

Breastfeeding Knowledge, Attitude, Practice and Influencing Factors among Libyan Women in Tripoli City: A Cross-Sectional Study

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ABSTRACT

Exclusive breast feeding is considered the first contact between the mother and her infant. A community based cross-sectional study was conducted in Tripoli city during July - September 2022 to evaluate the knowledge, attitude and practice of Libyan women toward breastfeeding and to assess the factors associated with them. A total of 380 mothers, randomly picked and interviewed, were shared in this study. Our data showed that, 32.63% of mother's initiates breastfeeding immediately after delivery, 28.42% were breast feeders up to 3-6 months, 22.89% did continue breastfeeding for 12 months and 56.58% starts use of supplementary food 4-6 months of baby age. Among them 25.26% were reported to be exclusive breast feeders, 66.05% were mixed feeders and 8.68% were practicing only infant formula feeding. In addition, 40% of women know that breastfeeding is a contraceptive natural method and has benefits to both infants and mothers. The majority of women realized that breast milk digested more easily than infant formula and increases mother's relationship with her child. About half of mothers (48.68%) have good knowledge about colostrum and acknowledge its benefit. Mothers agreed that breast milk possesses all the essential nutrients required for infants and protect them from infection. Nonetheless, there were certain factors interfered with exclusive breastfeeding including mothers believed that had insufficient milk by 29.39%, and there is no enough privacy for breastfeeding in work places by 12.10%. Also, short maternity leaves, to somehow, created a negative impact on breastfeeding.

There is no difference between participants' demographics and feeding plan regarding type of delivery, number of children and education level of mothers. There is a need for programs that support and encourage for breastfeeding focusing on younger mothers, and for providing facility items at work places to rise the duration of breast feeding and the percentage of breast feeder mothers.

Keywords- Breastfeeding; Colostrum. Cross-sectional study; Knowledge; Practice; Attitude.

INTRODUCTION

The ratio of infant feeding practices account is fluctuated from country to another due for certain opinions and believes. In Arabic countries few women know the values of breastfeeding for both, mothers and infants.¹ Therefore, to intensify the values of full breastfeeding, certain information regarding the attitudes and practices that motivate this outcome are necessitated.

Indeed, breastfeeding is considered as a health approach that improves infant survival rate in this critical period of a child's life, since it found that it lowers infant death by 13%.² As demonstrated by scientific researchers, breastfeeding reduces early childhood morbidity and mortality due to infectious diseases³ and diarrhea⁴, mending maternal morbidity⁵, and control family health care budgets.⁶ Clinical studies had

revealed that breastfeeding influences newborn baby's health positively and improves its nutritional status.⁷ Additionally, breast milk provides advantages with regards to risk of gastroenteritis, otitis media, sudden infant death syndrome, stimulates immune system, respiratory illness, enterocolitis and risk of extreme obesity.⁸ Hence, it is advised that all newborn babies should be breastfed for the first six months of life, and be continuing up to two years of age and even longer.⁹

According to World Health Organization (WHO), exclusive breastfeeding is a feeding of newborn baby with only breast milk, *via* lactation, directly from mother breasts, and with no additional fluids and other foods.¹⁰ Data from WHO reported for infant during the year 2009 stated that, in developing countries, non-exclusive breastfeeding during the infant first 6 months leads to 1.4 million deaths each year amongst kids



below five years old.¹¹ Several factors were shown influences on breastfeeding including maternal age, race, motherly employment and conflicts at work, education levels of parents, defective in milk supply by mother, baby health problems, smoking, type of delivery and socio-economic status.¹²

In general, unsatisfactory breastfeeding practices are well-known. Over the past decade, the benefits of breastfeeding for mothers and children were extensively documented in different countries including Jordan, Saudi Arabia⁸ and Nigeria.¹⁰ These studies addressed factors influencing breastfeeding women knowledge, practice and attitudes towards breastfeeding. However, data on infant breastfeeding among Libyan women¹⁴⁻¹⁶ are generally scarce and needs a more detailed understanding. In Libya, women compromise around half of the workforce all over the governmental and private responsibilities. Given the importance of breastfeeding, dissemination of women exclusive breastfeeding knowledge and practice have a crucial impact on infant health in the long term, since women are the monitor that pass the correct attitudes to the new mothers tomorrow.¹⁷ Hence, the present study was aimed to evaluate the knowledge, attitude and practice of Libyan women in Tripoli city to breastfeeding, and to assess factors associated with colostrum, breastfeeding and artificial feeding. The influence of cultural, sociodemographic selves and economic barriers on these scenes were also investigated.

