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A Medico-Legal Study on the Use of Infant Formula as an Alternative to Breastfeeding for Children Aged 0–2 Years

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ABSTRACT

The significant gap between the recommendation for exclusive breastfeeding and its implementation in practice—where many infants still receive formula milk without clear medical indications—highlights the need for more comprehensive regulations and medicolegal oversight to safeguard the health rights of children aged 0–2 years. This study aims to analyze the legal framework and medicolegal aspects of using formula milk as an alternative to breastfeeding for children in this age group. Using a normative legal research method, the study employs statutory, conceptual, and historical approaches, drawing on primary and secondary legal sources, including relevant laws and government regulations. The findings reveal that although national rules, such as Law No. 17/2023 on Health and Government Regulation No. 28/2024, affirm the right to exclusive breastfeeding and restrict formula use to medical indications, gaps remain in implementation and understanding among healthcare professionals. The use of formula milk is permitted only when there is a medical indication, with priority given to donor breast milk. In such cases, formula use must meet AFASS (Acceptable, Feasible, Affordable, Sustainable, and Safe) criteria, be supported by written parental consent, and adhere to strict health protocols. This research contributes to the discourse on child protection, health law, and ethical medical practice, while encouraging the development of stronger operational policies and public education on the responsible use of formula milk based on children's rights and public health safety.

Keywords: Breastfeeding Policy, Children's Rights, Formula Milk, Health Law, Medicolegal Aspects.

I. Introduction

Breastfeeding is crucial to providing a child with the best possible nutrition, which is essential for healthy growth and development (Modak et al., 2023). Women are responsible for pregnancy, childbirth, and lactation, and play a crucial role in ensuring their children's health (Gouni et al., 2022). This job is crucial during the first 1,000 days of life, which many experts agree is vital for a child's physical, mental, and emotional development (Draper et al., 2024). Children are vulnerable and will be valuable assets to the country in the future; thus, they need comprehensive nutritional care. Families are not the only ones responsible for this; the state is, too, via rules that safeguard and promote the welfare of children. UNICEF and the World Health Organisation (WHO) say that one of the clearest ways to protect this right is to only breastfeed for the first six months of life. Breast milk is commonly recognized as the best and most natural source of nourishment. It

contains antibodies and other essential components not found in store-bought replacements (WHO, 2024a). Even though these advantages are well-known, some still do not nurse correctly. In 2024, 73.59% of babies in East Java were only breastfed, which is higher than the national average of just 68% (BPS, 2024; WHO, 2024). The 2023 National Health Survey also revealed that only 27% of babies were breastfed within the first hour of delivery, and 20% received other meals or drinks immediately (Samosir et al., 2025). These numbers reveal a significant disparity between what is recommended and what is happening, indicating the need for stricter rules and ongoing supervision.

This is not a problem that happens in Indonesia. Countries like the United Kingdom have faced similar issues, where insufficient enforcement of rules allows the marketing of baby formula to continue even when advertising is banned. People in the industry typically use legal loopholes to market their goods indirectly. For instance, 72% of follow-up formula packaging resembles the packaging for baby formula, and 94% of it features small ads for follow-up items. Additionally, 39% of them feature advertisements intended for children over one year old (Conway et al., 2023). Public health messages often lack impact when there are no strong warnings about the benefits of breastfeeding. It adds to the UK's shockingly low percentage of exclusive breastfeeding, which is just 1% for the recommended six-month period. In Indonesia, there are comparable problems, which are exacerbated by a regulatory framework that is neither clear nor consistent. Pramono and Hikmawati say that the lack of defined national rules for donating breast milk has led to informal sharing methods that come with hazards, including fraud, abuse, and worry for mothers. (Pramono & Hikmawati, 2024).

During the COVID-19 epidemic, there was also a lack of clear rules. For example, only 58.3% of women on the outskirts of Depok were able to breastfeed exclusively. This was mainly because they did not have equitable access to professional help and public health education. (Apriningsih et al., 2024). Mulyaningsih et al. also said that in 2017, only 35.7% of women in the country were exclusively nursing, considerably below the 90% goal. (Mulyaningsih et al., 2020). The aggressive marketing of formula and the insufficient implementation of the WHO Code on the Marketing of Breast Milk Substitutes were two factors that hindered progress. These problems not only take away children's right to enough food, but they also make them malnourished and stunted. However, there are times when baby formula is the only option, including when a mother has HIV, is taking drugs that are not safe for her, or is dealing with mental health issues that make it hard for her to make milk. (Eccles et al., 2022). In such situations, a formula similar to breast milk regarding nutrients may be suitable. (Caroli et al., 2021). However, using formulas without supervision may be dangerous, as it can cause digestive difficulties and increase the likelihood of infections. (Dierikx et al., 2022; Venter et al., 2024). Therefore, a robust legal framework grounded in the care concept is crucial to ensure the formula is used safely and correctly.

Although the Ministry of Health and the National Agency for Drug and Food Control (BPOM) have implemented regulations, several questions remain, particularly regarding the level of monitoring required, enforcement mechanisms, and the allocation of responsibilities among stakeholders. This is particularly evident when formula milk is given to children aged 0 to 2. The current system of rules must be critically examined to determine how effectively it safeguards children's right to food in situations where breastfeeding is not possible. Additionally, the legal system has not yet fully incorporated medico-legal duties, which include healthcare personnel's need to provide accurate information and obtain informed parental permission. Considering these regulatory gaps, practical obstacles, and medico-legal challenges, this study aims to assess the legal framework governing the use of formula milk for children aged 0–2 years and to examine the medico-legal dimensions of its use as a substitute for breastfeeding. The study addresses two main questions: (1) How is the implementation of national regulations regarding exclusive breastfeeding and the use of infant formula carried out in healthcare facilities in Indonesia? (2) What are the medico-legal aspects of using infant formula for children aged 0–2 years? In doing so, this research seeks to fill an essential gap in the legal and health policy literature and offer insights supporting child rights and professional accountability.

Overall, the study underscores that exclusive breastfeeding is a fundamental right of every child, recognized nationally and internationally. However, its implementation is hindered by covert formula

marketing and limited awareness among healthcare professionals of their medico-legal duties. While Indonesia formally regulates the use of infant formula based on the AFASS principle (acceptable, feasible, affordable, sustainable, and safe), real-world practices often diverge from these standards. Therefore, there is an urgent need for stronger operational policies and expanded educational efforts to ensure that children's nutritional rights are upheld in both policy and practice.

II. Literature Review and Hypothesis Development

2.1. Nutritional Needs and the Urgency of Breastfeeding for Children Aged 0–2 Years

Breast milk is an essential and irreplaceable source of nourishment and immunological support for babies, particularly during the first 1,000 days of life, a significant time for growth and development. It has important parts like antibodies, growth factors, digestive enzymes, and anti-inflammatory compounds that have been shown to boost the immune system, protect against infections in the gut and lungs, and help the brain grow. (Quitadamo et al., 2021; Sánchez et al., 2021). The Sustainable Development Goals (SDGs) include initiatives to encourage exclusive breastfeeding during the first six months of life. This is especially true for Goal 2 (Zero Hunger) and Goal 3 (Good Health and Well-being) (Atukunda et al., 2021; Souza et al., 2021). UNICEF statistics from 2023 show that only over 48% of babies throughout the globe are exclusively breastfed, which is still far short of the goal of 70% by 2030 (UNICEF, 2023a). The Indonesian government has passed laws like Government Regulation No. 33 of 2012 and No. 28 of 2024 to protect babies' right to breast milk and limit the use of formula milk to medical reasons. (Central Government, 2012; Government Regulation, 2024). Even yet, implementation on the ground still faces significant problems, such as not having spaces to breastfeed at work, not getting enough social support, and the subtle effects of formula milk business ads. (Ching et al., 2021; Escamilla et al., 2023). This is especially worrying since Ministry of Health Regulation No. 39 of 2013 clarifies that formula milk should only be used for medical reasons. (Government Regulation, 2013). So, we need a more thorough policy approach right now. This should include stronger rules for how businesses operate, greater public education, and rewards for businesses. The main objective is to make nursing not only a personal choice or cultural norm, but also a key aspect of national plans to fight infant malnutrition and lower health inequities.

