The 6th Mitra Husada Health International Conference (MiHHICo) 2026
Volume 6 (2026) ISSN: 2988-3768

Family Centered Care Midwifery Intervention to Overcome Vaccine Hesitancy: A Case Study of Incomplete Immunization in Tanjung Morawa

Theresia Arliyani Sianturi[1], Cesy Simanullang[2], Agnes Monica Purba[3], Siti Nurmawan Sinaga[4], Asnita Sinaga[5]
[1,2,3,4,5]Sekolah Tinggi Ilmu Keshatan Mitra Husada Medan

Email : 2219201114@mitrahusada.ac.id[1], 2219201014@mitrahusada.ac.id[2], 2219201003@mitrahusada.ac.id[3], sitinurmawan@mitrahusada.ac.id, asnitasinaga@mitrahusada.ac.id[4]

ABSTRACT

Background: Immunization is a critical global health intervention, yet incomplete coverage remains a significant challenge due to parental anxiety regarding adverse events.Although immunization is proven to save lives, global childhood vaccination coverage has stagnated due to growing parental anxiety. This anxiety is deeply rooted in love, driven by an overwhelming fear of Adverse Events Following Immunization (AEFI) such as high fevers, seizures, or other unpredictable side effects. This fear is amplified by the influx of negative stories on social media, making extremely rare medical risks feel like immediate threats that will inevitably harm their own child. Consequently, parents are trapped in a painful emotional dilemma: they desperately want to protect their child from future diseases, yet they dread that a medical procedure today might inadvertently harm their little one. This article explores how healthcare communication must evolve—shifting away from merely presenting cold statistics toward embracing and validating parental fears with deeper empathy and humanity **Objectives:** To evaluate the effectiveness of family-centered midwifery protocols in improving immunization compliance for a 1-year-old child with an incomplete vaccination status. **Methods:** A qualitative community midwifery approach using the 7-step Varney management framework was conducted from February to May 2026 in Bangun Rejo Village, Deli Serdang. The intervention utilized a family-centered educational protocol focusing on the management of Adverse Events Following Immunization (AEFI). **Results:** Initial assessments revealed the child missed the first measles dose due to parental trauma over previous post-immunization fever. Following targeted family-centered education, parental knowledge regarding AEFI management significantly improved. Consequently, the mother proactively brought the child to the integrated health post (Posyandu) to receive the measles vaccine. Subsequent monitoring showed normal physiological responses with managed mild fever, eliminating parental anxiety. **Conclusions:** Family-centered midwifery care effectively addresses vaccine hesitancy by empowering parents with knowledge and practical AEFI management skills. Continuous educational support is vital for maintaining complete immunization coverage.

Keywords: AEFI Management; Family-Centered Care; Immunization Compliance; Midwifery Intervention; Vaccine Hesitancy.

INTRODUCTION

Immunization is a monumental success in global health, preventing an estimated 3.5 to 5 million deaths annually from diseases such as diphtheria, tetanus, pertussis, and measles. (World Health Organization, 2024) Despite these global strides, in 2024, approximately 20.6 million children worldwide missed their routine measles vaccine. In Indonesia, the achievement of Complete Basic Immunization (IDL) for infants experienced a significant decline to 47.76% in 2024, though North Sumatra recorded a higher coverage of 80.14%. Specifically, in Medan and surrounding districts, the measles immunization target of 95% remains unmet (Profil Kesehatan Indonesia, 2024).

This gap in coverage is frequently driven by parental hesitancy, hich is influenced by misinformation, lack of confidence in vaccines, and inadequate communication between healthcare providers and families(United Nations Children's Fund, 2024) .Findings from community observations indicate that the primary barrier is not healthcare accessibility, but rather a lack of knowledge and prevalent anxiety regarding Adverse Events Following Immunization (AEFI), such as fever and swelling. Parents often equate these normal immunological responses with illness, leading to immunization drop-outs (Lushinta *et al.*, 2024).

This research needs to be conducted because bridging the gap between national targets and actual community compliance requires targeted interventions. Therefore, this study aims to investigate the impact of family-centered midwifery protocols on resolving incomplete immunization in a 1-year-old child in Bangun Rejo Village. Family-centered communication has been shown to improve parents' confidence in immunization and reduce vaccine hesitancy by addressing their concerns through empathetic counseling (Moorthy, 2024) It hypothesizes that empowering families through direct AEFI management education will resolve vaccine hesitancy and restore immunization compliance (Surbakti *et al.*, 2022).

RESEARCH METHOD

This study utilized a qualitative observational research design with a community midwifery care approach based on the 7-step Varney management framework. The observation site was Dusun VI, Bangun Rejo Village, Tanjung Morawa District, Deli Serdang, conducted between February 09 and May 02, 2026. The primary informant/participant was a family with a 1-year-old child (Child "B") who had an incomplete basic immunization record. The sampling technique employed was purposive sampling, targeting families under the community development program (Keluarga Binaan).