MATERIALS AND METHODS

A community based cross-sectional study was executed during the period July - September 2022 amongst Libyan women living in Tripoli city, the capital of Libya. Data were collected randomly from women visited Tripoli Medical Center, Alkhadra Hospital, Airport Road Clinic, Gorji Clinic West Street and Al Jomhorya School. After the purpose of the study was explained to all participants, they were asked to take enough time to read and respond to the questionnaire. All participants were requested to answer several questions relating to the reasons for both bottle feeding and breastfeeding. The inclusion criteria included women who have at least one child below the age of five years. A written consent was signed by all women that agreed to participate.

To avoid any conflict, the used questionnaire was firstly translated to Arabic language. The study protocol was ethically approved by the Scientific Research Committee of the University of Tripoli.

The sample size of participants was calculated according to single population proportion formula and was found to be 380 mothers.¹⁸ The questionnaire was prepared depending on previously described studies^{8,13,16,19} with 38 items. The questionnaire was distributed through face-to-face interview. The first part of questionnaire comprised 7 items covered the sociodemographic property of each participant, included mother's age, marital status, education levels, employment status, family income, number of children and mode of delivery for the last baby. The second part of questions included 21 items that reflect the information and attitude regarding breastfeeding and the participants were able to choose only

one answer (yes, no or I don't know). The questions evaluated the effect of breast feeding on family duties, to what age the newborn baby be supposed to receive just breast milk, role of medical staff and nurses in forwarding women for breastfeeding, duration of maternity leave and enabling of breastfeeding during work location. Also, points evaluated knowledge were built-in on duration of breastfeeding, its role in protection from infection, and its benefit to mothers.

The third section of questionnaire included 10 question that assessed common mothers' practice incorporated mother's consolation with breastfeeding, importance of colostrum, reasons beyond discontinuing breastfeeding and believes for deciding breastfeeding, time of initial breastfeeding after-delivery, numbers of breastfeeding, difficulties in activating breastfeeding and the age of newborns baby beginning supplementary foods. Thirty-five questionnaires were used as a pilot test group of women to ensure the validity of the questionnaire and they were not involved in the study. All women were reacted to the questionnaire depending on their experience with the last baby. Higher score demonstrated a higher participant's agreement with the item tested.

Statistical analysis

The information from questionnaire that is in the variety of categorical data was typified in descriptive statistics in the form of chart and tables. Descriptive analyses were clarified using frequency distribution, percentage, mean and standard deviation. Chi-square test was applied to compare the correlation and association between variables. *P*-value of less than 0.05 was judged as a significant data.

RESULTS

Three hundred and eighty questionnaires were distributed and 380 were returned back given a response rate of 100%. The age of the participants ranged between 18 and 50 years, with a mean age and SD of 37.2 ± 5.1 years. The median age of participated mothers was 38 years. Table 1 shows that 52.10% of participants (198 mothers) aged between 28-37 years, 90.52% of subjects (344 mothers) were married, 53.42% of women (203 mothers) were educated up to university level, 61.05% of participants (232 mothers) were employed, 32.11% of women (122 mothers) had good to excellent income level, 59.47% of women (226 mothers) with a child less than 3 years old and 55.00% of respondents (209 mothers) were an incidence of normal vaginal delivery.

Mother's common facts and knowledge regarding breastfeeding are shown in table 2. Our data showed, on 100-point scale, that the statement "three months is considered enough for breastfeeding" scored 16, less than half of mothers decide that "breastfeeding is one way of contraceptive" (scored 40), and less than fifth of women agreed with the statement that "breast milk and infant formula have the same health benefits" (scored 15), indicating disagreement with these items. Whereas, most women support the statements that "breast milk is digested more easily than formula" (scored 82), "breastfeeding protects child from diarrhea and infectious diseases" (scored 67), "breastfeeding protects against breast cancer" (scored 79), "breastfeeding contains all the essential nutrients for infant"



(scored 78), and “breastfeeding help uterus to return to its pre-pregnancy state more quickly” (scored 65).

