

Factors Associated with Cessation of Exclusive Breastfeeding among Lactating Mothers



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1.ABSTRACT

Background: Worldwide, inadequate rate of exclusive breastfeeding result from many alternative factors such as fetal, maternal or socio-cultural factors. **Aim:** To assess factors associated with cessation of exclusive breastfeeding among lactating mothers. **Study design:** A descriptive cross-sectional design was utilized in this study. Study subjects: A convenient sample of 206 women who stopped exclusive breastfeeding and attended at Health Unit in Diarb Negem city, Sharkia, Egypt. A structured interview questionnaire was utilized to assess socio- demographic data and factors associated with cessation of exclusive breastfeeding. **Results:** The study findings revealed that breast factors presented more than three-quarters of maternal factors and more than two-thirds of infantile factors were related to breastfeeding process that attributed to cessation of exclusive breastfeeding among mothers. **Conclusion:** The study question was answered where; the factors associated with cessation of exclusive breastfeeding were maternal and infantile factors. The most maternal factor was breast factor while the most infantile factor was unsatisfactory infant weight gain. **Recommendation:** Implementation of antenatal educational programs regarding importance of exclusive breast breastfeeding.

Keywords: Breastfeeding, Cessation, Exclusive breastfeeding, Factors

2.Introduction:

According to WHO recommendations; early initiation of breastfeeding (BF) should be within 1 hour of birth; exclusive breastfeeding (EBF) should be for the first 6 months of life; and BF should be continued with introduction of nutritionally-adequate and safe complementary (solid) foods at 6 months up to 2 years of age. All this is critical for infant health and could save lives of over 820 000 children under the age of 5 years each year (WHO, 2020).

Exclusive breastfeeding is giving breast milk only for infant for the first six months of life without introducing any other forms of nutrition except breast milk with initiation within one hour of life and continued BF for up to two years old or beyond (Senosy et al., 2020). In the Holy Quran Allah commanded mothers to breastfeed their babies up to 2 years, if possible, and states that every newborn infant has the right to be breastfed. The translation of verse 233 is "The mothers shall give suck to their children for two whole years that is for those parents who desire to complete the term of suckling" (Al-Hilali& Khan, 1997).

Exclusive breastfeeding reduces infants' mortality and morbidity in the first year of life. In addition, it reduces the risk for diarrhea, infections,

and allergic reactions, as well as it decreases the risk of infant malnutrition, gastro-intestinal diseases, obesity in childhood as well as its consequences, such as decrease liability for hypertension, heart diseases, and diabetes either during childhood or later on life (Rahman et al., 2020).

Furthermore, EBF has additional benefits for mothers where; it is evident that BF mothers at lower risk for psychological disturbance and gynecological cancer such as breast, ovarian and uterine cancer. Moreover, the financial cost benefits of normal breast milk than the artificial milk, and its availability at any time suitable for feeding without any preparation. Besides, breastfeeding enhances infant mother bonding and attachment (Hendaus et al., 2018).

Many factors can affect early initiation and continuing of BF. It is estimated that 78 million babies are not breastfed within the first hour of life, which make them less likely to continue BF. These factors may include maternal misbeliefs and misperceptions about insufficiency of breast milk or painful BF practice. Also, some maternal characteristics such as maternal age, family income, education, knowledge, and ethnicity can

influence on continuation of EBF (Ahmed, Pushpamala Ramaiah & Lindsay, 2019).

1.2 Significance of the study

Nowadays, exclusive breastfeeding is a new neglected issue from the contemporary mothers. The exact cause is undetermined, but it may differ from one mother to another. Although, its well-recognized benefits and risks of early cessation, even though WHO recommendations about EBF rate that it should be up to at least 50% (WHO, 2020).

It is estimated that only (16,8%) was reported as a rate for EBF for developed countries such as United states. In other countries such as India the EBF prevalence rates was (34%). Also, EBF rates were estimated to be (38.9%) in Turkey, (20.7%) in Tanzania, (12.9%) in Syria, (31.4%) in Spain, (13.8%) in Canada and (5.5%) in Italy. In Egypt, it is estimated that only (9.7%) who are breastfeed their babies exclusively (Behzadifar et al., 2019).

In Mansoura, it is estimated that (14.1%) who are breastfeed their babies exclusively (Abou-ElWafa & El-Gilany, 2018). So, it is important to bridge the gap between the current neglected EBF issue and World Health Organization recommendations based on careful assessment of the EBF.

2.2 Aim of the study

The study aimed to assess factors associated with cessation of exclusive breastfeeding among lactating mothers.

3.2 Research Question:

What are the factors associated with cessation of exclusive breastfeeding among lactating mothers?

3. Methodology

1.3 Study design:

A descriptive cross-sectional design was utilized in this study.

