

The Role of Maternal Knowledge, Family Support, and Access to Health Services on The Success of Complete Basic Immunization

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ABSTRACT

Introduction: Complete basic immunization is an important effort in preventing infectious diseases in infants; however, its coverage is still not optimal. Nationally, the coverage of complete basic immunization in Indonesia continues to fluctuate and has not yet reached the established targets, mainly due to various barriers such as limited public knowledge, inadequate family support, and restricted access to health services. This condition indicates the need for more targeted efforts to improve the success of immunization programs.

Objective: The purpose of this study is to determine the role of maternal knowledge, family support, and access to health services in the success of complete basic immunization in the working area of Sukalaksana Public Health Center, Tasikmalaya City. **Method:** The method used in this study is a quantitative approach with an analytical observational design using a cross-sectional approach. The population in this study consists of mothers who have infants aged 9–12 months, with a total sample of 92 respondents selected using a simple random sampling technique. **Result:** The results of this study show that the majority of respondents have good knowledge (54.3%), receive family support (65.2%), and have easy access to health services (63.0%). A total of 67.4% of infants have received complete basic immunization. The bivariate analysis indicates a significant relationship between maternal knowledge ($p = 0.012$), family support ($p = 0.001$), and access to health services ($p = 0.004$) with the success of complete basic immunization. **Conclusion:** Based on the results of the study, maternal knowledge, family support, and access to health services play an important role in improving the success of complete basic immunization.

Keywords: access to health services, immunization, knowledge support

Introduction

Complete basic immunization is one of the most effective health interventions in reducing morbidity and mortality among infants and young children. The immunization program aims to provide active immunity against infectious diseases such as tuberculosis, diphtheria, pertussis, tetanus, hepatitis B, poliomyelitis, and measles. Although the immunization program has long been implemented and prioritized in health services, the coverage of complete basic immunization in several regions has not yet reached the expected targets (World Health Organization, 2021). Incomplete basic immunizations in infants can make them more susceptible to disease. Because their immune systems are not yet fully developed, infants can easily contract diseases, which can disrupt their growth and development (Wahyuni et al., 2022).

Vaccination is particularly beneficial for children as a method of early prevention against various health risks. Indonesia's National Medium-Term Development Plan (RPJMN) for the 2019–2024 period has set a target that 90% of children aged 12–23 months and 80% of infants aged 0–11 months in 488 districts/cities will receive a complete set of basic immunizations by 2024 (Kementerian Kesehatan RI, 2022). The coverage of complete basic immunization in Indonesia has experienced fluctuations, particularly due to the impact of the COVID-19 pandemic. Based on data from the Ministry of Health, in 2021 the coverage of complete basic immunization reached only around 58.4%, which is still far below the national target of approximately 79.1% (Kementerian Kesehatan RI, 2021a).

This indicates that there is still a significant gap in immunization achievement, and therefore accelerated efforts are needed to improve coverage at the national level. At the provincial level, the coverage of complete basic immunization in West Java is relatively better compared to the national average. In 2020–2021, the coverage reached approximately 89.3% (Dinas Kesehatan Provinsi Jawa Barat, 2022). Furthermore, in 2024 the coverage increased to around 93.27%, although it experienced a slight decrease compared to the previous year. This indicates that West Java is among the provinces with relatively good immunization performance, although further improvement is still needed to achieve the optimal target ($\geq 95\%$) (Dinas Kesehatan Provinsi Jawa Barat, 2025).

The success of complete basic immunization is not only determined by the availability of health services but is also influenced by various factors, including individual, family, and environmental aspects. One important factor is maternal knowledge about immunization. As the primary caregiver, the mother plays a major role in making decisions regarding the child's health. Good knowledge about the benefits, schedule, and side effects of immunization will encourage mothers to be more compliant in completing their child's immunization schedule (Notoatmodjo, 2018).

In addition to maternal knowledge, family support also plays an important role in the success of complete basic immunization. Support from husbands and other family members may include emotional support, information, and practical assistance such as accompanying the mother to health facilities. A lack of family support can become a barrier for mothers in accessing immunization services, especially in communities with a high level of family dependency (Friedman, Marilyn, 2014).