2.2. Legal Framework and Medicolegal Implications of Formula Feeding

Providing infant formula to children under the age of two without a clear medical indication can violate the child's right to optimal nutrition, as guaranteed by various regulations in Indonesia. Laws such as Law No. 23 of 2002, Law No. 35 of 2014 on Child Protection, Law No. 17 of 2023 on Health, and Government Regulation No. 28 of 2024 emphasize the responsibility of both the state and healthcare professionals to ensure that infants receive exclusive breastfeeding as a form of protection for their growth and development. (Central Government, 2023; Government of the Republic of Indonesia, 2014; Government Regulation, 2024; President of the Republic of Indonesia, 2002). The use of formula milk is permitted only under specific circumstances—for instance, when the mother or baby has health issues, breast milk is insufficient, or emergencies cause separation between the mother and infant. From a medicolegal and ethical perspective, physicians, midwives, or nurses who recommend infant formula must adhere to the AFASS principle: Acceptable, Feasible, Affordable, Sustainable, and Safe. They are also required to obtain informed consent from the parents based on a complete understanding of the situation, and to document this decision in the medical record. (Basse et al., 2020; Hall et al., 2024).

Failure to follow these procedures may result in administrative sanctions, civil lawsuits, or criminal penalties under Law No. 17 of 2023 on Health. (Central Government, 2023). Although the law is explicit, a gap exists between what is written and what happens. Much research has been conducted on the benefits of promoting breastfeeding. Still, little has been done regarding implementing these regulations, especially in

community health centers (puskesmas) or hospitals in remote locations with limited resources. To date, no study has examined whether the legal and ethical requirements for using formulas are being adhered to. The WHO and UNICEF (2023) claim that on a global scale, the marketing of baby formula is becoming increasingly aggressive, often violating international rules that limit the promotion of breast milk substitutes. This has led to two problems: it encourages the use of formula and, simultaneously, makes it harder to preserve a child's right to breastfeed. This study situates Indonesia within a broader global context. It demonstrates that inadequate enforcement of breastfeeding regulations is not only a problem in Indonesia but also a global issue affecting all countries worldwide in their efforts to protect children's right to the best possible nutrition from birth. This study not only examines the rules that apply, but it also provides a critical analysis of how they are implemented. It also advocates for increased monitoring and responsibility among healthcare workers when they make judgments about using baby formula.

2.3. Children's Rights, Legal Protection, and Implementation Gaps

Both national and international law guarantee the rights of children. The Universal Declaration of Human Rights, the Convention on the Rights of the Child (CRC), and Article 28B(2) of the 1945 Constitution of Indonesia all say that every child has the right to grow healthy and be safe from injury or unfair treatment. These rights are much stronger in Indonesia because of Law No. 4 of 2024 on Maternal and Child Welfare and Law No. 39 of 1999 on Human Rights. (Central Government, 1999, 2024). In actuality, nevertheless, these rights are still being broken. One example is giving babies formula milk without an apparent medical reason, and using deceptive advertising by manufacturers. (Doherty et al., 2022; Kamata et al., 2025). Many physicians and nurses are still unaware of the legal requirements for prescribing formulas. Additionally, a persistent discrepancy exists between policy and implementation, suggesting that regulations are not adequately implemented or enforced. People worldwide are also concerned about this issue. Formula milk manufacturers are increasingly criticized for their aggressive marketing strategies and frequent violations of the WHO's International Code of Marketing of Breast-milk Substitutes. Numerous studies have shown the health benefits of breastfeeding and the significance of promoting it. Few, meanwhile, have specifically examined the legal and health ramifications of formula feeding, particularly regarding Indonesian policy implementation. This gap is a crucial area of research. The lack of in-depth research connecting medical practice, legal frameworks, and abuses of children's rights shows that further research is needed. The results of this study show how important it is to make rules stronger, help healthcare workers better understand their legal and moral duties, make policies that are more focused on children, and ensure that children's rights are protected in the healthcare system for a long time.

2.4. Relevance of Previous Studies

This study and previous ones are similar in that they both look at using infant formula instead of nursing and what that means for children's health and rights. Agbozo et al. (2020) WHO/UNICEF policies were not thoroughly followed in a Baby-Friendly Hospital in Ghana. This is similar to what this study found: healthcare workers in Indonesia do not yet fully understand or follow national rules. Oliveira et al. (2021) Also talked about problems with marketing breastmilk replacements in Brazil, which is similar to what this study said about the need for regulatory control and legal protection against the wrong use of infant formula. Athbi & Ali (2020) A strong link was also found between using bottles and pacifiers and the risk of otitis media in babies. This supports the idea that using infant formula has health effects and needs to be tightly controlled to keep kids safe. How this study was done, its scope, and its key goals set it apart from other studies. Agbozo et al. (2020) A mixed-methods quantitative design was used to see how well hospitals followed WHO/UNICEF guidelines.

On the other hand, this study used a normative legal method to look at Indonesia's national legal framework and medical-legal issues. Oliveira et al. (2021) Looked at how formula goods are marketed in stores

and the rules that are broken when they do so. On the other hand, this study focuses on a normative legal analysis of government rules and the legal duties of healthcare practitioners while giving infants formula. In contrast, Athbi & Ali (2020) Utilized an epidemiological approach to find medical risk factors for certain diseases in babies. On the other hand, this study looked at the legal ramifications of giving babies formula without clear medical reasons. This study is different because it looks at infant formula as an alternative to nursing for kids ages 0 to 2 in Indonesia from a medical and legal point of view. It fills a vacuum in the existing literature by combining normative legal analysis of national laws like Law No. 17/2023 on Health and Government Regulation No. 28/2024 with the real-world problems that healthcare practitioners encounter. This study differs from earlier ones that focused on epidemiological data, marketing violations, and institutional compliance. It takes a broad legal view to look at how well children's rights to health and nutrition are protected, and it stresses the need for healthcare providers to understand the law and enforce regulations.

III. Research Method

3.1. Type of Research

This study employs a normative legal approach, a type of research that examines and analyzes written (positive) legal norms as its primary object of analysis. Normative legal research focuses on the study of legislation, legal doctrines, legal principles, and court decisions to understand how the law ought to operate (*das sollen*), rather than how it is practiced in the field (*das sein*) (Ahmad, 2024; Diana & Aswari, 2024). This approach was chosen because the primary focus of the research is to examine the existing legal framework rather than to evaluate the empirical behavior or implementation by legal actors. Therefore, this approach is suitable for reviewing the normative foundations that govern the use of infant formula in the context of ensuring children's rights to optimal nutrition. This research examines the legislative rules limiting formula milk as an alternative to breastfeeding for infants aged 0–2, employing a normative method, particularly when donor breast milk is unavailable due to medical reasons. Law is a body of written standards that governs social behaviour, guides medical decisions, and safeguards children's rights. The following research questions are developed to give the study a clearer direction:

- a. How are national regulations regarding exclusive breastfeeding and infant formula use implemented in Indonesia's healthcare facilities?
- b. What are the medicolegal aspects of using infant formula for children aged 0–2 years?

3.2. Approach Methods

Several legal approaches were used in this study:

- a. Statute Approach: This approach was implemented by looking at pertinent laws, including the Child Protection Law, the Health Law, the Government Regulations on Exclusive Breastfeeding, and the Ministerial Regulations controlling the supply of baby formula.
- b. Conceptual Approach: Legal and medicolegal perspectives analyze informed consent in medical decision-making, healthcare professionals' ethical and professional responsibilities, and protecting children's rights. Its primary goals with formula milk supply are to examine the AFASS principles (Acceptable, Feasible, Affordable, Sustainable, and Safe), the need for verified medical documentation, and legal liability if standard operating procedures are not followed. By examining these concepts, this approach offers a comprehensive understanding of the legal limitations and medicolegal responsibilities related to providing formula milk in place of nursing, particularly for young babies (ages 0–2).
- c. Historical Approach: This approach examines how Indonesian rules and government policies around nursing and the use of formula milk have changed over time. The investigation looks at important legal

events, starting with the passing of the Child Protection Law in 2002, which recognized children's rights to health and nutrition for the first time. It then looks at the changes made in 2014 and 2024 that made it even more important for the state to ensure that babies are exclusively breastfed. This method also looks at Government Regulation No. 33 of 2012, the first technical rule that systematically governed exclusive breastfeeding, and Minister of Health Regulation No. 39 of 2013, which set medical limits on the use of formula milk. Law No. 17 of 2023 on Health and Government Regulation No. 28 of 2024 show a shift in how we think about child protection and nutritional rights. They stress that people who stop breastfeeding should face criminal penalties and make it harder to promote formula milk. Overall, this study's historical approach gives a complete picture of how policies and laws have changed. It shows how the focus has shifted from promoting education to protecting and restricting children's right to nutrition and how legal rules have adapted to real-world problems and social changes over the past 20 years.

