Original Article

Prevalence of exclusive breastfeeding and associated factors among mothers in Surman City a cross-sectional study

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Abstract

Background: Exclusive breastfeeding (EBF) means that the infant receives only breast milk for the first six months of life after birth. The objective was to assess the prevalence of EBF and associated factors among mothers having children aged 0–6 months in Surman city, Libya

Methods: A cross-sectional study was conducted in Surman city among 146 mothers of infants aged 0–6 months. Eligible mothers were identified and randomly selected using the demographic surveillance system's computerized database that is updated weekly. A semi-structured questionnaire was used for interviews that inquired information on socio-demographic characteristics, obstetric, health service, breastfeeding related factors (initiation of breastfeeding, prelacteal feeding and colostrum feeding) and economic factors. EBF prevalence was calculated using 24-hour recall method. Multivariate logistic regression analysis was used to identify those factors associated with the Exclusive breastfeeding

Results: The prevalence of EBF in the last 24 hours preceding the survey was 44.5%. Significant evidence of an association was observed with type of delivery, assistance during delivery and fathers' education with (OR = 0.664, 95% CI 0.461, 0.957, p=0.027), (OR =0.593, 95% CI 0.422, 0.835, p=0.007) and (OR= 2.500, 95% CI 1.161,2.925 P= 0.041) respectively. Age, Mothers' education, Initiation of breastfeeding, were found to be not associated with breastfeeding practices

Conclusion: The prevalence of EBF Surman city (44,5%) is lower than Global Nutrition Targets 2025, increase the rate of EBF in the first 6 months up to at least 50%. Most (66.4%) of the mothers reported that they had not received breastfeeding education during their last pregnancy and 94.5% percent of mothers had not antenatal care visits, (54.8%) were Caesarean deliveries These findings suggest that there is a need for breastfeeding support provided by health services. Hence, promotion of EBF during the first six months of life needs to be addressed and future breastfeeding promotion programs should give special attention to those women who are not practicing EBF.

Keywords: Exclusive breastfeeding, Predictor, Surman city

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Introduction

According to World Health Organization (WHO), breastfeeding is one of the most natural and cost-effective processes of feeding infants aged less than 24 months to obtain the right amount of nutrition needed for healthy growth and development (1,2). Exclusive breastfeeding is a cornerstone of child survival and child health because it provides essential, irreplaceable nutrition for a child's growth and development. It serves as a child's first immunization – providing protection from respiratory infections (3), diarrheal disease, and other potentially life-threatening ailments. Exclusive breastfeeding also has a protective effect against obesity and certain noncommunicable diseases later in life (3).

Exclusive breastfeeding (EBF) refers to the practice of feeding an infant on breast milk alone for the first six months of life (without addition of other food or water) [4]. In 2012, the World Health Assembly Resolution 65.6 endorsed a Comprehensive implementation plan on maternal, infant and young child nutrition (1), which specified six global nutrition targets for 2025, this policy brief covers the fifth target: increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%, the purpose of this policy brief is to increase attention to, investment in, and action for a set of cost-effective interventions and policies that can help Member States and their partners in improving exclusive breastfeeding rates among infants less than six months.(5)

Previous studies have reported several predictors of EBF. Differences are evident not just between countries but also within the same country. Several factors have been shown to be associated with EBF: variations between urban and rural areas, infant's age, mothers' employment status and education level, knowledge about good breastfeeding practices, occupation, monthly household income, mothers' smoking status, socio-economic position, prelacteal feeding, parity, positive attitudes towards EBF, intent to exclusively breastfeed before delivery, timely initiation of breastfeeding, mode of delivery, infant's birth weight, health system practices, discarding colostrum and community beliefs [6-7]

In Libya, the rate of artificial feeding is between 5.7% and 40.3% (8, 9), and 47.88% of mothers breast-feed their infants for less than 1 month, whereas 28.18% breast-feed their children for 13 months (10)

In Libya, we have limited data about breastfeeding practices, hence, understanding the factors that influence EBF is essential to help in the development of strategies to promote EBF practices in Libya. The purpose of the present study is to determine EBF frequency in infants who attended a pediatric outpatient clinic in Surman city. The objective was to assess the prevalence of EBF and associated factors among mothers having infants aged 0–6 months in Surman city

Methods

A cross-sectional study was conducted from January to March 2022. by using pre-tested semi-structured questionnaire that inquired information on socio-demographic characteristics, obstetric, health service and breastfeeding related factors (initiation of

breastfeeding, prelacteal feeding and colostrum feeding) and economic factors. Questions related to EBF were asked using 24-hour recall method. Survey questionnaires were administered in native language (Arabic) of the respondents for 146 mothers of infantes aged 0–6 months in Surman city, at immunization outreach points and health facilities.

