

---

**EFFECTIVENESS OF BREAST CRAWL ON POST-PART MOTHERS' SATISFACTION  
AND THE SUCCESS OF EARLY BREASTFEEDING INITIATION (IMD) AT  
KARANGPUCUNG PUBLIC HEALTH CENTER IN 2025**

**Wijiyati<sup>1</sup>, Peni Cahyati<sup>2</sup>, Qanita Wulandara<sup>3</sup>, Uly Artha Silalahi<sup>4</sup>, Bayu Irianti<sup>5</sup>**

<sup>1</sup>Department of Nursing, Bachelor of Applied Nursing and Professional Nursing Study Programs

<sup>2</sup> Department of Midwifery, Applied Midwifery Undergraduate Program

<sup>3</sup>Poltekkes Kemenkes Tasikmalaya

**Coresspondent Email:** [peni\\_poltekestsm@yahoo.com](mailto:peni_poltekestsm@yahoo.com), [wijiyati3110@gmail.com](mailto:wijiyati3110@gmail.com)

This is an open access article under the CCBY-NC-ND license



Received: January 14<sup>th</sup> 2026, Revised: June 01<sup>st</sup> 2026, Accepted: June 6<sup>th</sup> 2026

**ABSTRACT**

Early Initiation of Breastfeeding (IMD) is an important step to support successful breastfeeding and improve bonding between mother and baby. The breast crawl method is known to help babies carry out the IMD process naturally through their innate reflexes. In addition, the first breastfeeding experience also influences the level of satisfaction of postpartum mothers. However, the use of this method has not been fully implemented in all health facilities. This study aims to determine the success rate of IMD between babies given the breast crawl method intervention and babies who received standard care and the level of satisfaction of postpartum mothers after the breast crawl intervention, as well as the characteristics of postpartum mothers based on age, parity, education, and occupation. This study used a comparative design with a post-test only approach involving a total of 60 respondents, consisting of 30 mothers in the intervention group and 30 mothers in the control group. Univariate analysis was used to describe the characteristics of the respondents, while bivariate analysis used the Mann-Whitney test to see differences between the two groups. The results of the Mann-Whitney sign rank statistical test obtained a p-value (0.000) or  $p < 0.05$  on the success rate of IMD and the level of maternal satisfaction between the intervention and control groups. These results indicate that the breast crawl method is effective in increasing the success of early breastfeeding initiation (IMD) and increasing postpartum maternal satisfaction.

**Keywords:** *Breast crawl, Childbirth, Early initiation of breastfeeding, IMD, postpartum maternal satisfaction,*

## INTRODUCTION

Early Initiation of Breastfeeding (IMD) is a crucial intervention in reducing infant mortality and strengthening the bond between mother and baby from an early age. WHO and UNICEF recommend that IMD be initiated immediately after birth, allowing the baby to crawl to the mother's breast on its own, a process known as the breast crawl. This process not only provides physiological and psychological benefits for the baby but also positively impacts the mother's experience during the postpartum period.

The breast crawl method is a natural process where a newborn is placed skin-to-skin on the mother's chest and given the opportunity to crawl to the nipple and breastfeed spontaneously within the first hour after birth. A study by Wisecraft et al. explains that this behavioral sequence consists of the cry, relaxation, activity, crawl, and breastfeeding phases, as the baby utilizes its biological reflexes to initiate breastfeeding (Schafer & Genna, 2015).

Research shows that this method can improve the success of early breastfeeding (IMD), accelerate mother-infant bonding, and trigger the production of the hormone oxytocin, which supports uterine involution and accelerates milk letdown. However, the implementation of breast crawl in various health facilities remains suboptimal due to a lack of knowledge from health workers and a lack of maternal readiness to accept this method.

On the other hand, postpartum maternal satisfaction is an important indicator of obstetric care. This satisfaction encompasses physical and emotional aspects, as well as experiences during labor and the postpartum period. Successful and comfortable implementation of early breastfeeding (IMD) through the breast crawl method can increase maternal positive feelings about the birth process, reduce anxiety, and boost breastfeeding confidence.

