

RESEARCH ARTICLE

Relationship between Breastfeeding Knowledge, Self-Efficacy and Readiness for Discharge among Postpartum Mothers: A Cross-Sectional Study

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Abstract

Purpose. Exclusive breastfeeding is the clinical standard that provides maximum health benefits for mothers and infants. However, the transition to home post-delivery may pose challenges for postpartum women. This study aimed to determine the relationship between breastfeeding knowledge, self-efficacy and readiness for hospital discharge among postpartum mothers.

Design. This cross-sectional research utilized a descriptive-correlational design and purposive sampling method to recruit postpartum mothers aged 18 years and above who gave birth through normal spontaneous delivery or cesarean section in Silliman University Medical Center from December 2022 to February 2023. Sociodemographic and perinatal characteristics were obtained through self-administered questionnaires. Data was collected using the Breastfeeding Knowledge (BK) Scale, the Breastfeeding Self-Efficacy Scale Short Form (BSES-SF), and the Readiness for Hospital Discharge Scale (RHDS). Statistical analyses were performed using Jamovi software.

Results. A sample of 119 postpartum mothers qualified for the study with a mean maternal age of 30.49 years and a mean gestational age of 38.25 weeks. The majority were married, college graduates, and employed. About half of the sample were primigravid and primiparous. Most were delivered via normal spontaneous delivery (69.75%) and exclusive breastfeeding was preferred (63.87%). The postpartum mothers had good breastfeeding knowledge (56.30%), were frequently confident to breastfeed ($M=3.81$; 95% CI [3.62, 4.00]), and were slightly ready for hospital discharge ($M=7.87$; 95% CI [7.55, 8.19]). Chi-square correlations revealed a significant relationship between educational attainment and breastfeeding knowledge ($\chi^2 [4, N=11] = 14.70, p<0.05$). Gestational age ($\chi^2 [2, N=119] = 6.96, p<0.05$), employment status, ($\chi^2 [2, N=119] = 6.00, p<0.05$), gravidity ($\chi^2 [2, N=119] = 14.31, p<0.05$), parity ($\chi^2 [2, N=119] = 7.08, p<0.05$) and infant feeding style ($\chi^2 [2, N=119] = 12.24, p<0.05$) had a significant relationship to breastfeeding self-efficacy. Additionally, gravidity, ($\chi^2 [2, N=119] = 11.19, p<0.05$) and parity, ($\chi^2 [2, N=119] = 5.08, p<0.05$) were both associated with readiness for hospital discharge. Spearman rank order correlation revealed a significant positive relationship between breastfeeding self-efficacy and readiness for hospital discharge, $r_s(117) = 0.553, p=0.000$.

Conclusion. Self-efficacy to breastfeed was linked to an increased likelihood of exclusively breastfeeding. Postpartum mothers with greater confidence in their ability to breastfeed were more prepared for hospital discharge. When transitioning to home after delivery, it is important to consider specific sociodemographic and perinatal characteristics to tailor-fit teaching plans on breastfeeding, thus improving breastfeeding knowledge and self-efficacy when caring for postpartum women.

Keywords: *Breastfeeding knowledge; breastfeeding self-efficacy; readiness for hospital discharge.*

Introduction

Exclusive breastfeeding remains the clinical gold standard, uniquely tailored to provide health benefits for infants and mothers. However, even with its proven health benefits, breastfeeding practices remain globally suboptimal,

and rates of exclusive breastfeeding remain low (Rollins et al., 2016; Ngo et al., 2021). A portion of Filipino mothers are not exclusively breastfeeding their newborns (Gonzales, 2020).

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According to the Philippine Statistics Authority (PSA) and the International Classification of Functioning, Disability, and Health (ICF, 2023), 85% of Filipino infants experienced breastfeeding in 2020, two years before the survey commenced in May 2022. From this population, only 54% received breastfeeding within the first hour after birth, and 73% were exclusively breastfed two days postpartum. Despite the recommendation to exclusively breastfeed for the initial six months of life, only 41% of infants aged 0-5 months received exclusive breastfeeding (PSA & ICF, 2023). The decision of the mother to exclusively breastfeed is influenced by a range of biopsychosocial factors (Asimakil et al., 2022). Sociodemographic factors must also be considered to improve maternal knowledge of its proven benefits (San Lio et al., 2021). Preparing for hospital discharge post-delivery has also become a growing concern now that hospitals have implemented shorter hospital stays for uncomplicated births. Appropriate measurement of these factors is imperative to support new mothers throughout breastfeeding. Hence, this study aims to determine the relationship between breastfeeding knowledge, breastfeeding self-efficacy, and readiness for hospital discharge among postpartum mothers. It also seeks to identify the relationship between the sociodemographic and perinatal characteristics of the postpartum mothers to the breastfeeding knowledge, breastfeeding self-efficacy and readiness for hospital discharge.

