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## **Breastfeeding practices in post partum mothers with mental health problems : scoping review**

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### **Abstract**

**Background:** Early postpartum breastfeeding practices are accompanied by more frequent oxytocin release and lower anxiety, which can contribute to exclusive breastfeeding. **Objective:** To determine breastfeeding practices in postpartum mothers with mental health problems. **Method:** Scoping review design using the PEO framework. Databases include EBSCO, Pubmed, and Wiley. Critical appraisal using the JBI tool. **Results:** 21 articles were obtained after conducting the scoping review stage. The results showed that breastfeeding practices were significant to the mental health status of postpartum mothers and even since pregnancy. Mental health problems experienced by postpartum mothers related to stress, anxiety, and depression significantly affected the sustainability of early breastfeeding and exclusive breastfeeding. Factors related to breastfeeding practices include age, occupation, education, knowledge, attitude, breastfeeding intention, BMI, postpartum depression, stress, planned pregnancy, breastfeeding sentiment, social support, professional support, grandmother and father support, type of delivery, breastfeeding problems, early skin contact, health literacy, hotline services, socio-cultural norms, exposure to formula milk. **Conclusion:** Based on the findings, including Lactation Counselor Support; antenatal and postpartum interventions; gifts/incentives; counseling; education, and peer support. These efforts are more focused on promotive and preventive and are adjusted to the capabilities of health facilities, but should be carried out optimally to increase breastfeeding considering its many benefits.

**Keywords:** Breast milk; Practice; Postpartum Mother; Mental Health

### **Abstrak**

**Latar belakang:** Praktik menyusui pada awal pascapersalinan terbukti disertai dengan adanya pelepasan oksitosin yang lebih sering dan kondisi cemas lebih rendah, sehingga dapat berkontribusi dalam pemberian ASI eksklusif. **Tujuan:** Untuk mengetahui praktik pemberian ASI pada ibu nifas dengan masalah kesehatan mental. **Metode:** Desain *scoping review* dengan memakai *framework* PEO.

Database meliputi *EBSCO*, *Pubmed*, dan *Wiley*. Critical appraisal menggunakan *JBI tool* Hasil: 21 artikel diperoleh setelah melakukan tahap *scoping review*. Hasilnya menunjukkan bahwa praktik pemberian ASI signifikan dengan status kesehatan mental ibu nifas dan bahkan sejak kehamilan. Masalah kesehatan mental yang dialami ibu nifas terkait stress, cemas, dan depresi signifikan mempengaruhi keberlanjutan pemberian ASI dini dan ASI eksklusif. Faktor-faktor yang berhubungan dengan praktik menyusui meliputi umur, pekerjaan, Pendidikan, pengetahuan, sikap, niat menyusui, IMT, depresi postpartum, stress, kehamilan terencana, sentiment menyusui, dukungan sosial, dukungan professional, dukungan nenek dan ayah, jenis persalinan, masalah menyusui, kontak kulit dini, literasi kesehatan, layanan hotline, norma sosial budaya, paparan susu formula. **Simpulan:** Berdasarkan temuan diantaranya meliputi Dukungan Konselor Laktasi; intervensi antenatal dan pascasalin; hadiah/insentif; konseling; pendidikan dan dukungan sebaya. Upaya tersebut lebih berfokus pada promotif dan preventif serta disesuaikan dengan kemampuan fasilitas kesehatan, namun sebaiknya dapat dilakukan secara maksimal untuk meningkatkan pemberian ASI mengingat banyak manfaatnya.

**Kata kunci:** ASI; Praktik; Ibu Nifas; Kesehatan Mental

## INTRODUCTION

According to WHO, the European region including Central Asia is the second best country in terms of early initiation of breastfeeding, but the poorest country globally in terms of exclusive breastfeeding. Many countries do not have up-to-date data on breastfeeding indicators. Evidence suggests that legislation plays a very important role in facilitating breastfeeding trends, but the existence of legislation alone is not enough to guarantee improvement. Communication of breastfeeding behavior change also plays an important role (World Health Organization, 2020).

The target of the exclusive breastfeeding program in Indonesia is 45% in 2022, with a coverage of 61.5%. This means that it has exceeded the national target. The sustainability of exclusive breastfeeding is influenced by the Early Breastfeeding Initiation action carried out immediately after the baby is born for at least 30-60 minutes. In the same year, 86.5% of babies who were IMD had also exceeded the national target of 62%. The percentage of both coverage and targets between IMD and exclusive breastfeeding is still not the same. So it is hoped that the coverage of exclusive breastfeeding can exceed the IMD target (Kementerian Kesehatan Republik Indonesia, 2023).

There are several key evidence-based practices for health care providers to promote and support breastfeeding, including educating families about breastfeeding, initiating skin-to-skin contact and breastfeeding at birth, teaching or assessing effective positioning and attachment, promoting exclusive and continued breastfeeding, intervening to increase milk production, providing technical and emotional support for breastfeeding difficulties, and referring to breastfeeding resources (lactation consultants, community groups, peers, and mentors). However, there are various barriers to implementing these activities. And this reflects that the

level of breastfeeding is still low. Therefore, it is important to recognize the various factors that influence breastfeeding practices and systematically plan for improving practices (World Health Organization, 2020).

Barriers to exclusive breastfeeding according to research results are associated with premature birth and preparation of infant formula before birth. Research evidence also shows that the practice of exclusive breastfeeding is less than optimal (37%) and is associated with various factors in the study area of China. The prevalence of exclusive breastfeeding is positively associated with breastfeeding self-efficacy, maternal education level, and early breastfeeding initiation (Li et al., 2021).

Early postpartum breastfeeding practices are associated with more frequent oxytocin release and lower anxiety, which may contribute to exclusive breastfeeding (Nagahashi-Araki et al., 2022). Symptoms of maternal mental health problems (depression, anxiety, and stress) were significantly associated with breastfeeding attitudes and self-efficacy. However, there was no significant relationship between symptoms of mental health problems and exclusive breastfeeding. Maternal education level and infant age may play a role in maternal breastfeeding practices. To improve breastfeeding practices, interventions should use a multidimensional approach that focuses on improving maternal mental well-being and considering demographic characteristics (Jiang et al., 2022). According to research by Chen et al., (2022), it is known that exclusive breastfeeding for up to 42 days postpartum is associated with a reduced risk of postpartum *post-traumatic stress disorder* (PTSD). Although the potential for reverse causality cannot be ruled out, strategies to increase exclusive breastfeeding through education, counseling, and support may benefit mothers and their infants by reducing the risk of postpartum PTSD (Chen et al., 2022).

The purpose of this study was to determine the practice of breastfeeding in postpartum mothers with mental health problems. In this study, the author wanted to determine the prevalence of breastfeeding, breastfeeding practices, factors related to breastfeeding and postpartum mothers' mental health, and efforts to increase breastfeeding.

