college students, it is mandatory, they cannot fill out a study plan card. Our children are now safe. Maybe if the child will be vaccinated, I don't know what will happen next after the vaccine." (P8)

A healthy lifestyle was another reason for participants' refusing or delaying their child being vaccinated against COVID-19.

"I'm not willing, because I think if we keep our diet, sleep patterns, disease will be far away from us. Live a healthy life and maintain a healthy lifestyle, because we can see that the children are still healthy, nothing makes them sick. I instill in my children a healthy way of life. Eat healthy

food, don't overdo it." (P35)

One participant expressed his religious belief that vaccines are haram (sinful; against religious teaching). "...That the vaccine contains haram elements. The COVID-19 vaccine is the same. So it contains an element of haram. So in religion if it is forced it becomes not haram, it is forced because of bodily illness, because it is enforced, but I believe that it contains haram elements. Ulama who say it is halal, we can accept it. But I choose not to, I prefer that it is haram." (P34)

Parents' expectations for COVID-19 were that COVID-19 cases would decrease and the COVID-19 pandemic would end soon.

"Vaccination can reduce COVID-19 in Aceh." (P22)

"Hopefully COVID-19 will end soon." (P3, P6, P7, P35)

The hopes of parents for children were that all children would be vaccinated, not infected, develop immunity, and there would be no adverse events following immunization.

"I hope all children will be vaccinated." (P3)

"Hopefully after the children are vaccinated in every school, we will no longer hear that anyone in the school has COVID-19." (P9)

"After my child is vaccinated, hopefully he will be immune from it." (P13)

"Nothing happens after being vaccinated, doesn't cause any bad effects after being vaccinated." (P29)

Parents' expectations of education so that face-to-face learning at school could be carried out every day.

"All children must be vaccinated, so that all schools can conduct face-to-face learning every day. As long as learning is still online, there is no benefit, sir. No learning. I support that vaccination is accelerated, so that children can go to school as usual." (P17)

Parents' hope for the government was to increase education and socialization about the COVID-19 vaccine. Participants also hoped that there would be education and socialization about the COVID-19 vaccine from trusted sources among health workers. "We want it like this, if the government wants to launch a vaccine for everyone, at least there will be more socialization to prevent the hoaxes that are currently happening, for example there is a hoax like this, health workers must say it is wrong. So what is the function of the vaccine, what happens if it is not vaccinated, there must be more information. The education depends on whether you want to come to school, newspapers, electronic media,

brochures, everything can be done. Sometimes hoax news is more prominent. When the positive news is there, we are already influenced by the negative news, in the end we can't accept the positive news." (P1)

Parents' expect society to be critical and selective in receiving information.

"I don't mean to disrespect other parents, all from the point of view, insight, curiosity, don't accept hoax information outright, the point is to do a cross check. In dealing with everything, whether it's related to vaccines, or related to pandemics, or whatever, even though it's not our field, but I have to find out, I have to look for references related to health, at least I can take care of myself, children, and wife." (P14)

## Discussion

Most participants were willing to have their children vaccinated against COVID-19 because of the benefits of vaccination. The benefit of the COVID-19 vaccine is to provide protection from being infected or seriously ill due to COVID-19 by generating or stimulating specific immunity in the body.<sup>15,16</sup> Vaccinated children can help protect family members, including siblings who do not qualify for vaccination and family members who may be at increased risk of serious illness if they become infected. Vaccinations can also help to keep children from becoming seriously ill if they become infected with COVID-19. Vaccinations can help them stay in school and help them safely participate in sports, playtime, and other group activities. COVID-19 vaccinations for adults and children help protect the whole family and slow the spread of COVID-19 in the community.<sup>17</sup> In agreement with our results, a study showed that the main reasons survey takers stated for receiving the vaccine was self-protection and protecting others, including family members from COVID-19, in response to an open-ended survey and interview.<sup>18</sup> Similar results were also obtained from a national survey conducted in the United States which noted that the majority of parents stated that the COVID-19 vaccine would be useful, effective, and important for their children's health and other health.<sup>19</sup>