Regarding the respondents’ attitudes to exclusive breastfeeding, on a scale of 100, the average score for responses is shown in table 2. Mothers were not satisfied with that “breastfeeding has no negative effect on marital relationship” (scored 33), “there is no difficulty for nursing mothers in doing family duties” (scored 46), and “maternity leave for 3 months is sufficient for the success of breastfeeding” (scored 23). Mother’s positive attitude in this study was displayed in their agreeing that “breastfeeding is easier than formula” (scored 70), “breastfeeding is one way to reduce family expenses” (scored 62), “breastfeeding prevents excessive weight gain and keeps the body well shaped” (scored 79), and “breastfeeding strengthens the mother relationship with her newborn baby” (scored 85).

In addition, our data showed that 79% of mothers reported that they did not have special rooms in work places to feed her child and 73.2% of mothers did not agree that the benefit of breastfeeding is only for the first three months. The believed that formula milk is richer than the benefit of breast milk was chosen by 72.4% of mothers, whereas 75.5% of mothers agreed that breastfeeding is the best choice for a child, 47.1% of subjects reported they practice breastfeeding more than 3 times a day, and 79.2% of mothers stated that doctors and nurses’ advices mothers for breastfeeding, while 61.8% of participants agreed that educational program, during pregnancy, for encouraging women for breastfeeding is highly necessitated.

Figure 1 shows that 185 of participants (48.68%) stated that colostrum is good for infant, while 105 mothers (27.63%) considered it is not good. Eighty-three of mothers (21.84%) did not know the importance of colostrum for baby and 7 mothers (1.84%) said it may be detrimental to the child’s health.

The number of mothers who breastfed immediately after delivery was 124 (32.63%), while 118 mothers (31.05%) indicated they started exclusive breastfeeding 24 hours after birth (table 3). The duration of which the baby received breast milk for 3-6 months was chosen by 108 mothers (28.42%) whereas, 22.89 % of participants (87 mothers) stated they did not give formula to their children during the first year, while 99 of respondents (26.05%) reported that they practiced breast fed exclusively up to 24 months of baby age. With regards to giving supplementary food, table 3 shows that the majority of participants (215 mothers, 56.58%) declared that they started giving the child supplementary food with continues exclusive breastfeeding between 4-6 months.

With regards to giving formula, of the 380 interviewed mothers, our data showed that 25.26% of participants (96 women) were full breast feeders, 66.05% of participants (251 women) were mixed feeders and they did give formula to their children as well as breast milk, while 33 mothers (8.68%) used only infant formula for feeding of their children. Table 4 shows that, of the 347 breast feeders, a number of mothers stopped breastfeeding before 24 months of child age due to

different reasons; 6.34% (22 mothers) were stopped for having nipple or breast problem, 29.39% (102 mothers) thought that having insufficient breast milk, 8.65% of respondents for child refusal, 12.68% of mothers for child’s health problem, 2.02% of mother’s dislike breastfeeding, 25.94% of subjects for having new pregnancy and 12.10% of mothers because of there were not enough privacy in their work places.

Data in table 5 illustrates the correlation between mother’s characteristic and type of feeding plan. Among the 96 mothers with exclusive breastfeeding plan, 47 mothers (22.49%) were normal vaginal birth and 49 of women (28.65%) had cesarean delivery; Chi-square analysis shows no significant association between type of delivery and feeding plan with a *P*-value 0.31. Likewise, the type of feeding plan was independent with other factors. Mothers were less likely to breastfeed considering the number of children, mother’s employment, mother’s education level and family income level with *P*-values > 0.05.