## METHOD

This study method uses a *literature review technique* in the form of a *scoping review*. This study attempts to provide in-depth and broad search results from available literature and to map *evidence* and differences in results between studies. The first stage of the scoping study includes identifying problems and research questions using the PEO framework ( *Population* " *Postpartum*, *Exposure: Mental health*, *Outcome: Breastfeeding practice* ). The scoping review question is "How is the behavior of breastfeeding in postpartum mothers with mental health problems?". The second stage is to identify relevant articles using *medical subject headings* (MeSH), *truncation*, *Boolean operators* (OR, AND, and NOT), and search keywords. The article search database in this *scoping review* uses, EBSCO, *Pubmed*, and *Wiley Online Library*. Inclusion criteria include original or primary articles, articles published between 2013 and 2023, articles from relevant sites, articles in Indonesian and/or English, research articles aimed at exploring mental

health risk factors for postpartum mothers, breastfeeding behavior, factors related to breastfeeding behavior, and efforts to improve breastfeeding behavior. The exclusion criteria in this *scoping review* are articles in the form of guidebooks, standard operating procedures, *review articles*, and articles that do not have open access.

The third stage is the selection of articles and reporting the results of the scoping review of articles from the search to the final selection is described using the PRISMA flow diagram (figure 1) (Pham *et al.*, 2014), (Munn *et al.*, 2018). The fourth stage is the assessment of the quality of the article (*critical appraisal*) using *The Joanna Briggs Institute* (JBI). The articles that have been reviewed will be categorized into article quality with Good results (grade A with a score), Sufficient (grade B), and Less (grade C). Determination of the quality value of the article uses the following details: high quality (A) score of 30-≥36, moderate quality (B) score of 24-29, low quality (C) score of 9-<24 (Lorenc *et al.*, 2014).

Table 2. Critical Appraisal by JBI tool

No.	Article Type	Article Quality/Grade		
		A	B	C
1	RCT	A5, A14, A16, A17, A20, A21	A4	-
2	<i>Cross-sectional</i>	-	A1, A10, A19	-
3	<i>Cohort</i>	A3, A7, A8, A9, A11, A12, A13	A2	-
4	<i>Quasi Experimental</i>	-	A18	-
5	<i>Qualitative</i>	A15	A6	-
	Jumlah	14	7	0