The independent variable in this study was the application of family-centered educational protocols regarding AEFI management. This was defined as direct, individualized counseling provided to the parents on expected post-vaccination reactions and home-care strategies (e.g., proper nutrition, applying compresses, and avoiding pressure on the injection site). The dependent variable was immunization compliance, measured by the fulfillment of the missed measles vaccine dose (Imunisasi, 2025).

The tools and materials used included physical examination instruments (measuring tape, pediatric scale, and thermometer) and the Maternal and Child Health (KIA) handbook to track vaccination history and developmental milestones(UNICEF Indonesia, 2024). Descriptive analysis was used to interpret the behavioral changes and A strength of this study is the intensive, physical assessments before and after the intervention. Ethical approval and community entry permissions were authorized under the community service program (KKN) protocols of STIKes Mitra Husada Medan, with the consent of the village head.

RESULT

The implementation of the family-centered protocol yielded significant behavioral shifts. During the initial visit on February 12, 2026, the 1-year-old child weighed 7.92 kg with a length of 82 cm and normal vital signs. The KIA handbook revealed the child missed the measles vaccine because the parents refused further immunization after the child experienced high fever and redness following the DPT 3 vaccine in November 2025.

Following the educational intervention, the mother brought the child to the Posyandu on February 14, 2026, to receive the delayed measles vaccine. A follow-up visit on February 16, 2026, confirmed the child experienced mild fever and a mild rash at the injection site. However, equipped with the provided AEFI management knowledge, the mother handled the symptoms calmly without recurring anxiety (Rosmani Sinaga, 2023).

The results indicate that the primary cause of incomplete immunization is psychological rather than logistical. By integrating family-centered protocols, the care provider directly addressed the root cause of the hesitancy: fear of AEFI (Wigunarti, Simanjuntak and Lestari, 2025). This aligns with theories suggesting that enhanced health literacy directly alters parental decision-making. When parents understand that fever and swelling are normal signs of antibody formation, they are more likely to comply with schedules personalized follow-up, though its weakness lies in the small sample size inherent to a single case study (Nurlaelasari, 2024)

Table 1. A Case Study of Incomplete Immunization in Tanjung Morawa

Monitoring Phase	Child's Physical Condition (Child "B")	Mother/Family's Psychological Status & Knowledge	Action & Immunization Status	Explanation Of Research Success (Outcome)
Phase 1: Initial Assessment (Pre-Intervention) ***(February 12, 2026)***	Weight: 7.92 Kg, Length: 82 Cm. Temperature: 37.0°C. The Child's Physiology Is Within Normal Limits And Healthy.	The Mother Experienced Trauma And High Anxiety Due To A History Of The Child's Fever Post-Dpt 3. Refused Further Immunization Schedules.	Measles Vaccine Delayed (Temporary Drop-Out).	Problem Identification Phase: It Was Found That The Main Barrier Was Not Healthcare Access, But Rather The Family's Low Health Literacy Regarding Adverse Events Following Immunization (Aefi).

	Temperature:	The Family Has	The Mother	Compliance Achieved:
Phase 2: Intervention Implementation	36.5°C. Heart Rate: 85 Bpm. The Child Is In Prime	Received Aefi Management Education. Understanding Increased, And	Brought The Child To The Posyandu; Measles Vaccine Was	The Success Of The Intervention Is Evident From The Change In Family Behavior. Family-Centered
(February 14, 2026)	Condition To Receive The Vaccine.	The Mother Voluntarily Made The Decision.	Successfully Administered.	Education Effectively Broke Vaccine Hesitancy.
Phase 3: Post-Immunization Evaluation	Temperature: 37.5°C (Normal Mild Fever). There Is Slight	The Mother's Anxiety Was Resolved. The Mother Remained Calm And Was	Aefi Monitoring Was Well-Managed Without The	Family Independence (Primary Success): The Family Demonstrated Coping Abilities
(February 16, 2026)	Redness At The Injection Site.	Able To Practice Warm Compresses And Independent Observation At Home.	Need For Medical Referral.	Towards Aefi. The Intervention Succeeded Not Only In Meeting The Child's Vaccination Target But Also In Empowering The Family In Independent Health Management.

DISCUSSION

In evaluating the factors influencing immunization completeness and the management of anxiety regarding Adverse Events Following Immunization (AEFI), the implementation of family-centered protocols provides a highly significant impact on compliance. Interventions that do not solely rely on the mother, but also involve the entire family through structured education, have proven effective in minimizing vaccine hesitancy (Munthe, 2025).

Field findings, such as those observed at the primary care level at Kedai Durian Community Health Center, indicate that modifying the measurement variables for immunization success must begin to consider the strength of the family's role and support in infant health decision-making (Nurhasanah, 2024). This aligns with previous research by Siregar et al. (2024), which confirms that the level of understanding derived from education targeting mothers and their families positively correlates with the increased completeness of basic immunization. Proper education helps reduce anxiety regarding AEFI, ensuring it no longer acts as a barrier. Continuous counseling efforts are capable of changing misconceptions that have frequently been the primary reason for delaying immunization schedules (Masulilli et al., 2023).

