



# The Strategic Effort to Ensure Successful Breastfeeding Practice in the Workplace: An Indonesian Expert Opinion

Ray Wagiu Basrowi<sup>1,2,\*</sup>, Febriansyah Darus<sup>3</sup>, I Gusti Ayu Nyoman Partiw<sup>4,5</sup>, Luciana B. Sutanto<sup>6</sup>, Astrid Sulistomo<sup>1</sup>, Dewi Sumaryani Soemarko<sup>1</sup>, Erika Wasito<sup>2</sup>, Tonny Sundjaya<sup>2</sup> and Dessy Pratiwi<sup>2</sup>

<sup>1</sup>Department of Community Medicine, Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia

<sup>2</sup>Medical Scientific Affairs Department, Danone Specialized Nutrition Indonesia, Yogyakarta, Indonesia

<sup>3</sup>Department of Obstetric Gynecology, Presidential Hospital, Gatot Subroto Army Hospital (RSPAD), Jakarta, Indonesia

<sup>4</sup>Bunda Mother and Child Hospital (RSIA Bunda), Jakarta, Indonesia

<sup>5</sup>Indonesia Pediatric Society (IDAI), Jakarta, Indonesia

<sup>6</sup>Indonesia Nutrition Association, Jakarta, Indonesia

## Abstract:

**Background:** Breastfeeding has benefits for both the child and the mother. However, breastfeeding can be a challenge for working mothers due to inadequate time and space for expressing breastmilk, employer perceptions of reduced productivity, regulations prohibiting children in the workplace, and the lack of childcare close to the workplace.

**Methodology:** The experts from different backgrounds were invited to provide their views on this matter. This report summarizes the discussion of multidisciplinary experts on the recommendations about breastfeeding practices for mothers and the workplace.

**Results:** Improving education and knowledge, implementing a lactation promotion model, seeking information, and making plans and arrangements are recommended for successful breastfeeding practices.

**Conclusion:** The aspects of the lactation promotion model can be the key to successful breastfeeding for working mothers.

**Keywords:** Breastfeeding, Workplace, Expert consensus, Working mothers, Multidisciplinary experts, Lack of childcare.

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\*Address correspondence to this author at the Department of Community Medicine, Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia; E-mail [ray.basrowi@gmail.com](mailto:ray.basrowi@gmail.com)

Cite as: Basrowi R, Darus F, Partiw I, Sutanto L, Sulistomo A, Soemarko D, Wasito E, Sundjaya T, Pratiwi D. The Strategic Effort to Ensure Successful Breastfeeding Practice in the Workplace: An Indonesian Expert Opinion. Open Public Health J, 2024; 17: e18749445291278. <http://dx.doi.org/10.2174/0118749445291278240305073733>



Received: December 07, 2023

Revised: January 30, 2024

Accepted: February 14, 2024

Published: March 12, 2024



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## 1. INTRODUCTION

According to recommendations from both the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), the optimal diet for infants

during their initial six months is exclusively breast milk [1, 2]. This guidance is echoed in Indonesian national regulations, affirming the obligation of exclusive breastfeeding to ensure that the rights of infants are

upheld until they reach six months of age [3]. However, recent data from the 2022 Indonesian Nutrition Status Survey reveal that only 67.96% of infants under six months receive exclusive breastfeeding, indicating a significant gap in achieving this target [4]. One of the causes of the low coverage of exclusive breastfeeding is that for mothers who are actively working, efforts to provide exclusive breastfeeding often experience obstacles. Maternal employment without adequate support has been previously described as a barrier to breastfeeding. Work-related issues have been identified as a major reason why mothers do not initiate breastfeeding or wean their infants sooner [5].

Breastfeeding is not just a matter of nutrition; it fosters secure attachment, enhances cognitive development, and contributes to reducing childhood and maternal illnesses, thereby lowering healthcare expenses, promoting healthier families, and fortifying society [6-8]. To meet the recommendation of WHO regarding six months of exclusive breastfeeding, a supportive environment is crucial, encompassing both the home and workplace. However, returning to work without adequate support mechanisms often disrupts optimal breastfeeding practices, with full-time employment significantly reducing the duration of breastfeeding. Workplace challenges, such as inadequate time and space for expressing breast milk, perceptions of reduced productivity with infant presence, and lack of nearby childcare facilities, further exacerbate the situation [5].

