

Relationship Between Exclusive Breastfeeding Self-Efficacy and Mothers' Practices

Shaimaa Hassan Ahmed Morsy

Nursing Education, Faculty of Nursing, Alexandria University

shaimaa.morsy@alexu.edu.eg

Eman EL-Sayed Taha EL-Sayed

Nursing Education, Faculty of Nursing, Alexandria University

Awatif Ali Hassan Elsharkawy

Pediatric Nursing, Faculty of Nursing, Alexandria University

Abstract

Women have an essential need for the encouragement of Exclusive Breastfeeding (EBF) practices. These practices enhance the mother's Exclusive Breastfeeding Self-Efficacy (EBFSE). **Objective:** Explore the relationship between EBFSE and mothers' practices. **Settings:** Three governmental MCHs in East district- San Stefano, Middle district- Ambrozio and Muharram Bey, as well as Gomrok district- Al-Hajjari. **Subjects:** A convenient sample of 580 lactating mothers. **Tools:** Two tools were used. The first tool is namely Breastfeeding Self-Efficacy Scale to Measure Exclusive Breastfeeding (BSES-EBF). The second one is called an observational checklist regarding mothers' breastfeeding practices. **Results:** Nearly half of the lactating mothers got a high level of total EBFSE whereas less than half of them had a low level. Unfortunately, about three-quarters of mothers had an unsatisfactory level in their total maternal BF practices. **Conclusion:** EBFSE has a positive very strong correlation with mothers' practices regarding EBF. **Recommendations:** Conducting educational sessions regarding effective BF techniques and proper management of its difficulties is mandatory for Health Care Providers (HCPs), and pregnant as well as lactating mothers.

Keywords: Exclusive breastfeeding practice, Breastfeeding self-efficacy

Introduction

Internationally, women have an essential need for encouragement of exclusive breastfeeding (EBF) practices (Abd El-Magead, 2022). World Health Organization (WHO), & United Nations International Children's Emergency Fund (UNICEF), the American Academy of Pediatrics (AAP) described Exclusive Breastfeeding (EBF) as "the given breast milk only on-demand without anything else even a drop of water except oral medications and vitamin/mineral supplements for first six months of life". It is vital to reduce maternal-infant morbidity and mortality rate and enhance the mother's self-confidence and the perception of the ability to continue BF practice (World Health Organization [WHO], 2022).

Maternal Breastfeeding Self-Efficacy (BSE) is defined as a "mother's self-confidence in her ability to breastfeed her infant whatever the challenges". It is based on the social-cognitive theory of Bandura which refers to the belief in one's ability to successfully perform health practices, including EBF (Shahsavani et al., 2019). One of the leading causes of EBF discontinuation is the low maternal BSE. Generally, when a mother's self-confidence increased, the EBF period is prolonged (Maher & Sadrkhanlou, 2019).

Exclusive Breastfeeding (EBF) practices started from birth until six months of infant's age. These practices are enhanced by the Early Initiation of Breastfeeding (EIBF) and Skin-to-Skin Contact (SSC). These EIBF and SSC are protective factors against the early cessation of EBF. They also are considered a prerequisite of maternity care for improving the EBF duration (Al-Jawaldeh et al., 2021; World Health Organization [WHO], 2018).

Globally, only 44% of infants under six months are breastfed exclusively (World Health Organization [WHO] et al., 2022). In Nigeria, the rate of EBF practice has been found to be 28% (Hashim et al., 2017). In Sweden,

Breastfeeding Self-Efficacy Score (BSES) remained higher to be 68% of EBF mothers at three months of infant's life than in those who didn't (Gerhardsson et al., 2018). In Singapore, BSES was significantly higher for mothers who continued EBF for up to six months (De Roza et al., 2019). Otherwise, in Egypt, the mean score of BSE is statistically higher in EBF mothers (Hussien et al., 2019), and the prevalence of EBF practices was 28.6% and only 10.3% of them continued for six months (Elalfy et al., 2022).

Nurse as a health educator is one of the health care providers' teams that plays a significant role in promoting EBF practices as well as maternal EBFSE. EBF educational sessions can increase the maternal EBFSE and continue EBF practices successfully (Citak Bilgin et al., 2020). Many educational materials can be used such as flipcharts and illustrated books to nourish the educational sessions (Chipojola et al., 2020). The health educator role can be achieved through identifying the relation between mothers' EBFSE and their practices which is the cornerstone to be highlighted because it can affect lactation during the first six months of life (Piro & Ahmed, 2020).

Aim of the study

The study aimed to explore the relationship between EBFSE and mothers' practices.