In addition to the benefits of vaccination, we found that participants' perception of government policies so that children could return to face-to-face

learning at school was the main reason participants were willing to have their children vaccinated. Based on a joint decision of the Minister of Education, Culture, Research, and Technology, the Minister of Religion, the Minister of Health, and the Minister of the Interior regarding guidelines for the implementation of learning during the COVID-19 pandemic, limited face-to-face learning could be undertaken in a limited fashion, while still implementing health protocols and/or distance learning.<sup>20</sup>

In addition to learning policies during the COVID-19 pandemic, parents' perception of vaccine certificates as an administrative requirement was another reason they were willing to have their children vaccinated. After implementing restrictions on community activities by declaring a Level 4 Emergency status on July 3, 2021 the government relaxed various policies, including the obligation to show a certificate or COVID-19 vaccination card to utilize public services, such as airports, malls, restaurants, railway stations, cinemas, and barber shops/salons. The obligation to show COVID-19 vaccination certificates in public spaces has its pros and cons. Some parties support it on the grounds of protecting the public interest, but other parties question it, given the uneven distribution of vaccinations in various regions.<sup>21</sup> Referring to a circular from the COVID-19 Handling Task Force Number 12 of 2021 on the implementation of restrictions on community activities at Level 4, evidence of a minimum of one vaccination dose and a negative RT-PCR test result certificate within a maximum period of  $2 \times 24$  hours, were requirements for travel administration.<sup>22</sup>

In our study, most participants expressed concern about vaccine safety. An open-ended survey and interview, reported that the main reasons for not receiving the COVID-19 vaccine were concerns about its safety and effectiveness.<sup>18</sup> Similarly, a previous study reported that many parents expressed concerns that the COVID-19 vaccine could cause long-lasting health problems for their child, have serious side effects, as well as the novelty of the vaccine.<sup>19</sup> Moreover, a survey on acceptance of the COVID-19 vaccine in Indonesia revealed that the most common reason for rejection of the vaccine was related to safety concerns.<sup>13</sup> Confidence in vaccine safety was the most influential factor for vaccine doubt among respondents.<sup>23</sup> The National Commission for

Adverse Events Following Immunization confirmed that so far no one had died from the COVID-19 vaccination. The deaths were suspected to be due to vaccination with Sinovac, but upon investigation, authorities concluded that the deaths were not related to vaccination.<sup>24</sup> There is no evidence that the COVID-19 vaccine causes fertility problems in women or men. There is no evidence that vaccine content or antibodies formed after COVID-19 vaccination will cause problems with future pregnancies. Similarly, there is no evidence that the COVID-19 vaccine affects puberty.<sup>25</sup> The COVID-19 vaccine is safe and effective. Any health problem that occurs after vaccination is considered an adverse reaction. An adverse reaction can be caused by the vaccine or it can be caused by a coincidental event unrelated to the vaccine. Serious side effects that can cause long-term health problems are not very common after any vaccination, including the COVID-19 vaccination. The benefits of COVID-19 vaccination outweigh the potential and known risks.<sup>26</sup>

Several participants stated that lack of education and socialization were the reasons they refused or delayed their children's vaccination. Likewise, a study noted that a small proportion of survey participants said that the reason for not accepting the vaccine for their children was due to lack of currently available vaccine information.<sup>18</sup> Similarly, another study noted that parental refusal of the vaccine was due to lack of information, knowledge, and understanding about it.<sup>27</sup>

Several participants stated that the reason they did not want their children to be vaccinated was because they believed that their child's immune system was strong and a healthy lifestyle is a way to maintain health and prevent disease. Parental beliefs about the importance of natural immunity were important barriers to immunization, including the perception that vaccines are not needed to maintain human health.<sup>28</sup> One participant revealed that religious beliefs were the reason for refusing or delaying the child being vaccinated, as he believed that the vaccine contained haram (sinful or against religious beliefs) elements. Similarly, a survey on COVID-19 vaccine acceptance in Indonesia revealed that 8% of the reasons for the rejecting the COVID-19 vaccine were related to religion.<sup>13</sup> *Majelis Ulama Indonesia* (MUI/ The Indonesian Ulema Council) has determined that Sinovac vaccine was halal. The Pfizer vaccine

is currently being reviewed by the MUI and will be issued a fatwa in the near future.<sup>29</sup>

