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Vaccine Hesitancy in the Administration of Hepatitis B Birth Dose Immunization to Newborns: A Parental Belief Perspective

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Abstract

Vaccine hesitancy in newborn immunization has become an important concern in maternal and child health services, particularly in the administration of Hepatitis B birth dose immunization. However, research specifically addressing parental belief as a determinant of refusal or delay in Hepatitis B0 immunization remains limited. This study aimed to describe vaccine hesitancy in the administration of Hepatitis B birth dose immunization to newborns from the perspective of parental belief. A qualitative approach with a descriptive case study design was employed, involving one postpartum mother and her newborn selected through purposive sampling. Data were collected through anamnesis, observation, physical examination, neonatal care documentation, and midwifery records. The data were analyzed descriptively by comparing clinical findings with relevant immunization standards and theoretical concepts of vaccine hesitancy. The findings indicate that the newborn was clinically stable, born at term, and received essential newborn care, including eye ointment and vitamin K1 injection. However, Hepatitis B0 immunization was refused by the mother on the basis of family belief, despite the provision of health education and informed

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consent. This case demonstrates that vaccine hesitancy in neonatal care may be shaped not only by access to services or clinical eligibility but also by belief-based and trust-related considerations within the family. The study concludes that parental belief plays a critical role in decisions to refuse Hepatitis B0 immunization for newborns. These findings contribute to the literature on vaccine hesitancy in maternal and child health by providing case-based insight into belief-driven immunization refusal and offer practical implications for midwives and health workers to provide earlier, empathetic, and culturally sensitive counseling during antenatal care.

Keywords: Vaccine Hesitancy; Hepatitis B0 Immunization; Birth Dose Immunization; Newborn Care; Parental Belief

INTRODUCTION

Hepatitis B remains a significant global public health issue because it can lead to chronic liver disease, cirrhosis, hepatocellular carcinoma, and premature death (Hsu et al., 2023; Lavanchy & Kane, 2016; Nguyen et al., 2024)`. The problem becomes more critical when transmission occurs during the perinatal period, as newborns infected with Hepatitis B virus have a higher risk of developing chronic infection later in life. For this reason, the World Health Organization recommends that all newborns receive the first dose of the Hepatitis B vaccine as soon as possible after birth, preferably within 24 hours, followed by completion of the routine vaccine series (Organization, 2017, 2020). This recommendation indicates that Hepatitis B birth dose immunization is not only a routine neonatal procedure, but also an essential preventive strategy to protect newborns from long-term health risks.

At the international level, the timely administration of the Hepatitis B birth dose remains a major concern (Al-Busafi & Alwassief, 2024; de Villiers et al., 2021; Noubiap & Ndoula, 2022). Although many countries have included the Hepatitis B vaccine in their national immunization programs, timely birth dose coverage remains lower than expected in several settings. This condition shows that the first 24 hours after birth are still a vulnerable period in which newborns may miss an important opportunity for early protection. WHO emphasizes that the birth dose is one of the most important interventions to reduce mother-to-child transmission and early childhood transmission of Hepatitis B virus (Organization, 2020). Therefore, delayed or refused administration of Hepatitis B0 may weaken the effectiveness of prevention efforts, especially in populations where maternal Hepatitis B status is unknown or not adequately monitored.

In Indonesia, Hepatitis B prevention has become part of maternal and child health programs through screening of pregnant women, neonatal immunization, and routine immunization services (Anwar et al., 2023; Kunigara & Bagus Setyoboedi, 2022; Wulandari et al., 2024). The Ministry of Health has emphasized the importance of Hepatitis B immunization for newborns as early protection against liver infection. In the Indonesian immunization schedule, Hepatitis B0 is recommended to be given to newborns shortly after birth, before the age of 24 hours, followed by subsequent doses according to the national immunization schedule (Kementerian Kesehatan Republik Indonesia, 2023, 2025). However, the implementation of this program does not only depend on vaccine availability, health facility readiness, or health worker competence. Parental acceptance also plays a central role because immunization decisions for newborns are made by parents or family members.

