


## Screening Instruments to Detect the Risk of Early Weaning in Infants: A Literature Review

Defa Oktafiana<sup>1</sup>, Hanifatur Rosyidah<sup>2</sup>, Noveri Aisyaroh<sup>3</sup>

<sup>1,2,3</sup>Universitas Islam Sultan Agung

Article Info	ABSTRACT
<b>Keywords:</b> Baby, Screening, Early Weaning.	There was a decrease in the percentage of exclusive breastfeeding in 2019 at 67.74%, a decrease from 68.74% in the previous year, showing a statistical decrease of 1.0%. In an effort to increase exclusive breastfeeding and prevent premature weaning, it is important to have measuring tools or instruments that can identify women at risk based on planned behavior theory. This Literature Review aims to find out the instruments that can be used to detect the risk of early weaning in babies. The method used is a systematic literature review by conducting a search through several databases, namely PubMed and Google Scholar. The search period is limited to the last 10 years, namely between 2013 to 2023 and 10 articles were obtained in this study. The BSES-SF instrument was used to measure confidence in breastfeeding. BAPT is used to predict the early cessation of breastfeeding by considering various factors, while BBAT provides an assessment of efficient breastfeeding techniques. Finally, the LATCH Score helps in evaluating breastfeeding practices and can predict the risk of stopping breastfeeding early. All of these instruments have an important role in supporting successful breastfeeding practices, both in research and in clinical practice.
This is an open access article under the <a href="https://creativecommons.org/licenses/by-nc/4.0/">CC BY-NC</a> license 	<b>Corresponding Author:</b> Defa Oktafiana Universitas Islam Sultan Agung Jawa Tengah <a href="mailto:defaoktafiana@std.unissula.ac.id">defaoktafiana@std.unissula.ac.id</a>

### INTRODUCTION

Breastfeeding is the best choice for babies during their growth and developmental stages. Initiating breastfeeding early, even within the first hour after birth, helps protect infants from the risk of infections and reduces neonatal mortality rates (Riko Sandra Putra et al., 2022). Early initiation of breastfeeding also increases the likelihood of successfully continuing exclusive breastfeeding. Providing exclusive breastfeeding for six months brings numerous benefits for both the baby and the mother, including protection against gastrointestinal infections and malnutrition. These benefits apply not only in developing countries but also in developed nations (UNICEF, 2013).

According to UNICEF (2013), the optimal standard for infant and child feeding includes initiating breastfeeding within one hour of birth, providing exclusive breastfeeding from birth to six months of age, introducing appropriate complementary feeding at six months based on the child's nutritional needs, and continuing breastfeeding up to 24 months or beyond.

In 2019, the percentage of mothers providing exclusive breastfeeding in Indonesia was 67.74%, showing a decrease from 68.74% in the previous year an overall decline of 1.0%. Despite this, Indonesia has yet to meet the national target for exclusive breastfeeding, which is set at 80%. In 2021, the target achievement was 45%, while the national coverage of exclusive breastfeeding for infants under six months reached 69.7%, with 1,287,130 infants receiving exclusive breastfeeding. This indicates that in 2021, the target was achieved, with West Nusa Tenggara province reporting the highest prevalence of exclusive breastfeeding at 86.7%. However, three provinces Papua (11.9%), West Sulawesi (27.8%), and West Papua (21.4%) failed to meet the target (Ministry of Health, Republic of Indonesia, 2022). One factor contributing to the failure of exclusive breastfeeding is early weaning. According to the Ministry of Health (2017), approximately 76% of infants in Indonesia were weaned between the ages of 0–6 months.

Noes (2002), as cited in Sa'adah & Sulistyoningtyas (2020), stated that one of the factors influencing early weaning is the mother's physical condition. A healthy maternal condition is crucial for successful breastfeeding. The mother's nutritional status before and during pregnancy significantly affects the quality of breast milk provided to the baby. Mothers who suffer from undernutrition, nutrient deficiencies, or micronutrient shortages are unable to supply the essential elements needed by the newborn through breastfeeding. This phenomenon has been observed in both developed countries like Singapore and developing countries like Vietnam and Nairobi. In addition, family support plays a significant role in the success of breastfeeding practices. The involvement of the father is considered one of the key factors in supporting breastfeeding, with both parents acknowledging the importance of the "triadic relationship" involving the mother, baby, and father (Sa'adah & Sulistyoningtyas, 2020).

To improve exclusive breastfeeding rates and prevent early weaning, it is important to have a tool or instrument capable of identifying women at risk based on the Theory of Planned Behavior. This becomes a responsibility for healthcare workers to determine appropriate interventions or care plans based on the information gathered. The aim is to help increase the rate of exclusive breastfeeding and anticipate the potential for early weaning. Therefore, this study aims to identify women at risk of early weaning.

