



Research Article

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## ***Breast and Nipple Problems Encountered among Puerperal Primipara Women in Zagazig***

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### **ABSTRACT**

*The most common problems affecting breastfeeding is breast engorgement and nipple pain or sore nipples due to lack of experience and improper technique of breastfeeding. Such problems have an adverse effect on the success and continuation of breastfeeding. The current study aimed to estimate the prevalence of breast and nipple problems, find out women's knowledge and practices related to the techniques of breastfeeding and the practices for management of breastfeeding problems. Subject and Methods ; a cross sectional descriptive research design was used and the study was conducted in three different Medical Health Centers at Zagazig. A statistical purposive sample of 384 puerperal women was recruited for the study during the period from the beginning of April to the end of December 2017. Personal demographic data, women's knowledge and practice about the technique of breastfeeding, and breast and nipple problems were collected. Results ; revealed that the majority of women were exposed to nipple soreness and breast engorgement (85.9% & 82.0%, respectively) and one third (30.7%) of women complained of inverted or flat nipple. Meanwhile, 22.9% of the participants had nipple size problems. Moreover, a sizable proportion had inadequate knowledge and practice of the technique of breastfeeding. Conclusion : lack of experience insufficient knowledge about the technique of breastfeeding, together with breast and nipple problems could influence the duration and success of breastfeeding. Recommendation ; antenatal and postnatal counseling are essential for avoiding breastfeeding problems.*

**Key words:** Nipple Pain, Breast Engorgement, Lack of Experience, Knowledge, Primiparous.

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### **INTRODUCTION**

Breast milk is a unique way to face all the nutritional needs of new babies for the first six months of life. The nutrients of the breast milk are present in proper balance and are provided in bioavailable and easily digestible forms. It also possesses remarkable immunological and anti-inflammatory properties that protect both mothers and infants against various infections and diseases [1]. Exclusive breastfeeding (EBF) in the first six months of life and continued breastfeeding from 6-11 months has shown to be the single most effective preventive intervention for reducing child mortality, with the potential of saving 1.3 million lives worldwide each year [2].

The most common factors for discontinuation of early breastfeeding were lack of paid maternal leave, maternal beliefs, and perceptions, such as insufficient breast milk and painful breastfeeding associated with incorrect infant position and latch. Maternal characteristics such as age, income, education, knowledge, and ethnicity have been associated with the initiation and continuation of EBF. The lack of support, encouragement, and education from healthcare professionals, family, and friends can become barriers to exclusive breastfeeding. The major maternal

problems identified for not continuing exclusive breastfeeding were insufficient breast milk, sore or painful nipples, return to work or school, and poor latching [2].

There are several breast problems in the puerperal period ; common ones are nipple problems, breast engorgement, plugged milk duct, breast infection and insufficient milk supply which are originated from conditions that lead the mother to inadequately empty the breasts. Incorrect techniques, not frequent breastfeeding and breastfeeding on scheduled times, pacifiers and food suppliers can predispose these breast problems. The proper and adequate management of those conditions is fundamental, as if not treated they result in breast complications and even to breast cancer [3].

Antenatal and postnatal counseling by a maternity nurse is considered an important, low cost, with a low technology health promotion tool [4]. Adequate support in the early postpartum period is vital for increasing the duration of EBF among women who initiated breastfeeding [5].

### Significance of the study

Exclusive breastfeeding is common but not universal in very early infancy in Egypt. Among infants under two months of age, 79 % were reported to have received only breast milk. However, the proportion of exclusively breastfed drops off rapidly among older infants by the age 4-5 months. Around seven in ten babies are receiving some forms of supplementation, with somewhat more than three in ten given complementary food [6]. The prevalence of breast problems in the postnatal period is very high. It is evidenced that the incidence rate of breast engorgement in the world is 1 :8000 and in India it is 1: 6500. Meanwhile, about 20.0 % of postnatal mothers especially primipara mothers are affected with breast engorgement within four days of postnatal period. In the Grampian study 33.0% of all women experienced breast problems in the first two weeks and 28.0% thereafter. This may be an underestimation, because some of the women may have considered these problems as baby feeding problems. Apart from overt mastitis, a relatively rare condition of these problems may have comprised engorgement, sore, cracked, bleeding or inverted nipples [3]. Therefore, the present study was conducted to investigate this problem and find out the factors influencing it.