Access to health services is also an important factor influencing the success of immunization. This access includes the distance to health facilities, availability of health personnel, infrastructure and facilities, as well as the ease of obtaining services. Barriers such as long distances, limited transportation, and inflexible service hours can lead to delays or

incomplete immunization among infants and young children (Kementerian Kesehatan RI, 2021b).

In the working area of Sukalaksana Public Health Center in Tasikmalaya City, the coverage of complete basic immunization remains a concern, despite various efforts made by health workers. This indicates that there are still factors influencing the success of immunization that need to be further examined, particularly maternal knowledge, family support, and access to health services. Identifying these factors is essential to improve the effectiveness of immunization programs at the primary health care level.

The mechanism of heat loss through evaporation is the loss of body heat through the air, which can occur when amniotic fluid or other liquids wet the baby's skin and are exposed to the surrounding air. Conduction occurs when the baby comes into direct contact with a colder object. Convection refers to the loss of body heat due to the cold air surrounding the baby. Radiation occurs when the baby's body heat is lost to a cooler environment without direct contact (Sarnah et al., 2020).

Objective

To determine the role of maternal knowledge, family support, and access to health services in the success of complete basic immunization in the working area of Sukalaksana Public Health Center, Tasikmalaya City.

Method

This study used a quantitative research design with an analytical observational approach employing a cross-sectional method. The study aimed to determine the relationship between maternal knowledge, family support, and access to health services with the success of complete basic immunization in infants. The population in this study consisted of all mothers who have infants aged 9–12 months in the working area of Sukalaksana Public Health Center, Tasikmalaya City, during the study period. The sample included a portion of mothers with infants aged 9–12 months in the same area who met the inclusion and exclusion criteria, totaling 92 respondents.

Result

Table 1. Analisis Univariat

Variable	f	%
Maternal Knowledge		
Good	50	54,3
Moderate	28	30,4
Poor	14	15,2
Family Support		
Supportive	60	65,2
Not Supportive	32	34,8
Access to Health Services		
Easy access	58	63,0
Difficult access	34	37,0
Success of Complete Basic Immunization		
Complete	62	67,4
Incomplete	30	32,6

Based on the results of the study involving 92 respondents, it was found that the majority of mothers had good knowledge about immunization (54.3%) and most received family support (65.2%). In addition, most respondents also had easy access to health services (63.0%). These conditions are consistent with the high success of complete basic immunization, with 67.4% of infants having received all recommended immunizations. Nevertheless, there were still some respondents with poor knowledge, suboptimal family support, and limited access to health services, which could potentially affect incomplete immunization among infants.

Table 2. The Relationship Between Maternal Knowledge and Immunization Success

Knowledge	Complete	Incomplete	Total
Good	40	10	50
Moderate	16	12	28
Poor	6	8	14

Based on the table, it was found that mothers with good knowledge had the highest number of infants with complete basic immunization, totaling 40, compared to 10 infants with incomplete immunization. Among mothers with moderate knowledge, 16 infants were fully immunized while 12 were not. Meanwhile, for mothers with poor knowledge, the number of infants with complete immunization was lower, totaling 6, compared to 8 infants with incomplete immunization. This indicates that the better the mother's level of knowledge, the higher the success of complete basic immunization in infants.

Table 3. The Relationship Between Family Support and Immunization Success

Support	Complete	Incomplete	Total
Supportive	48	12	60
Not Supportive	14	18	32

Based on the table, it was found that respondents who received family support had a higher success rate of complete basic immunization, with 48 infants fully immunized compared to 12 infants not fully immunized. Conversely, among respondents who did not receive family support, the number of infants with incomplete immunization was higher, totaling 18, compared to 14 infants who were fully immunized. This indicates that family support plays an important role in improving the success of complete basic immunization in infants.

Table 4. The Relationship Between Access to Health Services and Immunization Success

Access to Health Services	Complete	Incomplete	Total
Easy	45	13	58
Difficult	17	17	34

Based on the table, it was found that respondents with easy access to health services had a higher success rate of complete basic immunization, with 45 infants fully immunized compared to 13 infants not fully immunized. Meanwhile, among respondents with difficult access to health services, the number of infants with complete and incomplete immunization was relatively balanced, with 17 infants in each category. This indicates that easy access to

health services plays an important role in improving the success of complete basic immunization in infants.