Postpartum mothers who experience a smooth and trauma-free first breastfeeding (minimal episiotomy pain, less bleeding) tend to experience higher postpartum satisfaction, increased breastfeeding confidence, and strengthened motivation for long-term

exclusive breastfeeding.

A quasi-experimental study in India with 60 mother-infant dyads showed significantly higher LATCH and IBFAT outcomes in the breast crawl group at 24 and 48 hours postpartum compared to the control group. Most babies (83.3%) managed to crawl and breastfeed within 60 minutes (Dhanawade et al., 2024).

A prospective cohort study in China (N=163) examined the long-term effect of breast crawl on early breastfeeding initiation. Infants who successfully crawled had earlier initiation of lactation, higher breastfeeding scores even up to 5 months postpartum, and longer breastfeeding duration (Pang et al., 2023).

The implementation of breast crawl and skin-to-skin contact (SSC) requires the support of hospital policies, training of medical personnel (midwives/nurses), and clinical protocols that ensure minimal interventions that disrupt the golden hour period of normal MB primers (Das & Varghese, 2023).

One important indicator of improving infant health is the success of exclusive breastfeeding practices. The WHO and the Indonesian Ministry of Health recommend exclusive breastfeeding for the first six months of a baby's life. However, exclusive breastfeeding coverage in Indonesia still falls short of national targets. Based on data from the Indonesian Demographic and Health Survey (IDHS), the national prevalence of exclusive breastfeeding in 2020 was only 66.06%, indicating a persistent gap between targets and actual outcomes (Jannah et al., 2023).

Central Java Province itself has shown an increasing trend in exclusive breastfeeding coverage in the last three years, namely from 72% (2019) to 76.3% (2020), and reaching 78.93% in 2021. However, this figure is still slightly below the 80% target set by the Ministry of Health (Awanis & Ariyanti, 2022). In Cilacap Regency, recent ecological research shows that exclusive breastfeeding coverage and early initiation of breastfeeding (IMD) significantly influence stunting rates in toddlers. The study found that exclusive breastfeeding and IMD were able to reduce the

risk of stunting with significance values of  $p = 0.028$  and  $p = 0.009$ , respectively (Tyas et al., 2024).

Another study conducted at the Tegarejo Community Health Center in Yogyakarta showed that of 69 mothers who gave birth, 73.9% practiced early breastfeeding (IMD) and only 58% succeeded in providing exclusive breastfeeding. Statistical analysis showed a significant relationship between the implementation of IMD and the success of exclusive breastfeeding ( $p = 0.003$ ), indicating that babies who received IMD were more likely to succeed in getting exclusive breastfeeding (Husen & Rohmah, 2025).

Based on preliminary studies at the Karangpucung I Community Health Center, it was found that the number of spontaneous deliveries in 2024 reached 146 cases (141 BPJS participants and 5 general participants). Meanwhile, as of July 2025, 84 cases were recorded (81 BPJS participants and 3 general participants). On average, the number of spontaneous deliveries at this community health center is approximately 12 cases per month. This figure indicates that Karangpucung I Community Health Center has a fairly stable monthly number of deliveries, making it an adequate research location. Furthermore, this community health center has also supported the implementation of Early Initiation of Breastfeeding (IMD) through the breast crawl method, allowing researchers to directly evaluate the method's effectiveness on postpartum maternal satisfaction and the success of IMD.

Although the breast crawl has been recommended by the WHO and is included in the Indonesian Ministry of Health's national program as part of early breastfeeding initiation, its implementation in the field remains suboptimal. Several studies in Indonesia report that many health workers still do not fully implement breast crawls according to procedure. This is due to a lack of knowledge and skills from health workers, limited time during the delivery process, and a tendency for health workers to immediately place the baby on the mother's breast without allowing the baby to crawl naturally. This situation indicates a gap between the policies that

have been socialized and their implementation in the field. Therefore, further research is needed to assess the effectiveness of breast crawl, both in terms of the success of early initiation of breastfeeding (IMD) and postpartum maternal satisfaction.