**Aim of study** was to estimate the prevalence of breast and nipple problems, find out women knowledge and practices related to the techniques of breastfeeding and assess women's practices concerning the management of these problems.

## SUBJECTS AND METHODS

A cross-sectional design was adopted and the study was conducted in 3 M.C.H centers, selected from all M.C.H representing available Geographical Health zones in Zagazig City. They include : Maternal and Child Welfare Center in Al- Ahrar Teaching Hospital, Maternal and Child Welfare Center in Zagazig City and Second health bureau in Zagazig City. Sample :

The sample size was calculated with precision/ absolute error of 5% and type 1 error of 5% according to the following equation :

Sample size =  $[(Z_{1-\alpha/2})^2 \cdot P (1-P)]/d^2$  Where,

$Z_{1-\alpha/2}$  = is the standard normal variation, 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 =  $[(1.96)^2 \cdot (0.51) \cdot (1-0.49)] / (0.05)^2 = 384$

Based on the above formula, the sample size required for the study was 384 puerperal women who were invited to participate in the study during the following postnatal period:

$\leq 2$  months after delivery, 2 – <4 months and 4- 6 months.

They were selected purposively depending on the following **inclusion criteria** :

1. Primipara mothers during their postnatal period i.e. the first 6 months after delivery,
2. Having normal vaginal & cesarean-section delivery,
3. Having normal & healthy newborn,
4. Having the intention to breastfeed their newborn.

### Tool of data collection :

An interview questionnaire was designed for data collection. It consists of the following parts:

1. Personal demographic data (age, residence, occupation, and education level ...etc.)
2. Antenatal counseling about breastfeeding

3. Labor history (place of delivery and mode of delivery)
4. Source of breastfeeding information
5. Facilities provided to working mothers to enable them to breastfeed their children
6. Women knowledge about the importance of breastfeeding
7. Women knowledge and practice about the technique of breastfeeding ; barriers and difficulties encountered during breastfeeding.
8. Incidence of breast and nipple complications
9. Grades or levels for measuring nipple and breast problems, and degree of pain.

Official permission was obtained by submission of an official letter from the Faculty of Nursing to the responsible authorities of the study setting to obtain the permission for data collection. All ethical issues were taken into consideration during all the phases of the study ; the researcher maintained an anonymity and confidentiality of the subjects. She introduced herself to the women and briefly explained the nature and aim of the study to every woman before participation and women were enrolled voluntarily after the written informed consent.

As for the Preparatory phase, related literature was reviewed. This helped in the selection and preparation of the data collection tools and in writing the review of literature. A panel of two experts in the field of Obstetrics and Gynecological Nursing reviewed the tool to test its content validity. Modifications were done accordingly based on their judgment. Cronbach's alpha coefficient was calculated to assess the reliability of the developed tool through their internal consistency.

A Pilot study was conducted on a sample representing about 10% of the main study sample, who were excluded from the sample. It was done to assess the clarity and applicability of the tools, arrangement of the items and helped to estimate the time needed for filling each sheet. It was found that the average time to fill in the interview sheet ranged from 10 to 20 minutes. Necessary modifications were undertaken in the tool.

Field work, collection of data lasted for about nine months from "the beginning of April to the end of December 2017". Data collection was accomplished in the morning from 10 :00 a.m. to 12 :00 p.m., two times per week and the interview took 5-10 minutes. The researcher introduced herself to the women and the interview was conducted individually for every participant to collect the required data.

#### **Statistical analysis :**

All statistical analyses were performed using SPSS for windows version 20.0 (SPSS, Chicago, IL).

## **RESULTS**

Table (1) revealed that mother's age ranged between 18 and 40 years, with the highest percentage (46.6%) was less than 25 years of age. Meanwhile, the infants' age ranged between 1 and 6 months and two fifth (40.1%) was between 2 – <4 months and 58.6% of women had intermediate level of education. As regards their residence more than half (53.4%) of the studied women were rural dwellers and 60.2% of the women perceived their monthly income as barely enough for the ordinary life requirements.

It is also noticed that 49.7% were housewives and 25.5% of them received antenatal counseling about breastfeeding. More than half (53.1%) of the women received their information from family and friends, 25.6% received information from health providers as midwives, nurses or doctors and the rest (21.3%) used the audiovisual aids and internet as their source for their information.