3.3. Legal Material Collection Techniques

The process of acquiring data included doing a literature review, which required identifying, selecting, and thoroughly analyzing several relevant and up-to-date legal sources. The sources were picked carefully, considering how relevant they were to the research topic, how reliable the organization that produced them was, and how current the laws or literature used were. The sources that were looked at were:

- a. Primary Legal Sources, including statutory regulations and pertinent judicial decisions, such as:
 - Law Number 17 of 2023 concerning Health (Central Government, 2023).
 - Law Number 4 of 2024 on the Welfare of Mothers and Children (Central Government, 2024).
 - Government Regulation Number 28 of 2024 about the Health Law's Implementation (Government Regulation, 2024).
 - States that Government Regulation Number 33 of 2012 pertains to exclusive breastfeeding (Central Government, 2012).
 - Regarding Infant Formula and Other Infant Products, Minister of Health Regulation Number 39 of 2013 (Government Regulation, 2013).
- b. Secondary Legal Sources, Academic works, such as books and journal articles, are used to support the examination of original legal documents. The AFASS principle in formula feeding, the application of exclusive breastfeeding rules, and medical personnel's moral and legal obligations are all covered theoretically and interpretively by secondary sources in this research. Scientific publications from legal and health journals are essential for analyzing the discrepancy between stated restrictions and field application and constructing compelling medico-legal arguments about the repercussions of giving formula milk without a prescription.
- c. Tertiary Legal Sources, Legal encyclopedias, law dictionaries, and reliable web sources explain important legal ideas, including informed consent, the child's right to food, and professional medical responsibility. In this research, tertiary sources assist in making the legal words and ethical concepts that support the study's recommendations and results more transparent and easier to grasp. These sources provide further evidence that connects abstract ideas with how the legislation is used in real life in mother and child health care services.

3.4. Legal Material Analysis Techniques

It employed a descriptive qualitative approach to analyze the data collected. This study employed a systematic approach to look at an item in its natural context without changing or upsetting it and without testing any hypotheses. (Khotimah et al., 2024). It used this method to fully define and explain the legal and

medical elements of giving formula milk to infants from birth to two years old, including the legality, restrictions, and legal duties. The study systematically examined how legal norms and key medicolegal concepts, such as the AFASS principle, the principle of informed consent, and national rules about exclusive breastfeeding and formula milk consumption, all relate to each other.

This research employed source triangulation by looking at various books, laws, and policy documents to ensure the results were valid and consistent. The researcher looked at analytical data from many different places and cross-validated the normative findings to make it less likely that there would be bias in the interpretation. Because of this, the arguments made in this study are founded on a solid legal basis and may be held to academic standards. (Hutasoit et al., 2024). The conclusions are presented in a logical order. (Bergé, 2024), beginning with broad legal principles and specific findings on the legality and limits of feeding formula milk to hospital newborns. This strategy also helps put together a complete and consistent image, which adds a lot to what we know about the law in Indonesia on how to protect newborns, particularly those between the ages of 0 and 2. This study also wants to address a gap in the literature since there has not been much talk on the legal and medical difficulties of giving formula milk to kids in Indonesia in the context of preserving their rights.

IV. Results and Discussion

This country's laws and those of other nations safeguard the right to breastfeed an infant exclusively for the first six months of its life. The Indonesian government has put severe rules in place to protect this privilege, such as making it illegal to use baby formula instead of breast milk. This study looks at the regulations and medicolegal concerns that regulate the provision of formula milk for babies from birth to two years old. In this sense, it helps to understand better how lawful it is to use a formula to provide a child with the best nutrition.

4.1. Legal Regulation on the Provision of Infant Formula for Children Aged 0–2 Years

Breast milk (ASI) contains all the essential nutrients an infant needs to grow and develop properly. It is the most natural and ideal form of nutrition for babies. During the first six months of life, breast milk alone is sufficient to meet a baby's nutritional requirements. Therefore, exclusive breastfeeding serves as a key indicator of the effectiveness of the government's national program, *Gerakan Nasional Percepatan Perbaikan Gizi 1.000 Hari Pertama Kehidupan* (1,000 HPK), which spans from pregnancy to a child's second birthday. (Susanti, 2021).

The exclusive breastfeeding policy is regulated and monitored by national and regional governments to ensure that every child has the right to receive whole breast milk. If breastfeeding is not possible—under specific conditions stipulated by law—infant formula may be used as an alternative. (Pramono et al., 2025a). The main objective of this policy is to guarantee and protect each infant's right to optimal nutrition from birth to six months of age. However, formula should not be given to newborns under normal conditions, except in the presence of clear medical indications. These indications must be determined by qualified health professionals such as midwives or nurses, especially in healthcare facilities without doctors. Government Regulation No. 28 of 2024, Article 24 paragraphs (1) and (2), states that every baby is entitled to exclusive breastfeeding from birth until six months of age, unless there is a medical reason. Breastfeeding should then be continued until the child reaches age two, along with the introduction of complementary foods. (Government Regulation, 2024). This national policy is further reinforced by Government Regulation No. 33 of 2012 on Exclusive Breastfeeding, which was issued under the mandate of Article 129 of the Health Law (Government Regulation, 2012).

Additionally, Law No. 4 of 2024 on Maternal and Child Health during the First 1,000 Days reaffirms in Article 11(1)(c) that every child has the right to exclusive breastfeeding up to six months and continued breastfeeding until two years, unless there are specific medical conditions, or if the mother is absent or separated from the child (Government of Indonesia, 2024). The law also ensures that children receive

complementary feeding from six months to two years of age. Article 12(1) of the same law mandates that both mother and father are responsible for supporting breastfeeding practices. Furthermore, all public facilities, workplaces, and service centers must provide breastfeeding support, such as lactation rooms or nursing corners, to help sustain this practice. Every newborn has the right to proper nutrition, quality healthcare, and emotional care to grow and thrive, as stated in Law No. 39 of 1999 on Human Rights (Government of Indonesia, 1999). The state, communities, and parents must protect and uphold children's rights. Article 17 of Government Regulation No. 33 of 2012 says the same thing as these laws:

- a. Health practitioners are not allowed to provide babies with formula or other goods that might interfere with exclusive breastfeeding programs, unless they meet the requirements in Article 15.
- b. They also cannot accept or promote formula products that might make it harder for women to breastfeed.
- c. Article 18 of the same rule says that health services cannot give out baby formula or other goods that make it harder to breastfeed exclusively, unless Article 15 says otherwise. These places are also not allowed to support or promote these items.

Even while the rules for exclusive breastfeeding and the ban on advertising formula are clear, they are not often followed. Several case studies show that exclusive breastfeeding rules work differently in different parts of Indonesia. For example, 49.7% of mothers exclusively breastfeed their babies in Kudus Regency. Many moms in the neighborhood work for companies that require much physical effort, like the tobacco industry, PT Djarum. Kusumasastra says enterprises like PT Djarum have followed Government Regulation No. 33 of 2012 and Kudus Regent Regulation No. 16 of 2016 by setting up lactation rooms and breaks for women to pump breast milk. However, there are still problems in coordinating and communicating with stakeholders. (Kusumasastra, 2023). In a second example from the Panombean Panei Community Health Center in Simalungun Regency, the percentage of exclusively breastfed babies has stayed below 40% for the previous four years. This is much below the national goal of 85%. Saragih discovered that health professionals have worked hard to promote education programs and mothers' courses. However, they have trouble implementing them because of a lack of facilities and infrastructure, cultural and occupational hurdles, and community awareness. (Saragih et al., 2024). In Bligo Village, Sidoarjo Regency, on the other hand, Regional Regulation No. 1 of 2016 on Nutrition and Exclusive Breastfeeding has been quite successful, owing to good communication and enough resources. However, early breastfeeding initiation is still not good enough since it is not clearly stated in policy. Stress, inadequate nutrition, and wrong ideas about how much better formula is than breast milk are still making it hard for many moms to breastfeed (Ambarwati & Lailul, 2023). Lastly, Pramono et al. discuss how hard feeding babies in catastrophic situations is. Indonesia had over 3,000 disasters in 2023, but only 4 out of 513 regional regulations included feeding babies and kids in catastrophes. As a consequence, the distribution of formula to those who did not follow the rules went higher, and there was not enough help for nursing moms at the evacuation centers. (Pramono et al., 2025b). These four case studies show that even though there are solid legal bases for exclusive breastfeeding laws, they are nonetheless hard to implement. Sabilla argues that Government Regulation No. 28 of 2024, Article 24(1) and (2) should be enforced. This guarantees that every baby has the right to exclusive nursing until a doctor says otherwise. Data from 48,995 children in low-income households in Indonesia shows that only 39.9% of them were exclusively breastfed, which shows a significant discrepancy in fulfilling these rights. Several demographic characteristics contribute to this poor coverage, including living in a city, being a single parent, having a mother under 20, not having enough education, not getting prenatal care, and not starting breastfeeding early. (Sabilla et al., 2025).

