



THE INFLUENCE OF MOTHER'S KNOWLEDGE AND ATTITUDE ON BASIC IMMUNIZATION COVERAGE

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Abstract

Background: Basic Immunization is the administration of vaccines to infants aged 0-18 months. The success of the basic immunization program in infants is supported by the important role of parents who are responsible for their babies **Objective:** To determine the influence of mothers' knowledge and attitudes on basic immunization coverage. **Methods:** The research design used was correlational analysis with a cross sectional approach. The sampling technique used is total sampling. The population and sample of all babies aged 12-59 months at the Mande Health Center in September 2023 amounted to 58 people. The instruments used are questionnaires and leaflets. Analyze data with Chi Square. **Results:** 58 mothers who had babies were obtained in 14 babies with incomplete immunization status, there were 3 (21.4%) mothers who had less knowledge and 11 (78.6%) mothers who had good knowledge. Meanwhile, in 44 mothers with complete immunization status, 42 (95.5%) mothers have a confident attitude towards immunization, while 2 (4.5%) mothers have an unsure attitude towards immunization. **Conclusion:** There is an influence of maternal knowledge and attitudes with basic immunization status in Jamali Village.

Keywords: Knowledge, Attitude, Basic Immunization Coverage

INTRODUCTION

Immunization is an effort to increase the immunity of an active person against a disease that can be prevented by immunization, so that when one day the disease is affected will not be sick or only mildly ill (Ministry of Health, 2021). Meanwhile, Basic Immunization is the administration of vaccines to infants aged 0-18 months (Maternal and Child Health, 2023). According to Health Law Number 39 of 2009, every child has the right to get basic immunizations to protect his body from PD3I. Immunization is the provision of immunity to a disease by inserting something into the body so that the body is immune to diseases that are endemic or dangerous for a person (Cianjur Regency Health Profile, 2021).

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Basic Immunization Coverage in 2018-2021 tends to be lower than the target that has been set, while in 2019 it can successfully achieve a fixed target of 93.7%. However, in 2020-2021 there was a decrease in basic immunization coverage due to the COVID-19 pandemic, where basic immunization coverage at that time ranged from 84.2%-84.5%. Indonesia has significantly increased the achievement of basic immunization targets in 2022. The number of targets set is 90% and the scope of realization is 92.7% so that it can reach or even exceed the predetermined targets (Ministry of Health, 2022). Basic Immunization Coverage in West Java in 2020-2021 is 90% but did not reach the target due to the Covid-19 pandemic. In 2022, it has a target of 95% with a status that exceeds the target by 107% (Ministry of Health of the Republic of Indonesia, 2022). Meanwhile, Cianjur Regency, especially in Mande District, in 2021 has a complete basic immunization coverage of 77.02% at the Mande Health Center. Meanwhile, the Pademangan Health Center has a coverage of 93.24%. In 2022, it has basic immunization coverage of 105.7% of the target of 95% (Profile of Mande District, Jamali Village, 2022).

The reason for the unattained immunization coverage is parents' rejection of immunization, this is due to the wrong assumption about immunization that is developing in the community, namely parents' concerns about the impact other than immunization and the lack of parental awareness to immunize their children. The lack of attitude in making decisions to immunize children is also one of the influences on immunization coverage that is not achieved (Donsu J, 2019). Thus, this is in line with a study conducted by (Darian, 2019) entitled "Factors Influencing Mothers in Providing Basic Immunization to Infants in RT 09 and RT 10 Sawunggaling Village, Surabaya" that maternal support will encourage attitudes to make decisions in immunization. In addition, there is also a study conducted by Zurhayati, et al. (2019) that the more information and knowledge that mothers get, the higher the interest of mothers in giving their children immunizations so that the coverage of immunization for children will be fulfilled.

The success of the basic immunization program in infants is supported by the important role of parents who are responsible for their babies. If the mother lacks knowledge about immunization so that the mother does not feel the need for



immunization, then this will affect the schedule, the baby's immunization which will have an impact on the onset of the disease. When mothers have good knowledge about immunization, it is hoped that immunizations can be given according to a predetermined schedule so that they can reduce the Infant Mortality Rate (AKB) and improve public health status (Herawati, 2023). Based on research conducted by (Dewi, 2016) at the Bendo Health Center, Magetan Regency, 66.2% of babies have complete immunization status and 33.8% of babies have incomplete status. Meanwhile, babies who have complete immunization status with good maternal knowledge are 49.2% and babies who have incomplete immunization status with poor maternal knowledge are 30.8%. This shows that the role of mothers' knowledge about basic immunization has a great influence on the administration of basic immunization to babies.