Figure (1), illustrates that almost two fifths 154 (40.1%) of the mothers are employed, of those 31.2% reported that the vacation for 4 months is nearly enough for successful breastfeeding. Only 7.3% indicated that their workplace provides them a private place to express their breast-milk and 39.8% had no refrigerator to store their breast-milk.

Table (2) indicates that the majority of mothers recognized that breastfeeding reduces the risk of infection and diseases to the baby, so it is healthier than artificial feeding, and more easily digestible as well as increase mother and infant bonding (95.6%, 99.7%, 88.8% and 93.8% respectively). Meanwhile, equal number 383(99.7%) of the sample answered that breastfeeding are clean and require no preparation and 42.2% cited that breastfeeding stimulate uterine contractions and helps the uterus to return quickly to its pre-pregnant position. Moreover, 38.5% of women knew the effect of breastfeeding on spacing of births and partially similar percentage was aware that it protects woman from breast cancer and osteoporosis (43.2% and 31.0% respectively).

Table (3) and table (4) describe women' practice related to the technique of breastfeeding. The majority (95.3%) of sample answered that their babies received colostrum and more than two fifths (49.7%) initiated breastfeeding within an hour after delivery and partially similar percentage exclusively breastfed their newborn until hospital

discharge (40.1%). The duration of breastfeeding was <15 minutes among 70.6% of the sample. Only 7.3% indicated that mothers were still exclusively breastfeeding at the time of the interview. Almost two thirds (59.9%) received additional fluids other than breast milk and 32.8% received others (solids).

Moreover, 68.2% of mothers were aware that correct positioning could help in the prevention of breast and nipple problems but partially similar percentage was unaware of correct attachment of the baby’s mouth to the nipple or pulling it from the nipple (64.8%) and 50.3% gave the two breasts alternatively. Moreover, breastfeeding the baby on demand was practiced by 84.4% and partially similar percentage correctly managed breast engorgement (74.0%). More than half (55.7%) were unaware of the correct management of painful nipple. However, only 3.4% who managed breast abscess.

Table (5) shows that duration of exclusive breastfeeding ranged between 2 - < 4 months with a mean of 3.1 ±1.7 months among 45.8% of mothers. None of the women in the sample extend exclusive breastfeeding until the 6 months after delivery.

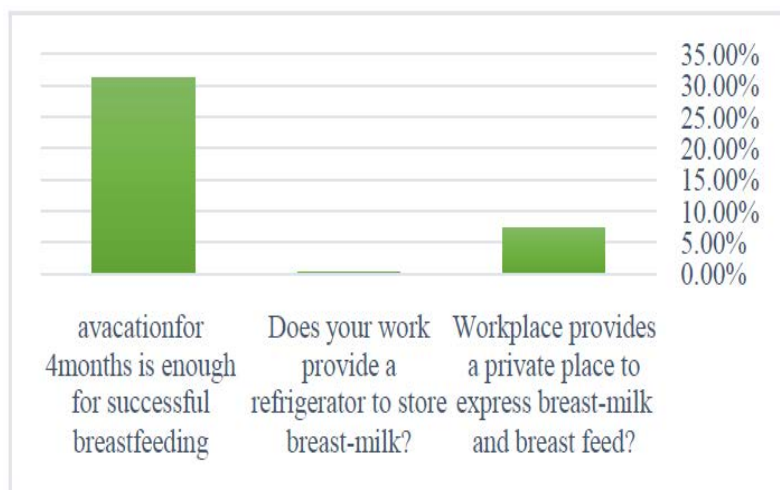
Table (6) demonstrated the difficulties encountered among breastfeeding mothers. The most common was lack of timely follow-up after delivery, followed by lack of family and social support, work related problem or school return and refusal of suckling (60.2%, 46.4%, 44.3% respectively). It also shows 68.5% received misguided information and misconceptions from relatives and friends about the effects of complementary food on the growing of the baby. The rest of the barriers to exclusive breastfeeding include ; painful nipple, anxiety, the feeling of embarrassment due to breastfeeding in public places and mode of delivery (58.1%, 34.1%, 23.2% respectively).