Table 1: Sociodemographic characteristic of breastfeeding mothers (n=380)

Variables	N (%)
Age (years)	
18-27	88 (23.16)
28-37	198 (52.10)
38-47	89 (23.42)
48-50	5 (1.32)
Mean age ± SD	37.2 ± 5.1 years
Median age	38 years
Marital status	
Married	344 (90.52)
Divorced	19 (5.00)
Widow	17 (4.47)
Education level	
Less than high school	177 (46.58)
University	203 (53.42)
Paid employment	
House wife	148 (38.95)
Employed	232 (61.05)
Income level	
Moderate-good	258 (67.89)
Very good-excellent	122 (32.11)
Number of children	
3 <	154 (40.52)
3 ≤	226 (59.47)
Type of delivery	
Vaginal	209 (55.00)
Cesarean section	171 (45.00)

Table 3: Breastfeeding practice by mothers in Tripoli city (n = 380)



Table 2: Mothers' knowledge and attitudes towards infant breastfeeding.

Item	Agreement % *
Knowledge	
Three months of breastfeeding is long enough	16
Breastfeeding is a good contraceptive method	40
Breastfeeding decreases diarrhea and infectious diseases	67
Breastfeeding milk is more easily digested than formula	82
Breastfeeding contains all the essential nutrients for newborn child	78
Breastfeeding helps uterus to return to its pre-pregnancy state more quickly	65
Breastfeeding protects against breast cancer	79
Brest milk and infant formula have the same health benefits	15
Attitude	
Breastfeeding being easier than feeding infant formula	70
It is not difficult for breastfeeding mother to take care for her family duties	46
Breastfeeding has no negative effect on marital relationship	33
Breastfeeding is a good way to decrease family expenses	62
Breastfeeding keeps the body well shaped and prevent over-weight	79
Maternity leave of 3 months is enough to successful breastfeeding	23
Breastfeeding strengthens mother's relation with her child	85

* On 100-point scale, a higher score indicated a higher participant's agreement with the item teste