## RESEARCH METHODS

This study is a systematic literature review. The method involves determining the topic to be reviewed, searching for sources, selecting relevant sources, categorizing and analyzing them, and summarizing the findings. The researcher conducted searches through several databases, namely PubMed and Google Scholar.

The search for research studies was carried out using the keywords "breastfeeding assessment tool", "breastfeeding discontinuation", and "early weaning breastfeeding", combined using the Boolean operators "OR" and "AND". The search was limited to studies published within the last ten years, specifically between 2013 and 2023, and restricted to publications written in English.

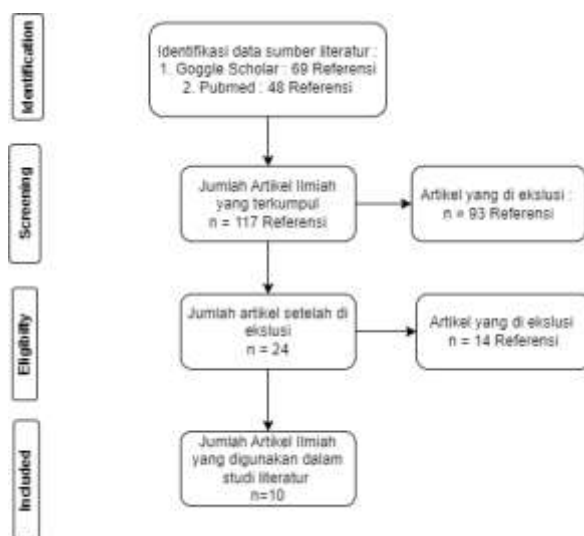


Figure 1. PRISMA Diagram

The next step involved screening by reviewing the titles, abstracts, research findings, and the methods used. Articles were sorted based on predefined inclusion and exclusion criteria. The inclusion criteria in this study were: (1) Research conducted in both developed and developing countries, (2) Studies on mothers' success in breastfeeding, (3) Psychosocial variables such as mental readiness, (4) Mothers' perceptions and willingness, (5) Mothers' knowledge, (6) Family and social support, (7) Subjects including third-trimester pregnant women and breastfeeding mothers with babies aged over six months. The exclusion criteria included: books, book chapters, published reports, journal reviews, and studies involving mothers with chronic illnesses, those taking medications that inhibit breast milk production, or with low birth weight infants (LBW). From the database searches, a total of 10 journals met the expected criteria. These journals will be analyzed further in this systematic literature review.

## RESULT AND DISCUSSION

### Result

No	Title	Author(s) and Year	Location	Findings
1	Self-efficacy in the practice of breastfeeding in adolescent puerperal women	(De Alencar & Sarni, 2023)	Brazil	This study used the Breastfeeding Self-Efficacy Scale–Short Form (BSES-SF) instrument, which consists of a structured Likert-scale self-report questionnaire containing 14 items divided into two domains: technical and intrapersonal thought. This instrument allows for the

				assessment of participants' self-efficacy in breastfeeding. The results showed that all adolescent mothers had moderate to high self-efficacy scores for breastfeeding, with no mothers exhibiting low self-efficacy. The study found that sociodemographic and obstetric variables did not differ significantly between the moderate and high self-efficacy groups.
2	Breastfeeding Behavior Is Not Associated With Health Literacy: Evidence From The German KUNO-Kids Birth Cohort Study	(Graus et al., 2021)	Germany	This study utilized the Iran HELIA questionnaire (Health Literacy Instrument for Adults). Hosseini et al. and Mirjalili et al. assessed health literacy (HL) more comprehensively, including access to, understanding, evaluation, and application of health-related information. Inconsistent assessment of breastfeeding practices also needs attention, particularly regarding the overall duration of breastfeeding and the feeding pattern, which refers to the proportion of breastfeeding compared to formula feeding. This study did not find a significant relationship between the mother's health literacy level and their breastfeeding behavior.
3	A Review of Quantitative Instruments for Understanding Breastfeeding Dynamics	(Torabinia et al., 2021)	US	This study discusses the Brazelton Neonatal Behavioral Assessment Scale (BNBAS). The BNBAS has been used since the 1970s to guide clinicians and parents in understanding the developmental needs of newborns. For example, the rooting and sucking reflexes are evaluated by having an