Given the importance of breast crawl in supporting the success of early initiation of breastfeeding (IMD) and postpartum maternal satisfaction, research that systematically assesses the effectiveness of this method is needed. By understanding the extent to which breast crawl influences these two important aspects, it is hoped that it can provide a basis for strengthening policies and practices for mother- and baby-friendly midwifery services.

## METHODS

This study was a quasi-experimental design with a two-group posttest-only control group design. The study involved two groups: an intervention group that received the breast crawl method and a control group that did not receive the breast crawl method.

The population in this study was 60 postpartum mothers who had just given birth in the Karangpucung 1 Community Health Center working area from September to October. By taking samples using purposive sampling where the inclusion criteria include: Mothers in the third stage of intrapartum with spontaneous vaginal delivery at term, Mothers with healthy babies and no congenital abnormalities with a normal APGAR Score of 7-10, 3. Mothers who gave birth at health centers, PMB, Pustu, etc., Mothers in healthy condition, Mothers who can read and write, which are divided into intervention groups, namely postpartum mothers who were given the breast crawl method immediately after delivery, totaling 30 respondents and control groups, namely postpartum mothers who were not given the breast crawl method (standard care), totaling 30 respondents.

Before the study began, respondents were provided with a consent form indicating their participation in the study and their willingness to participate. They also submitted a code of ethics, and the researchers agreed to adhere to ethical principles as outlined in the Belmont Report.

The intervention in this study was the implementation of the breast crawl technique. This technique involves placing the baby on the mother's body (skin-to-skin) and crawling to the mother's breast to initiate breastfeeding without assistance for at least one hour.

To

determine maternal satisfaction and the success of early breastfeeding initiation (IMD) after the implementation of the breast crawl method, respondents were asked to complete a post-test on maternal satisfaction and observations of LATCH use on the success of IMD. Postpartum maternal satisfaction encompasses a mother's subjective perception of the postpartum experience, including the quality of healthcare services, support from medical personnel, and early breastfeeding outcomes. The scale ranges from (1) 21–25: Very satisfied; (2) 16–20: Satisfied; (3) 11–15: Somewhat satisfied; (4) 10: Dissatisfied. The success of early breastfeeding initiation (IMD) is achieved by placing the newborn on the mother's chest or abdomen approximately one minute after birth, in a prone position with skin-to-skin contact. This allows the baby to naturally find the mother's nipple and breastfeed on its own within a period of  $\leq 1$  hour, with the following measurement intervals: (1) Score 1-3: Poor (Unsuccessful); (2) Score 4-7: Moderate (Partially Successful); (3) Score 8-10: High (Fully Successful). Because the data were not normally distributed, the Mann-Whitney test was used to evaluate the difference or magnitude of effectiveness between the intervention and control groups.

## RESULTS AND DISCUSSION

### 1. Result

The following tables show the results of the study related to the level of satisfaction, success of early breastfeeding initiation, and effectiveness of breast crawl in the intervention and control groups, as well as hypothesis testing.

**Table 1.** Frequency Distribution of Respondents

Based on Maternal Age

Umur	N		%	
	Intervensi	Kontrol	Intervensi	Kontrol
<20	3	2	10,0	6,7
21-35	23	27	76,7	90,0
>35	4	1	13,3	3,3
Total	30		100,0	

Table 1 shows that in the intervention group, the majority of respondents were in the 21–35 age group, amounting to 23 respondents (76.7%). Meanwhile, in the control group, the majority of respondents were also in the 21–35 age group, amounting to 27 respondents (90.0%).

**Table 2.** Frequency Distribution of Respondents Based on Mother's Education Level

Education	N		%	
	Intervensi	Kontrol	Intervensi	Kontrol
Elementry	2	4	6,7	13,3
Junior HS	9	10	30,0	33,3
Senior HS	14	12	46,7	40,0
Vocational School	4	0	13,3	0
Diploma	0	1	0	3,0
Bachelor	1	3	3,3	10,0
<b>Amount</b>	<b>30</b>		<b>100,0</b>	

Based on Table 2, the majority of respondents in the intervention group had a high school education (14 respondents (46.7%)), while the control group also had a high school education (12 respondents (40%).