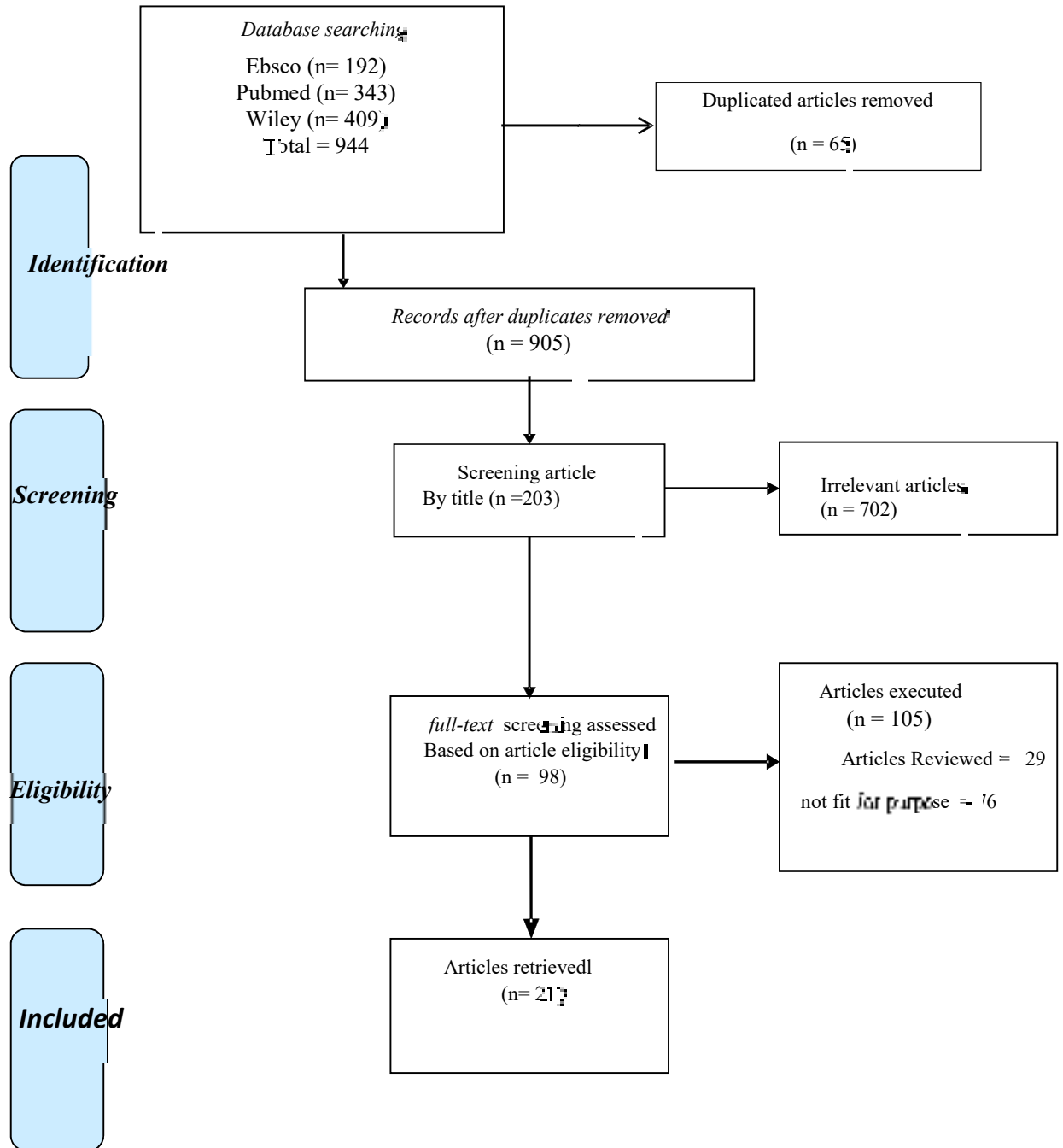


Figure 1. PRISMA flowchart

Table 1. Charting Data

No	Author/year	Title	Research purposes	Research methods	Research result
A1	(Chang et al., 2023)	<i>Associations between breastfeeding intention, breastfeeding practices, and post-natal depression during the COVID-19 pandemic: A multi-country cross-sectional study</i>	To report the association between breastfeeding intention, breastfeeding practices, and ( post-natal depression ) PND considering COVID-19-related factors among postpartum women in five countries.	The research design is <i>Cross-sectional</i> . Data collection using a cross-sectional internet-based survey was conducted with 3253 postpartum women from five countries: Brazil, South Korea, Taiwan, Thailand, and the United Kingdom from July to November 2021.	The results showed that women who intended to breastfeed during pregnancy were less likely to experience PND than women who did not intend to breastfeed. Women who did not intend to breastfeed but did breastfeed were more likely (AOR 1.75) to experience PND than women who intended to breastfeed and did breastfeed.
A2	(Isiguzo et al., 2022)	<i>Stress, social support, and racial differences: Dominant drivers of exclusive breastfeeding</i>	To examine the relationship between perceived stress and exclusive breastfeeding, and the moderating effects of perceived and received social support.	Cohort Design, data collection using a survey via mobile software to examine exclusive breastfeeding, perceived stress, and social support among 251 participants from <i>the Postpartum Mothers Mobile Study (PMOMS)</i> . Participants between 18 and 44 years of age were recruited during pregnancy and completed <i>real-time surveys</i> via <i>the Ecological Momentary Assessment (EMA)</i> up to 12 months postpartum.	Participants who reported higher perceived stress were less likely to breastfeed exclusively at 6 months. Perceived social support moderated the association between perceived stress and exclusive breastfeeding (odds ratio: 0.01, 95% confidence interval: 0.001–0.072).
A3	(Rahman et al., 2016)	<i>The impact of perinatal depression on exclusive breastfeeding: a cohort study</i>	To test the hypothesis that perinatal depression is associated with early cessation of exclusive breastfeeding and reduced milk supply in mothers in Pakistan.	Use prospective cohort design For learn a population-based sample of 132 depressed and 147 non-depressed women from the third trimester of pregnancy to 6 months after delivery.	Depression was associated with fewer days of exclusive breastfeeding (91.8 (SD = 47.1) vs. 108.7 days (SD = 54.3) (95% CI: 3.4 to 30.3 P=0.014). Women with persistent depression stopped exclusive breastfeeding earlier. There was no difference in the amount of milk produced by depressed and nondepressed mothers: 89.3 (SD = 38.1) vs. 83.9 (29.0) ml/kg infant weight/24 hours, P=0.57. Depressed mothers were significantly more likely to report insufficient milk supply: PIM scores were 34.4 (SD = 14.3) for depressed and 39.7 (SD = 10.4) for nondepressed women (P=0.004).

A 4	(Karp et al., 2013)	<i>Breastfeeding Initiation in the Context of a Home Intervention to Promote Better Birth Outcomes</i>	For examined the rate of breastfeeding initiation and factors associated with initiation in a sample of multiparous women with a history of previous preterm birth.	Research design <i>Randomized Controlled Trial (RCT)</i> . Data for a subsample (n = 130). The subsample included women who delivered infants at a gestational age greater than 35 weeks. All participants received standard prenatal care. Intervention participants (n = 73) also received home visits by certified nurse-midwives. Descriptive and logistic regression analyses were used, controlling for factors previously associated with breastfeeding.	Although 85% of women reported intention to breastfeed, only 65% reported initiating breastfeeding within 48 hours postpartum. Higher maternal education and lower pregravid body mass index were associated with higher initiation rates (odds ratio [OR] = 1.30, p = 0.010 and OR = 0.94, p = 0.007, respectively). Lower levels of depressive symptoms (OR = 0.95, p = 0.039) and higher levels of prenatal stress (OR = 1.11, p = 0.042) increased the odds of initiating breastfeeding.
	Southeastern United States				
A 5	(Balbierz et al., 2015)	<i>Maternal Depressive Symptoms and Parenting Practices 3-Months Postpartum</i>	To determine the relationship between postpartum depressive symptoms and parenting practices among a diverse group of mothers.	Data for this study came from two randomized controlled trials that tested behavioral educational interventions aimed at preventing postpartum depression among minority and majority women. The interventions prepared and educated mothers about the postpartum experience, strengthened social support, and improved self-management skills. The trials enrolled 1,080 postpartum women who delivered at a large, uptown tertiary hospital located in East Harlem, New York City.	Fifty-one percent of mothers were black or Latina, 33% had Medicaid, and 30% were foreign-born. Depressed mothers were more likely to have their babies sleep in the supine position.
	United States of America				
A 6	(AS et al., 2014)	<i>Women's Perceptions of Breastfeeding Barriers in the Early Postpartum Period: A Qualitative Analysis of Nests in Two Randomized Controlled Trials</i>	To examine women's perceptions of their early breastfeeding experiences and identify early postpartum barriers to successful breastfeeding.	Research design Qualitative. Semi-structured interviews at 6 months postpartum with a subsample of participants (n = 67) enrolled in two randomized controlled trials on breastfeeding promotion. Interview transcripts were coded using <i>grounded theory</i> and analyzed in MAXqda. A coding matrix was used to identify barriers to early postpartum breastfeeding and further examined about treatment group using mixed methods analysis.	The majority of participants reported experiencing at least one barrier to breastfeeding. Barriers to breastfeeding were more frequently reported in the early postpartum period than in the late postpartum period. The most common barrier during the early postpartum period was the perception of inadequate milk supply ('lactation') (n = 18), followed by latching problems, medical problems perceived as preventing breastfeeding, and medical staff and hospital practices. Participants frequently reported that the <i>International Board Certified-Lactation Consultant (IBCLC)</i> helps them anticipate, manage, and overcome these barriers.
	New York				

A 7	(Dagla et al., 2021)	<i>Women's Mental Health as a Factor Associated with Exclusive Breastfeeding and Breastfeeding Duration: Data from a Longitudinal Study in Greece</i>	To determine the relationship between exclusive breastfeeding and duration of breastfeeding, as well as maternal psychological well-being and the presence of perinatal mental health disorders, from pregnancy to the first year postpartum.	<i>Cohort</i> design. Sample of 1080 women. from pregnancy until year First post-childbirth, giving birth during the 5 years between January 2014 and January 2019 in Athens, Greece. The instruments were EPDS and PHQ-9. The analysis multivariate uses regression logistics.	Shorter duration of breastfeeding (with or without formula or other types of food/drink) appeared to be associated with (a) the occurrence of pathological mental health symptoms (P=0.029), (b) increased antenatal PHQ-9 scores (P=0.018), (c) increased EPDS scores at 6 weeks (P=0.004) and 12 months postpartum (P=0.031), (d) initiation of <i>postpartum psychotherapy</i> (P=0.040), and e) the need for more than 13 psychotherapy sessions (P=0.020).
A 8	(Radoš et al., 2018)	<i>Anxiety During Pregnancy and Postpartum: Course, Predictors and Comorbidity with Postpartum Depression</i>	To examine the prevalence and course of pregnancy anxiety, in the early and late postpartum periods; to establish the comorbidity of postpartum anxiety and PPD; and to examine predictors of state anxiety 6 weeks postpartum.	Cohort Design. A sample of women (N=272) who were below the cutoff score for clinical depression during pregnancy were assessed in the third trimester of pregnancy, then 2 days and 6 weeks postpartum. Questionnaires on anxiety, pregnancy-specific distress, stress, coping styles, social support, and depression were administered at each assessment. Obstetric data were collected from participants' medical records. Analysis correlation <i>Spearman rank</i> and analysis multivariate regression.	Estimates of high anxiety levels were 35% during pregnancy, 17% immediately postpartum, and 20% six weeks postpartum, indicating a decrease in anxiety levels after delivery. The comorbidity of anxiety and PPD was 75%. Trait anxiety and early postpartum anxiety were significant predictors of postpartum anxiety.
A 9	(Huang et al., 2022)	<i>Predictive factors of exclusive breastfeeding attrition at Week 6 postpartum among mothers of preterm infants based on the theory of planned behavior</i>	To determine various factors predictive contributing to termination breastfeeding in between Mother from baby premature at week to 6 post labor based on theory <i>planned behavior</i> , so that can give proof construction intervention breast-feed during take care stay	Study design <i>cohort</i> . 97 mothers who exclusively breastfed at 6 weeks postpartum in a tertiary specialty hospital in Shanghai from June 2021 to February 2022 were taken as the EBF group, and 179 mothers without EBF were assigned to the EBF attrition group. Through extensive literature review and expert consultation, we determined the possible factors affecting EBF reduction, analyzed the factors that showed statistical significance in our univariate analysis by applying binary logistic regression and	The results revealed that negative breastfeeding sentiment (odds ratio [OR] = 1.006; 95% confidence interval [CI], 1.000–1.011) resulted in a greater risk of stopping breastfeeding. However, positive breastfeeding sentiment (OR = 0.991; 95% CI, 0.983–0.999), social and professional support (OR = 0.993; 95% CI, 0.987–0.999), breastfeeding control (OR = 0.945; 95% CI, 0.896–0.996), knowledge (OR = 0.893; 95% CI, 0.799–0.998), and intention to EBF at Week 6 postpartum (OR = 0.522; 95% CI, 0.276–0.988) were protective factors from the reduction in exclusive breastfeeding.