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				<p>examiner place a finger along the infant's cheek and mouth to trigger these reflexes.</p> <p>Although the BNBAS takes early breastfeeding reflexes into account, it does not explicitly analyze the complex process of breastfeeding or assess effective latching and feeding from the breast.</p> <p>This article explores the historical development of the instrument, the importance of advanced tools in understanding latch dynamics, and the need for further research to quantify latch mechanics.</p>
4	Cross Cultural Adaptation, Validity, and Reliability of the Farsi Breastfeeding Attrition Prediction Tools in Iranian Pregnant Women	(Mortazavi et al., 2015)	Iran	<p>This study aimed to translate and validate the Farsi version of the Breastfeeding Attrition Prediction Tool (BAPT) among pregnant women in Iran. BAPT is a tool used to predict the premature discontinuation of breastfeeding. The study found that the Farsi version of BAPT demonstrated good content validity, reliability, and overall validity, making it a useful tool for identifying women at high risk of discontinuing exclusive breastfeeding in Iran.</p>
5	The Attitudes of Polish Women towards Breastfeeding Based on the Iowa Infant Feeding Attitude Scale (IIFAS)	(Bień et al., 2021)	Poland	<p>This study aimed to adapt the IIFAS culturally and validate it for use in the Polish setting, assess attitudes toward breastfeeding among Polish postpartum women, and identify the determinants of these attitudes.</p> <p>The study involved 401 women in the early days postpartum, and the results indicated that the IIFAS demonstrated good reliability and discriminatory power. These</p>

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				findings provide insights into breastfeeding attitudes among Polish women and may contribute to the development of effective interventions to promote breastfeeding.
6	Turkish Adaptation of the Workplace Breastfeeding Support Scale: A Validity and Reliability Study	(KARAKAYA & KILIÇ, 2021)	Turkey	This study examined the Breastfeeding Support Scale in its Turkish version and evaluated its validity and reliability. The study involved 225 women working in the public sector who had either breastfed or were currently breastfeeding their infants aged 4 to 12 months. The psychometric properties of the scale were assessed using factor analysis and structural equation modeling. The results indicated that the Turkish version of the scale is a valid and reliable tool for measuring breastfeeding support in the workplace.
7	The development of a new breast feeding assessment tool and the relationship with breast feeding self-efficacy	(Ingram et al., 2015)	England	This study describes the development and validation of a breastfeeding assessment tool called the Bristol Breastfeeding Assessment Tool (BBAT). The tool aims to improve the targeting of optimal positioning and attachment advice for breastfeeding mothers. The study found that the BBAT demonstrated good internal reliability and was able to consistently score breastfeeding performance. In addition, the tool showed a strong correlation with breastfeeding self-efficacy, indicating that more efficient

				breastfeeding techniques are associated with increased confidence in breastfeeding one's baby.
8	LATCH Score at Discharge: A Predictor of Weight Gain and Exclusive Breastfeeding at 6 Weeks in Term Healthy Babies	(Shah et al., 2021)	India	This study evaluates the usefulness of the LATCH score, a breastfeeding assessment tool, in predicting exclusive breastfeeding (EBF) and weight gain in healthy term infants at 6 weeks postpartum. The results showed that a LATCH score >6 at discharge had the highest sensitivity (92.1%) and specificity (66.7%) for predicting EBF at 6 weeks. The study also identified a LATCH score cutoff of 5.5, which demonstrated the highest sensitivity (93.6%) with a false positive rate of 30.1%. A LATCH score >6 at discharge was significantly associated with higher rates of EBF and appropriate weight gain at 6 weeks.
9	The Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF): a validation study in Iranian Mothers	(Amini et al., 2019)	Iran	This study aimed to validate the Persian version of the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) among mothers in Iran. The BSES-SF is a widely used instrument to measure self-efficacy in breastfeeding. The Persian version of this scale was found to have good reliability and validity, with a Cronbach's alpha coefficient of 0.910. Confirmatory factor analysis results supported the unidimensionality of the scale. The BSES-SF also demonstrated divergent validity by showing a

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				significant negative correlation with the Edinburgh Postnatal Depression Scale scores.
10	Intervention Strategies for Successful Breast Feeding: Randomized Clinical Trial	(Dash, 2017)	India	<p>This study was conducted at a government maternity hospital in Pondicherry. All pregnant women experiencing nipple problems who came to deliver were considered as samples for this study. The reliability of the research instrument was tested using inter-rater reliability techniques and found to be reliable. The correlation was calculated using Cronbach's Alpha formula for internal consistency. The reliability coefficient obtained was <math>r = 0.9</math>, indicating high reliability.</p> <p>In each group of mothers, the respective technique was demonstrated (Group 1 – manual technique, Group 2 – application of rubber bands, and Group 3 – injection method), and they were instructed to repeat the technique 3–4 times daily for 5 minutes over 7 consecutive days. The effectiveness of the intervention was assessed during the postpartum period using the Christi Breastfeeding Assessment Scale to evaluate breastfeeding patterns.</p>

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## Breastfeeding Self-Efficacy Scale–Short-Form (BSES-SF) Instrument

Appendix: Breastfeeding Self-Efficacy Scale—Short Form

For each of the following statements, please choose the answer that best describes how confident you are with breastfeeding your new baby. Please mark your answer by circling the number that is closest to how you feel. There is no right or wrong answer.