Research Question

What is the relationship between EBFSE and mothers' practices?

Materials and Methods

Materials

Design: A descriptive exploratory research design was used.

Setting: This study was conducted at three Maternal Child Health (MCH) centers in Alexandria affiliated with the following: East district- San Stefano, Middle district- Ambrozio and Muharram Bey, as well as Gomrok district- Al-Hajjari MCHs.

Subjects: A convenient sample of 580 lactating mothers have infants aged from zero to less than six months was included. The numbers of mothers from each MCH were calculated according to a proportionate allocation that depends on their attendance rate. The Epi-info was used to calculate the sample size by applying the following information; population size 580 over 5 months. Assuming that 50% of lactating mothers have high self-efficacy: the margin of error is 5%, design effect 1.5, an alpha error of 0.05, and the minimum required sample size: 576.

Tools: Two tools were used for data collection:

Tool I: Breastfeeding Self-Efficacy Scale to Measure Exclusive Breastfeeding (BSES-EBF):

It was developed by **Boateng et al. (2019)** to assess Exclusive Breastfeeding Self-Efficacy (EBFSE) in Uganda. It was modified by the researcher to match the culture in Egypt and used to measure the cognitive and functional domains of mothers' self-efficacy. The tool included approximately twelve items; five items for cognitive aspects and seven items for functional aspects.

The response categories for each item on the rating scale included; 1= not at all confident; 2= not very confident; 3= sometimes confident; 4= confident; 5=very confident.

The scoring system of the two domains of responses for scale items was as the following; the cognitive domain score ranged from 5–25 and the mean was 15. It was interpreted as high cognitive EBFSE ranged from 21-25, moderate ranged from 13-20, and low ranged from 5-12.

Functional domain scores ranged from 7–35 and the mean was 21. It was interpreted as high functional EBFSE ranged from 29-35, moderate ranged from 18-28, and low ranged from 7-17.

Total scores of BSES-EBF as a one-dimensional scale were interpreted as high total EBFSE ranged from 46-60, moderate ranged from 29-45, and low ranged from 12-28.

Tool II: Observational Checklist regarding Mothers' Breastfeeding Practices:

It was developed by **Elsharkawy (2008)** to assess mothers' practices during breastfeeding. It was modified by the researcher to achieve the study aim. It included eight items, that contained steps of Breastfeeding (BF) techniques like hand washing, infant and mother positions before, during, and after BF session, BF duration, ending of the feeding session, and eructation.

The responses of each item were as follows: done correct answer=2 grades, done incorrect (wrong) answer= 1 grade, and not done= zero grade.

The total scores were 16 grades. It was interpreted as follows: satisfactory ranged from 60% - 100% (10-16) grades, and unsatisfactory was less than 60% (less than 10 grades).

In addition, lactating mothers' sociodemographic data were collected from an attached sheet.

Methods

1. Permission obtained from the Research Ethics Committee of the Faculty of Nursing, Alexandria University.
2. Permission was obtained from the responsible official in the Directorate of Health Affairs to conduct the study.
3. Tool I and tool II were adapted.
4. Tools I and II were tested for their content validity by 5 experts from the faculty of nursing staff members; three from the nursing education department and two from the pediatric nursing department.
5. A pilot study was carried out on 58 lactating mothers (10% of the sample size) to test the clarity, and feasibility of

the tools. No modification was done. The pilot study was included in the sample.

6. The reliability of the tools was done using Cronbach's -Alpha test. The two tools were reliable as $r = 0.86$ for tool I, and $r = 0.84$ for tool II.
7. Every lactating mother was interviewed individually during the morning shift and observed once in the vaccination room of each MCH.
8. Tool II was used to observe lactating mothers during the BF session.
9. Tool I was used to measure the cognitive and functional aspects of exclusive breastfeeding mothers' self-efficacy.
10. The duration of each interview session ranged from 10 – 20 minutes.
11. Data was collected over five consecutive months, four days/ week. It begins from November 2020 to March 2021.

Statistical analysis

Data analysis was done using the computer software of Microsoft Excel program and Statistical Package for Social Science (SPSS) version 25. Data were presented using descriptive statistics in the form of frequencies and percentages for categorical data, the mean (\bar{X}), and standard deviation (SD) for quantitative data. Qualitative variables were compared using the chi-square test (χ^2). Pearson correlation test (r- test) was also used to test the correlation between the study variables. The data was coded, computerized, tabulated, and analyzed.

Ethical considerations:

- Written consent from mothers for participation in the study was obtained and witnesses wrote consent from the head nurse for observation after explaining the aim of the study.
- Participants' privacy through closing the room doors, respect for dignity, and anonymity were considered.
- The confidentiality of data was assured.
- Participation was done voluntarily.