2.3 Study Setting

The study conducted at Health Unit in Diarb Negm city, sharkia, Egypt. The health unit provided health services for 44 surrounding villages.

3.3 Subjects of the study

The study subject included a convenient sample of 206 women who stopped exclusive breastfeeding and attended at the previous setting to vaccinate their babies over a period of six months started from the beginning of October 2020 to the end of March 2021.

4.3 Sample size calculation

The previous study showed that considering power of study of 80%, to calculate the sample size with precision/absolute error of 5% and type 1 error of 5%: the sample size was calculated according to the following equation= $[(Z_{1-\alpha/2})^2 \cdot P(1-P)]/d^2$ Where, $Z_{1-\alpha/2}$ = is the standard normal variate, at 5% type 1 error ($p < 0.05$) it is 1.96. P = the expected proportion in population based on previous studies. d = absolute error or precision. So, sample size = $[(1.96)^2 \cdot (0.841) \cdot (1-0.841)] / (0.05)^2 = 205.4$

Based on the above formula, the sample size required for the study is 206.

5.3 Data Collection Tool

A Structured interview questionnaire: was developed by the researcher after revising the interrelated national and international literatures and involved of four parts; the first part regarding socio- demographic data of the mothers such as age, level of education, socio-economic status, marital status, occupation, etc. The second part entailing reproductive history such as parity, number of living children, method of last delivery (normal or caesarean).

The third part assessing breastfeeding preparation, initiation and pattern. Meanwhile the fourth part assessing factors associated with cessation of exclusive breastfeeding. It consisted of maternal factors such as personal causes, psychological causes, physical causes and breast factors and infantile factors such as infantile abnormalities after delivery and breastfeeding process factors.

6.3 Validity of the tool

Tool validity was revised by a panel of 3 specialists in Maternity Nursing before introducing it to the participant mothers. Some modifications were done such as categorizing items related to factors and paraphrasing of some sentences.

7.3 Reliability of the tool

Cranach's alpha test for reliability and internal consistency was (0.864) for structure interview questionnaire tool, hence the tool showed high reliability.

8.3 Pilot study

The pilot study was conducted on 10% (21) of the predetermined sample size to determine the time needed to complete the questionnaire and test the applicability of the tool. The results of the pilot study was excluded from the study sample.

9.3 Ethical Consideration

An official permission was obtained from the Ethics Committee of the Faculty of Nursing, Mansoura University. The purpose of the study was clarified to the study subjects and a written consent to participate in the study was obtained. Participation in the study was voluntary and each participant had the right to withdraw from the study at any time. Anonymity, privacy, safety and confidentiality were absolutely assured throughout the whole study.

10.3 Field work

Official permissions from the director of the health unit in Diarb Negm city was obtained to carry out the study. The researcher attended to the health unit of Diarb Negm city three days per week (Saturday, Tuesday and Thursday) which are the days of schedule vaccination of infants from 9.00 AM. To 12.00 PM. The researcher introduced herself to the mother, a full explanation of the aim was done to obtain their acceptance and cooperation. The mothers informed of the voluntary nature of the study. After they provide informed consent, the mother was asked to participate in a 10-to-15-minute face to face a structured interview at the health unit. Each mother was interviewed separately to keep privacy.

11.3 Statistical analysis

All statistical analyses were accomplished using SPSS for windows version 22.0. Continuous data were normally distributed and were stated in mean \pm standard deviation (SD) Categorical data were stated in number and percentage.

4. RESULTS

Table (1) Reveals that the mean age of the study mothers was 26.9 ± 5.2 . Nearly 51.9% from urban and the majority (86.4%) were married. Almost half (48.1%) of the mothers had university education and slightly and (80.6%) of them were housewives.

Table (1): Socio-demographic data of the mothers

Socio-demographic data	No. (N=206)	%
Age (years)		
≤ 20	26	12.6
>20 – 25	58	28.2
>25– 30	76	36.9
>30	46	22.3
Mean \pm SD	26.9 ± 5.2	
Residence		
Urban	107	51.9
Rural	99	48.1
Marital Status		
Married	178	86.4
Divorced	28	13.6
Educational level		

Table (2) Denotes that more than half (52.4%) of the mothers delivered twice to three times. In addition, more than one-third (36.4%) of them had one living child and more than half (63.1%) of them delivered by cesarean section at their last delivery.

Table (3) Evidence that slightly more than three-fourths (79.6%) of the mothers were intended to breastfeed their babies exclusively, but the majority (89.8%) of them did not prepare their breast during pregnancy and more than half (57.1%) of the mothers prepared their breast incorrectly (n=21). In addition, more than half (52.4%) of them did not have health education regarding exclusive breastfeeding.