The findings of this study will serve as a basis to develop and to improve existing programs on breastfeeding by examining factors that can significantly enhance the breastfeeding knowledge, self-efficacy, and readiness for hospital discharge among postpartum mothers.

Background

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) advocated for initiating breastfeeding within the first hour following the birth of an infant and the practice of exclusive breastfeeding for the first six months of life. Breastfeeding, aside from improving child development, also results in economic gains by reducing health care costs to the family and at the national level (World Health Organization, 2023). Women generally intend to breastfeed; however, sometimes, these intentions are not sustained. Many factors may influence initiation and continuing breastfeeding, including sociodemographic characteristics, attitudes, knowledge, and support (Casal et al., 2016), self-efficacy (Gonzales, 2020), and readiness to transition to home care. Based on the *Theory of Planned*

Behavior, behavioral intention is the most critical factor influencing one's behavior (Ajzen, 1991).

Factors such as education, knowledge, and social support may play a role in influencing breastfeeding behavior. Breastfeeding knowledge may affect the maternal decision to breastfeed (Kanhidlok & McGrath, 2015). Sisko et al. (2022) revealed that parental knowledge of breastfeeding may be insufficient thereby impacting the decision to continue exclusive breastfeeding during the first six months of the infant's life. Assessing the knowledge about breast milk and breastfeeding while receiving breastfeeding education may improve the chance of exclusive breastfeeding, especially among new mothers. Positive attitude and knowledge of breastfeeding plays a critical role in breastfeeding (Hamze et al., 2019). Various studies have also identified confidence as a notable variable in breastfeeding practices. Gonzales (2020) examined the self-efficacy in breastfeeding among urban postpartum Filipino mothers and found that they were confident. However, maternal attitudes, subjective norms, and perceived behavior control provide inconsistent findings regarding their ability to show a relationship with breastfeeding. Social support, along with breastfeeding education from health professionals, can also increase the success of breastfeeding. While health professionals, including physicians and nurses, readily provide information on breastfeeding, the actual test of learning from breastfeeding education lies in whether the new mother can continue and sustain breastfeeding at home. Post-discharge outcomes rely on the discharge preparation and what they have learned from the education provided by health workers. Evaluation of readiness for discharge includes essential constructs such as patient safety and satisfaction, as well as, physical, emotional, psychological, and social aspects. It is also linked to the quality of discharge teaching, including the adequacy and delivery of teaching content, and it is this phase where the nurse's role is very critical (Malagon-Maldonado & Connelly, 2017). The interplay among these factors may impact the breastfeeding outcomes of postpartum mothers.

Methodology

Study Design. A cross-sectional, descriptive-correlational design was utilized to determine the relationship between breastfeeding knowledge, self-efficacy, and readiness for discharge among postpartum mothers, as well as, the relationship of sociodemographic and perinatal characteristics to these variables. Data collection occurred from December 2022 to February 2023 in the Obstetrics Ward of Silliman

University Medical Center (SUMC), where the researchers administered the questionnaires to the postpartum mothers at least 4 hours before their discharge from the hospital.

Participants and Setting. Respondents were chosen through purposive sampling using the following eligibility criteria: postpartum mothers who were 18 years old and above, delivered either normal spontaneous delivery (NSD) or cesarean section (CS), and were admitted in the Obstetric Ward of SUMC from December 2022 to February 2023. The exclusion criteria were as follows: postpartum pediatric patients, postpartum patients who delivered to a neonate with anomalies and cannot breastfeed, postpartum patients who delivered and were diagnosed with any infection or sepsis and any hematologic disease during admission, and postpartum patients who delivered in another hospital or facility and transferred or referred to SUMC.

Data Collection Tools. The data were collected using the sociodemographic and perinatal characteristics form, Breastfeeding Knowledge (BK), Breastfeeding Self-efficacy Scale Short Form (BSES-SF), and Readiness for Hospital Discharge Scale (RHDS).