				established a nomogram model to predict EBF reduction	
A 10	(Duan et al., 2022) China	<i>What are the determinants of low exclusive breastfeeding prevalence in China? A cross-sectional study</i>	To identify key modifiable factors associated with low EBF prevalence in China.	A cross-sectional study was conducted in 12 provinces/municipalities across China in 2017–2018. We used <i>multistage stratified cluster sampling</i> and collected data through face-to-face interviews with mothers using an electronic questionnaire. A total of 5287 mother-infant pairs aged <6 months were investigated.	The prevalence of EBF was 29.2% (1544/5287). Exclusive breastfeeding was found in mothers with correct knowledge about colostrum and the highest perception score for the benefits of breastfeeding; infants who received their first breastmilk within 24 hours of birth; young infants whose primary caregiver was a grandmother; and mothers without receiving advice on formula feeding through health facilities, the media, or the internet or without experience of formula feeding in public places. However, mothers who were reluctant to breastfeed more frequently during the first month postpartum were less likely to practice EBF.
A 11	(Page et al., 2022) English	<i>Testing the buffering hypothesis: Breastfeeding problems, cessation, and social support in the UK</i>	For testing the hypothesis that social support protects mothers from the negative impact of breastfeeding problems on duration.	Cohort Design. Using Cox models on a sample of 565 mothers in the UK who completed a retrospective <i>online survey</i> on infant feeding and social support in 2017–2018. Regression Analysis.	Breastfeeding problems were important predictors of discontinuation; however, the direction of the effect depended on the type of problem and the type of support from the various supporters. Helpful support for discomfort problems (clogged ducts, too much milk) was significantly associated with a reduced hazard of discontinuation, as expected. However, helpful support for the reported lack of milk was associated with an increased hazard of discontinuation.
A 12	(Grzesko wiak et al., 2022) Norway	<i>Perinatal antidepressant use and breastfeeding outcomes: Findings from the Norwegian Mother, Father, and Child Cohort Study</i>	To evaluate the association between antidepressant use during and after pregnancy and breastfeeding outcomes up to 6 months postpartum, taking into account the mother's underlying mental health status.	Methods Retrospective analysis of 80,882 mother-infant pairs in the Norwegian Mother, Father, and Child Cohort Study. Women were first stratified by self-reported mental disorders and timing of antidepressant use before and/or after gestational week 28 (i.e., early-mid pregnancy and/or late pregnancy use). We then stratified women by self-reported mental disorders and postpartum antidepressant use and whether	Late pregnancy antidepressant use was associated with decreased odds of initiation of breastfeeding but not the predominance of breastfeeding at 6 months compared with women not exposed to mental disorders. When examined by postnatal antidepressant use, no differences in predominance or breastfeeding (at 6 months) were evident among women who continued antidepressant use from late pregnancy into the <i>postpartum period</i> compared with women not exposed to mental disorders. In

			antidepressants were continued since late pregnancy or newly/restarted. Breastfeeding outcomes included initiation of breastfeeding as well as predominant or any breastfeeding and abrupt cessation of breastfeeding up to 6 months.	contrast, new/restarted antidepressant use postpartum was associated with decreased odds of predominance and any (and increased risk of abrupt cessation of breastfeeding (compared with women not exposed to mental disorders.	
A 13	(Valero-Chillerón et al., 2021)  Spanish	<i>Health literacy and its relationship to continuing with breastfeeding at six months postpartum in a sample of Spanish women</i>	To explore the relationship between health literacy (HL ) and continued breastfeeding (BF ) at 6 months postpartum.	<i>Cohort Design.</i> Observational, longitudinal, and prospective study between December 2018–May 2019. Sample of 114 mother/infant pairs in a Spanish Hospital. Sample selection by a <i>non-probability sampling</i> of postpartum mothers who continued EBF after 36 hours postpartum. Maternal health literacy was studied with the Latest Vital Signs and Brief Assessment of Health Literacy for Spanish Adults 50 (SAHLSA-50). Before hospital discharge, BF efficiency was studied using the LATCH BF score, and BF continuity was followed for 6 months. Survival analysis and Cox regression were performed.	Health literacy and BF effectiveness levels were adequate before discharge from the hospital. At 6 months postpartum, less than half of the sample was still exclusively breastfed. The main reason for early cessation of exclusive BF was lower than recommended newborn weight gain. HL levels acted as a protective factor against BF neglect.
A 14	(Puharić et al., 2020)  Croatia	<i>The effect of a combined intervention on exclusive breastfeeding in primiparas: A randomized controlled trial</i>	To test (a) the effect of an educational intervention in the form of a breastfeeding booklet distributed during pregnancy and (b) the effect of four proactive telephone calls provided by health workers during the prenatal and postnatal periods.	RCT design, with evaluation results blind. A sample of four hundred women, from Split-Dalmatia County, Croatia, were randomized between November 2013 and December 2016 into three groups: intervention (IG), active control (ACG), and standard care (SCG). The primary outcome was exclusive breastfeeding (EBF) at 3 months. Secondary outcomes included breastfeeding difficulties, attitudes toward infant feeding, breastfeeding <i>self-efficacy</i> , and social support. Practice staff were blinded to group allocation.	EBF rates at 3 months were significantly higher for IG (odds ratio [OR] 4.6, 95% confidence interval [CI], 2.7 to 8.1; EBF 81%) and at 6 months (OR 15.7, 95% CI, 9.1 to 27.1; EBF 64%) compared with SCG (EBF 47% at 3 months and 3% at 6 months). Higher rates were also observed for ACG at 3 months (OR 2.2, 95% CI, 1.3 to 3.8, EBF 68%) and 6 months (OR 2.3, 95% CI, 1.4 to 3.9, EBF 16%).