**Table 3.** Frequency Distribution of Respondents Based on Maternal Parity

Paritas	N		%	
	Intervensi	Kontrol	Intervensi	Kontrol
Primipara	10	16	33,3	53,3
Multipara	20	14	66,7	46,7
Grandemultipara	0	0	0	0
<b>Amount</b>	<b>30</b>		<b>100,0</b>	

Based on Table 3, it is known that the majority of respondents in the intervention group were multiparous mothers, totaling 20 (66.7%). Meanwhile, in the control group, the most common parity was primiparous, totaling 16 (53.3%).

**Table 4.** Frequency Distribution of Respondents Based on Mother's Occupation

Occupation	N		%	
	Intervensi	Kontrol	Intervensi	Kontrol
House wife	26	21	86,7	70,0
Labor	2	2	6,7	6,7
Salesman	1	2	3,3	6,7
Teacher	1	5	3,3	16,7
<b>Amount</b>	<b>30</b>		<b>100,0</b>	

Based on Table 4, it is known that the majority of respondents in both the intervention and control groups were housewives. The intervention group had 26 (86.7%) housewives, while the control group had 21 (70%).

**Table 5.** Frequency Distribution of Respondents Based on Postpartum Mother Satisfaction Level

Kepuasan	N		%	
	Intervensi	Kontrol	Intervensi	Kontrol
Sangat Puas	28	0	93,3	0
Puas	2	0	6,7	0
Cukup Puas	0	18	0	60,0
Tidak Puas	0	12	0	40
Sangat Puas	28	0	93,3	0
Total	30		100,0	

Based on Table 5, it is known that the majority of postpartum mothers in the intervention group were very satisfied with the

breastfeeding process after the breast crawl method, namely 28 women (93.3%). Meanwhile, in the control group, the majority of respondents were only quite satisfied (60%).

**Table 6.** Frequency Distribution of Respondents Regarding the Success Rate of Early Initiation of Breastfeeding Using the Breast Crawl Method

Successful Level	N		%	
	Intervensi	Kontrol	Intervensi	Kontrol
Unsuccessful	0	21	0	70,0
Successful	1	9	3,3	30,0
Full Success	29	0	96,7	0
Total	30		100,0	

Based on Table 6, it can be seen that the majority of respondents in the intervention group demonstrated complete success in early initiation of breastfeeding (IMD) after being given the breast crawl method (29 respondents (96.7%). Meanwhile, in the control group, the majority of respondents (21 respondents) were unsuccessful in early initiation of breastfeeding (IMD).

**Table 7.** Effectiveness of the Breast Crawl Method on Maternal Satisfaction Levels in the Intervention and Control Groups

Variable	Group	N	Mean	P Value
Mother's Satisfaction Level	Intervensi	30	45,50	0,000
	Kontrol	30	15,50	

Based on the Mann-Whitney test, a significance value of  $p = 0.000$  ( $p < 0.05$ ) was obtained, indicating a significant difference between the intervention and control groups in terms of postpartum maternal satisfaction levels. The intervention group had a higher average score (45.50) than the control group (15.50).

**Table 8.** Effectiveness of the Breast Crawl Method on Initiation of Breastfeeding Success Rates in the Intervention and Control Groups

Variable	Kelompok	N	Rata-rata	P Value
Tingkat Keberhasilan IMD	Intervensi	30	45,42	0,000
	Kontrol	30	15,58	

The Mann-Whitney test results for the IMD success variable showed a p-value of 0.000 ( $<0.05$ ), thus concluding that there was a significant difference between the intervention and control groups. The average value of the intervention group was 45.42, higher than the control group (15.58), indicating that the

implementation of the breast crawl method had an effect on increasing the success of IMD.

## 2. Discussion

### a. Respondent Characteristics

Based on the research results, the characteristics of respondents in the intervention and control groups indicate that the majority of respondents were of productive reproductive age (e.g., between 20 and 35 years), which is the ideal age range in terms of physical health and readiness for breastfeeding. This age range falls within the healthy reproductive age category, 20–35 years, when the mother's physical and psychological condition is optimal for childbirth and breastfeeding. Younger mothers tend to be more curious and receptive to new information, potentially supporting the successful implementation of breast crawl and early breastfeeding initiation (Buckman et al., 2020; Mellynda et al., 2024).