Sociodemographic and perinatal characteristics form. This questionnaire was used to assess the profile of postpartum mothers. Sociodemographic characteristics include maternal age, gestational age upon delivery, marital status, highest educational attainment, employment status, and monthly income. In contrast, perinatal characteristics include gravity, parity, number of prenatal visits, type of delivery, and planned infant feeding style.

The *Breastfeeding Knowledge (BK) scale* measured the respondents' breastfeeding knowledge (Zielinska, et al., 2017). It assesses the mother's awareness and acquired information, facts, or skills on breastfeeding and infant nutrition, categorized as general knowledge, child-related knowledge, and mother-related knowledge. This 15-item questionnaire developed by Zielinska, Sobczak, and Hamulka (2017) has three subscales: general (6 questions), child-related (6 questions), and mother-related (3 questions).

The *Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF)* assessed the breastfeeding self-efficacy (BSE) or confidence of the postpartum mothers, reflecting their perceived breastfeeding abilities (Amini et al, 2019). The BSES-SF is a 14-item questionnaire that measures breastfeeding confidence in terms of (1) the technique, which pertains to maternal skills and principles for effective breastfeeding, and (2) the intrapersonal thoughts, which pertains to maternal beliefs and attitudes about breastfeeding. All items are rated on a Likert scale ranging from 1 (not at all confident) to 5 (always confident). Higher scores

indicate higher levels of self-efficacy in breastfeeding. Dennis (2003) found that the BSES-SF is an excellent tool for identifying high-risk breastfeeding mothers and assessing behaviors and cognitions about breastfeeding confidence. Preliminary evidence suggests that the BSES-SF is a valid and reliable (Cronbach's alpha coefficient of .80 and above) tool for health professionals to assess confidence among breastfeeding women (Tuthill et al., 2016). The Breastfeeding Self-Efficacy Scale Short Form (BSES-SF) was a revision done from the original 33-item self-administered instrument developed by Dennis and Faux in 1999 to assess breastfeeding confidence (Dennis, 2003).

The *Readiness for Hospital Discharge Scale (RHDS)* measured the postpartum mothers' readiness to leave and return home after acute care hospitalization (Weiss, et al., 2006). This tool was administered 4 hours prior to discharge. The RHDS for Postpartum Mothers is composed of 22 items in 4 components: Personal status (8 items), Knowledge (7 items), Coping Ability (3 items), and Expected Support (4 items). Items are on a 10-point Likert-type scale from 0 (not ready) to 10 (totally ready), and the mean of item scores is the RHDS score (See Table 5 notes for score interpretation).

Data Collection. All postpartum patients admitted to the SUMC Obstetrics Ward from December 2022 to February 2023 who satisfied the inclusion criteria were recruited for the study. The study was explained to the respondents and informed consent was obtained from each participant. At least four (4) hours before hospital discharge, the questionnaires were distributed to the patients to answer. Once done, questionnaires were collected and checked for completeness before storing them in a safety cabinet until data encoding commenced.

Ethical Considerations. The research proposal was submitted for review to the Research Ethics Committee of SUMC. Autonomy was observed, participation in the study was voluntary, and the postpartum mothers were informed that they could withdraw from the study at any time without consequences. Confidentiality and privacy of all the information disclosed was maintained. Access to the data was limited to the researchers only.

Statistical Analysis. The sociodemographic and perinatal characteristics of the postpartum mothers were analyzed using frequency distribution and percentage. Weighted mean was used to describe the breastfeeding knowledge, breastfeeding self-efficacy and readiness for hospital discharge of the postpartum mothers. Chi-square test was used to analyze the association between the sociodemographic and perinatal characteristics of the postpartum mothers, which are categorical scales, to the breastfeeding knowledge,

breastfeeding self-efficacy, and readiness for hospital discharge. On the other hand, the Spearman rank correlation coefficient was utilized to identify the relationship between the level of breastfeeding knowledge, breastfeeding self-efficacy and readiness for hospital discharge. The use of non-parametric test was made since the variables were measured in ordinal scale, not normally distributed and some assumptions in the use of parametric test were not satisfied. The results were analyzed using Jamovi statistical software.