Table (4) Reveals that most (99.5%) of the mothers did not have skin-to-skin contact immediately after delivery, only, (54.4%) of them breastfed their babies immediately after delivery. However most (90.8%) of them had rooming in with their babies, 82.5% of mothers did not have any support during the golden hour.

Table (5) Presents that the most common personal cause that led to cessation of exclusive breastfeeding was return to work (65.8%). In addition, the most common psychological cause for cessation of exclusive breastfeeding was fearing of breast boding mutilation (57.1%). In addition, the most common physical cause for cessation of exclusive breastfeeding was exhaustion from nursing twins (52.6%). Furthermore, the most common breast factor for cessation of exclusive breastfeeding was perceived insufficient milk supply (77.9%).

Table (6) Demonstrates that the most factors related to infantile abnormalities after delivery was related to low-birth-weight baby (86.4%) and the most breastfeeding process factor was related to unsatisfactory infant weight gain with breastfeeding (92.5%).

Basic	34	16.5
Secondary	73	35.4
University or higher	99	48.1
Occupation		
Housewife	166	80.6
Working	40	19.4

Table 2. Reproductive data of the mothers

Reproductive data	No.	%
	(N=206)	
Parity		
Once	84	40.8
2 – 3 times	108	52.4
> 3 times	14	6.8
Number of living children		
One	75	36.4
Two	70	34.0
3 or more	61	29.6
Mode of last delivery		
Normal delivery	50	24.3
Cesarean section	130	63.1
Emergency cesarean section	26	12.6

Table 3. Breastfeeding preparation among the mothers

Preparation items	No.	%
	(N=206)	
Planning for exclusive breastfeeding		
Yes	164	79.6
No	42	20.4
Prepare the breast during pregnancy		
Yes	21	10.2
No	184	89.8
Preparation of nipple by rolling upward, outward (n=21)		
Correct	9	42.9
Incorrect	12	57.1
Had educational knowledge for exclusive breastfeeding		
Yes	98	47.6
No	108	52.4

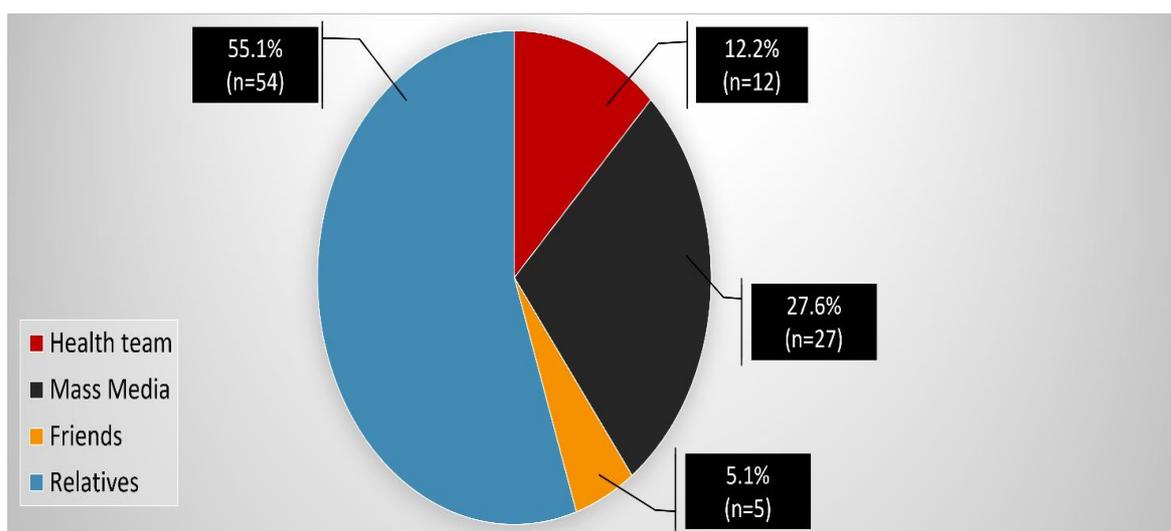


Figure 1. Source of knowledge regarding exclusive breastfeeding (N=98)

Table 4. Breastfeeding initiation (Golden hour) among the mothers

Items of golden hour	Yes		No	
	No.	%	No.	%
Practicing skin-to-skin contact immediately after the time of delivery	1	0.5	205	99.5
Putting the baby immediately on the breast after delivery	112	54.4	94	45.6
Rooming in with the baby	187	90.8	19	9.2
Having any support during the golden hour	36	17.5	170	82.5