The majority of respondents had a high school education, both in the intervention (46.7%) and control (40%) groups. Education level is related to mothers' ability to understand information provided by health workers. The higher a person's education, the better their understanding of the benefits of breast crawl and early breastfeeding (IMD) (Kurnia, 2019; Lilik & Budiono, 2021).

Most respondents worked as housewives, allowing them more time to interact directly with their babies after delivery. A high proportion of housewives can support the effectiveness of breast crawl because mothers have more flexibility in accompanying their babies and optimally implementing early breastfeeding initiation (IMD). This condition supports the success of IMD because mothers can focus more on skin-to-skin contact and early breastfeeding. Employment can be a factor in psychosocial burden, and job characteristics have been linked to various maternal outcomes in other studies (Setyaningsih et al., 2025).

Parity (number of births) is also a key factor. In demographic and behavioral studies of breastfeeding, parity has been found to significantly influence breastfeeding initiation and continuation. Based on parity, the parity

distribution shows a mix of primiparous and multiparous mothers, which may reflect differing experiences: multiparous mothers may find it easier to initiate early breastfeeding due to previous experience, while primiparous mothers may benefit greatly from breast crawl interventions that facilitate natural and optimal breastfeeding initiation (Hasnah & Ramadhani, 2024; Vargas-pérez et al., 2025).

## 2. Effectiveness of Breast Crawl on Postpartum Mother Satisfaction

The results showed that almost all postpartum mothers in the intervention group were very satisfied with the breastfeeding process after being given the breast crawl method (93.3%), while in the control group, the majority were only moderately satisfied (60%) and dissatisfied (40%). The Mann-Whitney test showed  $p = 0.000$  ( $p < 0.05$ ), indicating a significant difference between the intervention and control groups.

The release of the hormone oxytocin and feelings of relaxation, skin-to-skin contact immediately after birth, and nipple/areola stimulation when the baby begins to crawl trigger the release of oxytocin in the mother. Oxytocin not only functions to enhance emotional bonding but also creates feelings of calm and comfort, contributing to a positive first breastfeeding experience (Olla & Jumetan, 2023).

Successful first breastfeeding (self-attachment) enhances a mother's sense of competence. When a baby finds the nipple and attaches on their own, the mother feels a sense of mastery. This experience strengthens the mother's confidence in breastfeeding, thereby increasing her level of satisfaction (Das & Varghese, 2023).

By minimizing interventions that disrupt the natural process, breast crawl emphasizes giving the baby time and space to use their natural reflexes. This practice reduces excessive intervention (e.g., forced attachment or separation of mother and baby), making the birth and early breastfeeding experience feel more "natural" and less traumatic, factors closely linked to satisfaction.

These results suggest that breast crawling provides a more enjoyable first breastfeeding experience, increases the mother's

physical and emotional comfort, and fosters a sense of pride and satisfaction after seeing the baby successfully latch on. This occurs because during breast crawling, skin-to-skin contact between mother and baby triggers the release of the hormone oxytocin, which plays a role in creating a sense of relaxation and fostering emotional bonding between mother and baby (Schafer & Genna, 2022).

Postpartum maternal satisfaction is also related to the success of healthcare providers in assisting with the breast crawl process. Appropriate support can increase a mother's sense of security, comfort, and confidence in continuing exclusive breastfeeding (Pang et al., 2023).

## 3. Effectiveness of Breast Crawl on Early Initiation of Breastfeeding (IMD) Success

The results of this study showed that breast crawl significantly increased the success of Early Initiation of Breastfeeding (IMD). In the intervention group, 29 of 30 infants (96.7%) achieved full success in IMD (adequate latch and breastfeeding), while the majority in the control group were unsuccessful (70% unsuccessful; 30% partially successful). The Mann-Whitney test showed a significant difference ( $p = 0.000$ ), confirming the study's hypothesis that the breast crawl method has a positive effect on the success of IMD.

