

## Parents' knowledge, attitude, and perception of immunization in Tangerang



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Juan Antonio Fernando Sinaga<sup>1</sup>, Yohana Melani Sari<sup>1</sup>, Yovin Azriella Takaendengan<sup>1</sup>,  
Lia Kartika<sup>1\*</sup>, Prisca Adipertiwi Tahapary<sup>1</sup>

### ABSTRACT

**Introduction:** Immunization is an essential component of global efforts worthwhile to reduce illness and child mortality. The results of initial interviews with residents found that residents were traumatized by fake immunization, were afraid of the incidence of infants dying from immunization, felt distrust of the benefits of immunization. This study aims to determine the description of parents' knowledge, attitudes, and perceptions towards the toddler's immunization in one village in Tangerang.

**Method:** The design of this study is quantitative descriptive with a positivism approach. The population includes all parents who have children under five in one village in Tangerang. This study involved 148 respondents obtained through a purposive sampling technique. Data retrieval uses a valid and reliable measurement tool. Univariate data analysis uses descriptive test techniques, which are presented in the frequency distribution table.

**Result:** The results in this study found that most respondents had good knowledge of immunization as many as 121 respondents (81.8%), more than half of respondents had positive attitudes as many as 82 respondents (55.4%), and more than half of respondents had positive perceptions against immunization, as many as 78 respondents (52.7%).

**Conclusion:** We need accountable information through the provision of education under local wisdom to change the perceptions and attitudes of parents towards immunization. Further research is necessary to identify parents' behavior and how it relates to the completeness of toddler immunization.

**Keywords:** Attitude, Immunization, Knowledge, Parents, Perception.

**Cite This Article:** Sinaga, J.A.F., Sari, Y.M., Takaendengan, Y.A., Kartika, L., Tahapary, P.A. 2021. Parents' knowledge, attitude, and perception of immunization in Tangerang. *Bali Medical Journal* 10(3) Special Issue ICONURS: 1206-1210. DOI: 10.15562/bmj.v10i3.2867

<sup>1</sup>Faculty of Nursing, Universitas Pelita Harapan;

\*Corresponding author:

Lia Kartika;  
Faculty of Nursing, Universitas Pelita Harapan, Jakarta, Indonesia;  
sarah.kartika@uph.edu

Received: 2021-10-29

Accepted: 2021-12-16

Published: 2021-12-30

### INTRODUCTION

Immunization is an essential component of global efforts that help to reduce childhood illness and death. Immunization has a solid potential to reduce the burden of morbidity and mortality; immunization can prevent these two things, especially for children under five. In addition, immunization has also been shown to be cost-effective and successful than all other public health interventions.<sup>1</sup> Immunization is one of the efforts to prevent infectious diseases, which is one of the priority programs of the Ministry of Health as a form of government commitment in achieving the Sustainable Development Goals (SDGs), significantly to reduce child mortality.<sup>2</sup> Immunization is a health intervention proven to be the most cost-effective (cheap), can prevent and reduce the incidence of morbidity, disability, and death due to Immunization Preventable Diseases (PD3I) estimated at two to three

million deaths each year. Children who have been immunized will be protected from dangerous diseases that can cause disability or death. Several infectious diseases included in the Immunization Preventable Diseases (PD3I) include tuberculosis, diphtheria, tetanus, hepatitis B, pertussis, measles, rubella, polio, meningitis, and pneumonia.<sup>3</sup>

The form of immunization is a useful vaccination in preparing a person's immune system to fight a disease without exposing the person to the disease's symptoms.<sup>4</sup> Recent studies suggest that health workers are factors that affect parents' quality of knowledge and attitudes towards immunization information. The better the information provided by health workers, the better parents' knowledge and attitudes about immunization.<sup>5</sup> Recent research exploring the factors of giving immunizations finds that low economy, lack of education regarding immunization, and poor parental awareness are obstacles