National rules and data overwhelmingly promote exclusive breastfeeding, but it is also vital to look at things from other points of view. Some moms may not be able to breastfeed because of health, mental, or social issues. Also, even when there are rules, workplaces may still not provide enough assistance for nursing. In an emergency, formula may be the only food choice for babies. So, instead of only putting stringent rules

in place, policies should provide flexible safeguards and support mechanisms for moms and newborns in unusual situations. This involves teaching health personnel how to handle emergency newborn feeding and ensuring that the formula delivery matches international standards. A policy framework that is more inclusive and responsive would better represent the many different situations that exist in Indonesia.

4.2. Medico-Legal Aspects of Infant Formula Use for Children Aged 0–2 Years as an Alternative to Breast Milk

The World Health Organization (WHO) and UNICEF say babies should only be breastfed for the first six months. Breast milk has antibodies and nutrients that other diets cannot entirely replace. (WHO, 2024a). However, in real life, not all babies get this advantage. Exclusive breastfeeding rates in Indonesia are still poor because nursing is started late, and other meals or liquids are given to babies too soon after birth. (Abdulahi et al., 2021). These problems come from things within and outside of the organization. Some of the mother's physical and mental health problems, not knowing enough about the advantages of nursing, starting too late, and stress at work after maternity leave are examples of internal challenges (Fitriani et al., 2024; Nuampa et al., 2022; Salas et al., 2020). External variables include not enough help from the environment, not enough breastfeeding spaces in public or workplace facilities, and not enough help from family (Compte et al., 2021; Cordero et al., 2022; Jiravisitkul et al., 2022).

Research shows that although breastfeeding practices in Indonesia have improved, many challenges persist. WHO and UNICEF data indicate that exclusive breastfeeding coverage rose from 52% in 2017 to 68% in 2023. However, only 27% of newborns were breastfed within the first hour, and just 14% received skin-to-skin contact for at least one hour after birth (WHO, 2024b). A WHO-UNICEF press release even reported a decline in early initiation of breastfeeding from 58.2% in 2018 to 48.6% in 2021, and a drop in exclusive breastfeeding from 64.5% to 52.5% over the same period. (UNICEF, 2023). A study by Idris and Astari (2023) found that only 51.6% of mothers provided exclusive breastfeeding, with significant regional disparities—highest in Nusa Tenggara (72.3%) and lowest in Kalimantan (37.5%). Syahri et al. reported that 51.9% of working mothers practiced exclusive breastfeeding, and those who performed early initiation of breastfeeding were twice as likely to succeed. (Syahri et al., 2024). These findings highlight the urgent need for systemic support in healthcare settings and workplaces to promote equitable breastfeeding practices across Indonesia.

Indonesia has made it explicit in its laws that exclusive breastfeeding is protected. According to Article 430 of Law No. 17/2023 on Health, those who stop breastfeeding programs may go to jail for up to a year or pay a fine of up to IDR 50 million. (Central Government, 2023). This shows that the state is serious about ensuring every kid has the right to the best nutrition. Even yet, promoting baby formula for newborns 0–6 months old is still quite common, even when there is no medical need to do so. Some doctors even tell parents to give their babies formula, which goes against the idea of protecting a child's right to good nourishment. Medical and legal regulations say that physicians, hospitals, and other healthcare professionals cannot give babies formula unless it is medically necessary. (Doherty et al., 2022; Rollins et al., 2023). If breast milk is not accessible, donor milk is the best option as long as it is given out in a way that meets the law.

According to Article 27(2) of Government Regulation No. 28/2024, donor milk provision must fulfill several conditions: it must be requested by the mother or family; the donor's identity and religious background must be disclosed; the donor must consent after being informed of the recipient's identity; the donor must be in good health without contraindications; and the milk must not be sold (Government Regulation, 2024). Failure to comply can result in administrative sanctions for healthcare providers or facilities, including verbal and written warnings or license revocation, as Article 42 of the same regulation outlines. Further, Government Regulation No. 33/2012 defines infant formula as a substitute for breast milk, only to be used under specific conditions as described in Article 7: (a) medical indications; (b) the mother's absence; or (c) separation of mother and child. (Government Regulation, 2013). Medical indications are detailed in Article 7(1) of Minister of Health Regulation No. 39/2013, including cases such as A genetic disorder that causes the

body to be unable to process galactose (galactosemia). In this genetic disorder, the body cannot break down the amino acid phenylalanine, which can damage the brain if left untreated (phenylketonuria), cause low birth weight (<1500 grams), or result in premature birth before 32 weeks of gestation. Additionally, maternal medical treatment may justify formula use. According to the law, medical assessment must be conducted by a physician, a midwife, or a nurse in areas lacking physicians. (Government Regulation, 2013). In emergencies such as natural disasters, infant formula may be distributed as medical aid with approval from the district health office, as stipulated in Article 32 of Government Regulation No. 28/2024. Nonetheless, according to Article 14 of Minister of Health Regulation 39/2013, written consent from the mother or family is still required for donor milk provision. If donor milk is unavailable, formula may be used, but only if it meets the AFASS principles: acceptable, feasible, affordable, sustainable, and safe. (Li et al., 2021; Robb et al., 2020). Giving a kid formula on purpose without a good medical cause is a violation of their fundamental rights. In addition to administrative fines, these infractions may be punished under Article 42(1) of Law No. 17/2023. These punishments might be verbal or written warnings, or the loss of a company license (Central Government, 2023).

Giving babies formula without a medical reason is against the law and goes against a child's right to the best nourishment. People who work in healthcare and institutions that do these things might face major legal problems. This research is important and current since the World Health Organization and UNICEF (2024) say that exclusive breastfeeding for the first six months is the best way to feed a baby. However, there is still a gap between policy and reality in Indonesia. Both internal reasons cause low rates of exclusive breastfeeding, such as the mother's health, lack of knowledge, and work-related stress, and external problems, including not having enough support systems or breastfeeding facilities (Compte et al., 2021; Fitriani et al., 2024). Although regulations such as Law No. 17/2023 and related government policies explicitly uphold children's rights to breast milk and restrict formula use to medical cases, violations by healthcare providers and unregulated formula promotion still occur (Central Government, 2023; Doherty et al., 2022). This issue shows how important it is to study how these rules are implemented and followed. This kind of study is important to defend children's nutritional rights and help the world work to reduce malnutrition and improve children's health. Some people say that Indonesia's strict rules against formula use and strong support for exclusive breastfeeding may hurt mothers who cannot breastfeed for medical, mental, or social reasons, like those who are depressed after giving birth, have had a traumatic birth, or are under much stress at work. Furthermore, an overly punitive approach toward healthcare workers in resource-limited settings may hinder timely responses to infants' nutritional needs. Therefore, a more human-centered and flexible policy implementation that upholds children's rights is needed while considering the realities mothers and healthcare providers face. Such a balanced approach would promote justice, fairness, and holistic well-being for mothers and infants.