A 15	(Johnson et al., 2018)	<i>Valuing breastfeeding: a qualitative study of women's experiences of a financial incentive scheme for breastfeeding</i>	For reports analysis of interviews with women eligible for the scheme, exploring their experiences and perceptions of the scheme and its impact on breastfeeding to support interpretation of the trial results.	Qualitative study. Semi-structured interviews were conducted with 35 women eligible for the scheme during the eligibility and pilot phases. All interviews were recorded and verbatim transcripts were analyzed using a <i>Framework Analysis approach</i> .	Women reported that their decisions about infant feeding were influenced by the attitudes and beliefs of their family and friends, socio-cultural norms, and health and practical considerations. Responses to the scheme were positive, and they felt rewarded for the effort involved in breastfeeding. <i>Vouchers</i> were often described as a reward, a bonus, and something to look forward to, and helped women continue breastfeeding. However, women believed that the scheme would help normalize breastfeeding, influence those who were hesitant, and help women to continue breastfeeding and reach important milestones such as 6 weeks or 3 months.
A 16	(Patel et al., 2018)	<i>Effectiveness of weekly cell phone counseling calls and daily text messages to improve breastfeeding indicators</i>	To assess the effectiveness of using mobile phones for personalized lactation counseling to increase exclusive breastfeeding rates.	RCT design. The pilot study in four urban maternity hospitals retrained in Baby-Friendly Hospitals. Enrolled mother-infant pairs lived in slums and received health services at the study site. Controls received routine health services, while interventions received weekly mobile phone counseling and daily text messages, in addition to routine health service counseling.	1036 pregnant women were enrolled (518 - intervention and 518 - control). The rate of timely initiation of breastfeeding was significantly higher in the intervention compared to control (37% v/s 24%, p < 0.001). Pre-lacteal feeding rates were similar and low in both groups (intervention: 19%, control: 18%, p = 0.68). Exclusive breastfeeding rates were similar between groups at 24 hours after delivery, but significantly higher in intervention at all subsequent visits (control vs. intervention: 24 hours: 74% vs 74%, p = 1.0; 6 weeks: 81% vs 97%, 10 weeks: 78% vs 98%, 14 weeks: 71% vs 96%, 6 months: 49% vs 97%, p < 0.001 for the last 4 visits). Adjusting for covariates, women in the intervention were more likely to breastfeed exclusively compared to controls.
A 17	(Ara et al., 2018)	<i>Peer counseling improves breastfeeding practices: A cluster randomized controlled trial in urban Bangladesh.</i>	To evaluate the impact of peer counseling on early initiation of breastfeeding (IMD) and exclusive breastfeeding (EBF) rates for	RCT design. A sample of 350 mother-infant pairs from selected slums between September 2014 and July 2016. Women assigned to the intervention group received peer counseling from the third trimester of pregnancy to 6 months after delivery.	EIBF rates were higher in the intervention group than in the control group (89.1% vs 77.4%, p = .005). More mothers in the intervention group were exclusively breastfeeding at 5 months than mothers in the control group (73% vs 27%, p < .005). Control mothers were twice as likely to not practice

			mother-infant pairs living in an urban slum, in Dhaka, Bangladesh.	Multiple logistic regression was used to assess the effects of peer counseling and other related factors in the practice of <i>Early Initiation of breastfeeding</i> (EIBF) and <i>exclusive breastfeeding</i> (EBF).	EIBF compared to intervention mothers ( <i>adjusted odds risk</i> [aOR]: 2.53, CI [1.29, 4.97], p = .007). Overall, cesarean section was associated with an 8.9-fold higher risk of not achieving EIBF. Intervention mothers were 5.10-fold more likely to practice EBF compared to control mothers at 5 months.
A 18	(Akbarzadeh et al., 2018)  Iran	<i>Investigation of breastfeeding training based on the BASNEF model on the intensity of postpartum blues.</i>	For influence training breast-feed based on Model <i>Beliefs, Attitude, Subjective Norms, and Enabling Factors</i> (BASNEF) against postpartum blues in women who were referred to the gynecology clinic affiliated with <i>Shiraz University of Medical Sciences</i> , Islamic Republic of Iran in 2012.	Experimental design. The study population included pregnant women referred to gynecology clinics of selected hospitals affiliated with <i>Shiraz University of Medical Sciences</i> . Instruments BASNEF questionnaire and <i>Zung Self-Rating Depression Scale</i> . Four educational sessions were held separately for pregnant women and their mothers, mothers-in-law, and partners. The control group received routine care at the clinic. After delivery, maternal knowledge and attitudes toward postpartum blues were evaluated using <i>the Zung Self-Rating Depression Scale</i> . The analysis uses <i>t-tests</i> .	There were significant differences between groups regarding mean scores of knowledge, mothers' evaluation of behavioral outcomes, attitudes, and supporting factors. Also, the mean score for <i>postpartum blues</i> was significantly lower in the intervention group compared to the control group.
A 19	(Hamade et al., 2013)  Lebanon	<i>Determinants of exclusive breastfeeding in an urban population of primiparas in Lebanon: a cross-sectional study</i>	To assess the prevalence of breastfeeding in Beirut and determine factors influencing breastfeeding behavior in this population.	Data for this longitudinal study were collected in a randomized controlled trial (RCT) assessing the impact of a 24-hour hotline and a postpartum support film on postpartum stress. Healthy first-time mothers in the capital city of Beirut between March and July 2009 were interviewed 1–3 days and 8–12 weeks after delivery. Multiple logistic regression analysis.	The overall breastfeeding rate at 8–12 weeks postpartum was 67%. The exclusive breastfeeding rate was 27.4%. Factors associated with exclusive breastfeeding included maternal employment (OR=3.92; p-value<0.001), planned pregnancy (OR=2.42, p-value=0.010), breastfeeding intention (OR=3.28; p-value=0.043), maternal emotional support sources (OR=1.87, p-value=0.039) and use of postpartum support videos, hotline services or both.
A 20	(Abdulah i et al., 2021)	<i>Breastfeeding Education and Support to Improve Early Initiation and</i>	<i>intervention</i> (BFESI ) on infant growth, <i>early initiation</i> (EI ), and	RCT design. Randomly assigned 36 clusters into one of the intervention groups (N=249) receiving BFESI by <i>Women's Development Army</i>	Compared with controls, BFESI significantly increased EI by 25.9% (95% CI: 14.5, 37.3%; P=0.001) and EBF by 14.6% (95% CI: 3.77, 25.5%; P=0.010). Similarly, the