and barriers for children in obtaining their right to immunization.<sup>6</sup> In 2016, about 86% of children in the world had received three doses of diphtheria, tetanus, pertussis vaccine, 85% of children had received the measles vaccine, and 85% of children received the polio vaccine.<sup>7</sup> Knowledge is a means of information that has been translated into a language that humans can understand to know, remember about something, and have the curiosity of a subject.<sup>8</sup> Factors that influence knowledge include the level of education, information, culture, and experience. Attitude is an action that is believed to have values and norms and is related to the mindset of a human's behavior. Attitude can be interpreted as a character that must be possessed by a person and is a form of self-assessment to choose which actions are appropriate and deviate because of the attitude of reacting to a stimulus. Factors that influence attitudes are personal experience, the influence of cloth people

considered necessary, cultural influences, mass media, educational and religious institutions, and emotions.<sup>9</sup> Perception is an individual's experience of an object or event experienced by concluding and explaining what message is obtained by linking meaning to sensory stimulation consisting of sensation, attention, expectation, motivation, and memory. Factors that influence perception are attention, functional which consists of experience, learning process, and needs, structural.<sup>10</sup>

Parents are a woman and a man bound by marriage and are ready to assume responsibility as parents born.<sup>11</sup> Furthermore, the study writes that there are several things the role of parents must do, namely training children to learn discipline, getting children to behave by the values and norms that apply in the family, controlling children's development, and helping children to learn to make decisions by looking at actions: cause, effect, and problem understanding.

Regulation of the Minister of Health of the Republic of Indonesia<sup>12</sup> explains that toddlers are children under five years with a calculation of 12-59 months. Growth and development are very rapid in achieving optimal function and are commonly called the Golden age. This period determines the development of language skills, creativity, social awareness, emotional and intellectual, which work very quickly and is the basis for subsequent developments.

In the last five years, complete Basic Immunization Coverage in Indonesia has always been above 85%, still not reaching the target of the Strategic Plan of the Ministry of Health that has been determined. Indonesia's Health Profile in the field of immunization in 2018 was 90.61%. This result is slightly below the 2018 Strategic Plan target of 92.5%, and only 13 provinces in Indonesia have achieved the target. The provinces of Central Java, DKI Jakarta, West Nusa Tenggara, and South Sumatra have received complete basic immunizations, but for Papua (29.60%), East Nusa Tenggara (51.72%), and Aceh (55.26%), the achievement was relatively high.<sup>3</sup>

Complete basic immunization coverage in the Kelapa Dua area, Tangerang 2019 has not yet reached the target, from the

95% target, Tangerang only reached 53.4% in the Kelapa Dua area. The data obtained include 22.6% BCG immunization, 6.23% measles immunization, 53.4% DPT immunization, 65.3% Polio immunization. Our initial data found that only 70 parents out of 224 with toddlers gave their child immunization. Due to the large number of negative stigmas circulating among Kelapa Dua fourth hamlet regarding immunization, many parents do not take their toddlers to the Posyandu to be given immunizations, which is supported by data collection results on immunization in Kelapa Dua fourth hamlet. Based on this, the authors are interested in examining the description of parents' knowledge, attitudes, and perceptions about immunization. The purpose of this study was to describe the knowledge, attitudes, and perceptions of parents towards immunization in one district in Tangerang, Banten.

## METHODS

Researchers used descriptive quantitative research methods with a positivism approach. The study population includes all parents who have toddlers totaling 224 people in the Kelapa Dua area, Tangerang. The sampling technique is purposive sampling as many as 148 respondents. Harlinton developed the research instrument using a knowledge questionnaire.<sup>13</sup> This measuring instrument contains nine valid questions and 0.732 reliability, the attitude questionnaire developed by Sari<sup>14</sup> contains 14 valid questions and 0.748 reliability, and the perception questionnaire developed by Hemadiyan contains 15 valid and 0.776 questions.<sup>10</sup>

As a result of the COVID-19 pandemic, data collection was carried out through an online questionnaire. Researchers collaborated with cadres, the leaders from every neighborhood, and local midwives to assist the data collection process by distributing questionnaire links through Whatsapp communication media. Researchers still maintain ethical principles throughout the research process. To protect the rights of respondents, this research protocol has been reviewed by the Ethics Commission of the Faculty of Nursing, Universitas Pelita Harapan, with

No. 065/KEP-FON/III/2020. After the data is collected, the data is processed and analyzed using a computerized system-the data analysis technique used in univariate analysis using descriptive analysis test. Finally, the presentation of the data is done by using a frequency table.