This finding aligns with numerous previous studies showing that when infants are given the opportunity to breast crawl (skin-to-skin contact immediately after birth, allowed to seek the breast spontaneously), breastfeeding initiation time is reduced and the percentage of successful IMD significantly increases. Prospective cohort studies have reported that infants who breast crawled demonstrated earlier breastfeeding initiation and higher breastfeeding scores than those in the non-crawl group. (Pang et al., 2023).

Neonatal reflexes and sensory orientation. Newborns have orientation reflexes triggered by smell, touch, and movement. Skin-to-skin contact immediately after birth facilitates olfactory (the scent of colostrum/areola), tactile, and visual stimulation, which helps the baby "discover" the breast and achieve spontaneous attachment. This process is at the

heart of the breast crawl phenomenon and contributes to better attachment (Pang et al., 2023). The role of hormones (oxytocin and prolactin), skin-to-skin contact, and nipple stimulation trigger the release of oxytocin (supporting emotional bonding and uterine contractions) and prolactin (supporting milk production) (Kurniawati, 2024).

Increased levels of these hormones also facilitate the suckling reflex and an effective first latch, thus increasing the likelihood of successful IMD. Numerous physiological and clinical studies support the link between SSC/breast crawl and beneficial maternal-infant hormonal responses (Pang et al., 2023).

Physiological stabilization of the baby. Skin-to-skin contact helps stabilize the neonatal's temperature, breathing, and blood sugar, resulting in a more stable physiological state that helps the baby better prepare for breastfeeding. Improved LATCH/IBFAT scores in the breast crawl group indicate that the baby is technically more capable of latching on and breastfeeding (Dhanawade et al., 2024).

These results indicate that babies who practice breast crawling have earlier initiation of lactation and higher breastfeeding success rates than babies who don't. Furthermore, the hormone oxytocin released during skin-to-skin contact helps uterine contractions, accelerates involution, and prevents postpartum hemorrhage. Thus, breast crawling not only increases the success of early breastfeeding initiation but also has positive physiological effects on the mother (Varsha et al., 2017).

Based on observations using the LATCH sheet in this study, it was found that the most dominant component contributing to the failure of early breastfeeding initiation (IMD) in the control group was latch (the baby's initial attachment to the breast). Many babies in the control group demonstrated inadequate attachment, characterized by:

1. The baby's mouth did not open wide enough
2. The lips were not flanged enough
3. Only sucking on the nipple, not part of the areola
4. The baby appeared to have difficulty finding the right position for attachment

These conditions resulted in the failure of the IMD process or only achieving partial success. This finding aligns with other studies

that have stated that poor latch is one of the biggest causes of unsuccessful IMD, especially when babies are not given the opportunity to self-attach naturally.

Conversely, in the intervention group, which was given breast crawl, almost all babies achieved successful self-attachment. As babies crawl to the breast, sensory stimulation such as the smell of colostrum, the mother's skin temperature, and the innate sucking reflex help babies achieve a stable attachment. This is the reason why 96.7% of babies in the intervention group successfully carried out full IMD, much higher than the control group.

## CONCLUSION

The results of this study indicate that breast crawl is effective in increasing the success of early breastfeeding initiation (IMD) and postpartum maternal satisfaction. Therefore, this method needs to be continuously socialized and optimally implemented in healthcare facilities.

Based on these findings, it is recommended that community health centers (Puskesmas) and hospitals increase the implementation of the breast crawl method as part of the standard Early Breastfeeding Initiation (IMD) procedure for every normal delivery. Healthcare workers, particularly midwives, need to receive regular training on the stages of breast crawl implementation to ensure optimal implementation. With proper implementation, this method can accelerate uterine involution, prevent postpartum hemorrhage, and increase the success of early breastfeeding initiation (IMD) and postpartum maternal satisfaction. Future research is expected to be conducted with a larger sample size and involve various healthcare facilities for more representative results. Furthermore, it is recommended to include other variables such as the success rate of exclusive breastfeeding up to six months postpartum, or the influence of family support on breast crawl success.