Results

Sociodemographic data of lactating mothers are presented in **table (1)**. It was observed that the ages of nearly half of the lactating mothers (54.1%) ranged from 20 to less than 30 years old. It was noticed that the mean of lactating mothers' age was 29.87 ± 7.61 years. It was found that nearly two-thirds of them (68.3%) finished their university degree or higher. It also revealed that less than two-thirds of lactating mothers (58.8%) are working from 6-8 hours/ day. On the other hand, half of working and lactating mothers (50.0%) took four months of maternity leave.

The distribution of lactating mothers according to their levels of EBFSE is illustrated in **figure (1)**. According to the cognitive domain of EBFSE, nearly half of the lactating mothers (49.1%) accomplished a high level and 47.3% of them had a low level. As regards the functional domain of EBFSE, half of the lactating mothers (49.1%, and 50.0% respectively) attained high and moderate levels. Globally, it was also found that nearly half of the lactating mothers (50.2%) got a high level whereas 44.8% of them had a low level of EBFSE.

Table (2) describes the relationship between lactating mothers' sociodemographic data and their total score of EBFSE. It reveals that all lactating mothers (100.0%) whose age was less than 20 years and nearly two-thirds of them (63.7%) whose age ranged from 20 to less than 30 years old had a low EBFSE score. While nearly three-quarters of lactating mothers (72.8%) who are aged 30 to less than 40 years old and all mothers (100.0%) aged 40 years and above attained a high EBFSE score. All lactating mothers (100.0%) who had educational degrees from illiterate to preparatory got a low score of EBFSE and 80.6% of mothers who finished secondary school. On the other hand, 73.5% of those who finished a university degree or higher achieved a total score with a high EBFSE. Majority of lactating and employed mothers (88.2%) and less than half of unemployed mothers (47.8%) attained EBFSE with a high total score. There were statistically significant

differences between lactating mothers' sociodemographic data and EBFSE total score ($P= 0.014, 0.001, 0.015$ respectively).

The distribution of lactating mothers according to their total levels of BF practices is presented in **figure (2)**. Concerning mothers' BF practice, the majority of them (86.2%) and (87.6%) got an unsatisfactory level before and during lactation sessions respectively. While most of the lactating mothers (95.9%) gained a satisfactory level after lactation sessions. Unfortunately, about three-quarters of them (75.2%) had an unsatisfactory level in their total maternal BF practice.

Table (3) shows the relationship between lactating mothers' sociodemographic data and their total BF practices. It was obvious that all mothers (100.0%) whose ages were less than 20 years old and from 20 to less than 30 years old had unsatisfactory BF practices. It was clear that nearly half of the mothers (50.6%) who aged from 30 years old to less than 40, and 100.0% of those who aged ranged from 40 years old and above achieved satisfactory BF practices. Moreover, all mothers (100.0%) in educational levels starting from illiterate to preparatory, as well as 96.8% of them who finished secondary school and 64.6% of those who completed a university degree or higher had unsatisfactory BF practices. It was also noted that 88.2% of lactating and working mothers attained satisfactory BF practices. While 79.1% of mothers who were unemployed had unsatisfactory BF practices. Lactating mothers' sociodemographic data and their EBFSE practices had statistically significant differences ($p= 0.005, 0.000, \text{ and } 0.040$ respectively).

Table (4) explains the correlation between mothers' EBFSE and their BF practices. It was observed that there is a very strong correlation between mothers' EBFSE and their BF practices ($r= 0.810$) besides a statistically significant difference ($P= 0.000$).

Discussion

Exclusive Breastfeeding Self-Efficacy (EBFSE) is considered a crucial target to support lactating mothers to breastfeed during the first six months after delivery. EBF shall save the health and well-being of infants less than five years old according to the Sustainable Development Goals 2030 (SDGs) (**World Health Organization [WHO], 2021**). Thus, the current study was conducted to explore the relationship between Exclusive Breastfeeding Self-Efficacy (EBFSE) and mothers' practices.