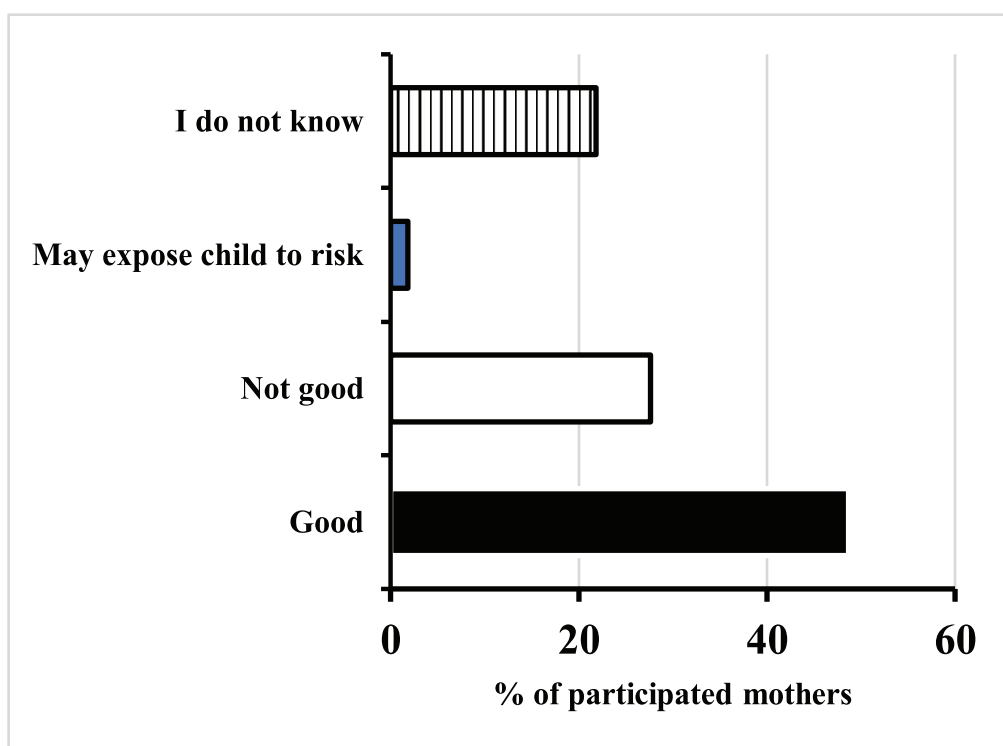


Figure 1: Knowing of mothers to the advantage of colostrum



Variable	Number	Percent (%)
Starting breastfeeding:		
Immediately after delivery	124	32.63
30 minutes after delivery	46	12.11
1 hour after delivery	92	24.21
24 hours after delivery	118	31.05
Exclusive breastfeeding for		
3-6 months	108	28.42
1 year	87	22.89
1.5 years	86	22.63
Up to 2 years	99	26.05
Exclusive breastfeeding and supplementary food		
Within 2 months	5	1.32
Between 4 – 6 months	215	56.58
After 1 year	72	18.95
After 2 years	88	23.16

Table 4: Causes of breastfeeding stopping (n=347)

Nursing problem	Frequency	%
Nipple or breast problem	22	6.34
Insufficient milk	102	29.39
Infant's refusal to nurse	30	8.65
Child's health problem	44	12.68
Mother's refusal or dislike	7	2.02
Pregnancy	90	25.94
No enough privacy in the work place	42	12.10

DISCUSSION

Table 5: The correlation between mother's characteristic and feeding plan

Factors	Mothers› feeding plan			P value
	Breastfeeding (n=96)	Infant formula (n=33)	Mixed feeding (n= 251)	
Type of delivery				
Vaginal (n=209)	47 (22.49)	17 (8.13)	145 (69.38)	0.31
Cesarean section (n =171)	49 (28.65)	16 (9.36)	106 (61.99)	
Number of children				
3 < (n= 152)	44 (28.95)	13 (8.55)	97 (63.82)	0.39
≤ 3 (n=228)	52 (22.81)	20 (8.77)	154 (67.54)	
Paid employment				
House wife (n=148)	31 (20.95)	15 (10.14)	102 (68.92)	0.24
Employed (n=232)	65 (28.02)	18 (7.76)	149 (64.22)	
Education level				
Less than high school (177)	47 (26.55)	113 (63.84)	17 (9.60)	0.65
University (203)	49 (24.14)	138 (67.98)	16 (7.88)	
Income level				
Moderate-good (258)	69 (26.74)	22 (8.53)	159 (61.63)	0.09
Very good-excellent (n=122)	24 (19.67)	8 (6.56)	89 (72.95)	

WHO recommended that optimum nutrition for new babies is breast milk since practices of satisfactory breastfeed lead to less health troubles, lower records of hospital admittances, and so low down the rates of children's mortalities and morbidities. The present study demonstrated that the beginning rate of breastfeeding, specified as the ratio of infants who established breastfeeding within the first 2 days, was 31%, which is lower than those stated by Jordanian¹³ and Iranian²⁰ women, but higher than that stated by Saudi mothers.⁸ The details behind given were attributed to different influences including mother's milk insufficiency, mother's health condition specially after cesarean section and sleeping of the infants most of the time. Several studies have specified their breastfeeding initiation rates and was fluctuating between over 90%^{21,22} to over 95%.²³ This may reveal to difference in the cultural states and the socio-economic conditions. Our findings demonstrated that more than quarter of participants were on full breast feeding and over 65% were on combined breast feeders. Moreover, more than 25% of contributors did not fulfill within the WHO advices of starting breastfeeding one hour of delivery.²⁴ Among Libyan women in Tripoli city higher-educated women were more liable to breastfeed to women with less education levels. Comparably, in developed countries and Western communities' education had an optimistic effect on breastfeeding.²⁵

The present study demonstrated that certain factors were not related with less practicing full breastfeed including delivery by caesarean section and mothers' working time. Our study findings revealed that, the majority of mothers were rarely caring for their newborns in the first two days post-delivery. In contrast to Jordan¹³ and Lebanon studies²⁶, in Tripoli city there is no hospital that is accredited as being baby friendly. Indeed, work places and hospitals without capabilities for breastfeed are unfavorable for



breastfeeding. Studies have demonstrated that women who are employed by industries that are breastfeeding friendly were capable to continue a routine breastfeed for more than six months comparable to women who are not working outside home.²⁷

Continued exclusive breastfeed up to 6 months with no supplement was reported by more than quarter of contributors by 28.42%. These findings are better than that been described by US²⁸, and Saudi Arabian studies.^{8,22} Nonetheless, it is less than the figure obtained from Ugandan study which was about half of participants by 49.8%.²⁹

Women participated in this study were not pleased with the time of their go home and they believed that workplaces did not provide a proper atmosphere for efficient breastfeeding. Therefore, organizational strategies concerning longer time off for new mothers within establishments should be considered.