Ethiopia	<i>Exclusive Breastfeeding Practices and Infant Growth: A Cluster Randomized Controlled Trial from a Rural Ethiopian Setting</i>	exclusive breastfeeding (EBF) practices.	<i>leaders.</i> (WDA) trained or control group (N=219) received routine care. The intervention was delivered from the third trimester of pregnancy until five months postpartum. The primary study outcomes were EI, EBF, and infant growth; secondary outcomes included maternal breastfeeding knowledge and attitudes, and child morbidity. Intervention effects were analyzed using linear regression models for continuous outcomes, and linear probability models or logistic regression for categorical outcomes.	intervention resulted in higher breastfeeding attitude scores, but not higher breastfeeding attitude scores. Of the growth and morbidity outcomes evaluated, the only outcomes with significant intervention effects were higher mid-upper arm circumference and lower prevalence of respiratory infections.	
A 21	(Javorski <i>et al.</i> , 2018)  Brazil	<i>Effects of educational technology on self-efficacy for breastfeeding and practice of exclusive breastfeeding</i>	To evaluate the effect of using flipcharts (album series) on maternal self-efficacy in breastfeeding and its influence on exclusive breastfeeding (EBF) in the first two months of the child's life.	Clinical trial in Recife, Northeastern Brazil, with 112 women in their third trimester of pregnancy, randomly distributed into intervention group (IG) and control group (CG). The intervention was the use of <i>flipcharts</i> in the IG. Data collection was done through prenatal interviews, and telephone contacts in the second, fourth, and eighth weeks <i>postpartum</i> . The <i>Breastfeeding Self-Efficacy Scale-Short-Form</i> (BSES-SF) was used to measure <i>self-efficacy scores</i> . Descriptive analysis and bivariate statistics were used through the comparison of proportions and mean tests and relative risk assessment.	There was a statistically significant difference in the mean self-efficacy scores between women in IG and CG ( $p<0.001$ ) and in the level of EBF ( $p<0.001$ ). The probability of exclusive breastfeeding in IG was twice as high as in CG.

The final stage of *the scoping review* is compiling, summarizing, and reporting the search results. The results of *the scoping review* are presented in the form of *mapping* or grouping the themes of the articles obtained.

Table 2. Grouping of scoping review themes

No.	Theme	Sub-themes	Number article
1	Prevalence practice breastfeeding in mothers postpartum	Prevalence practice breast-feed	A4, A6, A10
2	Behavior in breastfeeding for mothers postpartum with problem maternal mental health postpartum		A1, A2, A3, A4, A5, A7, A12
3	Related factors with maternal mental health postpartum	a. Intention breast-feed b. Practice Breast-feed c. History of Mental Health Problems d. Employment status husband e. Mechanism coping low	A1, A8
4	Related factors with behavior breastfeeding for mothers postpartum	a. Postpartum Depression b. Stress c. Support Social d. Visit House e. Body Mass Index (BMI) f. Education g. Professional support h. Knowledge i. Intention breast-feed j. Attitude k. Exposure to formula milk suggestions or experience giving baby formula milk l. Support Grandma and Dad m. Problem breast-feed n. Health Literacy o. Types of labor p. Skin contact early (IMD) q. Age r. Social Norms Culture s. Mother's Job t. Planned pregnancy u. Service <i>hotline</i>	A1, A2, A3, A4, A5, A6, A7, A9, A10, A11, A12, A13, A15, A17, A19, A20
5	Improvement efforts breastfeeding	a. Support Counselor Lactation certified b. Antenatal and postpartum interventions birth combined ( support telephone proactive, booklet breastfeeding and <i>flipchart</i> ) c. Incentive finance / Shopping Voucher d. Counseling through phone and message short (SMS/ short messages) e. Breastfeeding Education and Support Peers	A6, A14, A15, A16, A17, A18, A19, A20, A21

## RESULT AND DISCUSSION

### Result

Characteristics based on Country in 21 articles, 1 piece of evidence was found in research (A1) which conducted multi-country research of 5 namely A1: Brazil, South Korea, Taiwan, Thailand, and England. For other articles, each in only one country, including A2: Pennsylvania, A3: Pakistan, A4: Southeastern United States,

A5: United States, A6: New York, A7: Greece, A8: Croatia, A9: China, A10: China, A11: United Kingdom, A12: Norway, A13: Spain, A14: Croatia, A15: United Kingdom, A16: India, A17: Bangladesh, A18: Iran, A19: Lebanon, A20: Ethiopia, A21: Brazil. So the total number of countries is 25 countries from 21 articles.

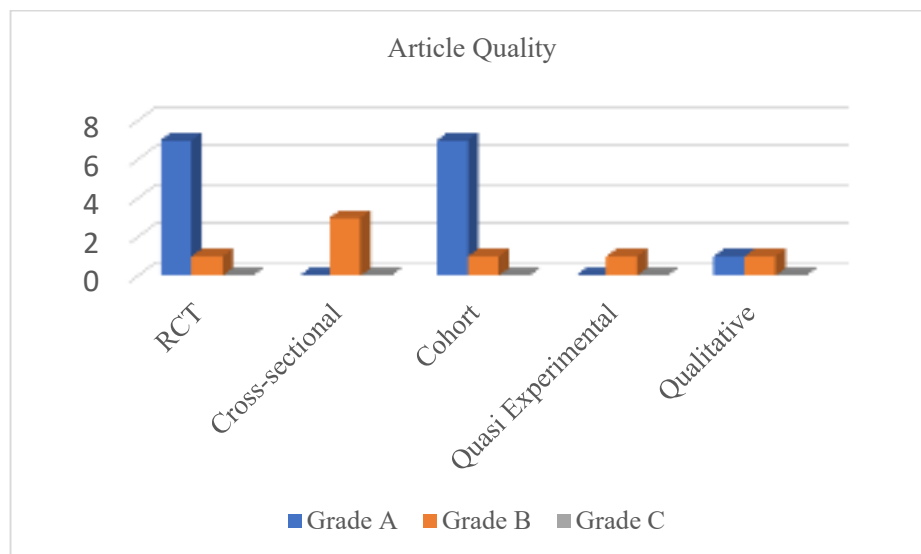
Table 3. Characteristics by Country

Continent	Country	f (%)
Asia	South Korea (1), Taiwan (1), Thailand (1), Pakistan (1), China (2), India (1), Bangladesh (1), Iran (1), Lebanon (1)	10 (40%)
Africa	Ethiopia (1)	1 (4%)
American	Brazil (2), Pennsylvania (1), Southeastern United States (1), United States (1)	6 (24%)
Europe	Greece (1), Croatia (2), England (3), Norway (1), Spain (1)	8 (32%)
	Total number	25 (100%)

Based on table 2.10 characteristics by country, the article studies as many as 10 (40%) came from the continent of Asia and the least originated from the African continent 1 (4%).