A positive attitude is an influential key to the success of EBF behavior (**Dukuzumuremyi et al., 2020**). In the current study, it was revealed that less than half of lactating mothers had low levels in their total EBFSE including cognitive and functional domains (**Figure 1**). It could be due to maternal negative attitudes toward insufficient breast milk production besides the crying dissatisfied infant. In addition, BF is a complex social behavior, so the mother has a feeling of guilt, stress, and anxiety. Therefore, the mother became low self-confidence to breastfeed exclusively or to continue. **Ejje et al. (2021)** were congruent findings with the present results and reported that perceived breast milk insufficiency was a critical barrier to EBF. Furthermore, **Van Ryneveld et al. (2020)** revealed that most lactating mothers faced EBF continuation challenges in their perception of insufficient breast milk production and the culture of introduced herbal fluids for infants. **Hegazi et al. (2019)** also found that insufficient maternal human milk perception and infant dissatisfaction affect negatively EBF. Inconsistent results with the current study, **Mohamed et al. (2018)** found that there is no difference in maternal attitude toward EBF practice.

Exclusive breastfeeding self-efficacy (BSE) could be contributed by numerous maternal factors such as sociodemographic characteristics namely maternal age (**Mopa-Egbunu et al., 2021**). Results of the current study showed that the older age and the higher educational levels housewives gained satisfactory BF

practices (**Table 2**) with high maternal EBFSE scores (**Table 3**). It was found that there were statistically significant differences between mothers' sociodemographic data, BF practices, and EBFSE total score (**Table 2, 3**). It could be that the availability of a husband as a social support member with higher education increased mothers' confidence to breastfeed exclusively which would improve their practices and EBFSE. These findings were in line with (**Eslami et al., 2020**) who reported that BSE scores increased in older mothers and lowered among mothers aged less than 19 years. Moreover, **Witten et al. (2020)** concluded that highly educated mothers had high BSE scores. On the other hand, **Gonzales (2020)** revealed that there was no significant relationship between maternal age, education, occupation, and postnatal BSE.

Exclusive Breastfeeding (EBF) practices are a crucial part of maternity health care (**Al-Jawaldeh et al., 2021**). It was noticed that the relationship between lactating mothers' sociodemographic data and their total BF practices had statistical significance. It was clear that the majority of working and lactating mothers who finished secondary school were older age and maintained satisfactory BF practices (**Table 3**). These findings were in line with **Hossain et al. (2018)** who concluded that there was a significant correlation between lactating mothers' sociodemographic data and EBF practices. On the contrary, **Elalfy et al. (2022)** were inconsistent and found that nearly half of the university-educated lactating mothers who practiced EBF successfully were housewives and younger than 30 y.

Breastfeeding Self-Efficacy (BSE) is influenced by mothers' EBF practices (**Tseng et al., 2020**). The present study found a very strong positive correlation between mothers' total BF practices and their EBFSE (**Table 4**). It could be related to the high confidence about BF among mothers encouraged to practice correct BF techniques. This current finding was supported by **Çankaya and Ataş (2022)** who concluded that the mothers who have

higher EBF satisfaction correlated positively with BSE. Furthermore, **Agrina et al. (2021)** reported a significant correlation between EBF activities and BSE. Moreover, **Piro and Ahmed (2020)** reported that higher postnatal BSE scores are associated with a higher level of EBF practice. On the contrary, **Kahforoushan et al. (2022)** reported that there was no statistically significant relationship between maternal EBF practice and BSE.

Conclusion

Based on the findings of the present study, it can be concluded that Exclusive Breastfeeding Self-Efficacy (EBFSE) has a positive very strong correlation with mothers' practices regarding EBF.

Recommendations

Based on the results of the current study, the following recommendations are suggested:

1. Conducting periodical cognitive behavioral counseling sessions on EBF by Health Care Providers (HCPs) for lactating mothers and their families.
2. Establishing social support groups including parents with a previous positive experience with EBF to enhance maternal EBFSE.
3. Performing educational sessions using audiovisual materials such as illustrated posters regarding effective BF techniques and proper care of its difficulties is mandatory for HCPs, and pregnant as well as lactating mothers.
4. Reinforcement of policies, regulations, and systems that enable working mothers to exclusively breastfeed their infants up to 6 months of age.

Table (1): Sociodemographic Data of Lactating Mothers (n=580)

Items	No	%
Age /year		
• Less than 20	4	0.7
• 20 —	314	54.1
• 30 —	239	41.2
• 40 & above	23	4.0
Mean ± SD	29.87 ± 7.61	
Education		
• Illiterate	9	1.6
• Read & write	9	1.6
• Primary	16	2.8
• Preparatory	26	4.5
• Secondary	124	21.4
• University degree or higher	396	68.3
Employment		
• Employed	34	5.9
• Unemployed	546	94.1
Working hours n= 34		
• Less than 6 hours	10	29.4
• 6-8 hours	20	58.8
• More than 8 hours	4	11.8
Duration of maternity leave		
• One month	7	20.6
• Three months	7	20.6
• Four months	17	50.0
• Not available	3	8.8