Exclusive breastfeeding was defined as feeding an infant on breast milk only from birth up to the age of six months (4,11).

Data were coded and entered into SPSS Version 21 software for analyses. Descriptive analysis including frequency distribution, proportion and mean was performed to summarize the characteristics of the study subjects. To identify factors associated with exclusive breastfeeding practice, firstly bivariable logistic regression was performed. Subsequently, significant variables in the bivariable analysis (p - value < 0.05) were incorporated into the multivariable logistic regression. Statistical significance was declared at $p < 0.05$ and the corresponding 95% CI.

Results

A total sample of 146 mothers having infants aged (0 – 6) months were interviewed

The background characteristics of the respondents are presented in Table 1. There were more male (58.2%) than female (41.8%) children. Among 146 children, (41%) were first born. Mothers' age (97.9%) was >18 y. Most of the mothers lived in a joint family (57.5%) and had primary education (46.6%). 56.2% of the mothers were employed. (70.5%) of fathers were educated up to primary level. (92.2%) of the families belonged to poorer wealth quintile.

Most (66.4%) of the mothers reported that they had not received breastfeeding education during their last pregnancy and 94.5% percent of mothers had not antenatal care visits. All of the mothers (100%) had delivered in a health institution during their last pregnancy. (54.8%) were Caesarean deliveries and majority of (76.7%) of mothers assisted by doctors. More than half (65.8%) of the children were initiated breastfeeding after one hour, and a large percentage (76%) received colostrum. (55.5%) of the children had received prelacteal feeds out of which most of the children (64.2%) were given other milk than breast milk

The prevalence of EBF in the last 24 hours preceding the survey was 44.5%. EBF prevalence was higher among male 58.5% than female 41.5% (Figure 1). Most of the mothers reported that the main reason for not practicing EBF was care taker fed the child with food other than breast milk unknowingly (43%), Other reasons were inadequate secretion of breast milk (36%), illness of the mother (7.5%) and other reasons (9.9%)

Our Study indicate that three factors were associated with EBF at 0.05 level of alpha (Table 2). Significant evidence of an association was observed with type of delivery, assistance during delivery and fathers' education with (OR = 0.664, 95% CI 0.461, 0.957, p=0.027), (OR =0.593, 95% CI

0.422, 0.835, p=0.007) and (OR=2 .500, 95% CI 1.161,2.925 P= 0.041) respectively.

Table 1 Sociodemographic characteristics of mothers having children aged 0–6 months from Surman City, Libya, 2022 (n = 146).

Table 1. Sociodemographic characteristics of mothers having children aged 0–6 months from Surman City, Libya, 2022 (n = 146) prescription.

Characteristics (N=146)	Frequency	Percentage
Sex of child		
Male	85	58.2
Female	61	41.8
Birth order of the child		
First born	60	41.1
Second and above	86	58.9
Mothers' age in years		
≤ 18 years	3	2.1
>18 years	143	97.9
Mothers' education		
Illiterate (no education)	23	15.8
Primary education	68	46.6
Secondary or higher education	55	37.7
Mothers' employment status		
Housewife	64	43.8
Working outside home	82	56.2
Fathers' education		
Illiterate (no education)	8	5.5
Primary education	103	70.5
Secondary or higher education	35	24.0
Type of family		
Nuclear	62	42.5
Joint and others	84	57.5
Wealth quintile		
Poorer < 1000 DL	136	93.2
Middle 2000-5000 DL	5	3.4
Richer > 5000 DL	5	3.4
Breastfeeding education received		
Yes	49	33.6
No	97	66.4

Visit		
No. ANC visit	138	94.5
1-3 visits	5	3.4
>= 4 visits	3	2.1
Place of delivery		
Institutional	146	100.0
Non-institutional	0	0.0
Type of delivery		
Normal	66	45.2
Caesarean	80	54.8
Assistance during delivery		
Doctor	112	76.7
Nurse/sisters and others	34	23.3
Initiation of breastfeeding		
≤1 hour	50	34.2
> 1 hour	96	65.8
Received colostrum		
Yes	108	74.0
No	38	26.0
Type of feeding		
Breastfeeding only	65	44.5
Breastfeeding with food supplements	42	28.8
Formula milk	39	26.7
Prelacteal feeds		
Yes	81	55.5
No	65	44.5
Prelacteal feeds		
Other milk than breast milk	52	64.2
Sugar/glucose water	6	7.4
Infant formula	23	28.4
main reason for not practicing EBF		
care taker fed the child with food other than breast milk unknowingly	35	43
inadequate secretion of breast milk	29	36

illness of the mother	6	7.5
Children were unable to suck the breast	3	3.6
other reasons	8	9.9