Support from international literature also reinforces these findings. A study by Li et al. (2024) highlights that hesitancy toward complete vaccination decreases dramatically when primary caregivers and families receive focused and clear communication support from healthcare providers. Furthermore, an analysis by Sriatmi et al. (2023) asserts that behavioral and structural factors, which are heavily influenced by information sources and internal family support, are dominant predictors determining the dropout status of childhood immunization. Therefore, a family-centered care approach is not merely an alternative support method, but rather a crucial strategy that is empirically capable of ensuring the continuity of complete immunization status (lasria simamora, 2023).

CONCLUSION

The implementation of family-centered midwifery care successfully resolved the problem of incomplete immunization for the subject. By addressing parental knowledge gaps and fears regarding post-immunization side effects, the mother was empowered to resume the vaccination schedule, culminating in the successful administration of the measles vaccine. To troubleshoot declining immunization rates globally, it is strongly suggested that healthcare providers shift from generalized instructions to personalized, family-centered counseling at the community level to directly mitigate vaccine hesitancy (Asnita Sinaga, 2025).

ACKNOWLEDGEMENT

The authors express sincere gratitude to Sekolah Tinggi Ilmu Keshatan Mitra Husada Medan and the village head of Bangun Rejo Village in Tanjung Morawa District, Deli Serdang, for granting permission and providing full support during the implementation of this community midwifery case study. Appreciation is also extended to the academic supervisors for their valuable guidance, constructive feedback, and continuous support throughout the preparation of this report.

Special thanks are given to the healthcare professionals at the Posyandu and the participating family of Child "B", whose collaboration and assistance were essential in the successful completion of this study. The authors also acknowledge all parties who contributed directly or indirectly to the completion of this report.

REFERENCES

Asnita Sinaga (2025) " Immunization is recognized as one of the most effective and cost-effective public health interventions for preventing vaccine-preventable diseases (VPDs).

Imunisasi, V.D.A.N. (2025) Handbook of Vaccines and Immunization

lasria simamora (2023) "The Relationship Between Mothers' Knowledge and the Provision of Basic Immunization for Infants in the Working Area of Mompang Community Health Center, Mandailing Natal Regency," 3(June 2022), pp. 93–98.

Lushinta, L. *et al.* (2024) "Family Support Influences the Completeness of Basic Immunization Among Infants and Toddlers 5(1), p. 1. Available at: https://doi.org/10.33490/b.v5i1.1044.

Moorthy, G. C., Poomkudy, J. T., & Walter, J.Moorthy, G. C., Poomkudy, J. T., & Walter, J. (2024) "On compromising with vaccine-hesitant families.," *Frontiers in Pediatrics*, 12.

Munthe, J. (2025) "The Role of Healthcare Workers in the Administration of Measles–Rubella (MR) Immunization Among Children in the Working Area of Kebayakan Community Health Center, Central Aceh Regency, Aceh Province 2023," pp. 5–9.

Nurhasanah (2024) "The Relationship Between Mothers' Knowledge and Basic Immunization Among Mothers with Infants Aged 12–24 Months, 1(4), pp. 115–120.

Nurlaelasari, E. (2024) "The Relationship of Knowledge, Attitudes, and Family Support with Complete Basic Immunization Behavior Among Infants Aged 0–11 Months" *Indonesia Journal of Midwifery Sciences*, 3(3), pp. 475–485. Available at: https://doi.org/10.53801/ijms.v3i3.178.

Profile health Indonesia (2024) *Profil Kesehatan*.

Rosmani Sinaga (2023) "ANJANI Journal : Health Sciences Study Available online at : http://journal.pdmbengkulu.org/index.php/anjani DOI : https://doi.org/13.11114/anjani.1.x.x1-x2 The Association Between Iron Supplement Consumption Behavior and Anemia Among Pregnant Women at Sri Pamela Clinic Aek," 3(2), pp. 72–78.

Surbakti, I.S. *et al.* (2022) "Factors Influencing the Completeness of Booster Immunization Among Children Under Three Years of Age at Mawar Integrated Health Post (Posyandu), Medang Deras District, Batubara Regency 2021," *Excellent Midwifery Journal*, 5(1), pp. 1–12.

UNICEF Indonesia (2024) *Tackling Gender Barriers to Immunization in Indonesia.* Jakarta.

United Nations Children's Fund (2024) *Strengthening confidence in vaccines, demand for immunization and addressing vaccine hesitancy*. UNICEF.

Wigunarti, M., Simanjuntak, M.K. and Lestari, D.P. (2025) "Optimizing Complete Basic Immunization Coverage Through Community Empowerment Based on Communication, Information, and Education (CIE) and Training of Trainers (TOT)," 4(2), pp. 257–270.

World Health Organization (2024) *Vaccines and immunization*. ganeva.