Findings

Table 1 illustrates that the postpartum mothers who qualified were between 18 and 44 years old (mean=30.49) and had ages of gestation ranging from 34 to 41 weeks (mean=38.25 weeks). The majority were married, college graduates, and employed. Approximately half of the sample exhibits gravidity and parity of 1, while the remaining participants are multiparous. Additionally, a substantial proportion had vaginal delivery, and more than half are planning to do exclusive breastfeeding.

Table 2 reveals that the level of breastfeeding knowledge of postpartum mothers is good at 56.30%. Table 3 specifically shows that postpartum mothers answered more correctly on all items on the mother-related subscale (84.31%). Within the general knowledge subscale, 91.60% yielded correct answers on comparing infant formula and human milk (items 2-3). However, less accurate responses were obtained concerning the appropriate diet during breastfeeding, with 84.87% incorrectly addressing the need to increase milk intake to increase production and 67.23% misunderstanding the need to avoid potential allergens while breastfeeding. Nevertheless, all statements under child-related questions yielded more correct answers except item 10, where the majority (91.60%) of the responses were inaccurate.

Table 1. Sociodemographic and Perinatal Characteristics of the Postpartum Patients

Profile of Postpartum Mothers	F	%
Maternal Age (n=119)		
<20	1	0.84
20 – 29	50	42.02
30 – 39	64	53.78
≥ 40	4	3.36
Gestational Age (n=117)		
34 – 36	9	7.56
37 – 38	56	47.06
39 – 41	52	43.70
Civil Status (n=119)		
Single	21	17.65
Married	96	80.67
Cohabiting	2	1.68
Educational Attainment (n=113)		
No Formal Education	1	0.84
High School Graduate	11	9.24
College Graduate	82	68.91
Master's Degree Holder	13	10.93
Post-Graduate Degree Holder	6	5.04
Employment Status (n=117)		
Employed	86	72.27
Unemployed	31	26.05
Income (n=51)		
≤ 10,000	2	1.68
11,000 – 19,000	9	7.56
20,000 – 29,000	23	19.33
30,000 – 39,000	4	3.36
≥ 40,000	13	10.93
Gravidity (n= 117)		
1	59	49.58
2	57	47.90
3	1	0.84
Parity (n= 117)		
1	64	53.78
2	53	44.54
Number of Prenatal Visits (n=66)		
1 – 5	1	0.84
6 – 10	43	36.13
11 – 15	20	16.81
≥ 16	2	1.68
Type of Delivery (n=119)		
Cesarian	36	30.25
Vaginal	83	69.75
Infant Feeding Style (n=119)		
Exclusive Breastfeeding	76	63.87
Mixed Feeding	41	34.45
Exclusive Formula Feeding	2	1.68

Table 2. Level of Knowledge on Breastfeeding (n=119)

Scores	Level of Knowledge	F	%
0-7	Insufficient	12	10.08
8-10	Sufficient	39	32.77
11-13	Good	67	56.30
14-15	Very Good	1	0.84

Table 3. Breastfeeding Knowledge among Postpartum Mothers (n = 119)

Statements	Answer	Responses			
		Correct		Incorrect	
		f	%	f	%
General questions					
1. The quantitative composition of human milk is adjusted to the infant's demand.	Y	100	84.03	12	10.08
2. The composition of infant formula is the same as human milk.	N	109	91.60	10	8.4
3. Infant formula is a better source of nutrients than human milk.	N	109	91.60	10	8.40
4. Drinking milk during lactation increases the amount of human milk produced.	N	18	15.13	101	84.87
5. Breastfeeding mother should avoid potential allergens, e. g. peanuts, fish, berries.	N	34	28.57	80	67.23
6. Eating gas-producing food by breastfeeding mother is the cause of colic in infant.	N	58	48.74	50	42.02
Percentage of subscale with correct answers			59.95		
Child-related Questions					
7. Breastfed infants develop at a slower rate.	N	104	87.39	12	10.08
8. Breastfeeding improves infant brain development.	Y	111	93.28	3	2.52
9. In terms of infant health, there is no difference between breastfeeding and formula feeding.	N	100	84.03	18	15.13
10. Breast-fed infants have a greater risk for development of type 1 diabetes.	Y	9	7.56	109	91.60
11. Formula-fed infants have a greater risk to become obese.	Y	84	70.59	31	26.05
12. Breastfeed infants are less likely to get diarrhea.	Y	94	78.99	24	20.17
Percentage of subscale with correct answers			70.31		
Mother-related Questions					
13. Breastfeeding decreases the risk of breast and ovarian cancer in the mother.	Y	102	85.71	13	10.92
14. Successful breastfeeding may decrease the risk of postpartum depression.	Y	105	88.24	13	10.92
15. Breastfeeding decreases the risk of type 2 diabetes in the mother.	Y	94	78.99	23	19.33
Percentage of subscale with correct answers			84.31		