As a result of interviews with Jamali Village Midwives, the coverage of the Complete Basic Immunization target as of August 2023 is 66.4% of the target of 100% per year. This means that for the coverage of Complete Basic Immunization as of August, there are still several children who have not received complete immunization, namely as many as 14 children from 12 posyandu in Jamali Village. Helping to increase the achievement of basic immunization in accordance with the national target, the researcher tried to intervene using educational leaflet media for mothers who have babies under the age of 24-59 months which aims to increase the interest and awareness of mothers to immunize their children as one of the prevention of Immunization Preventive Diseases (PD3I). The advantages of leaflets from other media are that they are easy to carry everywhere, flexible, compact, and practical and not constrained by electricity and the internet.

Based on the above problems, researchers are interested in conducting research that aims to determine the relationship between maternal knowledge and attitudes towards basic immunization coverage in women aged 24-59 months in the Mande Health Center work area as of August 2023.

METHOD

This research method was quantitative with an approach *cross sectional*. The research was conducted in Jamali Village, Mande District, Cianjur Regency.

The sample of toddlers aged 24-59 months in the Mande Health Center area amounted to 58 samples. The sample collection technique in this study used total sampling. The data sources obtained were primary and secondary data.

The primary data of this study was mothers who have babies aged 24-59 months. How to Collect Primary Data by Providing a Questionnaire *by to door* to mothers who have toddlers who are willing to be respondents. The questionnaire consisted of 65 questions containing respondent characteristics, mothers' knowledge and attitudes, access to health facilities and support for health workers, culture and completeness of immunization. Secondary data is the number of infant immunization coverage in Jamali Village in August 2023.

The independent variables in this study were knowledge and attitudes about immunization. The dependent variable is immunization coverage. The design used is quantitative with an approach *case control*, data analysis using *Chi square* with a confidence level of 5%. This study applies research ethics principles as an effort to protect the rights of respondents and researchers during the research process such as maintaining the confidentiality of respondents by not mentioning the client's identity or only mentioning the initials of the name and doing it *informed consent* before taking primary data on respondents. In addition, uphold the confidentiality of respondents' data by not disseminating and only presenting certain groups of data in the research results.

RESULTS AND DISCUSSION

Data collection was carried out on September 15-16, 2023 with a sample of 14 respondents in 8 Posyandu in WK Mande Puskesmas door *to door* to distribute questionnaires and leaflets. The questionnaire consisted of 65 questions containing respondent characteristics, maternal knowledge and attitudes, and immunization completeness.

RESULT

Table 1 shows that of the 14 mothers who did not provide complete basic immunizations to their babies, 10 (71.5%) were dominated by mothers with low education, 9 (64.2%) (IRT), 8 (57.2%) with low family income, and 11 mothers with 1-2 children (78.6).

Table 1 Frequency Distribution Based on Respondent Characteristics

Variable	Description	Frequency	Percentage %
Education	Primary (SD-SMP)	10	71,5
	High School (SMA/SMK-Higher Education)	4	28,5
Total		14	100
Work	Not working (IRT)	9	64,2
	Work (Farmers, Laborers, Self-Employed, Civil Servants)	5	35,8
Total		14	100
Family Income	< Rp. 500.000	1	7,1
	IDR 500,000 – IDR 1,000,000	8	57,2
	IDR 1,500,000 – IDR 3,000,000	3	21,5
	>Rp. 3.000.000	2	14,2
Total		14	100
Number of Children	1-2	11	78,6
	3-5	2	14,3
	>5	1	7,1
Total		14	100

Table 2 Completeness of basic immunization for infants aged 12-59 months in the working area of the Mande Health Center

Basic Immunization	n	%
Complete	44	75,9
Incomplete	14	24,1
Entire	58	100

Table 2 shows that of the 58 mothers who gave their babies complete basic immunizations, 44 (75.9%) while 14 (24.1%) were incomplete.