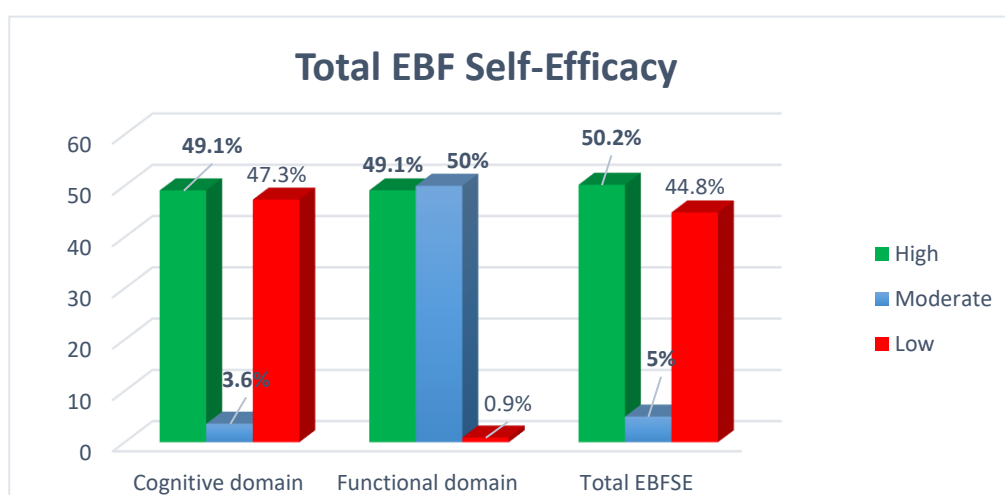


Figure (1): Distribution of Lactating Mothers according to their Levels of Exclusive BreastFeeding Self-Efficacy (EBFSE) (n =580)

Table (2): Relationship between Lactating Mother’s Sociodemographic Data and their Total Score of Exclusive BreastFeeding Self-Efficacy (EBFSE) (n=580)

Lactating mother’s sociodemographic data	Total score of EBFSE						No	X ²	P-Value
	High (n=291)		Moderate (n=29)		Low (n=260)				
	No	%	No	%	No	%			
Age /year									
• Less than 20	0	0.0	0	0.0	4	100.0	4	9.124	0.014*
• 20 —	94	29.9	20	6.4	200	63.7	314		
• 30 —	174	72.8	9	3.8	56	23.4	239		
• 40 & above	23	100.0	0	0.0	0	0.0	23		
Education level									
• Illiterate	0	0.0	0	0.0	9	100.0	9	13.05	0.001*
• Read & write	0	0.0	0	0.0	9	100.0	9		
• Primary	0	0.0	0	0.0	16	100.0	16		
• Preparatory	0	0.0	0	0.0	26	100.0	26		
• Secondary	0	0.0	24	19.4	100	80.6	124		
• University degree or higher	291	73.5	5	1.3	100	25.2	396		
Employment									
• Employed	30	88.2	4	11.8	0	0.0	34	11.97	0.015*
• Unemployed	261	47.8	25	4.6	260	47.6	546		