Some participants expected the COVID-19 pandemic to end soon and their children could return to face-to-face learning after being vaccinated. The principle of education policy during the COVID-19 pandemic is to prioritize the health and safety of students, educators, education staff, families, and the community in general, as well as considering the growth and development of students and psychosocial conditions in an effort to fulfill educational services during the COVID-19 pandemic.<sup>30</sup>

Parents' expectations of the government were for improved education and socialization of the COVID-19 vaccine. In the midst of the government's plan for mass distribution of COVID-19 vaccines, various hoaxes arose in online media, and often the information was spread by people lacking in knowledge about the COVID-19 vaccine.<sup>31</sup> Socialization is one of the efforts to accommodate and provide information related to our goals and objectives, carried out as an effort to provide information to the public, as providing socialization involves education. Education is the provision of knowledge about certain matters as an effort to increase public understanding. Efforts to administer vaccines by means of socialization and education can increase public understanding and trust in the vaccines given.<sup>32</sup> It is very important that we continue to ensure that the vaccine is safe. Health workers need to be involved and their capacity built, because health workers are the most trusted source of information in the community.<sup>33</sup>

Parents' expectations of society were that everyone use good judgment in responding to any negative vaccine information by looking for the facts. The importance of tabayyun (verification, or validation) in receiving news is to avoid transmission of fake news.<sup>34</sup> This was in line with the CDC's strategy to tackle COVID-19 vaccine false information by communicating accurate information about the COVID-19 vaccine, responding to information gaps, and dealing with misinformation with evidence-based messages from credible sources. The spread of misinformation on social media and through other channels can affect confidence in the COVID-19 vaccine.<sup>35</sup> The limitation of our study was that qualitative study was highly subjective so it could not be generalized to other conditions or populations.

In conclusion, the perception of benefits of the vaccine and government policy influence parents' decisions to have their children vaccinated, while the perception of vaccine safety, lack of information, strong immunity, healthy lifestyle, and religious beliefs also influence parents to refuse or delay their children being vaccinated. Parents' expectations on the COVID-19 illness, their children's response to the vaccine and education, as well as the government's and society's roles during the pandemic are also elucidated.

## Conflict of interest

None declared.

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## Appendix 1

Three themes were generated from 12 subthemes. Quotations were used to support each subtheme.