Table 4 shows that the postpartum mothers consistently expressed being frequently confident in all items in the breastfeeding self-efficacy scale, with a weighted mean ranging from 3.56 to 4.09. This reflects confidence in their thoughts and perceptions about breastfeeding and their capability to carry out tasks that contribute to successful breastfeeding. The composite weighted mean of 3.81, 95% CI [3.62-4.00] corresponds to the confidence level derived from the items described as frequently confident.

Table 5 reveals that the postpartum mothers were slightly ready for hospital discharge, with an overall weighted mean of 7.87, 95% CI [7.55-8.19]. The weighted mean on the domain of personal status was 7.25, 95% CI [6.96-7.54] reflecting a lower

mean score. Within this subscale, two out of eight items reflected being somewhat ready for discharge, particularly in their perception of pain or discomfort (mean=5.04) and stress (mean=4.81). In contrast, the three other domains—knowledge, coping ability, and expected support achieved composite weighted means ranging from 8.10 to 8.40, indicating they were extremely ready for discharge.

Utilizing the Chi-square test, only the educational attainment of the postpartum mothers showed a statistically significant association with breastfeeding knowledge, χ^2 (4, N=119) = 14.70, $p < .05$). Analysis of the mean knowledge reveals that college graduates and those with master's degrees have higher breastfeeding knowledge than those with high school education.

Table 4. Level of Breastfeeding Self-Efficacy ($n = 119$)

Statements	$w\bar{x}$	Verbal Description	95% CI
Technique			
1. I can always comfortably breastfeed with my family members present.	4.08	FC	3.90 – 4.25
2. I can always deal with the fact that breastfeeding can be time-consuming.	3.98	FC	3.80 – 4.17
3. I can always ensure that my baby is properly latched on for the whole feeding.	3.90	FC	3.70 – 4.09
4. I can always tell when my baby is finished breastfeeding.	3.90	FC	3.73 – 4.06
5. I can always manage to keep up with my baby's breastfeeding demands.	3.77	FC	3.58 – 3.96
6. I can always manage the breastfeeding situation to my satisfaction.	3.69	FC	3.49 – 3.89
7. I can always finish feeding my baby on one breast before switching to the other breast.	3.69	FC	3.51 – 3.87
8. I can always determine that my baby is getting enough milk.	3.64	FC	3.46 – 3.83
9. I can always manage to breastfeed even if my baby is crying.	3.56	FC	3.35 – 3.76
<i>Subscale Weighted Mean</i>	<i>3.80</i>	<i>FC</i>	<i>3.61 – 3.99</i>
Intrapersonal thoughts			
10. I can always keep wanting to breastfeed.	4.09	FC	3.94 – 4.25
11. I can always continue to breastfeed my baby for every feeding.	3.80	FC	3.61 – 3.99
12. I can always successfully cope with breastfeeding like I have with other challenging tasks.	3.68	FC	3.48 – 3.82
13. I can always breastfeed my baby without using formula as a supplement.	3.59	FC	3.36 – 3.82
14. I can always be satisfied with my breastfeeding experience	4.03	FC	3.85 – 4.22
<i>Subscale Weighted Mean</i>	<i>3.84</i>	<i>FC</i>	<i>3.64 – 4.03</i>
Over-all Breastfeeding Self-efficacy	3.81	FC	3.62 – 4.00

Notes. $w\bar{x}$ means weighted mean. The ranges of weighted mean correspond to the level of confidence of postpartum mothers as described: 4.20–5.00 = Always Confident (AC); 3.40–4.19 = Frequently Confident (FC); 2.60–3.39 = Sometimes Confident (SC); 1.80–2.59 = Rarely Confident (RC); 1.00–1.79 = Not at all Confident (NaaC).