Table (7) shows that nipple soreness and breast engorgement were the most common problems with highest percentage (85.9% & 82% respectively), followed by partially similar proportion of milk problems and thrush (42.7% and 43.5%) and 30.7% complained of inverted or flat nipple. Meanwhile, 22.9% of the participants had nipple size problems. The least breast problem was that of breast abscess, which was found among 4.9%. Concerning the degree of nipple pain 34.4% of women had the feeling of tenderness between feeding, makes grimace and 22.7% complained of nipple cracking and involuntary gasp. Only 11.7% had tender nipple for first seconds after feeding. Nipple was red/tender longer than one minute and nipple cracking or soreness was encountered among 14.6% & 16.7% respectively. As for the breast engorgement 42.7% of them complained of firm and beginning tenderness in the breast and 15.9% were exposed to very firm and very tender breast.

**Table 1.** Distribution of the studied mothers according to socio-demographic characteristics (n= 384) :

Socio-demographic	Studied women (n=384)	
	No.	%
Mother’s age (years)		
< 25	179	46.6
25-29	92	24.0
30-40	113	29.4
Baby’s age (months)		
≤2	84	21.9
2- < 4	154	40.1
4- 6	146	38.0
Level of education		
Illiterate	39	10.2
Primary	21	5.5
Intermediate	225	58.6
University	99	25.8
Residence		
Rural	205	53.4
Urban	179	46.6
Family income		
Income less than daily living expenses	101	26.3
Income equal to daily living expenses	231	60.2
Income more than daily living expenses	52	13.5
Maternal employment status		
House wife	191	49.7
Worker	154	40.1
Student	39	10.2
Receiving antenatal counselling about BF		
No	286	74.5
Yes	98	25.5

Place of delivery		
Hospital	300	78.1
Home	84	21.9
Mode of delivery		
Vaginal delivery	192	50.0
Caesarean section	192	50.0
Source of information about breastfeeding		
Family and friends	204	53.1
Health providers (midwives, doctors and nurses)	98	25.6
Audiovisual and internet	82	21.3



**Figure 1.** Number and percent distribution of the working mothers according to the facilities provided for mothers (n= 154) :

**Table 2.** Distribution of the studied mothers according to their knowledge about the benefits of breastfeeding to the infants and mothers (n= 384) :

Variables related to benefits of BF for infants and mothers	No		Don't know		Yes	
	No.	%	No.	%	No.	%
BF reduce the risk of infection and illness	0	0	17	4.4	367	95.6
Baby become more-healthier than formula feeding	1	0.3	0	0	383	99.7
BF increases the baby's intelligence	5	1.3	101	26.3	278	72.4
Formula-fed babies are more likely to gain weight quickly	74	19.3	1	0.3	309	80.5
Breast milk is more easily digested than formula	9	2.3	34	8.9	341	88.8
Babies sleep well after they receive adequate breastfeeding	94	24.5	0	0	290	75.5
BF increases mother-infant bonding	15	3.9	9	2.3	360	93.8
Cleanliness and easy preparation	1	0.3	0	0	383	99.7
Exclusive breastfeeding is beneficial in spacing birth	191	49.7	45	11.7	148	38.5
BF helps to stimulate uterine contraction and return to its pre- pregnancy position more quickly	8	2.1	214	55.7	162	42.2
Breast feeder may achieve pre-pregnancy weight faster	152	39.6	36	9.4	196	51.0
Breast feeder has low risk of getting ovarian/ breast cancer	32	8.3	186	48.4	166	43.2
BF may protect against osteoporosis	116	30.2	149	38.8	119	31.0

**Table 3.** Distribution of the studied mothers according to their knowledge about the technique and practice of breastfeeding (n= 384):

Variables related to knowledge of technique and practice of BF	No.	%
Initial time of BF after delivery :		
1st hour	191	49.7
2-3 hours	154	40.1
1st day	13	3.4

2nd day or more	12	3.1
Don't know/don't remember	14	3.6
Mother gave colostrum to the baby :		
No	18	4.7
Yes	366	95.3
Hospital based practice :		
Exclusive BF until hospital discharge	154	40.1
Herbs	33	8.6
Formula feeding	2	0.5
Glucose water	94	24.5
Don't know/ Don't remember	28	7.3
Don't apply	73	19.0
Additional food after hospital discharge/ permanent partial feed with BF :		
Exclusive BF	28	7.3
Formula feeding	98	25.5
Water and formula feeding	58	15.1
Water	74	19.3
Others	126	32.8

**Table 4.** Distribution of the studied mothers according to their knowledge about the technique and practice of breastfeeding (n= 384) (continued) :