One of the main challenges in the implementation of newborn immunization is vaccine hesitancy. Vaccine hesitancy refers to delay in acceptance or refusal of vaccination despite the availability of vaccination services (Rageh Ismail & Spinelli, 2012). This concept is complex and context-specific because it varies across time, place, type of vaccine, social environment, and individual belief systems. Vaccine hesitancy is influenced by several dimensions, including confidence in vaccines and health workers, complacency toward disease risk, and convenience or accessibility of vaccination services (Chang et al., 2022). In the context of Hepatitis B0 immunization, vaccine hesitancy may appear in the form of parental refusal, delay, fear, doubt, or uncertainty about whether the newborn should receive the vaccine immediately after birth.

Parental belief is an important factor that shapes vaccine acceptance or refusal (Howell et al., 2022; Wiley et al., 2020). Parents may refuse or delay Hepatitis B0 immunization because of concerns about vaccine safety, fear of side effects, limited understanding of Hepatitis B transmission, perception that the baby is too young to receive immunization, family influence, cultural values, religious considerations, or distrust toward health services. These beliefs do not always indicate rejection of modern health care, but may reflect uncertainty, lack of confidence, or the influence of family-based decision-making. Ismail et al. (2024) state that vaccine acceptance is closely related to public trust in vaccines, health workers, and government health programs. Similarly, Sinuraya et al. (2024) explain that knowledge, perception, access to information, and trust are important factors influencing childhood immunization acceptance.

The issue of parental belief becomes more sensitive in the case of newborn immunization because the decision must be made shortly after delivery (Adeyanju & Betsch, 2024; Bradshaw & Carter, 2022; Smith et al., 2022). At this stage, parents, especially mothers, may still be physically tired, emotionally vulnerable, and dependent on family support. If information about Hepatitis B0 is not delivered clearly and empathetically, parents may perceive immunization as a risky or forced medical intervention rather than a preventive effort to protect the baby. Therefore, health education should not be limited to explaining the benefits of the vaccine, but should also address parents' fears, questions, cultural values, and belief systems. Effective communication between health workers and parents is essential to build trust, support informed decision-making, and reduce vaccine hesitancy.

Previous studies have discussed vaccine hesitancy, childhood immunization coverage, and parental attitudes toward vaccination (Fadl et al., 2024; He et al., 2022). Chang et al. (2022)introduced a widely used conceptual framework explaining that vaccine hesitancy is influenced by confidence, complacency, and convenience. Hadi (2024) highlighted that parental trust and collaboration among families, health workers, and government are important in overcoming vaccine hesitancy. Sinuraya et al. (2024) also found that childhood immunization completeness is associated with parental knowledge, socioeconomic factors, and access to health information. However, most previous studies discuss vaccine hesitancy in the broader context of childhood immunization, while studies that specifically examine vaccine hesitancy in the administration of Hepatitis B birth dose immunization to newborns from the perspective of parental belief remain limited.

The research gap in this study lies in the limited discussion of how parental belief influences the refusal or delay of Hepatitis B0 immunization in newborn care practice. Many studies focus on immunization coverage, vaccine availability, or general parental knowledge, but fewer studies explore the meaning behind parents' hesitation, especially when refusal is based on family belief. This gap is important because parental refusal cannot be understood only as a lack of compliance. It must also be seen as a complex decision shaped by knowledge, trust, perceived risk, family values, cultural norms, and communication with health workers. Therefore, understanding parental belief is necessary to develop more appropriate, respectful, and culturally sensitive strategies to improve Hepatitis B0 immunization acceptance.

The novelty of this study lies in its focus on vaccine hesitancy in the administration of Hepatitis B birth dose immunization to newborns through a parental belief perspective. This study does not merely describe whether the vaccine was given or refused, but seeks to understand the belief-based reasons behind parental hesitation and how health workers respond through education, counseling, informed consent, and respect for parental autonomy. In midwifery and neonatal care, this perspective is important because health workers must balance evidence-based immunization recommendations with ethical principles, including respect for the family's decision-making process. Thus, the issue of Hepatitis B0 refusal should be approached not only as a clinical problem, but also as a communication, cultural, and trust-related issue.

Based on this background, this study focuses on vaccine hesitancy in the administration of Hepatitis B birth dose immunization to newborns from the perspective of parental belief. The purpose of this study is to describe how parental beliefs influence the decision to refuse or delay Hepatitis B0 immunization, how health workers provide education and informed consent, and how parental decisions are respected in neonatal care practice. The findings of this study are expected to contribute to the development of more empathetic, trust-based, and culturally responsive communication strategies to increase parental acceptance of Hepatitis B birth dose immunization among newborns.