Table 5. Level of Readiness for Hospital Discharge among Postpartum Patients (n = 119)

Indicators	Weighted Mean	VD	Confidence Interval
<i>Personal Status</i>			
1. How physically ready are you to go home?	8.79	ER	8.50 – 9.08
2. How would you describe you pain or discomfort today?	4.96	SoR	4.47 – 5.44
3. How would you describe your strength today?	7.41	SR	7.08 – 7.75
4. How would you describe your energy today?	7.34	SR	7.01 – 7.66
5. How much stress do you feel today?	5.19	SoR	4.73 – 5.66
6. How emotionally ready are you to go home today?	8.64	ER	8.34 – 8.95
7. How would you describe your physical ability to care for your baby in the first few days after you go home?	7.99	SR	7.66 – 8.32
8. How would you describe your physical ability to care for yourself in the first few days after you go home?	7.69	SR	7.34 – 8.03
<i>Composite</i>	7.25	SR	6.96 – 7.54
<i>Knowledge</i>			
9. How much do you know about caring for yourself after you go home?	8.27	ER	7.96 – 8.58
10. How much do you know about caring for baby after you go home?	8.30	ER	8.03 – 8.58
11. How much do you know about problems to watch for after you go home?	7.73	SR	7.41 – 8.05
12. How much do you know about who and when to call if you have problems after you go home?	8.19	ER	7.89 – 8.50
13. How much do you know your restrictions (what you are allowed and not allowed to do) after you go home?	7.96	SR	7.65 – 8.27
14. How much do you know about follow-up medical care you and your baby need after you go home?	8.47	ER	8.20 – 8.74
15. How much do you know about services and information available to you in your community after you go home?	7.99	SR	7.68 – 8.30
16. How well will you be able to handle the demands of life at home?	7.92	SR	7.63 – 8.20
<i>Composite</i>	8.10	ER	7.80 – 8.40
<i>Coping Ability</i>			
17. How well will you be able to perform your personal care (for example, care of your stitches, incision, breast care, hygiene, bathing, toileting, eating)?	8.16	ER	7.87 – 8.45
18. How well will you be able to perform baby care?	8.36	ER	8.09 – 8.64
19. How much emotional support will you have after you go home?	8.69	ER	8.42 – 8.96
<i>Composite</i>	8.40	ER	8.12 – 8.68
<i>Expected Support</i>			
20. How much help will you have with baby care after you go home?	8.52	ER	8.23 – 8.81
21. How much help will you have with household activities (for example, cooking, cleaning, shopping, babysitting) after you go home?	8.29	ER	7.96 – 8.61
22. How much help will you have with your personal care after you go home?	8.34	ER	8.00 – 8.68
<i>Composite</i>	8.38	ER	8.06 – 8.70
Readiness for Hospital Discharge	7.87	SR	7.55 – 8.19

Notes. wx̄ means weighted mean. VD refers to Verbal Description. The ranges of weighted mean correspond to the level of readiness for hospital discharge among postpartum mothers described as follows: 8.1–10.0 = Extremely Ready (ER); 6.1–8.0 = Slightly Ready (SR); 4.1–6.0 = Somewhat Ready (SoR); 2.1–4.0 = Moderately Ready (MR); 0.0–2.0 = Not at all Ready (Naar).

On the other hand, there is a significant association between gestational age ($X^2 [2, N=119] = 6.96, p<0.05$), employment status, ($X^2 [2, N=119] = 6.00, p<0.05$), gravidity ($X^2 [2, N=119] = 14.31, p<0.05$), parity ($X^2 [2, N=119] = 7.08, p<0.05$) and infant feeding style ($X^2 [2, N=119] = 12.24, p<0.05$) and breastfeeding self-efficacy. Furthermore, individuals with gestational ages less than or equal to 38 weeks exhibit higher self-efficacy (mean=3.87) compared to those with gestation ages greater than or equal to 39 weeks (mean=3.76); unemployed mothers demonstrate greater self-efficacy (mean=4.12) than their employed counterparts (mean=3.70); mothers with two times gravidity and parity manifest higher self-efficacy (mean=4.02; mean=4.04) than those with only one occurrence (mean=3.63;

mean=3.64); and those who preferred to breastfeed exclusively attained higher self-efficacy. Among the sociodemographic variables and perinatal characteristics, gravidity ($X^2 [2, N=119] = 11.19, p<0.05$) and parity, ($X^2 [2, N=119] = 5.08, p<0.05$) were significantly associated with the mother's readiness for hospital discharge. These findings signify that postpartum mothers with two or more gravidity (mean=8.15) and parity (mean=8.11) manifested a higher level of readiness for hospital discharge (see Table 6).