Variables related to knowledge of technique and practice of BF	No.	%
Duration of each breastfeeding		
<15 minutes	271	70.6
15 minutes	42	10.9
> 15 minutes	71	18.5
Position of the baby during breastfeeding		
Correct	262	68.2
Incorrect	122	31.8
Attachment of the baby's mouth to the nipple or pulling it from the nipple		
Correct	135	35.2
Incorrect	249	64.8
Giving the two breasts in an alternative way		
Correct	193	50.3
Incorrect	191	49.7
Breast fed the baby		
On demand	324	84.4
Using schedule	60	15.6
Describe the management of painful nipples		
Correct	170	44.3
Incorrect	214	55.7
Describe the management of breast engorgement		
Correct	284	74.0
Incorrect	100	26.0

**Table 5.** Distribution of the studied mothers according to the duration of BF (n=384) :

Variables related to duration of BF	No.	%
Total duration of BF		
≤ 1 month	69	18.0
2- < 4 months	176	45.8
4- 6 months	139	36.2
Mean ± SD	3.1 ±1.7	
Duration of receiving BF exclusively		
≤4 weeks	168	43.8
2- < 4 months	134	34.9
No exclusively	82	21.4

**Table 6.** Distribution of the studied mothers according to their barriers encountered among breastfeeding mothers (n= 384)

Variables related to barriers against EBF	No		Yes	
	No.	%	No.	%
Lack of experience	95	24.7	289	75.3
Insufficient breast milk	282	73.4	102	26.6
Unawareness of its importance	138	35.9	246	64.1
Inadequate clinician knowledge and support	123	32.0	261	68.0
Refusal of suckling	214	55.7	170	44.3
Work related problem or school return	206	53.6	178	46.4
Lack of family and social support	166	43.2	218	56.8
Lack of timely follow-up after delivery	153	39.8	231	60.2
Delayed intervention for breastfeeding difficulties	171	44.5	213	55.5
Stressful (pain-anxiety)	161	41.9	223	58.1
Having to breast feed in public places/ Embarrassment	253	65.9	131	34.1
Mode of delivery	295	76.8	89	23.2
Time consuming	322	83.9	62	16.1
Superstitious beliefs about the effects of complementary food on the growing baby/ Early introduction of complementary foods	171	44.5	213	55.5
Misguided information on early breastfeeding from relatives and friends	144	37.5	240	62.5
Interference from relative – in- law to give water	121	31.5	263	68.5
Others (personal decision, did not desire to breastfeed)	337	87.8	47	12.2

**Table 7.** distribution of the studied mothers according to breast and nipple problems (n= 384):

Variables related to breast and nipple problems	No.	%
Problems with nipple		
Inverted or flat nipple	118	30.7
Nipple size problems (big or small)	88	22.9
Nipple soreness or painful	330	85.9
Problems with breast		
Thrush (yeast infection)	167	43.5
Breast engorgement	315	82.0
Mastitis	48	12.5
Breast abscess	19	4.9
Grade of nipple soreness		
Nipple slightly red and/ or tender for first seconds of feeding	45	11.7
Nipple red/tender longer than one minute	56	14.6
Tender between feeding, makes grimace	132	34.4
Nipple crack, involuntary gasp	87	22.7
Nipple crack, sore	64	16.7
Level of nipple pain		
No pain, just the tugging feeling of the baby moving her breast	24	6.3
Mild pain	47	12.2
Moderate pain	166	43.2
Severe Pain	147	38.3
Degree of breast engorgement		
Soft and no changes in the breast	34	8.9
Slight changes in the breast	49	12.8
Firm and beginning tenderness in the breast	164	42.7
Very Firm and very tender.	137	35.7

## DISCUSSION

The benefits of breastfeeding for the health and wellbeing of the baby and mother are well documented. The World Health Organization [7] recommends exclusive breastfeeding starting within one hour after delivery until six months of life. Nutritious complementary food should then be added while continuing to breastfeed for up to two years or beyond. Exclusive breastfeeding is considered the cornerstone of child survival and health. It not only provides all the nutrients necessary for growth for the first six months of life, but also protection from many childhood life-threatening diseases and some non-communicable diseases later in life. Despite these countless benefits, the rates of

initiation and continuation of breastfeeding in both developed and the developing countries remain lower than optimal. This is due to a number of barriers including lack of experience, breast and nipple problems, lack of family and social support, improper technique of breast feeding as well as work related problems [8].