## ACKNOWLEDGMENT

The authors would like to thank the Department of Midwifery and Nursing at the Tasikmalaya Ministry of Health Polytechnic for their permission and support in conducting this research. They also express their gratitude to all participating respondents and those who assisted in the successful completion of this research.

## REFERENCE

- Awanis, A., & Ariyanti, L. (2022). The Contribution of Early Breastfeeding Initiation (IMD) To Exclusive Breastfeeding and the Relationship With Nutritional Status of Child. *Indonesian Journal of Global Health Research*, 4(3), 543. <http://jurnal.globalhealthsciencegroup.com/index.php/IJGHR548>.<https://doi.org/10.37287/ijghr.v4i3.1210>.
- Buckman, C., Diaz, A. L., Tumin, D., & Bear, K. (Wahyuni et al., 2023)
- Das, B., & Varghese, L. (2023). Effectiveness of Breast crawl on Initiation of Breastfeeding among Newborn and Mother's Self Satisfaction in a Tertiary Care Hospital, Kochi. *African Journal of Health, Nursing and Midwifery*, 6(1), 1–10. <https://doi.org/10.52589/ajhnm-xobxh2cp>
- Dhanawade, S. S., Chouksey, R., & Bhole, G. (2024). The Impact of Breast crawl on the Effectiveness of Breastfeeding in the First 48 Hours: A Quasi-experimental Study. *Journal of Neonatology*, 38(1), 98–104. <https://doi.org/10.1177/09732179231221885>
- Hadisuyatmana, S., Has, E. M. M., Sebayang, S. K., Efendi, F., Astutik, E., Kuswanto, H., & Arizona, I. K. L. T. (2021). Women's Empowerment and Determinants of Early Initiation of Breastfeeding: A Scoping Review. *Journal of Pediatric Nursing*, 56, e77–e92. <https://doi.org/10.1016/j.pedn.2020.08.004>
- Hasnah, F., & Ramadhani, F. D. (2024). Analisis Kebijakan Inisiasi Menyusui Dini (IMD) dan ASI Eksklusif di Indonesia. *Jik Jurnal Ilmu Kesehatan*, 8(1), 1. <https://doi.org/10.33757/jik.v8i1.746>
- Husen, N., & Rohmah, F. (2025). Hubungan Inisiasi Menyusu Dini (IMD) Dengan Keberhasilan Pemberian Asi Eksklusif Pada Bayi Di Wilayah Kerja Puskesmas Tegalrejo. *Journal Sains Farmasi Dan Kesehatan*, 2(3), 240–244.
- Jannah, A. W., Rindu, & Wulandari, R. (2023). Hubungan Pengetahuan, Dukungan Keluarga, Status Gizi dan Inisiasi Menyusu Dini (IMD) Dengan Keberhasilan ASI Eksklusif Di Wilayah Kerja UPTD Puskesmas Bogor Tengah. *Riset Ilmiah*, 2(4), 1149–1162.
- Jyotsana. (2024). A Study to Assess the Effectiveness of Breast crawl Technique on Episiotomy Suturing Pain among Primi Mothers at Tertiary Care Hospital at Bangalore , India. *Online Journal of Gynecology, Obstetrics and Maternity Care*, 6(1), 1–7.
- Kurnia. (2019). Tentang Inisiasi Menyusu Dini Characteristics and Level of Knowledge of Postpartum Mother about Early Initiation of Ghidza: *Jurnal Gizi Dan Kesehatan*, 3(1), 33–36
- Kurniawati, R. (2024). FASILITASI INISIASI MENYUSUI DINI PADA BAYI BARU LAHIR UNTUK Mendukung Keberhasilan Menyusui Efektif. *Jurnal Ilmiah Keperawatan Dan ....* <https://jurnal.akperalkautsar.ac.id/index.php/JIKKA/article/view/139>
- Lilik, N. I. S., & Budiono, I. (2021). Mutu Pelayanan Kesehatan Setelah Persalinan Yang Berhubungan Dengan Kepuasan Pelayanan Ibu Nifas. *Indonesian Journal of Public Health and Nutrition*, 1(1), 101–113. <http://journal.unnes.ac.id/sju/index.php/IJPHN>
- Mellynda, I. G. A. T., Purnamayanti, N. M. D., & Utarini, G. A. E. (2024). Gambaran Pengetahuan, Sikap Dan Dukungan Tenaga Kesehatan Dalam Pelaksanaan Inisiasi Menyusu Dini Pada Ibu Bersalin. *Archive of Community Health*, 11(1), 200. <https://doi.org/10.24843/ach.2024.v11.i01.p16>
- Olla, S. I., & Jumentan, M. A. (2023). Penyuluhan Inisiasi Menyusui Dini Dan Asi Eksklusif Pada Ibu Hamil Dan Ibu Menyusui. *Jurnal Kreativitas Pengabdian ....* <https://www.ejurnalmalahayati.ac.id/index.php/kreativitas/article/view/12603>.
- Pang, Y., Wang, X., Li, H., & Tu, S. (2023). Effect of neonatal breast crawl on breastfeeding: a prospective cohort study. *Frontiers in Pediatrics*, 11(June 2023), 1–9. <https://doi.org/10.3389/fped.2023.1186585>
- Rana, P., & Swain, D. (2022). Understanding the effective breast crawl on maternal and newborn benefits and its feasibility. October. <https://doi.org/10.1729/Journal.34550>.
- Rawat, G., & Balusamy, P. (2022). Effectiveness of breast crawl method on selected new born and maternal outcomes. *International Journal of Health Sciences*, 6(S1), 1721–1729. <https://doi.org/10.53730/ijhs.v6ns1.4930>
- Sarita, S., Syahrianti, S., & P, N. (2020). Effectiveness of Breast crawl By Midwives To Increase Breast Milk Production Among Postpartum Mothers. *Public Health of Indonesia*, 6(3), 94–98. <https://doi.org/10.36685/phi.v6i3.335>
- Sarma, M., & Syed, R. (2023). A Study to Assess the Effectiveness of Breast crawl Technique on Initiation of Breastfeeding among Newborns at Selected Hospitals of Kamrup District, Assam. *International Journal of Science and Research (IJSR)*, 12(4), 678–684. <https://doi.org/10.21275/sr23410131955>
- Schafer, R., & Genna, C. W. (2015). Physiologic Breastfeeding: A Contemporary Approach to