METHODS

This study employed a qualitative approach with a descriptive case study design. A qualitative approach was selected because the study aimed to describe and interpret vaccine hesitancy in the administration of Hepatitis B birth dose immunization to a newborn from the perspective of parental belief. According to Creswell & Creswell (2017), qualitative research is appropriate for exploring a phenomenon in its natural context and understanding the meaning of experiences, decisions, and social processes in depth. The case study design was used because the research focused on one specific case involving a postpartum mother and her newborn who experienced refusal of Hepatitis B0 immunization. This design was considered appropriate because it allowed the researcher to examine the clinical context, parental decision-making, health worker response, and neonatal follow-up comprehensively. The subject of this study was Mrs. N, a 37-year-old postpartum mother, and her newborn who received care at Berkah Prima Clinic and during home visits. The subject was selected using purposive sampling because she met the criteria relevant to the research focus, namely

a mother who delivered a newborn in a health facility, received neonatal care, and refused Hepatitis B0 immunization based on family belief. Sugiyono (2013) explains that purposive sampling is used when research subjects are selected based on specific considerations that are appropriate to the research objectives.

Data were collected through anamnesis, observation, physical examination, neonatal care documentation, and midwifery care records using the SOAPIE method. The instruments used included maternal and newborn assessment sheets, laboratory records, delivery and neonatal care records, postpartum visit records, and documentation related to informed consent and counseling on Hepatitis B0 immunization. Data collection was carried out from childbirth to neonatal follow-up visits, including the first hours after birth, the seventh day, and the nineteenth day of neonatal care. The data were analyzed descriptively using qualitative analysis procedures, including data reduction, data presentation, and conclusion drawing, as described by Miles et al. (2014). The analysis focused on identifying clinical eligibility for Hepatitis B0 immunization, the manifestation of parental refusal, the belief-based factors influencing the decision, and the health worker's response through education, counseling, and informed consent. The findings were then compared with relevant immunization standards, neonatal care principles, and the theoretical concept of vaccine hesitancy to produce a comprehensive interpretation of the case.

RESULTS

1. Result 1. Clinical Context of Hepatitis B Birth Dose Immunization

The results of this study describe vaccine hesitancy in the administration of Hepatitis B birth dose immunization to a newborn based on a parental belief perspective. The case involved Mrs. N, a 37-year-old multiparous mother who delivered a male baby spontaneously at Berkah Prima Clinic on January 18, 2026, at 05.21 a.m. The baby was born at term with good clinical condition, cried immediately after birth, had good muscle tone, normal breathing, and an Apgar score of 8/9/10. These findings indicated that the newborn had good adaptation to extrauterine life.

Maternal laboratory data showed that the mother's HBsAg status was non-reactive. However, Hepatitis B0 immunization remained part of the standard newborn care procedure. In the first hour after birth, the newborn received antibiotic eye ointment and 1 mg vitamin K1 injection in the left anterolateral thigh. After the administration of vitamin

K1, the newborn was planned to receive Hepatitis B0 immunization in the right anterolateral thigh. However, the immunization was not administered because the mother refused the procedure.

The refusal of Hepatitis B0 immunization became the central finding of this study. Although the newborn was clinically stable and eligible to receive the vaccine, the mother declined Hepatitis B0 immunization based on family belief. Health workers provided education and informed consent regarding the benefits of Hepatitis B0 immunization, but the mother's decision was respected. This finding shows that vaccine hesitancy in this case was not caused by the absence of vaccine services or newborn clinical instability, but by parental belief influencing the decision-making process.

Table 1. Clinical Findings Related to Hepatitis B0 Immunization Decision

Component	Finding	Interpretation
Mother's age	37 years old	Multiparous mother with high-risk pregnancy history
Gestational age at birth	40 weeks	Term delivery
Delivery process	Spontaneous vaginal delivery	No major delivery complication
Baby's sex	Male	Newborn subject of Hepatitis B0 decision
Apgar score	8/9/10	Good neonatal adaptation
Birth weight	3,855 grams	Normal birth weight
Birth length	49 cm	Within normal newborn range
Maternal HBsAg status	Non-reactive	No reactive Hepatitis B status identified in mother
Initial newborn care	Eye ointment and vitamin K1 administered	Essential newborn care was accepted
Hepatitis B0 immunization	Not administered	Refused by mother/family based on belief

2. Result 2. Manifestation of Vaccine Hesitancy in Newborn Care

The manifestation of vaccine hesitancy in this case appeared as refusal of Hepatitis B0 immunization after delivery. The mother accepted several components of newborn care, including drying the baby, early breastfeeding initiation, eye ointment administration, and vitamin K1 injection. However, she refused Hepatitis B0 immunization. This pattern indicates selective acceptance of neonatal care, in which parents may accept some medical interventions but hesitate or refuse vaccination.