<b>Theme 1: Perceptions of parents who were willing to have their children vaccinated against COVID-19</b>
<p>Subtheme 1.1: Benefits of vaccines</p> <p>Most of the participants were willing to have their children vaccinated against COVID-19 because of the benefits of the COVID-19 vaccine.</p> <p><i>"First is to protect himself, second is to protect family." (P2)</i></p> <p><i>"It's good to be vaccinated, so that we can avoid Corona. So it doesn't spread. The vaccine was implemented to prevent it in children. Totally agree." (P9)</i></p> <p>In addition to reducing the risk of transmission, the benefits of the COVID-19 vaccine are also to stimulate a person's immune system and reduce the severe impact of the virus.</p> <p><i>"This disease can happen at any age. Children can be infected and make other people sick too. If the child has been vaccinated, this automatically means that the spread of the virus may be somewhat hampered because the body already has immunity, the virus becomes difficult to enter the body and spread to other people." (P10)</i></p> <p><i>"This is one way to prevent the bad effects of the virus, for example if your child is sick from COVID-19, then if your child has been vaccinated, this can reduce the impact of the virus on the child." (P27)</i></p>
<p>Subtheme 1.2: Government policy</p> <p>The government's policy of vaccinating students against COVID-19 so that learning can be carried out face-to-face during the pandemic was another factor in parents wanting to have their children vaccinated against COVID-19.</p> <p><i>"The first is to prevent the disease, the second is because of the government ordering children to be vaccinated. It is also related to education. If children are not vaccinated, they cannot carry out face-to-face learning." (P3)</i></p> <p><i>"Going back to school as usual. If children continue to carry out online learning, we must get dizzy thinking about internet packages and other things, mustn't we? Face-to-face learning is more effective. He does not learn 100% if online learning. Study while sleeping. What kind of school is that?" (P17)</i></p> <p>Participants also revealed that the government's policy of imposing vaccine certificates as an administrative requirement was another reason that participants were willing to have their children vaccinated against COVID-19.</p> <p><i>"Yes, the first is for health, the second is that we may be asked for vaccine documents later. I got information, I don't know if this is the mode or not, there is no vaccine certificate, you can't travel out of town." (P6)</i></p>
<b>Theme 2: Perceptions of parents who refused or delayed their children's vaccination against COVID-19</b>
<p>Subtheme 2.1: Vaccine safety concerns</p> <p>Most of the participants refused or delayed vaccinating their children for COVID-19 due to vaccine safety concerns</p> <p><i>"I'm afraid of the effect, even though she has no congenital disease, I mean, I saw people who had been vaccinated, nothing happened, but they said they had pain from the injection site. I was worried that she had a fever, or some other disease will appear later, that's all." (P5)</i></p> <p><i>"...What we've heard so far is the influence of the news 50 to 70%. There are children after being vaccinated having convulsions, almost dying." (P18)</i></p>
<p>Sub Theme 2.2: Lack of information</p> <p>Some participants also stated that the lack of information about vaccines was another reason for participants' refusing or delaying their children's vaccination against COVID-19. Lack of education and socialization about vaccines was expressed by the following participants:</p> <p><i>"Maybe I was not educated about vaccines, what are the effects after being vaccinated, and why are they vaccinated? Children have been vaccinated since childhood and when children are older they are vaccinated again." (P1)</i></p> <p><i>"I don't agree, why? I mean, we don't really understand how the COVID vaccine will react. We don't really understand what the side effects are." (P8)</i></p> <p><i>"My view is that there are still doubts for me, me as a parent. The first is from the media, whether it's a hoax or true, maybe the government is not educating the public, that this vaccine is not dangerous, has no side effects and so on. This lack of education from the government makes people confused, because it's hoax news, people can't make decisions. There's a lot of hoax news, isn't there? We as parents will take care of our children, any problem, including their health." (P18)</i></p>
<p>Sub Theme 2.3: Strong body immunity of the child</p> <p>Some participants also thought that children had strong immunity, which was another reason of participants who refused or delayed their child's vaccination against COVID-19.</p> <p><i>"...For me, the child's immune system is strong, so why should the child be vaccinated again." (P1)</i></p> <p><i>"Children's immunity is still strong, there is no need for such a vaccine. Except as college students, it is mandatory, they cannot fill out a study plan card. Our children are now safe. Maybe if the child will be vaccinated, I don't know what will happen next after the vaccine." (P8)</i></p>