- Breastfeeding Initiation. *Journal of Midwifery and Women's Health*, 60(5), 546–553. <https://doi.org/10.1111/jmwh.12319>
- Setyaningsih, D., Mindarsih, E., Wijayanti, H. N., Novika, A. G., Susanti, S., Yogyakarta, U. R., & Gizi, S. (2025). Faktor karakteristik demografi ibu terhadap status gizi ibu pada masa kehamilan. *Klabat Journal Of Nursing*, 7(1), 17–23.
- Tyas, L. W. I., Ningrum, D. N. A., & Kukilowati, N. (2024). Pemetaan dan Determinan Stunting pada Balita di Kabupaten Cilacap Tahun 2021. *HIGEIA (Journal of Public Health Research and Development)*, 7(4), 474–485. <https://doi.org/10.15294/higeia.v7i4.67761>
- Vargas-pérez, S., Hernández-martínez, C., Canals-sans, J., & Arija, V. (2025). Factors influencing breastfeeding initiation , duration , and early cessation : a focus on maternal and infant characteristics. *International Breastfeeding Journal*, 5.
- Varsha, T., Ashish, P., & Mamta, V. (2017). A recent advance in first hour feeding – breast crawl. *Pediatric Review: International Journal of Pediatric Research*, 4(8), 537–543. <https://doi.org/10.17511/ijpr.2017.i08.07>
- Wahyuni, T., Syswianti, D., & Perceka, A. L. (2023). JURNAL MEDIKA CENDIKIA THE EFFECT OF USING VIDEO MEDIA ON STUDENT SKILLS IN PREGNANCY EXAMINATION PRACTICUM. *JURNAL MEDIKA CENDIKIA*, 10.