Table 3 Frequency Distribution Based on the Influence of Mother's Knowledge about Basic Immunization in Infants

Knowledge	Basic Immunization				Entire		P value
	Complete		Complete		N	%	
	N	%	n	%			
Good	11	78,6	42	95,5	53	91,38	0,04
Less	3	21,4	2	4,5	5	8,62	

Sum	14	100	44	100	58	100
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Table 3 shows that of the 53 mothers who have good immunization knowledge, there are 42 mothers who provide complete basic immunization. The results of the statistical test found that there was a significant relationship between maternal attitude and complete basic immunization in infants which was characterized by a *p-value* of $0.04 < 0.05$.

Table 4 Frequency Distribution Based on the Influence of Mother's Attitude on Basic Immunization in Infants

Mother's Attitude	Basic Immunization				Entire	P value	
	Incomplete		Complete				N
	n	%	n	%			
Don't believe	4	28,6	2	4,5	6	10,34	0,03
Believe	10	71,4	42	95,5	52	89,66	
Sum	14	100	44	100	58	100	

Table 4 shows that of the 52 mothers who have a confident attitude towards immunization, there are 42 mothers who provide complete basic immunization. The results of the statistical test found that there was a significant relationship between maternal attitude and complete basic immunization in infants which was characterized by a *p-value* of $0.03 < 0.05$.

DISCUSSION

The Influence of Mother's Knowledge About Basic Immunization

Based on the results of the analysis that has been studied, it can be seen that knowledge has a meaningful relationship with complete basic immunization coverage. Based on the results of the study, it shows that out of 58 mothers, there are 14 babies with incomplete immunization status, namely as many as 11 (21.4%) mothers have less knowledge and 3 (78.6%) mothers have good knowledge. In infants with complete immunization status, 42 (95.5%) mothers have a good level of knowledge, while 2 (4.5%) mothers have a good level of knowledge less. The results of the analysis obtained from the chi-square test showed that the P value



was $0.04 < 0.05$ so it can be concluded that there is a relationship between maternal knowledge and complete basic immunization status in Jamali Village. Lack of maternal knowledge will have an impact on the status of basic immunization completeness in toddlers, as shown by the results of research by Trianiska, et al. (2021) which stated that mothers with less knowledge are less likely to provide complete basic immunizations compared to mothers who have good knowledge.

Education is indeed not a benchmark in seeing whether someone is smart or not. But education can help digest information well, the higher the education, the more knowledge is obtained. Likewise, what happened in this study, the average education of mothers is elementary and junior high school with insufficient knowledge and incomplete immunization status. So in this case, attention is needed to special health services in providing health promotion related to the importance of basic immunization that is fulfilled.

Knowledge has an important role for a person to act. Meanwhile, attitude is a person's reaction that is still closed to a stimulus where opinion and emotional factors are already involved in it, so that the use of health services is influenced by the attitude and knowledge of a person who can choose and decide on the use of health services (Dillyana and Nurmala, 2019).

Mother's knowledge about immunization will greatly determine the health of her child in the future, one of which is by participating in an immunization program that will increase the child's immunity to disease. However, sufficient maternal knowledge will not be useful if there is no follow-up from mothers to include their children in the immunization program in the respondent's place of residence. This is in accordance with the theory by Notoatmodjo (2014) which states that knowledge or cognition is a very important domain for the formation of one's actions (*overt behavior*). Knowledge about an object contains two aspects, namely positive aspects and negative aspects. These two aspects will determine a person's attitude, the more positive aspects and known objects, the more positive attitudes towards certain objects so that from experience it turns out that behavior based on knowledge will be more lasting than behavior that is not based on knowledge.

This study is in line with the results of Febri Indah sari's (2023) research at the Srikaton Health Center, showing that 34 respondents (69.4%) were well-informed and received complete basic immunizations and 15 respondents (30.6%) did not receive complete basic immunization. The results of the statistical test obtained a *p-value* 0.02 ($\leq \alpha = 0.05$), the results of the study showed a meaningful relationship between knowledge and the completeness of basic immunization at the Srikaton Health Center in 2023 (Sari, Ciselia and Africa, 2024).