The maternity nurse has the opportunity to ensure that mothers successfully establish and continue breastfeeding. This is done through counseling, encouragement and support. In addition of helping those to cope with common breastfeeding problems that interfere with their ability to breast feed [9]. Several studies have shown that women with breast and nipple complication reported that it affects their success and continuation of breastfeeding [9-13]. Despite these evidences, huge paucity data of this problem are scarce most especially in Zagazig. Thus, the aim of this study was to estimate the prevalence of breast and nipple problems, find out women knowledge and practices related to the techniques of breastfeeding and assess women's practices concerning the management of these problems.

Concerning demographic characteristics, the present study showed that two fifths of the studied women were younger than 25 years. Partially similar observation is submitted [2] in USA who found that the age of 45.3% was younger than 25 years old. This is anticipated because it is the normal age of childbearing. Unlikely, [14] study in India found that about one fifth (21.2%) of the participants had their age ranged between 26- 30 years. [15] In Shanghai, China reported that 29.6% of the participants was older than or equal to 30 years old. According to the present study findings, most of the studied primipara mothers were housewives, having low level of education, living in rural areas and only one quarter of them received antenatal counseling about breastfeeding.

In the same line, [16] in Turkey found that 29.5% received information about breastfeeding during pregnancy. Conversely, [17] in Eastern Ethiopia found that more than half (52.9%) of the total participants had received information about breastfeeding. Recently, [18] study in Menoufia, Egypt about "Effect of two different nursing care approaches on reduction of breast engorgement among postnatal women" reported that the highest percent of women were housewives, living in rural area, and lacking awareness about breastfeeding problems and their management. The previous mentioned results insisted the need for complete ante and postpartum health advices about breastfeeding for these vulnerable primipara because higher educational level and exposure to work outside the home gives women better chances of contact with a more experienced persons and to acquire valuable health and social information.

Moreover, in this respect [19] emphasized the fact that, counseling as a practice and technique is vital and significant relevance in allowing the health professionals to have the opportunity of carrying out not only educational but also assistance actions in the common illnesses at the beginning of breastfeeding.

Women in the present result were asked to whom they would go if they had a breastfeeding problem ; the major source of their information was their family or friends. This in congruence with [13] study in Al-Yarmouk, Iraq about "Breast feeding problems in primipara mothers in early postnatal period". They reported that the highest percent of mothers had information about breastfeeding from family and friends. Unlikely, [9] study in Karad, India reported that one fifth (20.0%) of the participants obtained their information from health workers. Meanwhile, [20] study in Niger reported that 10.4% received the information from the media. Concerning the facilities provided for working women to promote successful breastfeeding [21] study in USA showed that 47.0% of the mothers are employed ; only one third (30.0%) reported that their workplace provides a private place to express breast milk and provides a refrigerator to store breast milk. Conversely, the present study finding revealed that, working women were neither provided a private place to express breast milk nor provided a refrigerator to store breast milk.

The present study also illustrated that the mothers had lower score of knowledge about the benefits of breastfeeding to the mother, but with partially equal proportion to the studies [22] in Saudi Arabia, [21] and [23] in Fayoum, Egypt in relation to its benefit to the infant. They found that, the scores for seven items of breastfeeding benefits from the highest to the lowest percentage were that ; babies sleeping well, increasing the infant's intelligence, increasing mother-infant bonding, gaining weight, reducing the risk of respiratory infection and other diseases compared to artificial feeding, preventing the uterus to return to its pre- pregnancy state more quickly, decreasing the incidence of breast cancer and protecting against osteoporosis. Such dissimilarities between the results of the above-mentioned studies and the present one could be attributed to the supportive care and encouragement provided by both the health providers and the family.

On query about the technique of breastfeeding, it was observed that almost half of the women had initiated breastfeeding within the first hour after delivery. In the same line, WHO [7] recommends early (i.e. within one hour of giving birth) initiation of breastfeeding. A recent trial has shown that early initiation of breastfeeding could



reduce neonatal mortality by 22.0% which would contribute to the achievement of the Millennium Development Goals. The same finding coincides with other studies as [23] in Fayoum, Egypt revealed that 43% of mothers practiced BF within the first hour after delivery, and [24] study in Turkey about “Factors influencing breastfeeding duration : a survey in a Turkish population”. They found that almost one half (50.0%) of women who early initiated breastfeeding. Unlikely, [25] found that 37.4% of mothers began breastfeeding within 2- 3 hours after delivery and 4.5% initiated it between 1- 3 days after delivery.