Despite these challenges, there is a notable gap in fully addressing the multifaceted barriers encountered by working women in the workplace. The specific support and resources needed to facilitate sustained breastfeeding remain inadequately delineated and addressed by stakeholders. Hence, there is a pressing need for governmental and employer policies to create a conducive environment that acknowledges and supports the integration of breastfeeding responsibilities with professional commitments [9-12].

A comprehensive strategy is essential to support successful breastfeeding among working mothers, necessitating efforts from both mothers and company management. Recognizing this, a roundtable of experts convened to explore critical aspects that employees and employers must be cognizant of and prepared for, underscoring the importance of concerted efforts in facilitating and sustaining breastfeeding practices in the workplace.

## 2. MATERIALS AND METHODS

This report was developed based on a series of discussions with multidisciplinary experts.

### 2.1. Experts Selection

We selected experts from various fields. We selected six professionals with over ten years of experience in their respective fields. The specialists are obstetricians, gynecologists, pediatricians, clinical dietitians, and occupational physicians.

### 2.2. Procedures

Six experts attended an expert meeting online via the Zoom platform in 2022 to discuss efforts strategically employed to promote successful breastfeeding practices within the workplace. The three-hour meeting comprised expert presentations about breastfeeding according to their fields (*e.g.*, from a nutritionist's perspective), followed by a discussion of the key points to ensure workplace breastfeeding. The results of this expert opinion method are validated by referring to other relevant sources, such as scientific literature, clinical guidelines, or related studies. This will help ensure that expert opinions are in line with current knowledge and practice in the field. Comments and feedback were collected from the experts to develop the present expert review. They were supported by a bibliographical literature search on Scopus, PubMed, and Cochrane databases to collect the most relevant articles. The keywords used in the literature search were: (workplace breastfeeding OR breastfeeding practice). The manual screening of relevant references complemented the online bibliographic search.

## 3. RESULTS AND DISCUSSION

### 3.1. Clinical Factors for Successful Pregnancy

Both breastfeeding mothers and their support systems must prioritize several crucial factors, notably thorough lactation preparation and postpartum counseling support. Lactation preparation encompasses a range of elements, from maternal nutrition to equipping mothers with the knowledge and skills necessary for successful breastfeeding. This preparation significantly impacts maternal confidence and self-efficacy, which are key predictors of breastfeeding success. Moreover, adequate preparation during pregnancy directly influences breast milk production. Recognizing the importance of instilling positive attitudes and decisions prior to childbirth, psychological readiness for breastfeeding is paramount during pregnancy. Counseling interventions serve as valuable tools in this preparation process, proving to be effective in promoting and maintaining exclusive breastfeeding. The research underscores the efficacy of such interventions in bolstering maternal confidence and sustaining breastfeeding practices beyond the postpartum period [13, 14].

The World Health Organization (WHO) suggests breastfeeding counseling prenatally, postnatally, and for at least 24 months. All pregnant women are required to receive at least six antenatal care (ANC) visits to monitor the health of the mother and baby and prepare them for breastfeeding. Prenatal caregivers need to educate and support new mothers and their families as they prepare to breastfeed and examine mothers to identify any health conditions that could prevent them from doing so. As part of a continuum of care, breastfeeding counseling should be provided by trained health care professionals (pediatrician, obstetrician, or general practitioner) and community-based lay and peer breastfeeding counselors [14]. Comprehensive and practical preparation during the

prenatal period, coupled with robust social support and expert guidance, plays a crucial role in helping women surmount challenges. This multifaceted approach empowers women, fostering the confidence necessary to achieve their feeding objectives successfully [15].