The refusal was related to family belief. The mother and family had a belief-based consideration that influenced their decision not to provide Hepatitis B0 immunization to the

newborn. This finding indicates that parental belief can become a strong determinant in vaccine decision-making, even when health workers have provided counseling. In this case, vaccine hesitancy was expressed not as a temporary doubt only, but as a clear refusal at the time when Hepatitis B0 immunization was scheduled to be administered.

3. Result 3. Neonatal Follow-Up and Persistence of Hepatitis B0 Refusal

Neonatal follow-up was carried out in three visits, namely at 6 hours after birth, day 7, and day 19. During the first neonatal visit, the baby was 6 hours old and showed stable vital signs. The heart rate was 125 beats per minute, body temperature was 36.8°C, and respiratory rate was 42 breaths per minute. The baby's birth weight was 3,855 grams, body length was 49 cm, head circumference was 35 cm, and chest circumference was 36 cm. Physical examination and neonatal reflexes were within normal limits. However, Hepatitis B0 immunization was still not administered because of maternal refusal.

During the second neonatal visit on January 24, 2026, when the baby was 7 days old, the mother reported no complaints regarding the baby. The baby's heart rate was 127 beats per minute, body temperature was 36.8°C, and respiratory rate was 44 breaths per minute. The baby's weight increased to 3,900 grams. Physical examination showed no abnormalities, and the umbilical cord had detached on the fourth day after birth. However, the mother still refused Hepatitis B0 immunization, and counseling was provided again.

During the third neonatal visit on February 5, 2026, when the baby was 19 days old, the baby remained in good condition. The heart rate was 129 beats per minute, body temperature was 36.8°C, and respiratory rate was 45 breaths per minute. The baby's weight increased to 4,100 grams, body length was 50 cm, head circumference was 36 cm, and chest circumference was 38 cm. These findings indicate that the baby showed good growth and adaptation during the neonatal period, although Hepatitis B0 immunization had not been administered.

Table 2. Neonatal Follow-Up and Hepatitis B0 Immunization Status

Visit	Time	Main Clinical Findings	Hepatitis B0 Status	Health Worker Response
Neonatal visit 1	6 hours after birth	Heart rate 125 beats/minute, temperature 36.8°C, respiration 42 breaths/minute, birth weight 3,855 grams, physical examination normal	Not administered	Education and informed consent were provided
Neonatal visit 2	Day 7	Heart rate 127 beats/minute, temperature 36.8°C, respiration 44 breaths/minute,	Still refused	Counseling was repeated

Visit	Time	Main Clinical Findings	Hepatitis B0 Status	Health Worker Response
		weight 3,900 grams, umbilical cord detached, no abnormality found		
Neonatal visit 3	Day 19	Heart rate 129 beats/minute, temperature 36.8°C, respiration 45 breaths/minute, weight 4,100 grams, body length 50 cm, head circumference 36 cm	Not recorded as administered	Neonatal condition continued to be monitored

4. Result 4. Parental Belief as the Main Factor in Vaccine Hesitancy

The results show that parental belief was the main factor influencing the refusal of Hepatitis B0 immunization. The mother's decision was not associated with poor neonatal condition, lack of access to services, or absence of health workers. The baby was born in a health facility, essential newborn care was provided, and the vaccine was planned as part of the postnatal care procedure. Nevertheless, the mother refused Hepatitis B0 immunization because of the belief held by the family.

This finding indicates that vaccine hesitancy in newborn care may occur even when health services are available and the newborn is clinically stable. In this case, the parental decision reflected a belief-based consideration that influenced acceptance of immunization. Therefore, the refusal of Hepatitis B0 immunization should not be interpreted only as a procedural failure, but as a complex decision involving trust, belief, family values, and parental autonomy.