1 = not at all confident  
 2 = not very confident  
 3 = sometimes confident  
 4 = confident  
 5 = very confident

1	I can always determine that my baby is getting enough milk	1	2	3	4	5
2	I can always successfully cope with breastfeeding like I have with other challenging tasks	1	2	3	4	5
3	I can always breastfeed my baby without using formula as a supplement	1	2	3	4	5
4	I can always ensure that my baby is properly latched on for the whole feeding	1	2	3	4	5
5	I can always manage the breastfeeding situation to my satisfaction	1	2	3	4	5
6	I can always manage to breastfeed even if my baby is crying	1	2	3	4	5
7	I can always keep wanting to breastfeed	1	2	3	4	5
8	I can always comfortably breastfeed with my family members present	1	2	3	4	5
9	I can always be satisfied with my breastfeeding experience	1	2	3	4	5
10	I can always deal with the fact that breastfeeding can be time consuming	1	2	3	4	5
11	I can always finish feeding my baby on one breast before switching to the other breast	1	2	3	4	5
12	I can always continue to breastfeed my baby for every feeding	1	2	3	4	5
13	I can always manage to keep up with my baby's breastfeeding demands	1	2	3	4	5
14	I can always tell when my baby is finished breastfeeding	1	2	3	4	5

Source: (Amini et al., 2019)

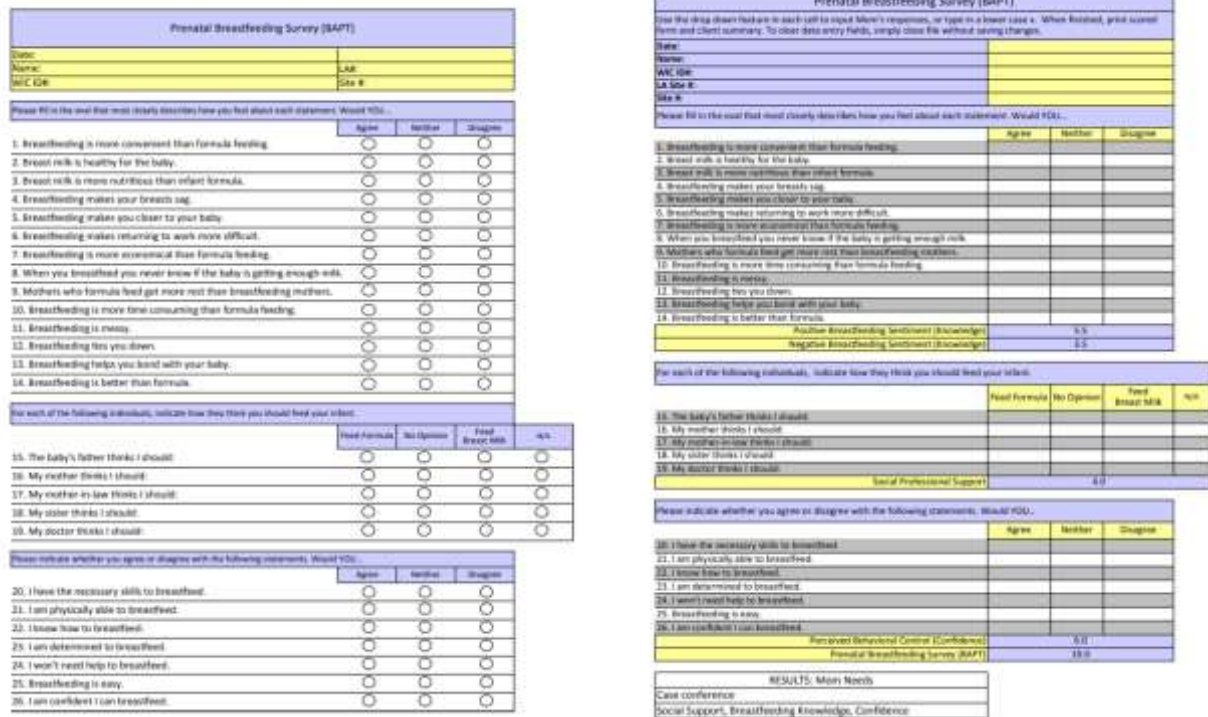
**Figure 2.** BSES-SF Instrument

The BSES-SF (Breastfeeding Self-Efficacy Scale - Short Form) instrument was developed by Dennis and Faux in 1999 to assess mothers' confidence in breastfeeding. The original scale consisted of 33 items and was a self-administered instrument, with each item beginning with the phrase "I can always", rated on a 5-point Likert scale ranging from 1 (not at all confident) to 5 (always confident). Thus, the total score ranges from 33 to 165, where higher scores reflect greater breastfeeding self-efficacy (De Alencar & Sarni, 2023).