Prenatal lactation counseling entails educating expectant mothers on the benefits of exclusive breastfeeding and the urgency with which they should begin the process. Home visits, lactation consultations, the distribution of printed and written materials, video demonstrations, and participation by prospective fathers in educational activities are all examples of what might be included in this type of program. At a time when many choices about infant feeding are being considered, pregnant women, their partners, and families can learn about the advantages of breastfeeding during the prenatal period [10]. As a result of this prenatal counseling, more women are likely to breastfeed their newborns. Counseling decreases the likelihood of not initiating breastfeeding within the first hour after birth, between 4 and 6 weeks, and at 6 months, compared to no counseling. These indicated a strong recommendation for breastfeeding counseling for pregnant women and nursing mothers [11, 13, 14]. Continued counseling efforts are crucial in the immediate postnatal weeks, necessitating an extended commitment to providing comprehensive support. This entails verbal guidance and the incorporation of practical demonstrations to exemplify proper breastfeeding techniques. Furthermore, ensuring the success of breastfeeding rates and practices requires a dedicated focus on offering substantial assistance to mothers, addressing individual concerns, and tailoring support to meet specific needs. The holistic approach during this critical postnatal period aims to fortify mothers with the knowledge, skills, and confidence essential for the sustained success of breastfeeding endeavors [16].

The ability of a mother to successfully breastfeed is linked to the ability of her body to produce milk, known as lactogenesis, which is responsible for the formation of milk. Lactogenesis occurs from 16 weeks of pregnancy until 1-2 days after delivery. Lactogenesis includes all the processes required for the mammary gland to go from an undifferentiated state to a fully differentiated state postpartum. Lactation can occur in its entirety in this fully differentiated state [17].

Pregnancy requires a meticulous and comprehensive focus on maintaining an optimal nutritional intake to enhance the lactogenesis process effectively. Expectant mothers must prioritize a well-rounded, nutrient-dense diet that encompasses essential vitamins, minerals, and other nutrients. This nutritional strategy supports the overall health and well-being of the mother during gestation and lays the groundwork for successful lactation. Adequate nutrition during pregnancy is a foundational element in promoting the physiological mechanisms necessary for the subsequent production of high-quality breast milk. Therefore, a conscientious and balanced approach to dietary choices during pregnancy becomes paramount in ensuring the successful initiation and

sustained efficacy of lactogenesis [18]. Nutrition is essential for the health of pregnant women and the growth and development of the fetus before and during pregnancy. The dietary requirements of pregnant women are increased to accommodate the expansion of maternal tissue and plasma volume, the growth of the fetus, and the preparation for lactation. This is why pregnant women should keep track of their food intake to ensure that they are getting enough micronutrients. Even though lactation is considered, breastfeeding women should continue taking their daily prenatal vitamins [19].

Pregnant individuals are advised to prioritize consuming high-quality, nutrient-dense foods while minimizing the intake of processed, empty-calorie foods and beverages. A healthy diet during pregnancy encompasses several key elements, including achieving appropriate weight gain, ensuring sufficient vitamin and mineral supplementation, abstaining from alcohol, tobacco, and other harmful substances, and practicing safe food handling practices.

In pregnancy nutrition, supplementation entails directly providing vitamins and minerals in amounts surpassing those attainable through regular dietary intake. Such supplements may be administered daily or intermittently, such as once, twice, or thrice a week, with non-consecutive days between administrations. Multiple micronutrient supplements are recommended for pregnant women whose dietary intake is deemed insufficient. Notably, well-nourished women may not necessarily require these supplements to meet daily nutritional requirements. However, a cautious approach is advised without meticulous evaluation by a nutritionist. This approach ensures prudence in determining supplementation necessity during pregnancy [20].

Currently, supplementation efforts are focused on providing iron, folic acid, iodine, and multiple micronutrient formulations. Including micronutrients like zinc, calcium, and various vitamins in the diet is also recommended. Previous research indicates that insufficient levels of iron during pregnancy can result in unfavorable outcomes for both the mother and child. In mothers, deficiencies, such as iron deficiency anemia (IDA), have been linked to conditions like preeclampsia, preterm delivery, and miscarriage. In infants, inadequate iron status during pregnancy has been associated with issues like fetal growth restriction, low birth weight, and compromised cognitive development. Moreover, certain studies emphasize the critical role of timing in addressing iron deficiency (ID) and IDA, as long-term consequences, particularly related to the brain development and function of a child, may prove irreversible even after iron levels are corrected [11, 12].

Consequently, it is imperative to prioritize comprehensive nutritional care both preceding pregnancy and throughout the entire gestational period. This commitment is crucial for sustaining optimal health for both the expectant mother and the developing baby, emphasizing the significance of maintaining well-rounded and nourishing dietary practices from the preconception stage

through the entire duration of pregnancy. Such an approach underscores the importance of proactive nutritional measures in fostering maternal and fetal health well-being.