The health worker's response was carried out through education, counseling, and informed consent. The mother was informed about the importance of Hepatitis B0 immunization, but her decision was respected. This result shows that health workers faced an ethical situation in which evidence-based recommendations had to be balanced with respect for parental decision-making. The case also indicates that communication strategies need to be empathetic, culturally sensitive, and trust-based so that parents can understand the benefits of Hepatitis B0 immunization without feeling pressured.

Overall, the results demonstrate that the newborn had good clinical adaptation and growth during the neonatal period, but Hepatitis B0 immunization was not administered due to parental refusal based on family belief. The persistence of refusal from birth until the second neonatal visit indicates that vaccine hesitancy in this case was not only temporary uncertainty, but a belief-based decision. Therefore, parental belief becomes an important

aspect that must be considered in efforts to improve acceptance of Hepatitis B birth dose immunization among newborns.

DISCUSSION

The findings of this study indicate that vaccine hesitancy in the administration of Hepatitis B birth dose immunization to newborns may occur even when health services are available and the newborn is clinically stable. In this case, the baby was born at term, cried immediately after birth, had good muscle tone, showed normal breathing, and obtained an Apgar score of 8/9/10. Essential newborn care, including antibiotic eye ointment and vitamin K1 injection, was accepted by the mother. However, Hepatitis B0 immunization was refused based on family belief. This finding shows that the refusal was not caused by limited access to immunization services, vaccine unavailability, or poor neonatal condition, but was more closely related to parental belief and family-based decision-making.

The refusal of Hepatitis B0 immunization in this study reflects the concept of vaccine hesitancy. Chang et al. (2022) defines vaccine hesitancy as a delay in acceptance or refusal of vaccination despite the availability of vaccination services. This concept is relevant to the present finding because the vaccine was available and planned to be given as part of newborn care, but the mother refused the intervention. Vaccine hesitancy is complex and context-specific because it is influenced by confidence, complacency, convenience, social values, and belief systems (Chang et al., 2022). Therefore, the refusal in this case should not be interpreted only as a lack of compliance, but as a health decision shaped by trust, belief, perceived risk, and family influence.

From the perspective of Hepatitis B prevention, the refusal of birth dose immunization is an important finding because the first dose of the Hepatitis B vaccine is recommended to be given as soon as possible after birth, preferably within 24 hours. WHO states that timely Hepatitis B birth dose is a key intervention to reduce mother-to-child transmission and early childhood transmission of Hepatitis B virus (Leonardi et al., 2022). Although the mother's HBsAg status in this case was non-reactive, Hepatitis B0 remains part of standard newborn immunization because it provides early protection and supports completion of the primary immunization series. Thus, refusal of the birth dose may create a gap between recommended neonatal preventive care and parental acceptance in practice.

This finding is consistent with previous studies showing that parental hesitation is one of the barriers to Hepatitis B birth dose administration. Belle Jarvis et al. (2023) found that parental refusal occurred in the administration of Hepatitis B birth dose, and many parents who refused felt uncomfortable or preferred to wait. This is similar to the present case, in which the mother did not reject all forms of newborn care but specifically refused Hepatitis B0 immunization. Such selective acceptance indicates that parents may distinguish between different neonatal interventions based on perceived urgency, safety, and belief. Therefore, health workers need to recognize that acceptance of one health intervention does not automatically mean acceptance of vaccination.

The persistence of refusal during neonatal follow-up further strengthens the interpretation that the hesitation was belief-based rather than momentary uncertainty. During the second neonatal visit, the baby's condition remained stable, weight increased, and no abnormalities were found, but the mother still refused Hepatitis B0 immunization (Gao et al., 2025; Huang et al., 2024; Jacobson et al., 2022). Counseling was provided again, yet the parental decision remained unchanged. This finding suggests that vaccine hesitancy may not always be resolved through one-time education immediately after birth. Instead, it requires repeated, empathetic, and trust-based communication that begins during pregnancy and continues through postpartum and neonatal care.

The findings also show that parental belief plays a central role in newborn immunization decisions. In many families, health decisions for newborns are not made by the mother alone but involve the husband, older family members, religious beliefs, cultural values, and prior family experiences. Therefore, refusal of Hepatitis B0 may reflect collective family reasoning rather than an individual decision. This situation is important in midwifery practice because health workers must communicate not only with the mother but also with the family members who influence decision-making. Communication that ignores family belief may create resistance, while communication that respects beliefs can become a pathway to build trust and improve vaccine acceptance.