The Effect of Mother's Attitude on Basic Immunization

Based on the results of the study, it was shown that out of 15 mothers who had babies, as many as 14 babies had incomplete immunization status. Of the 14 babies who were not fully immunized, 4 (28.6%) mothers had an insecure attitude and 10 (71.4%) mothers had a confident attitude. In the complete immunization status, 42 (95.5%) mothers have a confident attitude and 2 (4.5%) mothers have an uncertain attitude. The results of the analysis obtained from the chi-square test showed that the P value was $0.03 < 0.05$ so that it can be concluded that there is a relationship between the mother's attitude and the complete basic immunization status in Jamali Village.

The skap of mothers who believe in providing immunizations is also supported by the interest of mothers where interest will arise if mothers have sufficient knowledge and information and get a fairly good educational history (high school/vocational school). The higher the mother's education, the easier it will be to understand information, after that there will be an attitude of trust in a statement so that there will be a sense of interest in mothers to immunize their children.

This study has similarities with the research of Carolina *et al.* (2021) which concluded that there was a relationship between maternal attitudes and behavior of fulfilling complete basic immunization during the COVID-19 pandemic (*p-value* < 0.01). Mothers who have a good attitude towards vaccination have a positive relationship with vaccination compliance compared to mothers who have a bad attitude towards vaccination. According to her, the mother's attitude is influenced by the high level of knowledge, support from her husband, and the



perception of religion towards immunization. This result is in accordance with Lawrence Green's theory in Notoatmodjo (2003) that in the formation of health behavior, three determining factors are determined are *predisposing factors*, which are manifested in attitudes. A person who does not immunize his child can be caused by the person being negative because he or she does not know or does not know the benefits of immunization for his child.

Thus, attitude is a positive or negative evaluation system, that is, a tendency to approve or reject. A positive attitude will be formed when the stimulus that comes to a person provides a pleasant experience. On the other hand, a negative attitude will arise, if the stimulus that comes gives an unpleasant experience. Attitude has direction, meaning that the attitude is separated in two directions of agreement, namely whether to agree or disagree, whether to support or dissupport, whether to favor something or someone as an object. People who agree, support or take sides with an object of attitude means having an attitude with a positive direction, preferably those who disagree or disagree are said to have a positive attitude, preferably those who disagree or disagree are said to have an attitude with a positive direction (Azwar, 2017).

The attitude towards the provision of basic immunization at the Jongaya Makassar Health Center in bringing toddlers to health service facilities has a relationship with the status of their immunization completeness which is due to many factors such as one of the respondents who are busy with work so that they forget to bring their toddlers for immunization. This affects the level of compliance of mothers in completing their child's immunization status (Nugrawati, 2019).

CONCLUSION

Based on the results and discussions, it can be concluded that there is an influence of good maternal knowledge and attitudes about immunization on the coverage of basic immunization for infants aged 24-59 months in the Mande Health Center work area as of August 2023.

Good mothers' knowledge and attitude are influential in making decisions to immunize their children which can affect the achievement of immunization

coverage targets. The more knowledgeable the mother has (educated), the greater the mother's attitude in making decisions to immunize her child because the mother knows the benefits of immunization and the impact if immunization is not carried out. Likewise, the lower the knowledge of mothers about immunization, the more immunization coverage in Jamali Village will not reach 100%. Therefore, there are still some babies aged 24-59 months whose immunization is incomplete due to low maternal knowledge, fear of side effects of immunization and the surrounding belief that immunization has no benefits. Thus, these factors can reduce the attitude of mothers towards making decisions to immunize their children.

SUGGESTION

Increasing public awareness, especially mothers who have babies, to provide complete immunizations to health facilities by involving the participation of residents, cadres, and midwives as health workers is a form of duty and responsibility in improving the health of babies by encouraging and inviting and reminding mothers to provide immunizations to babies in accordance with the immunization schedule. It is hoped that the government will provide firmness to health workers to provide support in providing complete basic immunizations for all babies by increasing the provision of health promotion and counseling on opportunities in community activities such as posyandu activities.

DECLARATION

Conflict of Interest

Author declare there is no conflict of interest in this research

Authors' Contribution

NH concept the idea and methodology research, EK concept idea and writing draff article, AF and DF concept the questioner of the research, EH and FP are contributing in data collecting, W and NR are contributing draff article and revision article.