4.3. Discussion

4.3.1. Legal Regulations on the Provision of Infant Formula for Children Aged 0–2 Years

The Indonesian government has implemented a ban on the provision of infant formula to newborns without medical indications as part of a systematic effort to promote exclusive breastfeeding. Article 34, paragraph (2) of Government Regulation No. 28 of 2024 clarifies that formula milk cannot replace breast milk. (Government Regulation, 2024). This policy reflects a growing commitment to employing procedures based on facts. It regards breastfeeding as a long-term investment in a person's health, social growth, and financial stability. (Government Regulation, 2024). The rules of breastfeeding in Indonesia have evolved a lot throughout the years. The government must protect breast milk since Regulation 33 of 2012 says it is a child's right. Article 129 of Law No. 36 of 2009 on Health specifies that the government must ensure every child has the right to the best food. (Central Government, 2012). The regulation was further strengthened by Government Regulation No. 28 of 2024, particularly Article 24 paragraphs (1) and (2), which state that every baby has the right to exclusive breastfeeding from birth until six months of age, unless there is a medical

condition involving the mother or child. (Government Regulation, 2024). These rules make it clear that the state and society have a shared obligation to encourage breastfeeding habits and protect the child's rights. Law No. 4 of 2024 on Maternal and Child Health during the First 1,000 Days of Life further added to the legal framework. Articles 11(1)(c) and 12(1) stipulate that exclusive breastfeeding is mandatory for the first six months and should be continued with complementary feeding (MPASI) until the child is two years old. The legislation also says that health care facilities, companies, day care centers, schools, and public places must include nursing rooms to help breastfeeding moms. (Government Regulation, 2024) (Government of Indonesia, 2024b; Gebremariam et al., 2020). The government's move from normative to structural methods shows they want to provide a complete support system for breastfeeding moms. It also signifies a broader cultural transformation, bringing breastfeeding out of the private sphere and into public policy as a national health agenda.

Furthermore, Law No. 39 of 1999 on Human Rights reinforces children's right to optimal nutrition. Article 52(2) affirms that every child has the right to nutritious food, including breast milk, as part of their fundamental rights to health and parental care (Government of Indonesia, 1999). This expands the breastfeeding agenda beyond health to encompass human rights, ethics, and social justice. As part of its sustained policy commitment, the government launched the National Nutritious Food Program, which began in stages in January 2025 (Indonesia.go.id, 2025). The program's goal is to stop chronic energy deficit (CED) in nursing moms, which might make it harder for them to make milk and increase the risk of stunting in children (Adila et al., 2023). It targets school-aged children, pregnant and breastfeeding women, and toddlers. So, the strategy combines feeding programs, legal protection, and social welfare programs.

Additionally, technical guidelines on the use of donor milk are set out in Ministry of Health Regulation No. 39 of 2013, Article 14, which requires written consent from the mother or family for donor breast milk provision. Formula milk is only to be used if donor milk is unavailable. Even then, as established by UNICEF, its use must comply with the AFASS principle—Acceptable, Feasible, Affordable, Sustainable, and Safe. (UNICEF, 2025). This rule ensures that infant formula is only used when needed and helps stop the unintended result of making babies more dependent on formula, which might make it harder for them to nurse (Feng et al., 2022; Harrison et al., 2023). This set of rules has significant effects on public health. Strong breastfeeding regulations have been shown to lower the death rate of babies, stop illnesses like diarrhea and respiratory infections, and help kids learn and be more productive in the long run (WHO & UNICEF, 2024; Abdulahi et al., 2021). Also, requiring breastfeeding facilities in public areas and workplaces helps working moms deal with their two problems, which is suitable for both the mother and the child (Fitriani et al., 2024; Comte et al., 2021). In short, the legislative evolution of exclusive breastfeeding in Indonesia shows how public health policy has changed over time, going from a moral appeal to a structural, rights-based, and welfare-oriented approach. It illustrates that the success of breastfeeding depends not just on the mother's knowledge but also on how strong the state's support systems are.

The implications of these findings are critical for future research and policymaking. They emphasize the need for a breastfeeding-supportive ecosystem grounded in evidence and human rights. The shift toward structural approaches calls for further evaluation of policy implementation, such as access to lactation rooms, availability of donor milk, and nutritional support for breastfeeding mothers. These findings also serve as a foundation for enhancing public health policies and initiatives at the national and local levels by designing holistic interventions that address individuals, social environments, workplaces, and healthcare systems. With cross-sector integration and data-driven monitoring, breastfeeding policies can be optimized to reduce stunting, improve the quality of future generations, and promote social justice in fulfilling children's rights.

4.3.2. Medico-Legal Aspects of Formula Milk Use for Infants Aged 0–2 Years as an Alternative to Breast Milk

Despite increasing supervision by central and local governments, the implementation of medico-legal aspects regarding the use of formula milk for infants aged 0–2 years still faces various challenges, both in communities and healthcare facilities. The government has established strict regulations through Government Regulation No. 28 of 2024, as a derivative of Law No. 17 of 2023 on Health. (Central Government,

2023; Government Regulation, 2024). Article 31(2) prohibits healthcare facilities, medical personnel, health workers, and health cadres from accepting or promoting formula milk and breast milk substitutes. Furthermore, Article 31(3) forbids them from providing healthcare services funded by formula milk manufacturers or distributors. Article 33 further prohibits manufacturers and distributors from engaging in activities that hinder exclusive breastfeeding. Violations include promotions, discounts, advertisements, and product offers. These prohibitions are based on the significant health risks of formula feeding in infants.

Risks include:

- a. For infants: increased likelihood of allergies and asthma, impaired cognitive development, respiratory infections, digestive disorders due to contamination, malnutrition, childhood cancer, obesity, diabetes, and cardiovascular diseases (WHO, 2019).
- b. For mothers: increased risk of breast, ovarian, and endometrial cancers, as well as obesity and osteoporosis (Maxwell et al., 2023; Pei et al., 2022).

Exclusive breastfeeding is mandated under Article 6 of Government Regulation No. 33 of 2012 (Central Government, 2012). However, Article 7 provides exceptions under specific conditions requiring formula feeding, such as:

- a. A physician determines medical indications according to service standards or by a nurse/midwife in areas without doctors.
- b. Absence or separation of the mother and baby – such as in disasters, maternal death, or unknown maternal whereabouts.

Ministry of Health Regulation No. 39 of 2013 Article 7(1) details specific medical conditions requiring formula feeding, including congenital metabolic disorders such as classic galactosemia, phenylketonuria, and maple syrup urine disease. (Government Regulation, 2013). For infants with phenylketonuria, breastfeeding may still be allowed under strict pediatric supervision. Additionally, infants with a birth weight <1500 grams, gestational age <32 weeks, or at risk of hypoglycemia may receive breast milk substitutes (Chang et al., 2024; Meek et al., 2022). For mothers, medical conditions that hinder breast milk production include polycystic ovary syndrome (PCOS), hypothyroidism, a history of breast surgery or radiation, and certain medications such as chemotherapy, antiretrovirals, radioactive iodine, sedatives, and anti-seizure drugs (Farah et al., 2021; Sokou et al., 2023). Breast milk production can also be disrupted by pseudoephedrine use and estrogen-containing hormonal contraceptives, especially for infants <6 months (Varghese et al., 2017). Infectious diseases such as HIV, HTLV-1 and 2, and breast herpes are also medical considerations, particularly if the infant has not received complete hepatitis B vaccination within the first 12 hours of life, in which case, breastfeeding is not recommended (Keleş et al., 2023; Pimentel et al., 2021).

Article 32(2) of Government Regulation No. 28 of 2024 allows formula feeding in disaster situations such as severe maternal injury or maternal death. (Government Regulation, 2024). Articles 29 and 30 state that when medically indicated, donor milk may replace breast milk, considering religious, social, safety, and quality aspects. If donor milk is unavailable, formula milk may meet the nutritional needs of infants aged 0–2 years. Hindering the exclusive breastfeeding program is regulated under Article 430 of Law No. 17 of 2023, which sets a penalty of one year in prison or a fine of up to IDR 50 million for violators, including medical personnel who promote formula products without legal justification. (Central Government, 2023). Administering formula milk in hospitals without a medical indication constitutes corporate criminal liability as stipulated in Article 447(2), with penalties as follows:

- a. IDR 2 billion if the criminal threat is <7 years,
- b. IDR 5 billion if the criminal threat is 7–15 years,

- c. IDR 50 billion if the criminal threat exceeds 15 years or includes life imprisonment or the death penalty.

The Convention on the Rights of the Child (CRC) states in Article 24 that all children have the right to adequate nutrition, including breast milk. In terms of international law, this is accurate. According to Article 25 of the Universal Declaration of Human Rights, everyone is entitled to a standard of living that promotes their health and well-being, including providing food for their children.

Some of the rights that children have to breast milk are:

- a. The right to receive breast milk as the primary source of nutrition during the first six months of life;
- b. The right to an environment that supports breastfeeding, including the role of families and communities;
- c. The right to access information about breastfeeding, its benefits, and proper feeding practices.