Table 7 illustrates that the spearman's rank-order correlation ($\alpha=0.05$) revealed a significant relationship between postpartum mothers' breastfeeding self-efficacy and their readiness for

Table 5. Association between Socio-Demographic and Perinatal Characteristics to Breastfeeding Knowledge, Breastfeeding Self-efficacy and Readiness for Hospital Discharge

Variables	Breastfeeding Knowledge			Breastfeeding Self-efficacy			Readiness for Discharge		
	χ^2	p-value	Mean	χ^2	p-value	Mean	χ^2	p-value	Mean
Maternal Age	2.13	.345		2.19	.335		0.41	.523	
Gestational Age	3.21	.201		6.96	.031*		0.91	.340	
≤ 38 weeks						3.87			
≥ 39 weeks						3.76			
Civil Status	2.33	.312		1.66	.436		0.03	.864	
^a Educational Attainment	14.70	.005*		1.05	.903		3.59	.166	
HS Graduate			9.25						
College Graduate			11.40						
Master's Degree			11.32						
Employment Status	4.78	.091		6.00	.049*		2.77	.956	
Employed						3.70			
Unemployed						4.12			
Gravidity	2.87	.239		14.31	.001*		11.19	.001*	
1						3.63			7.56
2						4.02			8.15
Parity	3.94	.140		7.08	.029*		5.08	.016*	
1						3.64			7.65
2						4.04			8.11
Number of Prenatal	1.58	.454		3.63	.162		0.27	.602	
Type of Delivery	4.44	.109		1.17	.558		1.48	.223	
Infant Feeding Style	1.17	.557		12.24	.002*		0.09	.762	
Exclusive BF						3.98			
Mixed						3.48			

* $p < .05$; $df = 2$ except ^aEducational Attainment ($df = 4$)

Table 7. Relationship between Level of Breastfeeding Knowledge, Breastfeeding Self-Efficacy and Readiness for Hospital Discharge (n = 119)

Independent Variable	Dependent Variable	r_s	p-value
Breastfeeding Knowledge	Breastfeeding Self-Efficacy	.018	.850
Breastfeeding Knowledge	Readiness for Hospital Discharge	.039	.675
Breastfeeding Self-Efficacy	Readiness for Hospital Discharge	.553	.000*

* $p < .05$; $df = 117$

hospital discharge, $rs(117) = 0.553$, $p = 0.000$. This finding indicates that postpartum mothers with higher levels of breastfeeding self-efficacy exhibit increased readiness for hospital discharge compared to those with lower levels. Conversely, no statistically significant relationships were observed between breastfeeding knowledge and breastfeeding self-efficacy, $rs(117) = 0.018$, $p = 0.850$ and breastfeeding knowledge and readiness for hospital discharge ($rs(117) = 0.039$, $p = 0.675$).

Discussion

In accordance with Zeilinska's (2017) study, postpartum mothers demonstrated good breastfeeding knowledge. The highest scores are in the mother-related subscale and the items related to breast milk composition. At the same time, diet-related responses during breastfeeding received the lowest scores. An alarming observation is the low percentage of breastfeeding knowledge related to the misunderstanding of increasing milk intake to enhance milk production, avoiding potential allergens, and restricting gas-forming foods to prevent infant colic. These misconceptions underscore the need for a comprehensive dietary teaching plan. A higher level of education is also linked with increasing breastfeeding knowledge, indicating that ongoing health education initiatives enhance the knowledge of postpartum mothers, particularly those with lower levels of education. The non-significant association between maternal age, employment status, parity, and number of prenatal visits is contrasted with the study by Gizaw et al. (2022). Alternatively, further investigation can examine the relationship between gestation age, marital status, gravidity, delivery method, infant feeding practices, and breastfeeding knowledge.

Postpartum mothers frequently expressed confidence in breastfeeding their infants. This is supported by the study of Gonzalez (2020) among Filipino postpartum mothers. Postpartum mothers with gestational ages less than or equal to 38 weeks demonstrate higher self-efficacy. Mothers, especially of early-term infants, could encounter challenges adjusting to the parental role, and the difficulties in their confidence can result in anxiety, guilt, lack of attachment, and bonding (Rosenblad & Funquist, 2022).