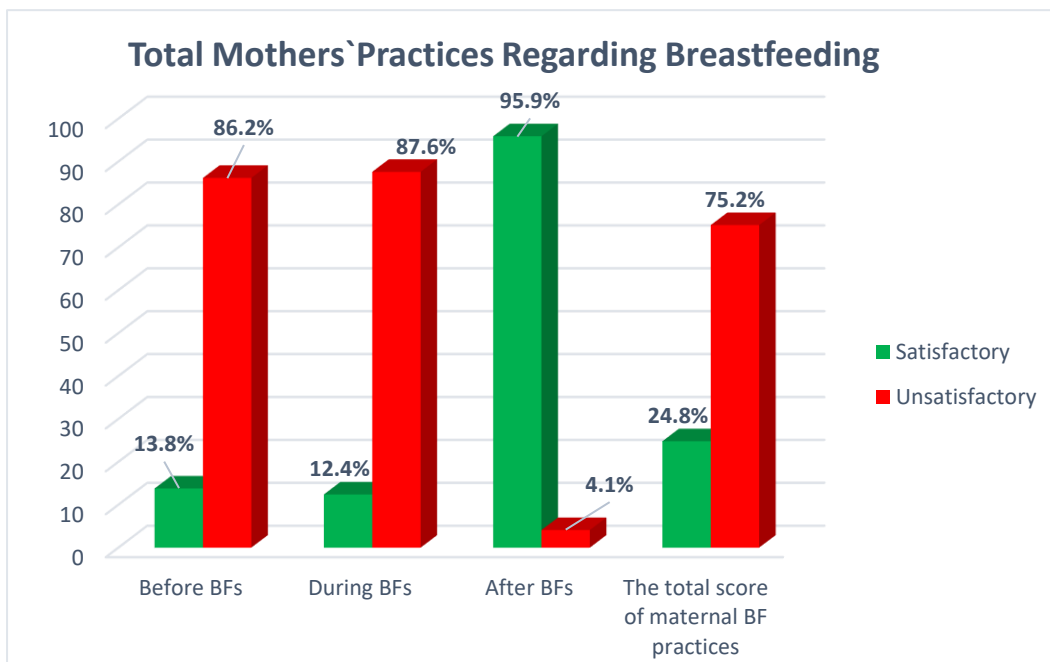


Figure (2): Distribution of Lactating Mothers according to their Levels of BF Practices (n =580)

Table (3): Relationship of Lactating Mothers' Sociodemographic Data to their Total BF Practices (n=580)

Lactating mothers' sociodemographic and obstetrical data	Total BF practices				No	X ²	P-Value
	Satisfactory (n=144)		Unsatisfactory (n=436)				
	No	%	No	%			
Age /year							
• Less than 20	0	0.0	4	100.0	4	13.24	0.005*
• 20 —	0	0.0	314	100.0	314		
• 30 —	121	50.6	118	19.4	239		
• 40 & above	23	100.0	0	0.0	23		
Education level							
• Illiterate	0	0.0	9	100.0	9	14.99	0.000*
• Read & write	0	0.0	9	100.0	9		
• Primary	0	0.0	16	100.0	16		
• Preparatory	0	0.0	26	100.0	26		
• Secondary	4	3.2	120	96.8	124		
• University degree or higher	140	35.4	256	64.6	396		
Employment							
• Employed	30	88.2	4	11.8	34	9.998	0.040*
• Unemployed	114	20.9	432	79.1	546		

Table (4): Correlation between Mothers' Exclusive BreastFeeding Self-Efficacy (EBFSE) and their BF Practices (n=580)

Correlation	Total Mothers' EBFSE
Total BF practices	r= 0.810
	P= 0.000*

r = Pearson correlation coefficient test
 r = 0.00-0.19 'very weak'
 r = 0.20-0.39 'weak'
 *Significant at p < 0.05

r = 0.40-0.59 'moderate'
 r = 0.60-0.79 'strong'
 r = 0.80-1.0 'very strong'

References

- Abd El-Magead, W. E. (2022). *Factors associated with the cessation of exclusive breastfeeding among lactating women* [Master Thesis]. Mansoura University. *Egyptian Universities Libraries Consortium (EULC)*.
http://srv2.eulc.edu.eg/eulc_v5/Libraries/Thesis/BrowseThesisPages.aspx?fn=PublicDrawThesis&BibID=12766975.
- Agrina, A., Sabrian, F., Hasanah, O., Erika, E., & Hasneli, Y. (2021). Mothers' Breastfeeding Practices and Self-Efficacy. *Jurnal Keperawatan Indonesia*, 24(1), 17-24.
<http://doi.org/10.7454/jki.v24i1.1083>
- Al-Jawaldeh, A., Abul-Fadl, A., & Farghaly, N. F. (2021). Enacting the Code by effective national laws influence trends in exclusive breastfeeding: An analytical study from the Eastern Mediterranean Region. *Indian Journal of Child Health*, 8(1), 12-19.
<https://doi.org/10.32677/IJCH.2021.v08.i01.003>
- Boateng, G. O., Martin, S. L., Tuthill, E. L., Collins, S. M., Dennis, C. L., Natamba, B. K., & Young, S. L. (2019). Adaptation and psychometric evaluation of the breastfeeding self-efficacy scale to assess exclusive breastfeeding. *BMC pregnancy and childbirth*, 19(1), 73.
<http://doi.org/10.1186/S12884-019-2217-7>
- Çankaya, S., & Ataş, A. (2022). The relationship of breastfeeding self-efficacy with relationship satisfaction and family function in mothers during the first year postpartum. *Early Child Development and Care*, 2, 1-14.
<http://doi.org/10.1080/03004430.2022.2042278>
- Chipojola, R., Chiu, H. Y., Huda, M. H., Lin, Y. M., & Kuo, S. Y. (2020). Effectiveness of theory-based educational interventions on breastfeeding self-efficacy and exclusive breastfeeding: A systematic review and meta-analysis. *International journal of nursing studies*, 109, 103675.
<https://doi.org/10.1016/j.ijnurstu.2020.103675>
- Citak Bilgin, N., Ak, B., Ayhan, F., Kocyigit, F., Yorgun, S., & Topcuoglu, M. A. (2020). Effect of childbirth education on the perceptions of childbirth and breastfeeding self-efficacy and the obstetric outcomes of nulliparous women(*,**,**). *Health care for women international*, 41(2), 188-204.
<http://doi.org/10.1080/07399332.2019.1672171>
- De Roza, J. G., Fong, M. K., Ang, B. L., Sadon, R. B., Koh, E. Y. L., & Teo, S. S. H. (2019). Exclusive breastfeeding, breastfeeding self-efficacy and perception of milk supply among mothers in Singapore: A longitudinal study. *Midwifery*, 79, 102532.
<https://doi.org/10.1016/j.midw.2019.102532>
- Dukuzumuremyi, J. P. C., Acheampong, K., Abesig, J., & Luo, J. (2020). Knowledge, attitude, and practice of exclusive breastfeeding among mothers in East Africa: a systematic review. *International Breastfeeding Journal*, 15(1), 70.
<https://doi.org/10.1186/s13006-020-00313-9>
- Ejje, I. L., Eleje, G. U., Chibuzor, M. T., Anetoh, M. U., Nduka, I. J., Umeh, I. B., Ogbonna, B. O., & Ekwunife, O. I. (2021). A systematic review of qualitative research on barriers and facilitators to exclusive breastfeeding practice in sub-Saharan African countries. *International Breastfeeding Journal*, 16(1), 44.
<https://dx.doi.org/10.21608/SCUMJ.2022.209404>