Restricting the use of formula milk has a significant impact on improving people's health. This strategy aims to cut down on the number of times babies are given formula milk for no medical reason. This could help more women breastfeed only, lower the number of babies who die, and stop a variety of chronic problems later in life, such as diabetes, obesity, and heart disease. However, it is not easy to put this plan into action. There are cultural differences, people in faraway places do not know enough about health, and there are not enough healthcare resources to teach and check on people regularly. More research using local data is needed to ensure that policy ideas fit what truly happens in the world. Not only do laws in the United States favor breastfeeding, but legislation in other countries does too. Article 24 of the Convention on the Rights of the Child (CRC) says that every child has the right to enough sustenance, including breast milk. According to Article 25 of the Universal Declaration of Human Rights, everyone has the right to a quality of living that is good for their health and well-being. This includes having enough food for children.

Some of the rights children have when it comes to breastfeeding are: The right to get breast milk as their primary source of food for the first six months of life; The right to live in a place that supports breastfeeding, including the roles of family and community; and The right to get information about breastfeeding, its benefits, and how to feed correctly. These results reveal that Indonesia's employment of medicolegal tactics to limit the use of formula milk has changed a lot. They used to promote it, but now they protect it and enforce the law. In the future, researchers should look at how well these rules operate in different locales, especially when receiving medically approved breast milk replacements and places to get aid with breastfeeding. It could also be interesting to find out how these rules make individuals feel in general and how they impact nursing. The results demonstrate that strict laws, public education, training for healthcare workers, and the availability of support systems like breastfeeding rooms and breast milk donation programs must all be linked. Regulation could make it tougher for some groups, especially those already weak, to get what they need without institutional support. So, future rules need to protect children's right to breast milk and give them safe and economical solutions for disorders that need medical attention. People from diverse fields need to work together and keep an eye on this policy all the time for it to work.

V. Conclusion

This research shows that breast milk is the best and only source of nutrients for babies, especially during the first 1,000 days of life. This important time significantly affects health and growth in the long run. The state is very committed to supporting exclusive breastfeeding and only allowing the use of formula milk in medically necessary situations. This is shown by national laws like Law No. 4 of 2024 and Law No. 17 of 2023, and technical rules like Government Regulation No. 33 of 2012 and Government Regulation No. 28 of 2024. From a legal and medical point of view, children aged 0 to 2 years old may only drink formula milk if it follows

the AFASS principles and is based on medical advice and written permission from their parents or guardians. This research also shows several problems with putting policies into action. In reality, many healthcare institutions have not wholly followed medicolegal rules, especially in places where resources are few and money is tight. Healthcare personnel do not know enough about the law, public education is not strong enough, formula milk corporations use secret marketing, and there are not enough lactation rooms, all of which are big problems for exclusive breastfeeding programs. Also, uneven enforcement of legal penalties for breaking the law makes it less likely that people will be deterred and held accountable. Even so, the results of this study open up new avenues for research and policy development. Future research may look at how well regulations function in distant places, how well healthcare staff understand the law, and how social and cultural variables affect people's choices about formula feeding. It is essential to do interdisciplinary research that combines legal, public health, and social points of view to make more flexible policies based on facts. Also, bringing together the government, healthcare institutions, companies, and communities is important for creating a long-lasting breastfeeding support system. So, this study not only helps to improve national policy, but it also has global implications for helping to reach the Sustainable Development Goals (SDGs), especially when it comes to reducing stunting, improving child health, and making sure that children's nutritional rights are met in a fair and accountable way.

References

- Abdulahi, M., Fretheim, A., Argaw, A., & Magnus, J. H. (2021). Initiation and Exclusive Breastfeeding Practices in an Ethiopian Setting. *Nutrients*, 1(1), 1–15. <https://www.mdpi.com/2072-6643/13/4/1204>
- Agbozo, F., Ocansey, D., Atitto, P., & Jahn, A. (2020). Compliance of a Baby-Friendly Designated Hospital in Ghana With the WHO/UNICEF Baby and Mother-Friendly Care Practices. *Journal of Human Lactation*, 36(1), 175–186. <https://doi.org/10.1177/0890334419848728>
- Ahmad, G. A. (2024). Critical Analysis of Anti-SLAPP Regulations in The Field of Criminal Law in Indonesia. *Golden Ratio of Law and Social Policy Review*, 4(1), 32–37. <https://doi.org/10.52970/grlspr.v4i1.920>
- Ambarwati, S. D., & Lailul, L. M. (2023). Policy Implementation of Exclusive Breastfeeding (ASI) Case Study in Bligo Village, Candi District, Sidoarjo Regency. *UMSIDA Preprints Server*, 1(1), 1–10. <http://dx.doi.org/10.21070/ups.1735>
- Apriningsih, Hanifah, L., & Nasrulloh, N. (2024). Exclusive breastfeeding practice during the COVID-19 pandemic in West Java, Indonesia: A cross-sectional study. *PLoS ONE*, 19(5), 1–12. <https://doi.org/10.1371/journal.pone.0303386>
- Athbi, H. A., & Ali, H. N. A. (2020). Risk factors of acute otitis media among infants in Kerbala Pediatric teaching hospital: A case-control study. *Medico-Legal Update*, 20(1), 766–771. <https://doi.org/10.37506/v20/i1/2020/mlu/194417>
- Atukunda, P., Eide, W. B., Kardel, K. R., Iversen, P. O., & Westerberg, A. C. (2021). Unlocking the potential for achievement of the unsustainable development goal 2 – 'zero hunger' – in Africa: Targets, strategies, synergies and challenges. *Food and Nutrition Research*, 65(1), 1–11. <https://doi.org/10.29219/fnr.v65.7686>
- Bassey, E. A., Ekrikpo, U. E., & Ekanem, A. M. (2020). Knowledge, Attitude and Practice Survey of the Recommended Infant Feeding Guidelines for HIV Positive Mothers by Primary Health Care Workers in Uyo, Nigeria. *Asian Journal of Research in Infectious Diseases*, 4(4), 23–34. <https://doi.org/10.9734/ajrid/2020/v4i430154>
- Bergé, J. S. (2024). The Vocabulary of A Priori in and Around the Law. *Revista Amagis Jurídica*, 16(1), 231–274. <https://doi.org/10.2307/3087875>
- Caroli, M., Vania, A., Tomaselli, M. A., Scotese, I., Tezza, G., Verga, M. C., Di Mauro, G., Antignani, A., Miniello, A., & Bergamini, M. (2021). Breastfed and formula-fed infants: Need for a different complementary feeding model? *Nutrients*, 13(11), 1–14. <https://doi.org/10.3390/nu13113756>
- Central Government. (1999). Law (UU) Number 39 of 1999 concerning Human Rights. <https://peraturan.bpk.go.id/Details/45361/uu-no-39-tahun-1999>