The response of the health worker in this case also reflects an ethical dimension in neonatal care. The midwife provided education and informed consent before respecting the mother's decision. This shows that health workers must balance two important principles: the professional responsibility to recommend evidence-based immunization and the ethical obligation to respect parental autonomy (Jalilian et al., 2023; Kung et al., 2025; Rifqi et al.,

2024). However, respecting parental autonomy does not mean stopping education. Instead, it requires continuous counseling, clear explanation of vaccine benefits and risks, and documentation of refusal. This approach is important to protect the rights of parents while ensuring that health workers continue to advocate for the best interests of the newborn (Stålberg et al., 2024).

The practical implication of this study is that Hepatitis B0 immunization counseling should be provided earlier, ideally during antenatal care, not only after delivery. The period immediately after childbirth may not be the most effective time to introduce new information because the mother may be tired, anxious, or dependent on family decisions. Antenatal counseling gives parents more time to ask questions, discuss concerns, consult family members, and make informed decisions before the baby is born. Hawkins (2024) also emphasized the importance of educating parents because hesitancy is a major reason for refusing the Hepatitis B birth dose. Therefore, strengthening education during pregnancy may reduce refusal at the time of birth.

The theoretical implication of this study is that vaccine hesitancy in newborn care should be understood through a broader framework that includes belief, trust, family influence, and communication. The case supports the vaccine hesitancy framework proposed by Chang et al. (2022), which explains that vaccine decisions are shaped by confidence, convenience, and complacency. In this study, the most dominant dimension appears to be confidence, particularly confidence in the vaccine, health information, and the compatibility of immunization with family belief. Therefore, future interventions should not only increase vaccine knowledge but also strengthen trust between families and health workers.

This study has several limitations. First, the study was based on a single case, so the findings cannot be generalized to all parents or all newborn immunization cases. Second, the study relied on clinical documentation and care records, so the deeper psychological, religious, and cultural meanings behind the mother's belief were not explored through in-depth interviews. Third, the study did not include the perspectives of the father, extended family, or religious/community figures, even though these actors may influence the mother's decision. Fourth, the study did not measure long-term outcomes related to the delayed or refused Hepatitis B0 immunization. Therefore, future studies are recommended to involve more participants, use in-depth qualitative interviews, include family members as informants,

and examine communication strategies that can reduce vaccine hesitancy in Hepatitis B birth dose immunization.

Overall, this study shows that vaccine hesitancy in Hepatitis B birth dose immunization is not merely a technical problem in neonatal care, but a complex issue involving parental belief, family decision-making, trust, and communication. The newborn in this case was clinically stable and received several components of essential newborn care, yet Hepatitis B0 immunization was refused because of family belief. This finding highlights the need for culturally sensitive, empathetic, and continuous counseling so that parents can make informed decisions while health workers continue to promote evidence-based protection for newborns.

CONCLUSION

This study concludes that vaccine hesitancy in the administration of Hepatitis B birth dose immunization to newborns was mainly influenced by parental belief. The newborn in this case was born at term through spontaneous delivery and showed good clinical adaptation, as indicated by immediate crying, good muscle tone, normal breathing, and an Apgar score of 8/9/10. Essential newborn care, including antibiotic eye ointment and vitamin K1 injection, was accepted and administered. However, Hepatitis B0 immunization was not given because the mother refused the vaccine based on family belief. This finding indicates that vaccine hesitancy did not occur because of limited access to health services, vaccine unavailability, or poor neonatal condition, but because of belief-based parental decision-making.

The refusal of Hepatitis B0 immunization continued during neonatal follow-up, although the baby remained in stable condition and health workers had provided education and counseling. This finding shows that vaccine hesitancy in newborn care is not merely a technical problem, but a complex issue involving trust, parental autonomy, family values, perceived risk, and communication between health workers and parents. Therefore, health workers need to provide immunization counseling earlier, especially during antenatal care, using empathetic, culturally sensitive, and trust-based communication. Future studies are recommended to involve more participants, include the perspectives of fathers and family members, and explore deeper cultural, religious, and psychological factors influencing parental refusal of Hepatitis B birth dose immunization.

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