Table 5. Analysis of the Relationship Between Variables and the Success of Complete Basic Immunization

Variable	Categori	Complete	Incomplete	Total	P-value
Knowledge	Good	40	10	50	0,012
	Moderate	16	12	28	
	Poor	6	8	14	
Support	Supportive	48	12	60	0,001
	Not Supportive	14	18	32	
Access to Health Services	Easy	45	13	58	0,004
	Difficult	17	17	34	

Based on the results of the bivariate analysis using the Chi-Square test, it was found that there is a significant relationship between maternal knowledge, family support, and access to health services with the success of complete basic immunization in infants. This is indicated by the p-values for each variable: maternal knowledge ($p = 0.012$), family support ($p = 0.001$), and access to health services ($p = 0.004$), all of which are less than 0.05. Therefore, it can be concluded that better maternal knowledge, the presence of family support, and easier access to health services increase the likelihood of successful complete basic immunization.

Discussion

Based on the results of the study, it was found that the majority of mothers had good knowledge regarding complete basic immunization. Bivariate analysis showed a significant relationship between maternal knowledge and the success of complete basic immunization ($p = 0.012$). Mothers with good knowledge tended to complete their children's immunizations more than those with moderate or poor knowledge. Good knowledge enables mothers to understand the benefits of immunization, the immunization schedule, and the risks associated with incomplete immunization.

According to the researchers assumption, the higher the mother's knowledge, the greater her awareness and compliance in bringing her child to receive immunizations according to the schedule, thereby increasing the success of complete basic immunization. This is in line with research stating that knowledge is a predisposing factor that influences a person's health behavior. Mothers who have good knowledge about the benefits, schedule, and importance of immunization are more likely to comply with taking their children to health facilities (Notoatmodjo, 2018).

Mothers knowledge plays a crucial role in ensuring that toddlers receive the full course of routine immunizations, as the level of mothers understanding of immunization is directly correlated with the consistency and timeliness of its administration (Ananta Noor Baihaqi et al., 2024). Therefore, interventions designed to continuously improve mothers' knowledge are crucial in supporting the full basic immunization program at the community level (Rusmita et al., 2025).

The results of the study show that the majority of respondents received family support, and there was a significant relationship between family support and the success of complete basic immunization ($p = 0.001$). Respondents who received family support had a higher proportion of complete immunization compared to those who did not receive support. Family

support, especially from the husband, can influence a mother's decision to access health services, both emotionally and practically.

According to the researcher's assumption, family support provides motivation, a sense of security, as well as assistance in the form of labor or financial resources, making it easier for mothers to consistently follow their child's immunization schedule. Respondents who received family support had a higher proportion of complete immunization. This aligns with (Friedman, Marilyn, 2014) theory, which states that the family plays an important role in determining the health behavior of its members. Family support can be emotional, informational, or instrumental. A study by (Lorenta & Simanullang, 2025) also showed that mothers who received support from their husbands were more likely to complete their children's immunizations compared to those who did not receive such support. Family support has been shown to influence immunization coverage among toddlers, efforts that can be made to increase family support for mothers in immunizing their children include involving the family in educating them about the benefits of immunization (Hamdin et al., 2025).

The results of the study show that access to health services also has a significant relationship with the success of complete basic immunization ($p = 0.004$). Respondents with easy access to health services tended to have a higher rate of complete immunization compared to those who experienced difficulties in accessing services. Easy access includes close proximity, available transportation, and easily reachable health services.

According to the researcher's assumption, easy access to health services reduces barriers for mothers in bringing their children to health facilities, thereby increasing the likelihood that children receive complete and timely immunizations. Respondents with easy access to health services had higher rates of complete immunization. This aligns with the concept of health service access, which includes availability, affordability, and ease of obtaining health services (Lisca & Winarya, 2023). Other studies have also shown that the distance to health facilities and ease of transportation affect mothers' compliance in bringing their children for immunization (Puriadi, 2024).

Conclusion

Based on the results of the study, it can be concluded that the majority of respondents had good knowledge, received family support, and had easy access to health services, with most infants having received complete basic immunization. The analysis showed a significant relationship between maternal knowledge, family support, and access to health services with the success of complete basic immunization. Therefore, these three factors play an important role in increasing immunization coverage in infants.