The reason for such delay of initiation of breastfeeding could be due to the lack of experience or they were given some type of liquid until the breast milk flowed freely. In this regard, a Nigerian study, found a significantly higher proportion of mothers with at least secondary education-initiated breastfeeding in 1 hour, avoided pre-lacteal feeding and practiced exclusive breastfeeding for 6 months, maternal education below secondary level strongly contributed to pre-lacteal feeding and failure of exclusive breastfeeding [26].

The present study also showed that the majority of the studied mothers gave colostrum to the baby. This is supported [14] in India who showed that 93.1% of the babies were given colostrum. On the other hand, [27] study in India reported that 10.0% had given pre-lacteals feeds like sugar and honey. In addition, [28] in Iran, it was revealed that traditional supplements like camel's thorn, flixweed, and sugar water have been reported in 58.0% of neonates. Such practices reflex the belief of each previously mentioned society about their effects in reducing diarrhea and jaundice. Likewise, the current finding matches that of a study undertaken by [26] and [9] which revealed that there is shortage of women who use the right position of the mother and baby during breast feeding. Not only that but also the correct attachment of the baby's mouth to the nipple during the feeding or pulling it from the nipple after the feeding. Conversely, [17] reported that two thirds used correct position during breastfeeding. Moreover, slightly more than half used correct attachment of the baby's mouth to the nipple during the feeding or pulling it from the nipple after the feeding. In this respect, the key to successful breastfeeding is information, education and communication strategies aimed at behavior change [2].

The findings of the current study also revealed that more than two thirds of mothers had correct knowledge regarding number of feeding in 24 hours, breast feeding at night, on demand breastfeeding, duration of each episode of breastfeeding. This is congruent with study of, [23] who showed that the majority practiced breastfeeding on demand. On the contrary, [18] reported only one quarter breastfed on demand. This discrepancy between the present study and the previously mentioned studies may be due the difference in research design and the criteria of selection of the sample.

As for using the two breasts during breastfeeding, less than half of women altered feeding between the two breasts. This may be due to the physical discomfort from the labor such as ; pain and limited movement after delivery. This result coincides with [29] study in Tanta, Egypt who found that 37.5% used the two breasts in an alternative way. It was also observed that almost the highest percentage of the studied women breast fed exclusively until hospital discharge. Meanwhile, more than one fifth of them did not use exclusive breastfeeding and few women practiced exclusive breastfeeding for 4 months. This finding is supported by [2] who found that 54.7% of mothers were exclusive breastfeeding their babies until hospital discharge.

On the other hand, [15] study in china found that 39.1% were practiced breastfeeding exclusively for  $\leq 4$  weeks and [22], showed that 44.0% and only 2.0% of infants were exclusive breast fed at the ages of 4 and 6 months, respectively. Moreover, [30] in Rotterdam reported that 12.8% of studied women never breast fed exclusively. The differences between the above-mentioned results and the present one could be due to the difference in the women culture and hospital policy that encourage or discourage EBF during the early neonatal period.

Lack of social and health workers support, lack of maternal experience and deficit information and misconceptions about breastfeeding, delay intervention of breast and nipple complications, and insufficient breast milk constituted the most commonly reported barriers for continuation of breast feeding among the Primipara in the present study. In line with these findings, a study in New York- USA conducted by [12] demonstrated that 73.0% of women studied described at least one breastfeeding barrier and many cited multiple barriers. Moreover, a study carried out in California revealed that most concerns peaked at day three, with 92.0% of women reporting at least one concern, and gradually declined thereafter [31]. Meanwhile, [32] in Mauritius, India noted that 22.6% of women experience insufficient milk supply in the first few days postpartum and 13.0% lost the desire to continue breastfeeding.

Furthermore, and in support with these present study findings, [33] study in Pakistan mentioned that a lack of breastfeeding information, improper technique of breast feeding together with lacking of confidence as key reasons among mothers for less than optimum breastfeeding duration. Also, [34] found that women with higher intention

scores achieved much greater breastfeeding duration than those with lower intention scores which associated with a lower risk of stopping breastfeeding, with a 29.0% and 43.0% lower risk respectively. [22] Found that more than two fifths (46.2%) of women concern was about the return to work. This inconsistency of reported concerns or barriers among the previously mentioned results could be due to the differences of the cultural aspects between different countries.