In 2003, Dennis revised the BSES from 33 to 14 items, renaming it the BSES-Short Form (BSES-SF). The theoretical framework remained the same as the original BSES. A substantial body of evidence supports its reliability and validity, making it a widely used global measure of breastfeeding self-efficacy (Amini et al., 2019).

This instrument aims to identify mothers' confidence in breastfeeding and contributes to understanding their situational context, as well as to addressing social and structural barriers that may interfere with a woman's ability to breastfeed confidently and peacefully (Bahorski, J. S., 2021).

### Breastfeeding Attrition Prediction Tools (BAPT) Instrument



**Prenatal Breastfeeding Survey (BAPT)**

Use the three clear bubbles in each cell to signal Mom's responses, or type in a lower case "x". When finished, print scored form and client summary. To clear data every field, simply close file without saving changes.

Name: \_\_\_\_\_  
 AWC ID#: \_\_\_\_\_  
 Site #: \_\_\_\_\_

Please fill in the oval that most closely describes how you feel about each statement. Would you...  
 Agree    Neither    Disagree

- Breastfeeding is more convenient than formula feeding.
- Breast milk is healthy for the baby.
- Breast milk is more nutritious than infant formula.
- Breastfeeding makes your breasts sag.
- Breastfeeding makes you closer to your baby.
- Breastfeeding makes returning to work more difficult.
- Breastfeeding is more economical than formula feeding.
- When you breastfeed you never know if the baby is getting enough milk.
- Mothers who formula feed get more rest than breastfeeding mothers.
- Breastfeeding is more time consuming than formula feeding.
- Breastfeeding is messy.
- Breastfeeding tins you down.
- Breastfeeding helps you bond with your baby.
- Breastfeeding is better than formula.

For each of the following individuals, indicate how they think you should feed your infant.  
 Feed Formula    No Opinion    Feed Breast Milk    %

- The baby's father thinks I should.
- My mother thinks I should.
- My mother-in-law thinks I should.
- My sister thinks I should.
- My doctor thinks I should.

Please indicate whether you agree or disagree with the following statements. Would you...  
 Agree    Neither    Disagree

- I have the necessary skills to breastfeed.
- I am physically able to breastfeed.
- I know how to breastfeed.
- I am determined to breastfeed.
- I won't need help to breastfeed.
- Breastfeeding is easy.
- I am confident I can breastfeed.

**Positive Breastfeeding Sentiment (Knowledge)**    5.5  
**Negative Breastfeeding Sentiment (Knowledge)**    2.2

For each of the following individuals, indicate how they think you should feed your infant.  
 Feed Formula    No Opinion    Feed Breast Milk    %

- The baby's father thinks I should.
- My mother thinks I should.
- My mother-in-law thinks I should.
- My sister thinks I should.
- My doctor thinks I should.

**Social/Professional Support**    4.0

Please indicate whether you agree or disagree with the following statements. Would you...  
 Agree    Neither    Disagree

- I have the necessary skills to breastfeed.
- I am physically able to breastfeed.
- I know how to breastfeed.
- I am determined to breastfeed.
- I won't need help to breastfeed.
- Breastfeeding is easy.
- I am confident I can breastfeed.

**Perceived Behavioral Control (Confidence)**    6.0  
**Prenatal Breastfeeding Survey (BAPT)**    18.0

**RESULTS: Main Needs**

Case conference  
 Social Support, Breastfeeding Knowledge, Confidence

Source: (Date et al., n.d.)  
**Figure 3.** BAPT Instrument

BAPT (Breastfeeding Attrition Prediction Tool) is an instrument used to predict early cessation of breastfeeding. In the study by Mortazavi (2015), it is explained that the BAPT scale, developed by Janke, consists of 52 items divided into four subscales, including positive sentiment toward breastfeeding, negative sentiment toward breastfeeding, social and professional support, and perceived behavioral control.