<p><b>Sub Theme 2.4: Healthy lifestyle</b>  A healthy lifestyle was another reason for participants' refusing or delaying their child being vaccinated against COVID-19.  <i>"I'm not willing, because I think if we keep our diet, sleep patterns, disease will be far away from us. Live a healthy life and maintain a healthy lifestyle, because we can see that the children are still healthy, nothing makes them sick. I instill in my children a healthy way of life. Eat healthy food, don't overdo it."</i> (P35)</p>
<p><b>Sub Theme 2.5: Religious belief</b>  One participant expressed his religious belief that vaccines are haram (sinful; against religious teaching) was another reason for participants' refusing or delaying their child's vaccination against COVID-19.  <i>"... That the vaccine contains haram elements. The COVID-19 vaccine is the same. So it contains an element of haram. So in religion if it is forced it becomes not haram, it is forced because of bodily illness, because it is enforced, but I believe that it contains haram elements. Ulama who say it is halal, we can accept it. But I choose not to, I prefer that it is haram."</i> (P34)</p>
<p><b>Theme 3: Parents' expectations regarding COVID-19 vaccination for children</b></p>
<p><b>Subtheme 3.1: Parents' expectations of COVID-19</b>  Parents' expectations for COVID-19 were that COVID-19 cases would decrease and the COVID-19 pandemic would end soon.  <i>"Vaccination can reduce COVID-19 in Aceh."</i> (P22)  <i>"Hopefully COVID-19 will end soon."</i> (P3, P6, P7, P35)</p>
<p><b>Subtheme 3.2: Parents' expectations of children</b>  The hopes of parents for children were that all children would be vaccinated, not infected, develop immunity, and there would be no adverse events following immunization.  <i>"I hope all children will be vaccinated."</i> (P3)  <i>"Hopefully after the children are vaccinated in every school, we will no longer hear that anyone in the school has COVID-19."</i> (P9)  <i>"After my child is vaccinated, hopefully he will be immune from it."</i> (P13)  <i>"Nothing happens after being vaccinated, doesn't cause any bad effects after being vaccinated."</i> (P29)</p>
<p><b>Subtheme 3.3: Parents' expectations of education</b>  Parents' expectations of education so that face-to-face learning at school could be carried out every day.  <i>"All children must be vaccinated, so that all schools can conduct face-to-face learning every day. As long as learning is still online, there is no benefit, sir. No learning. I support that vaccination is accelerated, so that children can go to school as usual."</i> (P17)</p>
<p><b>Subtheme 3.4: Parents' expectations of the government</b>  Parents' hope for the government was to increase education and socialization about the COVID-19 vaccine. Participants also hoped that there would be education and socialization about the COVID-19 vaccine from trusted sources among health workers.  <i>"We want it like this, if the government wants to launch a vaccine for everyone, at least there will be more socialization to prevent the hoaxes that are currently happening, for example there is a hoax like this, health workers must say it is wrong. So what is the function of the vaccine, what happens if it is not vaccinated, there must be more information. The education depends on whether you want to come to school, newspapers, electronic media, brochures, everything can be done. Sometimes hoax news is more prominent. When the positive news is there, we are already influenced by the negative news, in the end we can't accept the positive news."</i> (P1)   The government to provide continuous education and socialization as well as reproduce information against hoax narratives.  <i>"The government should provide understanding to the public faster, even more intensively, through TV media, other online media, so that hoax news can be overwritten with true news, so that hoaxes don't run rampant. The actual news is also not explained, why he died, do not hide or minimize the news, this will also be a pressure for the community."</i>(P18)   Participants also hoped that the government would make consistent regulations.  <i>"The hope is for the government, making regulations committed to the rules made, today A, tomorrow B, C, makes us confused, policy makers in making rules must be socialized, do not change, must be committed."</i> (P11)   Some participants hoped that in the implementation of vaccination, all children should be vaccinated  <i>"We want all students to be completely vaccinated, meaning that no one is left behind. We are afraid that those who are left behind will become carriers of the virus. If all of us have been vaccinated, we will all have the same belief, although it is possible that we can still be infected, but at least the effect is not so dangerous that it can be fatal."</i>(P14)   Participants also hoped that there would be a more thorough study of the child's medical history before vaccination.  <i>"... the government should study more, especially from a medical perspective, the history of this disease must be thoroughly investigated first. Screening is not just by talking, it means studying more. For example, if a child dies, you must know the reason. The study has not been completed, previously it was an emergency. Only 70% of the studies, 30% have not but the vaccine is given immediately. Maybe in this 30% who have a history of heart disease should not be given. There are people who were healthy before the vaccine, after the vaccine their hands became numb. Doctors understand better. It's also impossible for us to take blood samples before the vaccine, it takes a long time to get the vaccine."</i> (P18)</p>

Another participant revealed that vaccination is for anyone who wants it with their own awareness.

*"Vaccine for anyone who wants it. The government seems to oblige. For example, like us, if you don't get vaccinated, stop being a teacher, manage promotions using a vaccine certificate, everything needs a vaccine certificate, the threat is in that form, sir. No threat, but with self-awareness."*(P1)

Subtheme 3.5: Parents' expectations of society

Parents' expect society to be critical and selective in receiving information.

*"I don't mean to disrespect other parents, all from the point of view, insight, curiosity, don't accept hoax information outright, the point is to do a cross check. In dealing with everything, whether it's related to vaccines, or related to pandemics, or whatever, even though it's not our field, but I have to find out, I have to look for references related to health, at least I can take care of myself, children, and wife."*(P14)

Sentences with quotation marks (".....") were the participants' answers upon the questions; P=participant; P1=participant #1, etc.