Several studies have revealed that breastfeed should be interrelated to public health education. It was demonstrated that most of population in different communities preferred breastfeeding.³⁰ Therefore, for promoting breastfeeding, establishing of lactation rooms and work place breastfeeding policy are the most agreeable modes. Women participated in the present study stated that they felt scared to breastfeed in public areas. Hence, offering confidentiality to nursing mother in working and public places should be taken in consideration.

More than three quarter of the participants reported that breastfeed was better for child's health and with more benefit. The advantages of baby nursing over infant formula feeding are most likely the trigger arrow in spreading practice of breastfeeding. However, breastfeeding was brought to end by 22.89% of participants before infants became 12 months of age. The current study revealed that the most major cause of use infant formula feeding for new born baby was related to that mothers' concern their milk was inadequate by more than quarter of participants, which is found comparable to other studies.^{21,31} Several studies have identified that women give for discontinuing breastfeeding was related to their concern about milk supply.^{32,33} Therefore, education of new mothers for time needed for colostrum to convert to transitional milk and education related to procedure for successful breastfeeding are valuable in decreasing concern about milk supply. Being pregnant, by 25.94% of participated mothers, was the next most notable reason. Also, work-related troubles, by 12.10% of mothers, was a significant factor for prompt cessation of breastfeeding, which was to a certain extent lower than what was specified by 45.7% of health care workers in Saudi Arabian study.⁸ The influence of those factors on breastfeeding prevalence are most likely the belief that the participants transferred to readymade liquid formula after 12 months by 22.89%. Furthermore, absence of capabilities for preservation of pumped breast milk can be, partially, considered as an

additional factor for high rate of using formula feeding regarding salaried mothers.¹³

The present study revealed that about half of the participants (48.68%) agreed to feed newborns baby with colostrum, and acknowledged its benefit, since it provides nutrition and protection to their babies. These findings are similar to what was reported in Saudi Arabia study by Al-Binali⁸, and are in contrary to Indian studies^{31,30} where, respectively, 15% to 77% of mothers prefer to throw away colostrum. In addition, our study demonstrated that only a small figure of the population (1.84%) claimed ignorance to use of colostrum for the mother's believed it is filthy and harmful to the child.

Libyan women in Tripoli city acknowledged doctors and nurses' advice and encourage for breastfeeding, however some factors most likely have negative effects on mother's practice of exclusive breastfeeding including; feeling of shy as the major behavior of Libyan women, upgrading in education level among some participated women, where more than half of participants were with university level, length of maternity period and mother's believed that breastfeeding might disturb the marital relationship. Moreover, the use of higher technology for advertising infant formula has added an extra influence on desire of women to being breast feeder, specially, in public places.

Limitations of the present study

It is a cross-sectional descriptive design study and its location in one city. The inclusion criteria, involving the child's age of 5 years have reduced the risk of recall bias. The other factor which might limit generality of the findings include women whose youngest infant was aged 6 months and 5 years, as this might affect reacting to the survey.

CONCLUSION

The present study demonstrated that a high proportion of Libyan women in Tripoli city were breast feeder for more than 12 months. Though, women who delivered by caesarean section and employed did not have less desire to breastfeed. A work linked issues, looking for new pregnancy and breast milk insufficiency were the most reasons for discontinuing exclusive breastfeeding among respondents in this study. Having nursing room within workplaces would be the right action in the right way. The reported donation of readymade liquid formula, by several companies to hospitals (data not shown), and a high percentage of new born babies using those formula while still in the hospitals were also be worthy by the present study.

Competing interests

The authors certify that, there are no specialized competing interests.

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