- Central Government. (2012). Government Regulation (PP) Number 33 of 2012 concerning Exclusive Breastfeeding (Patent No. 33).
- Central Government. (2023). Law Number 17 of 2023 concerning Health (Patent No. 17).
- Central Government. (2024). Law (UU) Number 4 of 2024 concerning the Welfare of Mothers and Children in the First 1000 Days of Life.
- Chang, M. R., Tetarbe, M., Barton, L., Ramanathan, R., & Cayabyab, R. (2024). Transient Hypoglycemia and Biochemical Differences in Infants Less Than 1,250 G at Birth Fed Human Milk with Human Milk-Derived Fortifier versus Cow Milk-Derived Fortifier. *American Journal of Perinatology*, 41(1), 2824–2831. <https://doi.org/10.1055/a-2164-7957>
- Ching, C., Zambrano, P., Nguyen, T. T., Tharaney, M., Zafimanjaka, M. G., & Mathisen, R. (2021). Old tricks, new opportunities: How companies violate the international code of marketing of breast-milk substitutes and undermine maternal and child health during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(5), 1–29. <https://doi.org/10.3390/ijerph18052381>
- Compte, M. V., Hernández-Cordero, S., Ancira-Moreno, M., Burrola-Méndez, S., Ferre-Eguiluz, I., Omaña, I., & Pérez Navarro, C. (2021). Breastfeeding at the workplace: a systematic review of interventions to improve workplace environments to facilitate breastfeeding among working women. *International Journal for Equity in Health*, 20(1), 1–21. <https://doi.org/10.1186/s12939-021-01432-3>
- Conway, R., Esser, S., Steptoe, A., Smith, A. D., & Llewellyn, C. (2023). Content analysis of on-package formula labelling in Great Britain: Use marketing messages on infant, follow-on, growing-up, and specialist formula. *Public Health Nutrition*, 26(8), 1696–1705. <https://doi.org/10.1017/S1368980023000216>
- Cordero, S. H., Compte, M. V., Litwan, K., Mejia, V. L., Velazquez, N. R., Moreno, M. A., Aguilera, M. S., & Armijo, F. C. (2022). Implementing Breastfeeding Policies at Workplace in Mexico : Analysis of Context Using a Realist Approach. *International Journal of Environmental Research and Public Health*, 19(4), 1–20. <https://www.mdpi.com/1660-4601/19/4/2315>
- Diana, D., & Aswari, A. (2024). Legal Arrangements and Remedies for Abandoned Land: A Normative Study. *Golden Ratio of Law and Social Policy Review*, 2(2), 23–33. <https://doi.org/10.52970/grlspr.v2i2.293>
- Dierikx, T., Berkhout, D., Eck, A., Tims, S., van Limbergen, J., Visser, D., de Boer, M., de Boer, N., Touw, D., Benninga, M., Schierbeek, N., Visser, L., Knol, J., Roeselers, G., de Vries, J., & de Meij, T. (2022). Influence of maternal antibiotic administration timing during caesarean section on infant microbial colonisation: a randomised controlled trial. *Gut*, 71(9), 1803–1811. <https://doi.org/10.1136/gutjnl-2021-324767>
- Doherty, T., Pereira-Kotze, C. J., Luthuli, S., Haskins, L., Kingston, G., Dlamini-Nqeketo, S., Tshitauzi, G., & Horwood, C. (2022). They push their products through me: health professionals' perspectives on and exposure to marketing of commercial milk formula in Cape Town and Johannesburg, South Africa - a qualitative study. *BMJ Open*, 12(4), 1–11. <https://doi.org/10.1136/bmjopen-2021-055872>
- Draper, C. E., Yousafzai, A. K., McCoy, D. C., Cuartas, J., Obradović, J., Bhopal, S., Fisher, J., Jeong, J., Klingberg, S., Milner, K., Pisani, L., Roy, A., Seiden, J., Sudfeld, C. R., Wrottesley, S. V., Fink, G., Nores, M., Tremblay, M. S., & Okely, A. D. (2024). The next 1000 days: building on early investments for the health and development of young children. *The Lancet*, 404(10467), 2094–2116. [https://doi.org/10.1016/S0140-6736\(24\)01389-8](https://doi.org/10.1016/S0140-6736(24)01389-8)
- Eccles, R., Du Toit, M., De Jongh, G., & Krüger, E. (2022). Breastfeeding Outcomes and Associated Risks in HIV-Infected and HIV-Exposed Infants: A Systematic Review. *Breastfeeding Medicine*, 17(2), 112–130. <https://doi.org/10.1089/bfm.2021.0107>
- Escamilla, R. P., Tomori, C., Hernández-Cordero, S., Baker, P., Barros, A. J. D., Bégin, F., Chapman, D. J., Grummer-Strawn, L. M., McCoy, D., Menon, P., Ribeiro Neves, P. A., Piwoz, E., Rollins, N., Victora, C. G., & Richter, L. (2023). Breastfeeding: crucially important, but increasingly challenged in a market-driven world. *The Lancet*, 401(1), 472–485. [https://doi.org/10.1016/S0140-6736\(22\)01932-8](https://doi.org/10.1016/S0140-6736(22)01932-8)

- Farah, E., Barger, M. K., Klima, C., Rossman, B., & Hershberger, P. (2021). Impaired Lactation: Review of Delayed Lactogenesis and Insufficient Lactation. *Journal of Midwifery and Women's Health*, 66(5), 631–640. <https://doi.org/10.1111/jmwh.13274>
- Fitriani, D., Sartika, M., & Sayekti, W. N. (2024). The Role of Family and Workplace Support in Sustaining Exclusive Breastfeeding Among Working Mothers: A Scoping Review. *Journal of Current Health Sciences*, 4(2), 111–118. <https://doi.org/10.47679/jchs.2024105>
- Gouni, O., Jarašūnaitė-Fedosejeva, G., Akik, B. K., Holopainen, A., & Calleja-Agius, J. (2022). Childlessness: Concept Analysis. *International Journal of Environmental Research and Public Health*, 19(3), 1–45. <https://doi.org/10.3390/ijerph19031464>
- Government of the Republic of Indonesia. (2014). Law Number 35 of 2014 concerning Amendments to Law Number 23 of 2002 on Child Protection. In *Child Protection Law* (p. 48).
- Government Regulation. (2013). Regulation of the Minister of Health of the Republic of Indonesia Number 39 of 2013 concerning Infant Formula and Other Products (Patent No. 39).
- Government Regulation. (2024). Government Regulation (PP) Number 28 of 2024 concerning the Implementation of Law Number 17 of 2023 on Health.
- Hall, M., Valencia, C. M., Soma-Pillay, P., Luyt, K., Jacobsson, B., & Shennan, A. (2024). Effective and simple interventions to improve outcomes for preterm infants worldwide: The FIGO PremPrep-5 initiative. *International Journal of Gynecology and Obstetrics*, 165(3), 929–935. <https://doi.org/10.1002/ijgo.15269>
- Hutasoit, E. L., Siagian, F. J. C., Zulkifli, S., & Noor, T. (2024). Perlindungan Hukum bagi Anak Luar Nikah di Indonesia; Studi Komparasi Putusan Mahkamah Konstitusi Nomor 46/PUU-VIII/2010 dan Hukum Islam. *Jurisprudensi: Jurnal Ilmu Syariah, Perundang-Undangan Dan Ekonomi Islam*, 16(2), 420–437. <https://doi.org/10.32505/jurisprudensi.v16i2.8938>
- Jiravisitkul, P., Thonginnetra, S., Kasemlawan, N., & Suntharayuth, T. (2022). Supporting factors and structural barriers in the continuity of breastfeeding in the hospital workplace. *International Breastfeeding Journal*, 17(1), 1–15. <https://doi.org/10.1186/s13006-022-00533-1>
- Kamata, M., Pereira-Kotze, C., Kerac, M., & Sibson, V. (2025). Formula Labelling in the United Kingdom: Manufacturers' Compliance With the Code, UK Law and Guidance Notes. *Maternal and Child Nutrition*, 1(1), 1–15. <https://doi.org/10.1111/mcn.13794>
- Keleş, Y. E., Arisoy, A. E., Arisoy, E. S., & Correa, A. G. (2023). Breastfeeding and maternal parasitic infections. In *Breastfeeding and Metabolic Programming* (pp. 415–429). https://doi.org/10.1007/978-3-031-33278-4_31
- Khotimah, K., Putri, I., Azizah, D., & Amalia, I. (2024). The Law on Burying Two Bodies in One Grave According to the Perspective of Islam and the Ulama. *Nalar Fiqh: Jurnal Hukum Islam*, 15(1), 1–11. <https://www.shariajournals-uinjambi.ac.id/index.php/nalarfiqh/article/view/1309>
- Kusumasastra, R. M. (2023). Analisis Implementasi Kebijakan Pemberian Asi Eksklusif Dan Penyediaan Ruang Laktasi Pada Ibu Bekerja Di Kabupaten Kudus (Studi Kasus: Pt Djarum). *Jurnal Ilmu Keperawatan Dan Kebidanan*, 14(2), 411–424. <https://doi.org/10.26751/jikk.v14i2.1993>
- Li, K. M. C., Li, K. Y. C., Bick, D., & Chang, Y. S. (2021). Human immunodeficiency virus-positive women's perspectives on breastfeeding with antiretrovirals: A qualitative evidence synthesis. *Maternal and Child Nutrition*, 17(4), 1–18. <https://doi.org/10.1111/mcn.13244>
- Maxwell, C. V., Shirley, R., O'Higgins, A. C., Rosser, M. L., O'Brien, P., Hod, M., O'Reilly, S. L., Medina, V. P., Smith, G. N., Hanson, M. A., Adam, S., Ma, R. C., Kapur, A., McIntyre, H. D., Jacobsson, B., Poon, L. C., Bergman, L., Regan, L., Algurjia, E., & McAuliffe, F. M. (2023). Management of obesity across women's life course: FIGO Best Practice Advice. *International Journal of Gynecology and Obstetrics*, 160(S1), 35–49. <https://doi.org/10.1002/ijgo.14549>
- Meek, J. Y., Carmona, C. A., & Mancini, E. M. (2022). Problems of the Newborn and Infant. In P. M. Paulman, R. B. Taylor, A. A. Paulman, & L. S. Nasir (Eds.), *Family Medicine* (pp. 223–244). Springer International Publishing. https://doi.org/10.1007/978-3-030-54441-6_163