Characteristics based on design research and quality article research obtained from 21 articles are presented in the table following:

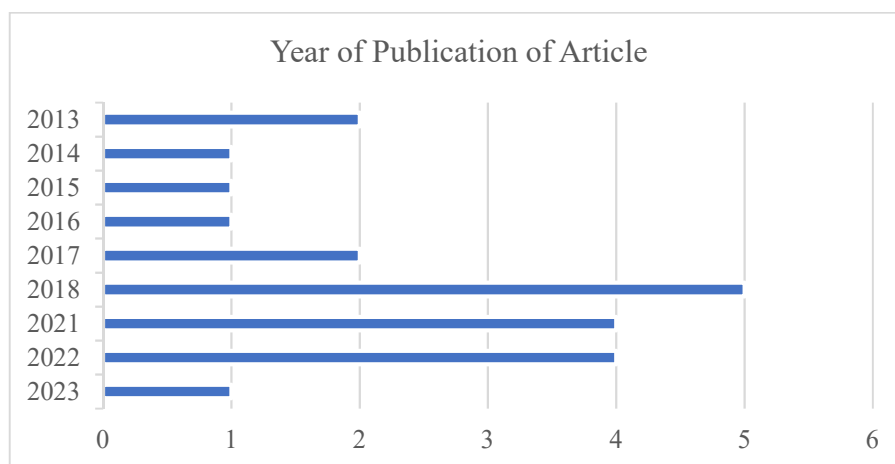
Table 4. Characteristics Based on Research Design and Article Quality



Based on table 4 characteristics based on the design study show part big design *cohort* of as many as 8(38%) and some small *quasi-experimental* 1(5%). Characteristics based on quality article researchs, the majority are articles with very good quality (A) as many as 14 (67%).

Characteristics based on year rise from 21 articles study presented in the table following:

Table 5. Characteristics article study based on year rise



Based on Table 5 shows as many as 5 articles of research (24%) published in 2018 and at least 1 (4.7%) published in 2023, 2016, 2015, and 2014.

### Discussion

#### 1. Prevalence Practice Breastfeeding for Postpartum Mothers

Based on results research (A4) states that 85% of women report intention to breastfeed, but only 65% reported breastfeeding at 48 hours postpartum (Karp *et al.*, 2013). Whereas findings from a study tall Teich *et al.*, (2014) that only 27% of participants started or tried to breastfeed first time one hour after giving birth. Eight tens eight percent of participants report that babies receive formula milk while treated at home sick. At 1 month old, only a quarter breastfeeding baby with intensity tall (Teich *et al.*, 2014). The prevalence of EBF was 32.4% for babies aged 0 months.

#### 2. Behavior in breastfeeding for mothers postpartum with problem maternal mental health postpartum

Symptoms of pathological mental health in women in the perinatal period cause the duration of breastfeeding more shorter (Dagla *et al.*, 2021). Suboptimal breastfeeding outcomes among. Women with problems with mental health (Grzeskowiak *et al.*, 2022). Based on the results study women who intend to breastfeed during pregnancy have a higher possibility more low experiencing PND compared to women who don't intend to breastfeed. Women who do not intend intention breastfeed but truly breastfeed own opportunities bigger for experiencing PND than women who intend to breastfeed and breastfeed. Women who have duration breast-feed more short directly on the breast than they plan opportunity more big for experience PND than those who breastfeed longer than they plan even after (Chang *et al.*, 2023).



Incident depression is associated with more than a little bit of breastfeeding time (Rahman *et al.*, 2016). Research results this is in line with the study by Karp *et al.*, (2013) states that levels of symptoms more depression are low, and the level more prenatal stress increases the possibility start breast-feed (Karp *et al.*, 2013). Postpartum mothers with symptoms of depression compared to Mothers without symptoms of depression are more likely to introduce water, juice, or cereals beginning from the recommended baby (Balbierz *et al.*, 2015).

Based on proof research participants who reported stress felt more tall tend to breastfeed in a way exclusive for 6 months. Support perceived social to moderate connection between perceived stress and exclusive breastfeeding ( *odds ratio*: 0.01, 95% confidence interval: 0.001–0.072 ). However, supporting breast-feed in a way directly increases the possibility of exclusive breastfeeding for 6 months (Isiguzo *et al.*, 2022).

### 3. Related factors with maternal mental health postpartum

Intention breastfeeding and practice breastfeeding (A1) are related with post mental health and the birth of one of their depression (Chang *et al.*, 2023). Prevalence improvement anxiety during pregnancy, period *postpartum* early, and *postpartum* the results were 35.3%, 17.3%, and 20.6% respectively. One of three anxious women during pregnancy kept going anxious at the beginning *postpartum* and one of two women who were anxious at the start *postpartum* kept going anxious at the end *postpartum*. In addition, of anxious women during pregnancy, only one of the five women reported anxiety on both sides during postpartum check-ups, which means that women experience anxiety while in the peripartum period. Variables demographics that contribute include the employment status of couples and history of depression previously as significant *predictors*. Postpartum anxiety levels are higher in women who have characteristics worried more high, anxiety situations, anxiety special pregnancy, higher stress levels, and higher levels of coping with low problems (Radoš *et al.*, 2018).

### 4. Related factors with behavior breastfeeding for mothers postpartum

Breastfeeding and duration breastfeeding (A7) show a significant relationship with symptoms of women's mental health from pregnancy until the year first post labor (Dagla *et al.*, 2021). Depression post births (A1, A3, A5, A12) exist the relation to the practice of breastfeeding, where Women with depression stop breast-feed exclusively more beginning (Chang *et al.*, 2023), (Rahman *et al.*, 2016), (Balbierz *et al.*, 2015), (Grzeskowiak *et al.*, 2022). Women who use antidepressants at the end of pregnancy tend not to start breastfeeding but it seems to own a greater risk of experiencing problems breastfeeding or stop breastfeeding before 6 months. Postpartum. Next, we found that the women who started returning or using antidepressants after giving birth to almost 3 times more likely to stop breast-feeding in a way suddenly (Grzeskowiak *et al.*, 2022). Stress and support social (A2) perceived Mother is booster important exclusive breastfeeding (Isiguzo *et al.*, 2022). This matter is in line with the study by Karp *et al.*, (2013) states that symptom depression is lower and higher levels of prenatal stress influence For start breast-feed (Karp *et al.*, 2013).

Postpartum mothers who receive time to visit home, are more likely to report breastfeeding. More maternal education with higher height and low body mass index is associated with level more initiation tall (Karp *et al.*, 2013). Related factors with exclusive breastfeeding (A18 ) include work mother, planned pregnancy, intention breastfeeding, source support emotional mother, and the use of support videos post-childbirth, hotline services, or both of them (Hamade *et al.*, 2013).

Common reasons mothers report not starting breastfeeding (A4) include hearing things negative about breastfeeding, disease ( self) Alone or baby ), experiencing a negative past, having to nurse another child, and coming back to work(Karp *et al.*, 2013). The early postpartum period is more often associated with obstacles to breast-feed than the *postpartum* end. Many women feel obstacles to breastfeeding during care hospitalization and the early postpartum period (A6). Barriers include perception of low breast milk supply, difficulty with adhesion, problem medical, experience with policies, and staff House Sick (Teich *et al.*, 2014). Reluctant mothers breastfeeding during the month of first post-childbirth ( article A10) have a small possibility of performing EBF (68%) during the month of first post-labor (Duan *et al.*, 2022). Whereas induced birth, no contact skin early in the first hour after born, or maintenance reproduction assisted (A13) and childbirth Caesarean section (A17) increases the risk of early EBF termination before 6 months post labor (Valero-Chillerón *et al.*, 2021), (Ara *et al.*, 2018). Attitudes and sentiments about negative breastfeeding ( A9) result in risk subtraction breast-feed more big (Huang *et al.*, 2022).