## RESULTS

There are 148 respondents involved in this study. Characteristics of respondents are described in [table 1](#).

[Table 1](#) described a few things, namely; most of the parents were aged 26-35 years, as many as 67 respondents (45.3%), most of them were female, namely 105 respondents (70.9%), more than half with the latest primary education, namely 84 respondents (56.8%), mostly with IRT work status as many as 98 respondents (66.2%), most of the children aged 37-60 months as many as 60 children (40.5%), most of them one is as many as 71 children (48.0%) and more than half are male, namely as many as 80 children (54.1%).

Based on [table 2](#), most parents had good knowledge of infant immunization, as many as 121 respondents (81.8%). In addition, more than half of the parents have a positive attitude towards immunization under five, as many as 82 respondents (55.4%). More than half of the parents had a positive perception towards immunization under five, as many as 78 respondents (52.7%).

## DISCUSSION

### Parental Knowledge

The findings in this study indicate that most parents have good knowledge as many as 121 respondents (81.8%). Based on the results of these studies, we can conclude that parents' knowledge about immunization is good. However, this is contrary to the phenomenon that occurred from the initial data survey in January 2020. The initial data showed that only 70 parents carried basic immunizations out of 224 parents that have toddlers. The researcher assumes that this happens because of the public perception that immunization can cause death and other negative stigmas that make parents choose not to immunize their children.

The results of this study are in line with

previous studies<sup>14</sup>, which showed that most of the respondents had good knowledge of the study's results, namely 45 respondents (46.4%). Subsequent studies obtained the results that 19 respondents (48.72%) had good knowledge of immunization.<sup>15</sup> From a different perspective, the study showed that previous studies found that most parents had poor immunization knowledge, namely 84% or as many as 21 respondents.<sup>16</sup> Furthermore, a previous study showed that more than half of the respondents had poor immunization knowledge, with 34 respondents (50.57%).<sup>17</sup>

To increase parents' understanding of immunization, teaching staff and students can distribute educational materials about immunization in the audio-visual form to the surrounding community. The provision of primary immunization in Indonesia will later be able to increase through this effort.<sup>18</sup>

#### Parental Attitude

The results showed that more than half of the respondents had a positive attitude towards immunization, including 82 respondents (55.4%). Researchers assume this positive attitude is not too

dominant because of the parents' culture, where immunization is still considered a dangerous substance for their children. In addition, researchers found that there are still stigmas in society, such as autism and seizure events, as the effect of immunization. The factors that influence attitudes include personal experience, the influence of others, culture, and the mass media, where stigmas were circulating among the public regarding the effects of immunization. These things make immunization rates low.

Attitudes are influenced by several factors, including personal experience, the influence of others, culture, and mass media. For example, parents agree that even though the staff is not friendly, parents also agree not to give immunizations when the toddler is sick. Parents also agree to continue giving immunizations even though the family prohibits it. Moreover, parents disagreed that immunization has no benefits and disagreed that immunized children are sick more often than not immunized children.

In line with the result of the study, previous studies also showed that respondents related to maternal attitudes in providing primary immunization showed that most mothers had positive attitudes. The results of the questionnaire analysis showed that the answer indicated the mother's positive attitude in providing primary immunization that the mother agreed that her child should be fully immunized because immunization was necessary for health, the mother agreed that the benefits from immunization were more significant than the disadvantages (side effects).<sup>19</sup>

The mother agrees to continue to immunize her baby even though the mother hears immunization reports from other people and the child has a fever after immunization. The mother will also continue to provide complete primary immunization even though the immunization service is far from home. For example, she must pay expensive immunization fees even though the government bears basic immunization costs. On the one hand, several studies have a dominant positive attitude from the respondents. Astuti<sup>20</sup> found that mothers' attitudes towards primary immunization

**Table 1.** The characteristic of the parents' in Tangerang.

Demography	Frequency (n)	Percentage (%)
Age (years)		
<25	37	26
25-35	67	45,3
36-45	41	27,7
Gender		
Male	43	29,1
Female	105	70,9
Level of Education		
Primary School	84	56,8
High School	41	27,7
Higher Education	23	15,5
Employment		
Housewives	98	66,2
Teacher	5	3,4
Non-Government Employee	28	18,9
Government Employee	6	4,1
Labour	8	5,4
Entrepreneur	3	2
Child's Age (Months)		
0-12	31	20,9
13-36	57	38,5
37-60	60	40,5