Table 5. Maternal Factors associated with cessation of exclusive breastfeeding

Maternal Factors	No.	%
(N=206)		
Personal Causes (n=38)		
Unintended pregnancy	7	18.4
Return to work	25	65.8
Return to study	7	18.4
Psychological Causes (n=7)		
Divorced	3	42.9
Family problems	3	42.9
Fearing of breast boding mutilation	4	57.1
Physical Causes (n=38)		
Chronic disease	8	21.1
Presence of acute diseases which may affect lactation	4	10.5
Urgent surgery (e.g., cholecystectomy, appendectomy, mammary gland excision...etc.)	7	18.4
Exhaustion from nursing twins	20	52.6
Breast Factors (n=163)		
Abnormal nipple type (inverted, huge, small)	74	45.4
Nipple fissures or soreness	80	49.1
Breast engorgement or abscess	11	6.7
Perceived insufficient milk supply	127	77.9

* Many choices are possible

Table 6. Infantile factors associated with cessation of exclusive breastfeeding

Infantile Factors	No.	%
(N=206)		
Infantile abnormalities after delivery (n=66)		
Low birth weight baby	57	86.4
Baby with congenital anomaly	3	4.5
Baby required intensive care	38	57.6
Breastfeeding process factors (n=147)		
Too demanding, unsatisfied hungry infant	18	12.2
Unsatisfactory infant weight gain with breastfeeding	136	92.5

* Many choices are possible

5. DISCUSSION

This study aimed to assess factors associated with cessation of exclusive breastfeeding among lactating mothers. The study aim was supported by the study finding. Regarding the maternal factors, the present study revealed that the breast factors were the most attributed maternal factors for cessation of EBF.

Breast factors include abnormal nipple type such as inverted, huge or small nipple, nipple

fissures and soreness, breast engorgement and perception of insufficient milk supply. In addition, the perception of insufficient milk supply was the most related breast factor that attributed to cessation of EBF. This finding may be attributed to, absence of breast preparation for the majority of the mothers and lack of mothers' knowledge due to not receiving health education for more than half of the mothers.

The present study finding was in agreement with a descriptive study conducted by **Shi et al. (2021)** that assessed EBF determinants among Chinese mothers at first six months. In addition to other Egyptian supported study conducted by **Shaheen et al. (2018)** estimated the prevalence of EBF and identified BF barriers among mothers in Berket El-Sabaa. This study found that breast problems were the most attributed factor to cessation of EBF.

Concerning the infantile factors, the present study revealed that the most related factor that attributed to cessation of EBF was breastfeeding process factors (BFPF). Breastfeeding process factors include too demanding baby for feeding, unsatisfied hungry infant and unsatisfactory infant weight gain with BF which were the first infantile factors attributed to cessation of EBF.

The present study finding was in the same line with a descriptive Indian study conducted by **Bag et al. (2020)** that aimed to assess factors attributed to mother complain of insufficient breast milk. This study found that the most commonly complaint leading to the presumption of insufficient breast milk was the infant vigorous crying excessively, especially at night which predict perceived insufficient breast milk supply and insufficient infant weight gain.

Regarding to personal causes for cessation of EBF, the present study finding revealed that the most common personal cause was return to work. This study finding was in the same line with a descriptive study conducted in Northwest Ethiopia by **Mazengia & Demissie (2020)** to assess factors related to EBF cessation among employed mothers. This study reported that the employed mothers did not have breastfeeding centers at working place and return to work lead to cessation of exclusive breastfeeding.

Regarding to mode of delivery, the present study revealed that more than three-fifths of the studied mothers had cesarean section of last delivery that effect on early cessation of EBF. This study finding was in agreement with a systematic review and meta-analysis was conducted in Ethiopia by **Getaneh et al. (2021)** to estimate the impact of cesarean section on timely initiation of EBF. This study showed that cesarean section affected on early initiation of BF and therefore affect on EBF.

According to the present study finding majority of the mothers who did not have any support with breastfeeding stopped exclusive breastfeeding. This study finding was in the same

line with study conducted in Northeastern Mexico by **Ávila-Ortiz et al. (2020)** to assess factors associated with cessation of EBF among Mexican mothers. The researchers reported that the partner support played an important role in EBF practice.

The study finding revealed that, most of the mothers did not have skin-to-skin contact immediately after the time of delivery with their babies. This study finding was contrast with other study conducted in Brazil by **Araújo et al. (2021)** to identify the prevalence and factors associated with the occurrence of skin-to-skin contact and early initiation of BF. The researchers reported that more the majority of mothers had skin-to-skin contact with their babies.

6. CONCLUSION

The study question was answered where; the factors associated with cessation of exclusive breastfeeding were maternal and infantile factors. The most maternal factor was breast factor while the most infantile factor was unsatisfactory infant weight gain.

7. Recommendation

Implementation of antenatal educational programs regarding importance of exclusive breast breastfeeding.

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