Vitamin D, B, and folate are the three most commonly prescribed prenatal vitamins for expectant mothers. According to the WHO, pregnant women with vitamin D deficiency should be supplemented with 200 IU (5 µg) daily, the current recommended daily intake [21]. Vitamin D is crucial in bone growth and immune function, concomitantly with vitamin K2. Inadequate vitamin D levels can lead to growth delays and skeletal deformities, such as rickets. Insufficient vitamin D during pregnancy is associated with an elevated risk of adverse outcomes, including miscarriage, preterm birth, and the necessity for a Caesarean section. Moreover, there is an increased likelihood of the child developing asthma, encountering language difficulties, and exhibiting symptoms of autism.

Supplementing with additional vitamin D during pregnancy has been shown to mitigate the incidence of several complications. This includes a reduction in the occurrence of preeclampsia, preterm birth, infections, hypertensive disorders during pregnancy, and secondary hyperparathyroidism. Furthermore, maternal supplementation with vitamin D has been correlated with increased mental and psychomotor scores in infants. The multifaceted impact of maintaining optimal vitamin D levels during pregnancy underscores its pivotal role in both maternal and fetal health [22].

Several B vitamins, including B12, folate, B6, choline, and methionine, are necessary for red blood cell production and nerve cell function. Folate is crucial in DNA synthesis and methylation processes and is essential for regulating gene expression. Additionally, folate is integral to the metabolism of various amino acids, contributing to normal cell growth and replication. Ensuring adequate folate levels through supplementation during pregnancy has been scientifically demonstrated to effectively lower the risk of neural tube disorders and megaloblastic anemia. Furthermore, it diminishes the occurrence of other congenital abnormalities and preterm birth, and if taken before conception, there is a likelihood of delivering a small-for-gestational-age baby. Insufficient folate levels have been linked to an increased risk of autism spectrum disorder in offspring. Conversely, elevated levels of unmetabolized folic acid have been associated with a higher risk of both autism and food allergies. Most studies consistently report a significant decline in blood folate levels during pregnancy unless supplemented [22, 23].

It is critical to keep track of the nutritional requirements of pregnant and lactating women to ensure that they can breastfeed successfully. Micronutrients and macronutrients are essential in reducing pregnancy risk and maintaining adequate milk production and duration of lactation. Lactating women should also receive nutrition education and be encouraged to regularly consume nutrient-rich foods, such as fruits, vegetables, calcium-rich dairy products, and protein-rich foods, such as meats, fish, and legumes [24].

The intention of the mother to breastfeed her child with

breast milk is the most critical factor in ensuring a successful breastfeeding experience for working mothers. Postnatal intention to breastfeed is a highly predictive factor for breastfeeding initiation, with a nearly 12-fold effect on the likelihood of initiation. It is partly due to a lack of prenatal education and preparation that women choose to stop breastfeeding after returning to their jobs [25]. To successfully maintain exclusive breastfeeding upon reentering the workforce, it is imperative to possess a comprehensive understanding of lactation, strategically plan for the transition, garner adequate support, and establish realistic expectations [15, 26].

Studies have found that workplace interventions, such as maternal leave, break time for breastfeeding during work hours, and break duration, all contribute to protecting, promoting, and supporting breastfeeding among working mothers. Women who pump and breastfeed during the workday have longer breastfeeding durations [5]. Explicit interventions and policies are necessary to assist working mothers. The employer must provide a clean, private, and secure space (not a toilet stall or adjacent to a bathroom) for breastfeeding. Organizational support requires written policies and breastfeeding education for mothers, managers, and co-workers, as this increases the likelihood of a supportive environment that promotes breastfeeding mothers' efficacy (*i.e.*, using lactation spaces and pumping breaks) and fosters a breastfeeding-friendly workplace environment in which women feel confident and free from stigma or discrimination [27, 28].