**Table 2.** The description of parents' knowledge, attitude, and perception of immunization in Tangerang.

Variables	Frequency (n=148)	Percentage (%)
Knowledge		
High	121	81,8
Fair	22	14,9
Low	5	3,4
Attitude		
Positive	82	55,4
Negative	66	44,6
Perception		
Positive	78	52,7
Negative	70	47,3

were as positive as 158 people (93.5%). The criteria for a positive attitude about immunization are based on mothers who are supported by the number of toddlers who are fully immunized, which means they understand the completeness of immunization.<sup>21</sup>

Mainly having positive attitudes, as many as 43 people (82.7%) with a positive attitude from someone will quickly get information from other people and the mass media about the benefits of primary immunization. This fact shows that the better the attitude or response in getting information, the more likely they will understand and know the benefits of immunization for their babies in the future.<sup>22</sup>

The distribution of the frequency of respondents' attitudes about the completeness of basic immunization was the most with a negative attitude of 46 people (50.55%). Based on these results, respondents' attitude about basic immunization is still not reasonable. The results are due to the education level of the respondents, who are also primarily junior high school graduates (50.55%), so that they do not consider the importance of providing primary immunization.<sup>23</sup> Other research also shows 46 negative attitudes (70.8%) so that almost all parents of children under five do not immunize their children. This negative attitude of respondents is because respondents have their own beliefs and spiritual concern.<sup>24</sup>

A previous study showed that most respondents had a negative attitude towards basic immunization for children, as many as 29 people (59.2%). These results indicate that the high percentage of respondents who have a negative attitude towards basic immunization illustrates the number of respondents who have a negative view of basic immunization.<sup>25</sup>

### Parents' Perception

The results showed that more than some parents positively perceived under-five immunization as many as 78 respondents (52.7%). Perception is influenced by various factors, including experience, environment or object that stimulates a person, learning process, level of education, and needs. Most of the respondents agreed that the vaccine given

during immunization was considered safe because it had been tested. Parents agree that health workers have provided good information about immunization and disagree that immunization is not essential when in an environment that is not at risk of infectious diseases. They also disagree that information from other parties is more reliable than information from health workers, they disagree that drugs are more effective than immunization. They do not agree if immunization causes disability for children. The results of this study are in line with previous studies that stated that the perception of mothers in an area in Surabaya with a positive perception, namely the perception of agreeing that children who were immunized, can be less infected than children who were not immunized.<sup>15</sup>

The study results related to different perceptions of mothers were obtained from the previous study<sup>26</sup>, where six respondents who participated in the previous study revealed that immunizations were made from disgusting and dangerous chemicals. The majority of negative perceptions of immunization were also found in the previous study that found 32 respondents (82.1%) had negative perceptions. They were afraid of the side effects after immunization, such as fever and fussiness.<sup>27</sup> Furthermore, a study involving five participants stated that they are still afraid of needles being pricked for children and the lack of effective delivery of information from health workers.<sup>28</sup>

Although most respondents have good knowledge and attitudes towards immunization, some of the questions have not revealed ample reasons for the small number of respondents who have negative attitudes towards immunization. Further research is needed to explore the possibilities associated with the emergence of negative perceptions among respondents.

### CONCLUSION

The findings in this study indicate that most of the respondents have good knowledge of immunization, most of the respondents have a positive attitude towards immunization, and most of the respondents have positive perceptions of immunization. The researcher hopes

educational institutions can consider developing teaching materials related to parents' knowledge, attitudes, and perceptions of infant immunization. Further research is needed to identify the behavior of parents towards the completeness of immunization for toddlers.

### CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

### FUNDING

We thank The Central for Research and Community Development (CRCD) Universitas Pelita Harapan for the support and the publication funding.

### ETHICS APPROVAL

This research protocol has been reviewed by the Ethics Commission of the Faculty of Nursing, Universitas Pelita Harapan, with No. 065/KEPFON/III/2020.

### AUTHOR CONTRIBUTION

Study conception and design, data collection, analysis, and interpretation of result: JAFS, YMA, YAT. Draft manuscript preparation: LK, PAT.

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