Furthermore, [31] found that more than two fifths (47.0%) of women reported the feeling of pain while breastfeeding. Partially similar finding was found in the present result and in this regard [35] emphasized the fact that pain was more likely to be cited as reasons for breastfeeding cessation before 6 months. [26] Found that poor suckling was more (42.8%) in early postnatal period than late postnatal period (32.9%). In addition, [17] found that 18.7% were complained that breastfeeding consumes time. This indicate that women social beliefs and attitudes about breastfeeding (especially in developing countries) were not supportive, thus counseling program about methods used to overcome barriers of breastfeeding, is imperative as approved by many studies [36] in England, [37] in USA and [3] in India.

Concerning the breast and nipple problems encountered among the studied women the current study results demonstrated that more than three quarter of the studied subjects were exposed to nipple soreness and breast engorgement. The findings are explained by the improper technique of breast feeding utilized by most of them in addition to lack of experience and support from health providers. In agreement with this [26] study in India demonstrated that cracked nipples, sore nipples and mastitis were more associated with poor breastfeeding position (57.1%) and nipple attachment (71.4%) to the baby's mouth. Recently, in congruence with the present study [29], it was demonstrated that more than half of the sample (54.6%) was exposed to nipple and breast problems such as; nipple soreness and cracking, breast engorgement and nipple size problems (51.5%, 39.0% and 34.0% respectively) as well as 76.0% were exposed to postpartum stress. According to the finding of the present result the majority of Primipara suffered from breast engorgement. This may be due to untimely evacuation of milk in case of milk fluid production. Breast engorgement would compress the mammary gland duct and block the secretion of milk. This could be a serious problem, complicated by the fact that women have no experience in the prevention and management of this problem. A similar high rate was revealed among the sample in studies in Egypt [18] and in Italy [38].

In this respect [39] in Taiwan found that the scores for six items of breast and nipple problems during breast feeding from the highest to the lowest were ; breast engorgement, breast hardening, unbearable breast pains which cannot be touched, nipple pains arising from a baby's suckling, nipple cleavage and then nipple bloody discharge. Also, found that the most common breast symptoms during breastfeeding were ; breast engorgement and breast hardening and the feeling of tenderness.

Furthermore, primipara women were also exposed to nipple problems especially ; nipple size problem, inverted nipple and soreness of the nipple and a sizable proportion were not able to cope with these problems and had unsatisfactory knowledge about its management. This is partially in agreement with [11] in India who found that 43.33% of the postnatal mothers had breast engorgement, 15.8% had cracked nipples, 10.0% had retracted nipples, 8.3% had cracked & sore nipples, 7.5% had lactation failure and 3.3% had breast abscess/mastitis. Also [16] study in Turkey reported higher rates of nipple soreness/ painful (68.6%) cracking (51.4%), tenderness. [40] Shows that all mothers suffered from different degrees of nipple pain during breastfeeding, (88%) of mothers suffered from severe nipple pain and all of them suffered from different degrees of nipple pain and did know how to cope with these problems.

This was expected since these women were in need for more preparedness about breastfeeding technique, help and support during the prenatal as well as early postnatal period. Their misconceptions about the belief that these problems are not serious and did not lead to failure of breastfeeding should be cleared up by the maternity nurses. In this respect [10] study in India about "A study to assess the effectiveness of breastfeeding technique in prevention of nipple soreness among primipara mothers", who reported that breastfeeding technique had a significant effect in preventing nipple soreness and recommends that providing the mother guidance and support on positioning, latching and modification of hospital practices may be more effective in reducing nipple problems.

## CONCLUSIONS :

The study arrived at the conclusion that the majority of mothers suffered from different degrees of nipple and breast problems during their postnatal period and they did not know how to manage these problems. They also had deficit knowledge about the importance of breastfeeding and showed poor practice of breastfeeding technique.

### RECOMMENDATIONS :

Counseling about breastfeeding is imperative during antenatal and early postnatal period, to clear up misconceptions, upgrade women' knowledge about the importance of EBF, the proper technique of breastfeeding as well as the prevention and management of breast and nipple problems. Hospital based practices and health providers should encourage early initiation breastfeeding and overcome the barriers that women may face and lead to unsuccessful lactation.

Nurses should be trained well for managing breast engorgement and nipple soreness in their discharge teaching plan and further research is recommended to expand the evidence base on the different nursing care approaches on reduction of breast and nipple problems.

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