With higher self-efficacy in breastfeeding, mothers become more responsive in adapting to their infants with adequate breastfeeding support. Further exploration of this phenomenon is warranted.

Moreover, unemployed mothers exhibit greater self-efficacy compared to their employed counterparts. This difference may be attributed to the employed mother's anticipation of challenges related to work resumption, impacting confidence in breastfeeding. The observed significant relationship between gravidity and parity and the self-efficacy score may be attributed to accumulated experiences. Multiparous women tend to have enhanced confidence at breastfeeding since they possess more extensive breastfeeding experiences after having undergone two or more childbirths. This aligns with Gizaw et al. (2022) findings, where multiparous women demonstrated higher self-efficacy than nulliparous women. Those who intend to breastfeed exclusively also showed higher self-efficacy levels than those planning to do mixed feeding, a finding supported by previous studies (Linares et al., 2015; Tsaras et al., 2021). This shows increased confidence before discharge is linked to an increased likelihood of continuing exclusive breastfeeding. Therefore, higher self-efficacy and good breastfeeding support among postpartum mothers before discharge are essential as they transition to home. However, this result deviates from a Philippine study that reported no relationship between infant feeding style and maternal breastfeeding self-efficacy (Gonzalez, 2020).

Gonzalez (2020) and Gizaw et al. (2022) found a positive correlation between the frequency of prenatal visits and breastfeeding self-efficacy. Their studies suggest that the rise in breastfeeding self-efficacy is affected by the number or frequency of prenatal visits. Such finding was not seen in the present study and can be attributed to the fact that some mothers did not report their prenatal visits. This correlation is vital as prenatal visits could be opportunities for more knowledge and education about breastfeeding. Considering the positive correlation between educational status and breastfeeding self-efficacy that has been established in prior studies (Gizaw et al.,

2022; Keddem et al., 2018), this connection is not substantiated in the present research.

Postpartum mothers were slightly ready for hospital discharge. The personal status subscale with a slightly ready result should be given attention. This highlights the need for an intervention plan targeting areas related to physical symptoms such as pain and stress that is indicated by low-weighted means. Moreover, it is essential to incorporate interventions to cope with the physical demands of caring for a newborn post-discharge. This is amended by their needs in the knowledge subscale, where the lowest mean obtained included aspects of monitoring the baby and how to access available community services. Education on strategies to collaborate with healthcare personnel and breastfeeding support groups in the community is essential.

On the other hand, the significant relationship between the parity and gravidity of women to the readiness of hospital discharge (Adams et al., 2022) suggests that multiparous women have a higher readiness level than nulliparous women. The disparity may be attributed to the more remarkable experiences of multiparous women in previous childbirths. Hence, there is a need to formulate a discharge teaching plan to address nulliparous mothers' needs and strengthen the multiparous women's confidence.

Postpartum mothers with a higher breastfeeding self-efficacy score also showed a higher level of readiness for hospital discharge. Mothers confident in breastfeeding are more ready to be discharged from the hospital (Argiropoulos et al., 2022). Conversely, the level of breastfeeding knowledge is not associated with any increase or decrease in breastfeeding self-efficacy and readiness for hospital discharge. This is inconsistent with the study of Gizaw et al. (2022), which showed a significant association between breastfeeding knowledge and breastfeeding self-efficacy. This may imply further exploration of these variables.

Conclusion

The postpartum mothers exhibited good knowledge and confidence in breastfeeding while expressing slight readiness for hospital discharge. Breastfeeding self-efficacy, therefore, is a vital factor to assess when caring for postpartum mothers about to be discharged from the hospital. An essential factor to consider in developing and administering the health teaching plan is the varying levels of education among postpartum mothers. Those with lower levels of education may benefit from a targeted teaching strategy tailored to their specific needs and comprehension level. Nulliparous and employed mothers may require more extensive health teaching and breastfeeding support encompassing both technique and intrapersonal

thoughts of breastfeeding. Thus, factors influencing the confidence of nulliparous and employed mothers to breastfeed may be explored. Confidence to breastfeed is positively linked to an increased likelihood of exclusively breastfeeding. After having amassed more breastfeeding experiences, multiparous women display heightened confidence and as a result, made them more ready for discharge. Therefore, tailoring teaching plans specifically for nulliparous women becomes imperative.

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We do not have any conflict of interest to declare.

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