- Elalfy, S. A., Elsayed, W. A., Abdelrhman, A. G., & Eldahshan, N. A. (2022). Factors Affecting Exclusive Breast Feeding of Infants in Port Fouad City. *Suez Canal University Medical Journal*, 25(1), 57-67. <https://dx.doi.org/10.21608/SCUMJ.2022.209404>
- Elsharkawy, A. A. (2008). *Effect of evidence-based guidelines of breastfeeding on growth parameters of low birth weight neonates in neonatal intensive care unit* (Publication No 11273389) [Doctoral Thesis]. Alexandria University. *Egyptian Universities Libraries Consortium (EULC)*. http://srv2.eulc.edu.eg/eulc_v5/Libraries/Thesis/BrowseThesisPages.aspx?fn=PublicDrawThesis&BibID=11273389
- Eslami, E., Pakseresht, S., Niknami, M., & Roshan, Z. (2020). Comparison of breastfeeding self-efficacy in mothers with different ages. *Journal of Holistic Nursing and Midwifery*, 30(4), 208-216. <https://doi.org/10.32598/jhnm.30.4.1096>
- Gerhardsson, E., Hildingsson, I., Mattsson, E., & Funkquist, E. L. (2018). Prospective questionnaire study showed that higher self-efficacy predicted longer exclusive breastfeeding by the mothers of late preterm infants. *Acta paediatrica (Oslo, Norway : 1992) (International Journal of Pediatrics)*, 107(5), 799-805. <http://doi.org/10.1111/apa.14229>
- Gonzales, A. M., Jr. (2020). Breastfeeding Self-Efficacy of Early Postpartum Mothers in an Urban Municipality in the Philippines. *Asian/Pacific Island nursing journal*, 4(4), 135-143. <http://doi.org/10.1186/s13006-017-0102-4>
- Hashim, T. H., Mgongo, M., Katanga, J., Uriyo, J. G., Damian, D. J., Stray-Pedersen, B., Wandel, M., & Msuya, S. E. (2017). Predictors of appropriate breastfeeding knowledge among pregnant women in Moshi Urban, Tanzania: a cross-sectional study. *International Breastfeeding Journal*, 12(1), 11. <http://doi.org/10.1186/s13006-017-0102-4>
- Hegazi, M. A., Allebdi, M., Almohammadi, M., Alnafie, A., Al-Hazmi, L., & Alyoubi, S. (2019). Factors associated with exclusive breastfeeding in relation to knowledge, attitude and practice of breastfeeding mothers in Rabigh community, Western Saudi Arabia. *World journal of pediatrics : WJP*, 15(6), 601-609. <https://doi.org/10.1007/s12519-019-00275-x>
- Hossain, M., Islam, A., Kamarul, T., & Hossain, G. (2018). Exclusive breastfeeding practice during first six months of an infant's life in Bangladesh: a country based cross-sectional study. *BMC pediatrics*, 18(1), 93. <https://doi.org/10.1186/s12887-018-1076-0>
- Hussien, N. N., Refaat, D. O., & Arafa, N. E. (2019). Alternative Feeding Techniques and Its Effect on Breastfeeding Self-Efficacy. *Journal of Family Medicine and Health Care*, 5(2), 22-27. <http://doi.org/10.11648/j.fjmh.20190502.12>
- Kahforoushan, A., Hasanpour, Sh., & Mirghafourvand, M. (2019). Breastfeeding self-efficacy and its relationship with the perceived stress and the breastfeeding performance in Iranian mothers with late preterm infants. Faculty of Tabriz of Medical Sciences. Iran. *Researchsquare*. <https://doi.org/10.21203/rs.3.rs-87806/v1>
- Maher, A., & Sadrkhanlou, M. (2019). Investigating the Reasons of Breastfeeding Self-efficacy among Mothers Referring to Urmia Healthcare Centers in the 2017-2018. *Independent*. http://www.researchgate.net/publication/333260470_Investigating_the_Reasons_of_Breastfeeding_Self-efficacy_among_Mothers_Referring_t