However, attitudes and sentiments about positive breastfeeding, support for social and professional, control breastfeeding, knowledge, intention, and age (30-35 years ), for using EBF is factors protective from subtraction-exclusive breastfeeding (Huang *et al.*, 2022), (Valero-Chillerón *et al.*, 2021). Correct knowledge about colostrum and its benefits in breastfeeding ( article A10) more possible for mothers to breastfeed in an exclusive (Duan *et al.*, 2022). In addition, maternal health literacy indicators (knowledge of reproductive health, ability to access health information and analyze health problems, and ability to seek support health) revealed that health literacy is a positive factor for the readiness of mothers to breastfeed exclusively. Of all these indicators, knowledge about reproductive health is the biggest contributing factor (Mulyani, 2017). This is supported by research by Valero-Chillerón *et al.*, (2021) that the *Health Literacy* (HL) level acts as a factor protector of early EBF cessation.

Mothers who don't receive advice on giving formula milk ( article A10) via facility health, media, or the internet or without experience giving formula milk is possible Mother For breast-feed exclusively. Babies who get their first breast milk in the first 24 hours after born own EBF odds 2.41 times compared to a baby who gets breast milk after 3 days of his life. A baby's possibility will breastfeed in a way exclusive if the father accepts the draft that breast milk is better Good rather than formula milk. A woman is more likely to breastfeed his son in a way exclusive when raised by her husband compared to her mother or

Mother of her in-laws during the month first postpartum. In addition, in babies who are older the possibility of breastfed in a way exclusive to a family Where caregiver the main thing is Grandma. This means existing support of the father and grandmother from the mother allows for breastfeeding exclusivity (Duan *et al.*, 2022).

Problem breastfeeding (artikel A11) is a predictor important to the occurrence of termination of breastfeeding. Support from various Supporter important for successful breast-feed and also the duration of breastfeeding Among them support is informational, emotional, and practical. All of them have effects on the relationships between problem breastfeeding and practice breastfeeding. Women who suffer from sickness, have no comfort, or have excess breast milk but get helpful support so will breastfeed longer (Page *et al.*, 2022). Women reported (article A15) that decisions about breastfeeding their infants were influenced by sociocultural norms, the behavior and beliefs of their family and friends, and health and practical considerations (Johnson *et al.*, 2018).

#### 5. Improvement efforts breastfeeding

Based on article A6, the existence of support by Consultant / Counselor Institution Lactation certified integrated in pre and post-routine care labor can effectively overcome obstacles breastfeeding at the beginning post labor (Teich *et al.*, 2014). Counselor lactation certified is a midwife-nurse who has gotten training additional for counseling through telephone or mobile phone. The advice given related to antenatal care, nutrition for the mother, practice, and preparation of breast-feed or giving eat baby. Findings Article A16 that counseling lactation use of mobile phones ( via daily phone calls and SMS ) has proven to become a very useful tool in giving support sustainable for Mothers pregnant and breastfeeding (Patel *et al.*, 2018).

Health Facilities provide intervention combination by following article A14 consisting of support telephone proactive and booklet breastfeeding in the antenatal and postpartum period birth, especially for first-time mothers. Breastfeeding material written and supporting telephone proactive among primiparas is an effective way to increase the number breastfeeding, reduce the difficulty of breastfeeding, and improve the efficacy self and attitude to giving Baby (Puharić *et al.*, 2020). Use Educational technology based on console *self-efficacy* breast-feed can increase the score *self-efficacy* for breastfeeding, and improve score the impact positive on EBF in term short (2 months) First life children). Educational Technology can modified in the form *flipchart* “I can breast-feed child I can *breastfeed my son*. The use of a *flipchart* allows For minimizing the impact conditions on somatic and emotional women at the beginning of the lactation process. Pictures guide the prevention of problems like cracks and swelling breasts, clarify the reason for crying, and sign the baby full in exclusive breastfeeding (Javorski *et al.*, 2018).

Findings Article A18 shows the effectiveness of training based on the BASNEF model (Model of *Beliefs, Attitudes, Subjective Norms, and Enabling Factors* ) in improving mothers' knowledge and attitudes, encouraging them to breastfeed, and reducing the intensity of breastfeeding postpartum blues

(Akbarzadeh *et al.*, 2018). This matter is in line with article A19 that intervention education breastfeeding and support peers given from the third-trimester pregnancy up to five months postpartum significantly more tall For start breast-feed in the first hour after giving birth and exclusive breastfeeding. Education led by peers and intervention support in a way significantly increased EI when breast-feed by 26%, and EBF by 15%, compared to service routine health. BFESI also produces improvement substantial in the attitude of Mothers toward breastfeeding (Abdulahi *et al.*, 2021).

Practice breastfeeding Good initiation of breast-feed within 1 hour after birth and practice of exclusive breastfeeding have proven to influence counseling the same age in a way positive ( article A17). Counseling the same age is an effective strategy for framing an increase in EIBF and EBF practices in slum areas urban, where malnutrition and practices are not appropriate (Ara *et al.*, 2018).

Based on article A15 to increase awareness about breastfeeding and push a normalization scheme incentive finance can accepted. Response positive on the scheme said, and consider it as an award for effort in breastfeeding. Voucher is pictured as gifts, bonuses, and something to look forward to and help mothers keep going breastfeeding (Johnson *et al.*, 2018).

### CONCLUSION

Based on 21 articles from this scoping review, it is known that breastfeeding practices are closely related to the mental health status of mothers during the postpartum period and even since pregnancy. The mental health status of postpartum mothers related to stress, anxiety, and depression significantly affects the sustainability of early breastfeeding and exclusive breastfeeding. Several factors related to breastfeeding behavior are maternal age, occupation, education, knowledge, attitude, breastfeeding intention, Body Mass Index (BMI), postpartum depression, stress, planned pregnancy, breastfeeding sentiment, social support, professional support, grandmother and father support, type of delivery, breastfeeding problems, early skin contact (IMD), health literacy, hotline services, socio-cultural norms, exposure to formula milk or experience of giving infant formula milk. Given the many benefits of breastfeeding for both mothers and children, efforts are needed to increase breastfeeding.

### SUGGESTION

Based on the findings, including Certified Lactation Counselor Support; Combined antenatal and postnatal interventions (proactive telephone support, breastfeeding booklets, and flipcharts); Financial incentives/ shopping vouchers; Counseling via telephone and text messages (SMS); Breastfeeding Education and Peer Support. These efforts focus more on promotive and preventive efforts and are adjusted to the capacity of hospitals or health facilities, but should be carried out optimally to increase breastfeeding.

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