A recent study indicated that a supportive workplace can increase the rate of exclusive breastfeeding by threefold, regardless of the intentions of the mothers [29]. On the contrary, findings indicated that management prioritizes profitability and financial considerations when providing breastfeeding facilities and support programs at work, which should be the opposite. This may be why the regulation of breastfeeding policy is not comprehensive or explicitly stated in government policy [30, 31]. The workplace is a critical determinant in the successful continuation of breastfeeding for employed mothers. Implementing a comprehensive model centered on promoting lactation within the workplace and actively advocating and fostering a breastfeeding-friendly environment hold significant potential to influence and improve lactation behaviors among working mothers positively. This approach recognizes the workplace as a pivotal setting that can substantially contribute to the overall success and sustainability of breastfeeding practices for employed women. Basrowi *et al.* (30) proposed a model with seven significant aspects to consider, namely the regulatory framework of the company, available facilities, health promotion, and professional counseling.

### **3.2. Recommendation for Working Mothers to Ensure Breastfeeding Practice**

As mentioned previously, prenatal counseling with trained healthcare professionals and peer counselors is essential for mothers to get the best possible start with breastfeeding. WHO and the Indonesian Pediatrician Association recommend a minimum of seven breastfeeding



counseling contacts to ensure successful exclusive breastfeeding in the first six months. Experts concur that breastfeeding counseling should be provided in the prenatal period a minimum of two times, with early initiation of breastfeeding at birth, and a minimum of four times postnatally. The first two meetings are crucial for empowering mothers to breastfeed while respecting their circumstances and desires and psychologically preparing them to face potential challenges. Breastfeeding counseling with lactation counselors is preferred to provide mothers with the correct and sufficient information, particularly concerning feeding decisions when the mother must return to work [13-15].

The achievement of successful breastfeeding is intricately linked to the nutritional status of the mother. Nutritional status plays a pivotal role in influencing the efficiency of breast milk production. When a breastfeeding mother consumes nourishing foods, these nutrients undergo metabolism in the digestive system. Subsequently, the body absorbs these essential elements, directing them into the composition of breast milk, ultimately contributing to increased milk production. It is crucial to underscore that maternal nutritional well-being, both during pregnancy and in the postpartum period, holds significant implications for the growth and development of the child.

The optimal nutritional status of breastfeeding mothers is discernible through the absence of deficiency diseases, as a deficiency in essential nutrients during lactation can detrimentally impact breast milk production. Therefore, sustaining a well-rounded and nutritious diet is paramount for mothers during the breastfeeding phase, ensuring their own health and promoting the well-being and thriving development of their infants [32].

This dietary requirement may or may not be met by lactating women who adhere to the minimum nutrient requirements because it is strongly influenced by the nutrient density of the total diet. Experts concur that in addition to meeting the bare minimum nutritional requirements, adhering to a regular meal schedule and consuming a balanced diet on a single plate is essential. Certain lactating women may require special consideration to prevent nutritional issues for themselves or their infants. Consequently, nutrition counseling must be integral to prenatal care for all pregnant women to achieve a healthy nutritional status [24, 33].

Before returning to work, mothers who are breastfeeding must make several preparations. Families should unite, especially with the help of the father. A working mother can anticipate logistical issues and develop a practical pumping schedule when developing a breastfeeding plan. She can also determine how often she can breastfeed or pump breast milk, where she can breastfeed or pump breast milk, her break schedule, work hours, and any obstacles she may face while breastfeeding or pumping breast milk at work. Mothers should practice pumping and storing equipment and proper storage and cleaning techniques [25]. Maintaining direct breastfeeding with the baby on demand at home is crucial for

augmenting the quantity of produced milk and facilitating significant bonding moments between the mother and the infant. This practice ensures that the nutritional needs of the infant are met while reinforcing a strong emotional connection between the mother and the infant [9, 10, 34].

Experts opined that peer support groups/individuals may help promote lactation behavior due to the shared information and experiences. These group environments that normalize breastfeeding can increase the duration by providing ongoing support and assistance during a woman's "pivotal points" in her infant feeding journey [29]. The experiences of women with group-based or individual peer support that normalized breastfeeding and provided flexibility increased their sense of autonomy and control. Recent approaches suggest that feeding decisions and journeys can be examined throughout the journeys and that breastfeeding promotion should be mother-centered to provide practical breastfeeding support [35]. This may be the opportunity for a peer support group or individual to become a viable support system besides a partner and family.