- [o Urmia Healthcare Centers in the 2017-2018.](#)
- Mohamed, M. J., Ochola, S., & Owino, V. O. (2018). Comparison of knowledge, attitudes and practices on exclusive breastfeeding between primiparous and multiparous mothers attending Wajir District hospital, Wajir County, Kenya: a cross-sectional analytical study. *International Breastfeeding Journal*, 13(1), 11. <https://doi.org/10.1186/s13006-018-0151-3>
- Mopa-Egbunu, A., Bello, I., & Edochie, R. (2021). Predictive influence of self-efficacy on infant feeding attitudes in Shahsavan, Z., Oveisi, S., & Jourabchi, Z. (2019). The Effect of Cognitive-Behavioral Counseling on Breastfeeding Self-Efficacy of Pregnant Women. *Journal of holistic nursing and midwifery*, 29(3), 176-183. <https://doi.org/10.32598/JHNM.29.3.176>
- Tseng, J. F., Chen, S. R., Au, H. K., Chipojola, R., Lee, G. T., Lee, P. H., Shyu, M. L., & Kuo, S. Y. (2020). Effectiveness of an integrated breastfeeding education program to improve self-efficacy and exclusive breastfeeding rate: A single-blind, randomised controlled study. *International journal of nursing studies*, 111, 103770. <https://doi.org/10.1016/j.ijnurstu.2020.103770>
- Van Ryneveld, M., Mwangome, M., Kahindi, J., & Jones, C. (2020). Mothers' experiences of exclusive breastfeeding in a postdischarge home setting. *Maternal & child nutrition*, 16(4), e13016. <https://doi.org/10.1111/mcn.13016>
- Witten, C., Claasen, N., Kruger, H. S., Coutsoodis, A., & Grobler, H. (2020). Psychosocial barriers and enablers of exclusive breastfeeding: Lived experiences of mothers in low-income townships, North West Province, South Africa. *International Breastfeeding Journal*, 15(1), 76. <https://doi.org/10.1186/s13006-020-00320-w>
- World Health Organization [WHO]. (2018). *Preterm birth*. WHO. <https://www.who.int/news-room/factsheets/detail/preterm-birth>.
- World Health Organization [WHO]. (2022). *Exclusive breastfeeding*. WHO. <https://apps.who.int/nutrition/topics/exclusive-breastfeeding/en/>.
- World Health Organization [WHO]. (2021). *Global Breastfeeding Collectives: Nutrition and food safety*. WHO. <http://www.who.int/teams/nutrition-and-food-safety/food-and-nutrition-actions-in-health-systems/global-breastfeeding-collective>.
- World Health Organization [WHO], [UNICEF], U. N. C. E. F., & Food and Agriculture Organization [FAO]. (2022). *UN Report: Global hunger numbers rose to as many as 828 million in 2021*. WHO. <http://www.who.int/news/item/06-07-2022-un-report--global-hunger-numbers-rose-to-as-many-as-828-million-in-2021>.
- postpartum mothers. *Journal of Behavioural Studies*, 3(1), 33-43. <http://154.68.199.18:8080/bitstream/123456789/2948/1/PREDICTIVE%20INFLUENCE%20OF%20SELF-EFFICACY%20ON%20INFANT%20FEEDING%20ATTITUDES.pdf>.
- Piro, S. S., & Ahmed, H. M. (2020). Impacts of antenatal nursing interventions on mothers' breastfeeding self-efficacy: an experimental study. *BMC pregnancy and childbirth*, 20(1), 19. <https://doi.org/10.1186/s12884-019-2701-0>