The Positive Breastfeeding Sentiment (PBS) subscale consists of 14 items that reflect positive attitudes toward breastfeeding. A woman is rated on a six-point scale (ranging from “strongly disagree” = 1 to “strongly agree” = 6) regarding her agreement with a given statement. Then, she is rated on a six-point Likert scale (from “not important” = 1 to “very important” = 6) to indicate how important it is for her to use the feeding method with the specified quality. Finally, each item’s attitude score is multiplied by its corresponding importance rating, and the total is summed to yield the PBS score, where a higher score indicates a more positive attitude toward breastfeeding.

The Negative Breastfeeding Sentiment (NBS) subscale contains 15 items reflecting negative meanings. The structure and scoring are the same as the PBS subscale, with higher scores indicating a more negative attitude toward breastfeeding. The Social and Professional Support (SPS) subscale includes 13 categories of significant individuals. The woman is rated on a six-point Likert scale (from “definitely should not breastfeed” = 1 to “definitely should breastfeed” = 6) regarding how these individuals believe she should feed her baby. She is

then rated on another six-point Likert scale (from “not important” = 1 to “very important” = 6) to indicate how important their opinions are to her. The scores from these two scales are multiplied for each item and summed to produce the SPS score, with higher scores reflecting greater support for breastfeeding.

The Perceived Behavioral Control (PBC) subscale consists of 10 items. The woman indicates the extent of her agreement with these statements on a six-point Likert scale (from “strongly disagree” = 1 to “strongly agree” = 6). Higher scores imply a stronger sense of control over breastfeeding. The study found that BAPT has good content validity, reliability, and construct validity, making it a useful questionnaire for identifying women at high risk of discontinuing exclusive breastfeeding (Mortazavi et al., 2015).

This is in line with a study by Sa’adah & Sulistyoningtyas (2020), which showed that the Breastfeeding Attrition Prediction Tool (BAPT) can be used to measure the risk of early weaning among postpartum mothers at PKU Muhammadiyah Hospital Yogyakarta. It was found that 83.33% of postpartum mothers were not at risk of early weaning. Furthermore, 90.00% of them did not perform early weaning.

#### Breastfeeding Assessment Tool (BBAT) Instrument

	0 Poor	1 Moderate	2 Good	Score
<b>POSITIONING</b>  <b>Baby well supported; Tucked against mother's body; Lying on side /neck not twisted; Nose to nipple; Mother confident handling baby</b>	No or few elements achieved  <b>Needs to be talked through positioning</b>	Achieving some elements  <b>Some positioning advice still needed</b>	Achieving all elements  <b>No positioning advice needed</b>	
<b>ATTACHMENT</b>  <b>Positive rooting; Wide open mouth; Baby achieving quick latch with a good amount of breast tissue in mouth; Baby stays attached with a good latch throughout feed</b>	Baby unable to latch onto breast or achieves poor latch. No/few elements achieved  <b>Needs to be talked through attachment</b>	Achieving some elements  <b>Some advice on attachment needed</b>	Achieving all elements  <b>No advice on attachment needed</b>	
<b>SUCKING</b>  <b>Able to establish effective sucking pattern on both breasts (initial rapid sucks then slower sucks with pauses). Baby ends feed.</b>	No effective sucking; no sucking pattern	Some effective sucking; no satisfactory sucking pattern; on and off the breast	Effective sucking pattern achieved	
<b>SWALLOWING</b>  <b>Audible, regular soft swallowing- no clicking</b>	No swallowing heard; clicking noises	Occasional swallowing heard; some swallows noisy or clicking	Regular, audible, quiet swallowing	

Source: (Ingram et al., 2015)

**Figure 4.** BBAT Instrument

In the study by Ingram et al. (2015), it is explained that a Brief Breastfeeding Assessment Tool (BBAT) was developed and validated with a group of midwives. This tool provides more comprehensive guidance than other tools, serving as a reminder to those supporting breastfeeding mothers about the essential components of effective breastfeeding. Midwives were able to consistently score breastfeeding sessions and reported that the tool helped them advise mothers on improving positioning and latch, making breastfeeding less painful, especially for tongue-tied infants.

The components of the tool are relevant across a wide age range of infants and are sensitive to subtle changes that are crucial for improving breastfeeding after frenotomy. The tool is easy to use while still offering detailed feedback on positioning and attachment skills. Although the comfort reported by mothers during breastfeeding is important, less consistent results were observed when these aspects were included as part of the midwife-observed assessment items. Therefore, the study concluded that maternal comfort should be recorded separately as a score related to pain.

The BBAT demonstrated a strong correlation with breastfeeding self-efficacy, indicating that more efficient breastfeeding techniques are associated with greater confidence in breastfeeding. This suggests that mothers who master these techniques while their babies are still young are more likely to continue exclusive breastfeeding for a longer period, as it enhances their confidence (Ingram et al., 2015).