### **3.3. Recommendation for Workplace to Support Breastfeeding Practice**

Workplace support is essential for breastfeeding success among working mothers. The policy of the company regarding maternity leave of more than three months was ranked first among experts' recommendations. However, it is recommended explicitly that workplace regulations be implemented to allow breastfeeding employees to have their breastfed time every 3 hours, as well as the option of working part-time or returning home earlier for employees with children under 6 months. Dedicated lactation rooms with additional amenities, such as cold storage, chairs, a water sink, and a breast milk pumping station, are also recommended by experts. The guidelines also recommended the inclusion of these items [27, 30].

The experts in this discussion also mentioned health education or promotion through the company physician as a critical human resource for the breastfeeding program of the lactation promotion model. Regarding health care services, including breastfeeding programs, the company physician should be a change agent and an expert at bridging the gap between employer and employee [27, 36]. Advocacy to employers and all the stakeholders within the workplace, including managers and supervisors, in facilitating breastfeeding program support was also critical to achieving a successful breastfeeding practice among workers [37, 38]. The lactation promotion model recommends various educational methods, notably social media, private counseling, interactive lectures, and group discussions. Additionally, the experts agreed that there should always be a lactation counselor on call and that education lectures should be held once a week and completed prior to returning to work. While providing a lactation counselor on-site would be costly for management, it may reduce employee absences to care for sick children, thereby lowering the cost of productivity.

Peer support groups are also beneficial for promoting breastfeeding behavior and may serve as a substitute for a full-time lactation counselor in the workplace. Studies have shown that a dedicated breastfeeding facility increased breastfeeding practice threefold, and a workplace breastfeeding support program increased breastfeeding practice nearly sixfold [30, 34]. Peer support in breastfeeding encompasses providing emotional assistance, positive reinforcement, and guidance in breastfeeding techniques, aiming to address challenges breastfeeding mothers encounter. This support is offered by individuals who are presently engaged in breastfeeding or have prior experience with breastfeeding. In this context, a peer refers to an individual who shares common characteristics with others, such as age, gender, occupation, and socioeconomic status. Prior research indicates that peer education and counseling contribute to higher self-efficacy scores among first-time mothers. The provision of counseling, support, and prenatal training plays a role in influencing breastfeeding self-efficacy. Significantly, breastfeeding counseling and the enhancement of breastfeeding self-efficacy scores significantly impact the sustained breastfeeding practice [39]. This creates the perception that implementing a lactation promotion model is necessary for working mothers to breastfeed successfully.

## CONCLUSION

Exclusive breastfeeding, coupled with optimal lactation practices, has demonstrated substantial benefits for both maternal and child health. However, the employment status of working mothers poses a significant challenge to sustaining breastfeeding practices, particularly among those engaged in full-time employment. Studies have highlighted a correlation between employment and the discontinuation of breastfeeding, as well as the adoption of suboptimal lactation practices.

To address these challenges, targeted interventions aimed at educating and empowering working mothers regarding health and lactation have shown promise in improving behaviors and attitudes towards breastfeeding. One proposed solution is the implementation of a lactation promotion model within the workplace. This model emphasizes the importance of prenatal education and planning for breastfeeding, as well as postnatal support upon returning to work. Upon re-entering the workforce, working mothers should arrange for conducive pumping schedules, receive adequate support, and have access to appropriate facilities for expressing breast milk. Additionally, companies play a vital role in facilitating these arrangements, thereby promoting a supportive environment for breastfeeding mothers. Experts emphasize the potential of the lactation promotion model to serve as a cornerstone for successful breastfeeding among working mothers. By implementing this model effectively, it is possible to foster a culture that prioritizes and supports breastfeeding, ultimately contributing to the health and well-being of both current and future generations. In essence, it represents a proactive step towards nurturing a healthier society.

## LIST OF ABBREVIATIONS

WHO	=	World Health Organization
UNICEF	=	United Nations Children's Fund
ANC	=	Antenatal care
IDA	=	Iron deficiency anemia
ID	=	Iron deficiency

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

## HUMAN AND ANIMAL RIGHTS

No animals/humans were used in this research.

## CONSENT FOR PUBLICATION

Not applicable.

## AVAILABILITY OF DATA AND MATERIALS

Not applicable.

## FUNDING

This study was funded by Danone Specialized Nutrition Indonesia.

## CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

## ACKNOWLEDGEMENTS

Declared none.

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