Ethical Approval

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Data Availability

The data supporting this research are available from the authors on reasonable request.

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REFERENCE

- Azwar, Saifuddin (2010). The Influence of Mother's Knowledge and Attitude in Immunization in 2010. *Journal of Health Medika*, 2(1).
- Azwar, Saifuddin. (2022). *Human Attitudes: Theory and Measurements*. Yogyakarta: Student Library
- Carolina S., Dian, A., (2021). Overview of Mother's Attitude in Fulfilling Basic Immunization Status.
- Darian, (2019) Factors Influencing Mothers in Providing Basic Immunization to Infants in RT 09 and RT 10 Sawunggaling Village, Surabaya.
- Dewi, (2016) The Relationship between Mother's Knowledge, Attitudes, and Information Sources with Basic Immunization Completeness in Infants.
- Dillyana, T.A. and Nurmala, I. (2019) "The Relationship between Maternal Knowledge, Attitudes and Perceptions with Basic Immunization Status in Wonokusumo," *PROMKES Journal*, 7(1), p. 67. Available on: <https://doi.org/10.20473/jpk.v7.i1.2019.67-77>.
- Eka Sudiarti, P., Z.R, Z., & Arge, W. (2022). The Relationship between Mother's Knowledge and Attitude with the Completeness of Basic Immunization in Children in Ridan Permai Village in 2022. *Journal of Nurses*, 6(2), 120–123.
- Herawati, E., Cahyawati, F. E., & Article, I. (2023). Journal of Midwifery Information (JoMI) The relationship between maternal knowledge and the completeness of basic immunization in infants. *Journal of Midwifery Information (JoMI)*,3(2).<https://doi.org/10.57190/jomi.v3i2.57>
- Manungkalit, M., Astarini, A., & Febiola, Y. (2021). DPT Booster (Determinant of Mother's Attitude towards DPT Booster Vaccination). *Journal of Nurses Lentera*. Vol. 9(1).
- Nugrawati, N. (2019) "The Relationship of Knowledge and Maternal Attitudes Towards Complete Immunization in Toddlers," *Scientific Journal of Health Enlightenment*, 8(1), p. 2656–8004. Available on: <https://stikesmu-sidrap.e-journal.id/JIKP/article/view/104/95>.

- Putri Dewi, A., & Darwin, E. (2014). The Relationship between the Level of Maternal Knowledge and the Administration of Complete Basic Immunization to Infants in Parupuk Tabing Village, Lubuk Buaya Health Center Working Area, Padang City in 2013. In *Andalas Health Journal* (Vol. 3, Issue 2). <http://jurnal.fk.unand.ac.id>
- Sari, F.I., Ciselia, D. and Afrika, E. (2024) "Factors Influencing the Administration of Complete Basic Immunization to Infants at the Srikaton Health Center in 2023," *OBSGIN SCIENTIFIC JOURNAL: Scientific Journal of Midwifery & Obstetrics and Gynecology* P-ISSN: 1979-3340 e-ISSN: 2685-7987, 16(1), pp. 63–71. Available on: <https://stikes-nhm.e-journal.id/JOB/article/view/1554>.
- Trianiska, K. Dinda, A. (2021). Overview of Mother's Knowledge of the Administration of Complete Basic Immunization in the Cikande Health Center Area. *Our Journal*. Vol 1(1).
- Mappaware, N. Research Ethics. *Ethics in Medicine-Health Research*
- Widyanti, R., Nawangsari, H., & Shofiyah, S (2019). The relationship between maternal attitudes and the completeness of follow-up immunization to Baduta at the Kedungadem Health Center, Bojonegoro Regency. *STIKES Insan Cendekia Medika Jombang*.
- Yansih Putri, N., & Hamamah, F. (2023). The relationship between maternal knowledge about basic immunization and the completeness of basic immunization in infants at the Babadan Health Center in 2022. *Multidisciplinary Scientific Journal*, 1(12).
- Zurhayati., Heti, M., Gita., S. (2019). The relationship between exposure to information media about fake vaccines and mothers' interest in immunization in 2019. *Endurance Journal: A Scientific Study of Health Problems*. e-ISSN: 2477-6571, 4(3) Available at: <http://doi.org/10.22216/jen.v4i3.3839>