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References

1. Ananta Noor Baihaqi, R., Kurnia Sari, F., Byandra, N., Hanifa Hasna, S., Rahma, A. W., Rona Zakiyya, R., Hait sami Ibnu Gamar, F., Dwi Kristiani, A., Noor Amanda, N., Elmira Setyawan, R., Arafat Sidiq, K., Nur Hamidah, N., & Nita, Y. (2024). Hubungan Pengetahuan Ibu tentang Imunisasi Dasar terhadap Kelengkapan Imunisasi Dasar Anak. *Jurnal Farmasi Komunitas*, *11*(2), 163–169. <https://orcid.org/0000-0001-8918-2901>
2. Dinas Kesehatan Provinsi Jawa Barat. (2022). *Profil Kesehatan Jawa Barat Tahun 2021*.

3. Dinas Kesehatan Provinsi Jawa Barat. (2025). *Profil Kesehatan Jawa Barat Tahun 2024*.
4. Friedman, Marilyn, M. (2014). *Buku Ajar Keperawatan Keluarga Riset, Teori & Praktik ed.5*. EGC.
5. Hamdin, Hamid, A., Sholihah, N. A., & Herni Hasifah. (2025). Hubungan Dukungan Keluarga dengan Kelengkapan Imunisasi Dasar pada Balita di Puskesmas Alas Kabupaten Sumbawa. *Jurnal Kesehatan Tambusai*, 6(3), 10078–10085.
6. Kementerian Kesehatan RI. (2021a). *Cakupan Imunisasi Dasar Lengkap Baru 58,4%, Kemenkes Dorong Pemda Kejar Target*. Jakarta. <https://www.kemkes.go.id/id/cakupan-imunisasi-dasar-lengkap-baru-584-kemenkes-dorong-pemda-kejar-target>
7. Kementerian Kesehatan RI. (2021b). *Profil Kesehatan Indonesia 2020*.
8. Kementerian Kesehatan RI. (2022). Strategi Komunikasi Nasional Imunisasi 2022-2025. In *Kemenkes*. Kementerian Kesehatan RI.
9. Lisca, S. M., & Winarya, P. S. (2023). Hubungan Akses Pelayanan, Keaktifan Ibu dan Kepercayaan Ibu Terhadap Ketepatan Pemberian Imunisasi Dasar. *Jurnal Kebidanan*, 3(1).
10. Lorenta, L., & Simanullang, E. (2025). Hubungan Dukungan Suami terhadap Sikap Ibu dalam Melakukan Imunisasi Bayi di Puskesmas Gebang. *Jurnal Siti Rufaidah*, 3(1).
11. Notoatmodjo, S. (2018). *Promosi Kesehatan dan Ilmu Perilaku*. Rineka Cipta.
12. Puriadi, P. (2024). Hubungan Persepsi, Jarak Fasilitas Kesehatan, Dan dukungan Suami dengan Kepatuhan Ibu Membawa Imunisasi Bayinya Sesuai Jadwal di Desa Sidetapa Tahun 2024. *Jurnal Ilmiah Kebidanan (The Journal Of Midwifery)*, 12(2), 166–173. <https://doi.org/10.33992/jik.v12i2.3349>
13. Rusmita, Wahyuni, S., Wilma, Novianti, A., Miskiyah, & Rohaya. (2025). Faktor-faktor yang Berhubungan dengan Kelengkapan Imunisasi Dasar Pada Anak. *Mahakam Midwifery Journal*, 10(2), 90–103.
14. Sarnah, S., Firdayanti, F., & Rahma, A. S. (2020). Manajemen Asuhan Kebidanan pada Bayi Ny “H” dengan Hipotermi di Puskesmas Jumpandang Baru Makassar. *Jurnal Midwifery*, 2(1), 1–9. <https://doi.org/10.24252/jmw.v2i1.10652>
15. Wahyuni, R. D., Hadi, E. N., Reproduksi, D. K., Masyarakat, K., Raya, J. M., Cina, P., & Beji, K. (2022). Persepsi Orang Tua Bayi terhadap Pemberian Imunisasi Dasar. *Jurnal Kedokteran Dan Kesehatan*, 1, 41–56. <https://jurnal.umj.ac.id/index.php/JKK>
16. World Health Organization. (2021). *Immunization Coverage*. Geneva: WHO.