### LATCH Score Instrument

Shah et al. (2021) conducted a study on the LATCH Score instrument, which is used as a breastfeeding assessment tool to evaluate breastfeeding practices. Infants with low LATCH scores at discharge are at a higher risk of early breastfeeding discontinuation. The following are the components assessed in the LATCH Score instrument:

Component	Score		
	0	1	2
L - Latch	Too sleepy No latch achieved	Repeated attempts Hold nipple in mouth Stimulate sock	Grasps breast Tongue down Lips flanged Rhythmic sucking Spontaneous and frequent
A - Audible Swallowing	None	A few with stimulation	
T - Type of nipple	Inverted	Flat	Everted (after stimulation)
C - Comfort (breast/nipple)	Severe discomfort Engorged Cracked/bleeding	Reddened Mild/moderate discomfort	No discomfort Soft
H - Hold (positioning)	Full assist Staff holds infant at breast	Minimal assist Staff holds on and then mother takes over	No assist from staff Mother able to position/hold infant

Source: (Shah et al., 2021)

**Figure 5.** Latch Score

The Latch Score can predict mothers who are at risk of early breastfeeding discontinuation, thereby indicating the need for intervention to support continued breastfeeding. As demonstrated in the studies by Riordan et al. (2001) and Kumar et al. (2006), which included mothers who delivered both vaginally and via cesarean section, it was observed that women who continued breastfeeding at six weeks postpartum had higher LATCH scores compared to those who had stopped. Both studies were passive observational studies and did not provide additional support to mothers with low LATCH scores.

### BAS Instrument

	0	1	2	Score	Risk
Latch-on	No latch on achieved	Latch on after repeated attempts	Eagerly grasped breast to latch on	0-2	High risk
Length of time before latch-on and suckle	Over 10 min	4-6 min	0-3 min	3-6	Moderate risk
Suckling	Did not suckle	Suckled but needed encouragement	Suckle rhythmically with lips flanged	7-10	Low risk
Audible swallowing	None	Only if stimulated	Over 48 hours: frequent		
Mom's evaluation	Not pleased	Some what pleased	Pleased		

Source: (Dash, 2017)

**Figure 6.** Breastfeeding Assesment Scale (BAS)

The reliability of this instrument was tested using inter-rater reliability techniques, and it was found to be a reliable tool. Correlation was calculated using Cronbach's Alpha formula for internal consistency, and the resulting reliability coefficient was  $r = 0.9$ . This instrument assesses, first, the condition of the nipple (types of nipple problems). In each group of mothers, relevant care techniques were demonstrated, and they were instructed to repeat the technique 3–4 times a day for 5 minutes over a period of 7 consecutive days (Dash, 2017).

### CONCLUSION

The conclusion drawn from the instruments discussed is that each has a clear purpose in evaluating specific aspects of breastfeeding practices. The BSES-SF is used to measure breastfeeding self-efficacy. The BAPT is designed to predict early breastfeeding discontinuation by considering various factors, while the BBAT provides an assessment of breastfeeding technique efficiency. Finally, the LATCH Score aids in evaluating breastfeeding practices and can help predict the risk of early breastfeeding cessation. All of these instruments play a crucial role in supporting successful breastfeeding practices, both in research and clinical settings, by offering a deeper understanding of the needs and challenges faced by breastfeeding mothers and providing a foundation for appropriate interventions.

### REFERENCES

- Amini, P., Samani, R. O., Sepidarkish, M., Hashiani, A. A., & Hosseini, M. (2019). The Breastfeeding Self - Efficacy Scale - Short Form ( BSES - SF ): a validation study in Iranian mothers. *BMC Research Notes*, 1–6. <https://doi.org/10.1186/s13104-019-4656-7>
- Bahorski, J. S., et al. (2021). Self-efficacy, infant feeding practices, and infant weight gain: An integrative review. *Journal Of Child Health Care*, 131(2), 56–57. <https://doi.org/10.1007/s41184-021-0921-z>
- Bień, A., Kulesza-Brończyk, B., Przestrzelska, M., Iwanowicz-Palus, G., & Ćwiek, D. (2021). The attitudes of polish women towards breastfeeding based on the iowa infant feeding attitude scale (lifas). *Nutrients*, 13(12). <https://doi.org/10.3390/nu13124338>