- Modak, A., Ronghe, V., & Gomase, K. P. (2023). The Psychological Benefits of Breastfeeding: Fostering Maternal Well-Being and Child Development. *Cureus*, 15(10), 1–10. <https://doi.org/10.7759/cureus.46730>
- Mulyaningsih, H., Suyanto, B., & Sugihartati, R. (2020). Discourse and breastfeeding practice in urban communities in Indonesia: A Foucauldian perspective. *Jurnal Studi Komunikasi (Indonesian Journal of Communications Studies)*, 4(3), 597. <https://doi.org/10.25139/jsk.v4i3.2452>
- Oliveira, M. I. C. de, Boccolini, C. S., & Fonseca Sally, E. de O. (2021). Breastmilk Substitutes Marketing Violations and Associated Factors in Rio de Janeiro, Brazil. *Journal of Human Lactation*, 37(1), 158–168. <https://doi.org/10.1177/0890334420978405>
- Pei, Z., Lu, W., Feng, Y., Xu, C., & Hsueh, A. J. W. (2022). Out-of-step societal and Darwinian adaptation during evolution is the cause of multiple women's health issues. *Human Reproduction*, 37(9), 1959–1969. <https://doi.org/10.1093/humrep/deac156>
- Pimentel, A., Pissarra, S., Rocha, G., & Guimarães, H. (2021). How and when maternal viral infections can be a contraindication to breastfeeding: a narrative review. *Journal of Pediatric and Neonatal Individualized Medicine*, 10(1), 1–12. <https://doi.org/10.7363/100130>
- Pramono, A., & Hikmawati, A. (2024). Donor human milk practice in Indonesia: a media content analysis. *Frontiers in Nutrition*, 11(1), 1–10. <https://doi.org/10.3389/fnut.2024.1442864>
- Pramono, A., Hikmawati, A., Hartiningtiyaswati, S., & Smith, J. (2025a). Breastfeeding Support and Protection During Natural Disaster and Climate-Related Emergencies in Indonesia: Policy Audit. *Journal of Human Lactation*, 41(2), 231–242. <https://doi.org/10.1177/08903344251322770>
- Pramono, A., Hikmawati, A., Hartiningtiyaswati, S., & Smith, J. (2025b). Breastfeeding Support and Protection During Natural Disaster and Climate-Related Emergencies in Indonesia: Policy Audit. *Journal of Human Lactation*, 41(2), 231–242. <https://doi.org/10.1177/08903344251322770>
- President of the Republic of Indonesia. (2002). Law of the Republic of Indonesia Number 23 of 2002 concerning Child Protection (Patent No. 23). *Child Protection*. <https://peraturan.bpk.go.id/Details/44473/uu-no-23-tahun-2002>
- Quitadamo, P. A., Comegna, L., & Cristalli, P. (2021). Anti-Infective, Anti-Inflammatory, and Immunomodulatory Properties of Breast Milk Factors for the Protection of Infants in the Pandemic From COVID-19. *Frontiers in Public Health*, 8(1), 1–29. <https://doi.org/10.3389/fpubh.2020.589736>
- Robb, L., Walsh, C., & Nel, M. (2020). Knowledge, perceptions, and practices of HIV-infected mothers regarding HIV and infant feeding. *South African Journal of Clinical Nutrition*, 33(1), 23–29. <https://doi.org/10.1080/16070658.2018.1503810>
- Rollins, N., Piwoz, E., Baker, P., Kingston, G., Mabaso, K. M., McCoy, D., Ribeiro Neves, P. A., Pérez-Escamilla, R., Richter, L., Russ, K., Sen, G., Tomori, C., Victora, C. G., Zambrano, P., & Hastings, G. (2023). Marketing of commercial milk formula: a system to capture parents, communities, science, and policy. *The Lancet*, 401(10375), 486–502. [https://doi.org/10.1016/S0140-6736\(22\)01931-6](https://doi.org/10.1016/S0140-6736(22)01931-6)
- Sabilla, M., Laksono, A. D., & Megatsari, H. (2025). Determine the promotion target of exclusive breastfeeding among low-income families in Indonesia. *Clinical Epidemiology and Global Health*, 32(1), 1–5. <https://doi.org/10.1016/j.cegh.2025.101960>
- Samosir, H. R., Saputri, F., Buulolo, E. S., Simangunsong, E. Z., Sitanggang, E. A., & Paninsari, D. (2025). Knowledge and Attitudes of Third-Trimester Pregnant Women Regarding Exclusive Breastfeeding Education. *Journal of Pharmaceutical and Sciences*, 8(2), 859–867. <https://journal-jps.com/new/index.php/jps/article/view/836>
- Sánchez, C., Franco, L., Regal, P., Lamas, A., Cepeda, A., & Fente, C. (2021). Breast milk: A source of functional compounds with potential application in nutrition and therapy. *Nutrients*, 13(3), 1–34. <https://doi.org/10.3390/nu13031026>
- Saragih, R. M. S., Sitorus, R. S., & Ginting, D. Y. (2024). Analysis of the exclusive breastfeeding policy implementation in the working area of Panombeian Panei Health Center. *Jurnal Kesmas Dan Gizi (Jkg)*, 6(2), 230–238. <https://doi.org/10.35451/jkg.v6i2.1782>

- Sokou, R., Parastatidou, S., Iliodromiti, Z., & Lampropoulou, K. (2023). Knowledge Gaps and Current Evidence Regarding Breastfeeding Issues in Mothers with Chronic Diseases. *Nutrients*, 15(13), 1–21. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10343612/>
- Souza, C. B. De, Venancio, S. I., & da Silva, R. P. G. V. C. (2021). Breastfeeding Support Rooms and Their Contribution to Sustainable Development Goals: A Qualitative Study. *Frontiers in Public Health*, 9(1), 1–9. <https://doi.org/10.3389/fpubh.2021.732061>
- Susanti, L. (2021). Pengaruh Pendidikan Kesehatan Dengan Booklet Terhadap Pengetahuan Ibu Hamil Tentang 1000 Hari Pertama Kehidupan. *Jurnal Delima Harapan*, 8(2), 46–52. <https://doi.org/10.31935/delima.v8i2.136>
- Syahri, I. M., Laksono, A. D., Fitria, M., Rohmah, N., Masrurroh, M., & Ipa, M. (2024). Exclusive breastfeeding among Indonesian working mothers: does early initiation of breastfeeding matter? *BMC Public Health*, 24(1), 1–10. <https://doi.org/10.1186/s12889-024-18619-2>
- UNICEF. (2023). Mothers need more support amid a decline in Indonesia's breastfeeding rates. <https://www.unicef.org/indonesia/nutrition/press-releases/mothers-need-more-support-amid-decline-indonesias-breastfeeding-rates#:~:text=Only> 52.5 per cent were, mothers to continue optimal breastfeeding.
- UNICEF. (2025). Elimination of mother-to-child transmission of HIV, syphilis, and hepatitis B. <https://www.who.int/initiatives/triple-elimination-initiative-of-mother-to-child-transmission-of-hiv-syphilis-and-hepatitis-b>
- Varghese, S., Krishnakumar, K., Panayappan, L., & Jayapraksh, K. (2017). A review on vaccine storage: keeping vaccines safe when in high demand. *J. Bio. Innov*, 6(4), 548–552. <https://stjamespharmacycollege.in/wp-content/uploads/2021/01/SJCOPS-Publications.pdf>
- Venter, C., Meyer, R., Bauer, M., Bird, J. A., Fleischer, D. M., Nowak-Wegrzyn, A., Anagnostou, A., Vickery, B. P., Wang, J., & Groetch, M. (2024). Identifying Children at Risk of Growth and Nutrient Deficiencies in the Food Allergy Clinic. *The Journal of Allergy and Clinical Immunology: In Practice*, 12(3), 579–589. <https://doi.org/https://doi.org/10.1016/j.jaip.2024.01.027>
- WHO. (2019). Feeding and Nutrition of Infants and Young Children. <https://iris.who.int/bitstream/handle/10665/272658/9789289013543-eng.pdf>
- WHO. (2024). Mothers need more breastfeeding support during the critical newborn period. <https://www.who.int/indonesia/news/detail/01-08-2024-mothers-need-more-breastfeeding-support-during-critical-newborn-period>