- Dash, M. (2017). Intervention Strategies for Successful Breast Feeding: Randomized Clinical Trial. *Academic Journal of Pediatrics & Neonatology*, 3(1), 2–6. <https://doi.org/10.19080/ajpn.2017.02.555601>
- Date, T., Lincoln, M. T., Formula, F., Formula, F., Formula, F., Formula, F., & Formula, F. (n.d.). *Prenatal Breastfeeding Survey (BAPT)*. 802.
- De Alencar, A. M. V., & Sarni, R. O. S. (2023). Self-efficacy in the practice of breastfeeding in adolescent puerperal women. *Revista Da Associacao Medica Brasileira*, 69(2), 341–345. <https://doi.org/10.1590/1806-9282.20220810>
- Graus, T. M., Brandstetter, S., Seelbach-Göbel, B., Melter, M., Kabesch, M., Apfelbacher, C., Fill Malfertheiner, S., Ambrosch, A., Arndt, P., Baessler, A., Berneburg, M., Böse-O'Reilly, S., Brunner, R., Buchalla, W., Franke, A., Häusler, S., Heid, I., Herr, C., Högl, W., ... Wellmann, S. (2021). Breastfeeding behavior is not associated with health literacy: evidence from the German KUNO-Kids birth cohort study. *Archives of Gynecology and Obstetrics*, 304(5), 1161–1168. <https://doi.org/10.1007/s00404-021-06038-2>
- Ingram, J., Johnson, D., Copeland, M., Churchill, C., & Taylor, H. (2015). The development of a new breast feeding assessment tool and the relationship with breast feeding self-efficacy. *Midwifery*, 31(1), 132–137. <https://doi.org/10.1016/j.midw.2014.07.001>
- KARAKAYA, N., & KILIÇ, M. (2021). Turkish Adaptation of the Workplace Breastfeeding Support Scale: a Validity and Reliability Study. *Samsun Sağlık Bilimleri Dergisi*, 6(3), 721–736. <https://doi.org/10.471115/jshs.1029188>
- Kemkes RI. (2022). *Profil Kesehatan Indonesia*. <https://www.kemkes.go.id/id/profil-kesehatan-indonesia-2022>
- Kumar, S. P., Mooney, R., Wieser, L. J., & Havstad, S. (2006). The LATCH scoring system and prediction of breastfeeding duration. *Journal of Human Lactation*, 22(4), 391–397. <https://doi.org/10.1177/0890334406293161>
- Mortazavi, F., Mousavi, S. A., Chaman, R., Khosravi, A., & Janke, J. R. (2015). Cross cultural adaptation, validity, and reliability of the farsi breastfeeding attrition prediction tools in Iranian pregnant women. *Iranian Red Crescent Medical Journal*, 17(3), 1–9. <https://doi.org/10.5812/ircmj.26354>
- Riko Sandra Putra, Bela Purnama Dewi, & Ramdani. (2022). Faktor – Faktor Yang Mempengaruhi Keberhasilan Asi Eksklusif Pada Ibu Bekerja. *Jurnal Kesehatan Dan Pembangunan*, 12(24), 193–200. <https://doi.org/10.52047/jkp.v12i24.198>
- Riordan, J., Bibb, D., Miller, M., & Rawlins, T. (2001). Predicting Breastfeeding Duration Using the LATCH Breastfeeding Assessment Tool. *Journal of Human Lactation*, 17(1), 20–23. <https://doi.org/10.1177/089033440101700105>
- Sa'adah, D., & Sulistyoningtyas, S. (2020). Uji Instrumen Breastfeeding Attrition Prediction Tool (Bapt) Untuk Deteksi Penyapihan Dini Pada Ibu Nifas Di Rumah Sakit Pku Muhammadiyah Yogyakarta. *JKM (Jurnal Kesehatan Masyarakat) Cendekia Utama*, 7(2), 55. <https://doi.org/10.31596/jkm.v7i2.501>
- Shah, M. H., Roshan, R., Parikh, T., Sathe, S., Vaidya, U., & Pandit, A. (2021). LATCH Score at Discharge: A Predictor of Weight Gain and Exclusive Breastfeeding at 6 Weeks in Term

Healthy Babies. *Journal of Pediatric Gastroenterology and Nutrition*, 72(2), E48–E52.

<https://doi.org/10.1097/MPG.0000000000002927>

Torabinia, M., Rosenblatt, S. D., & Mosadegh, B. (2021). A Review of Quantitative Instruments for Understanding Breastfeeding Dynamics. *Global Challenges*, 5(10), 1–8.

<https://doi.org/10.1002/gch2.202100019>

UNICEF. (2013). *ASI adalah penyelamat hidup paling murah dan efektif di dunia.*

[https://www.unicef.org/indonesia/id/media\\_21270.html](https://www.unicef.org/indonesia/id/media_21270.html)