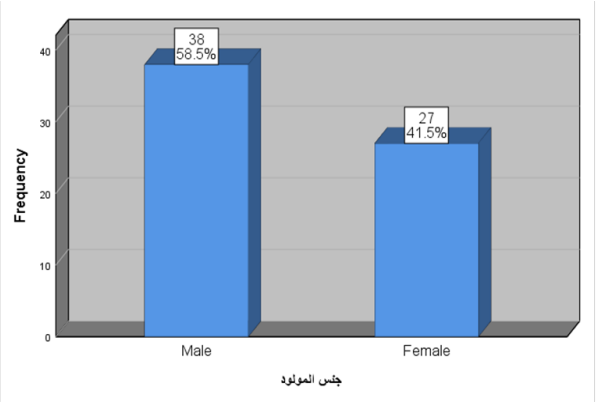

Figure 1. Prevalence of exclusive breastfeeding by sex**.**

Table 2. Bivariate analysis of factors associated with exclusive breastfeeding prescription.

Variable	**Exclusive breastfeeding**				**OR**	**p-value**
	Yes (n=65)		No (n=77)			
	n	%	n	%		
Sex of child						
Male	38	44.7	47	55.3	1	
Female	27	44.3	34	55.7	1.010(0.70,1.46)	0.958
Birth order of the child						
First born	23	38.3	37	61.7	1	
Second and above	42	48.8	44	51.2	0.785(0.53,1.16)	0.209
Mothers' age						
≤18 y	2	66.7	1	33.3	1	
>18 y	63	44.1	80	55.9	1.51(0.67,3.44)	0.435

Mothers' education						
Illiterate (no education)	11	47.8	12	52.2	1	0.520
Primary education	26	38.2	42	61.8	0.884(0.334,2.341)	
Secondary or higher education	28	50.9	27	49.1	0.160(0.291,1.227)	
Mothers' employment status						
Housewife	30	46.9	34	53.1	1	0.613
Working outside home	35	42.7	47	57.3	1.098(0.77,1.58)	
Fathers' education						
Illiterate (no education)	7	87.5	1	12.5	1	0.041
Primary education	44	42.7	59	57.3	1.119(0.512,2.442)	
Secondary or higher education	14	40.0	21	60.0	2.500(1.161,2.925)	
Type of family						
Nuclear	30	48.4	32	51.6	1	0.678
Joint and others	35	41.7	49	58.3	1.161(0.81,1.67)	
Wealth quintile						
Poorer < 1000 DL	62	45.6	74	54.5	0.1	0.102
Middle 2000-5000 DL	3	60.0	2	40.0		
Richer > 5000 DL	0	0.0	5	100.0		
Breastfeeding education received						
Yes	24	49.0	25	51.0	1	0.441
No	41	42.3	56	57.7	1.159(0.802,1.675)	
Visit						
No. ANC visit	59	42.8	79	57.2	1	0.190
1-3 visits	4	80.0	1	20.0	0.373(0.033,4.216)	
>= 4 visits	2	66.7	1	33.3	2.000(0.078,5.593)	

Place of delivery						
Institutional	65	44.5	81	55.5		
Non-institutional	-	-	-	-		
Type of delivery					0.957	
Normal	36	54.5	30	45.5	1	0.027
Caesarean	29	36.3	51	63.7	0.664(0.461,0.957)	
Assistance during delivery						
Doctor	43	38.4	69	61.6	1	0.007
Nurse/sisters and others	22	64.7	12	35.3	0.593(0.422,0.835)	
Initiation of breastfeeding						
≤1 hour	25	50.0	25	50.0	1	0.336
> 1 hour	40	41.7	56	58.3	1.200(0.833,1.728)	
Received colostrum						
Yes	50	46.3	58	53.7	1	0.467
No	15	39.5	23	60.5	1.173(0.753,1.827)	
Prelacteal feeds						
Other milk than breast milk	3	5.6	54	94.4		0.434
Sugar/glucose water	0	0.0	6	100.0		
Infant formula	0	0.0	23	100.0		
Reason mother gives Prelacteal feeds						
care taker fed the child with food other than breast milk unknowingly	1	2.9	34	97.1		0.820
inadequate secretion of breast milk	2	6.7	28	93.3		

illness of the mother	0	0.0	6	100.0		
Children were unable to suck the breast	0	0.0	3	100.0		
other reasons	0	0.0	9	100.0		
No Answer						

Discussion:

EBF is the best recommended infant feeding method for the first six months of life.[12] Currently, there is solid evidence that exclusive breastfeeding had short-term and long-term health benefits for infants and mothers (13). But it has not yet been universally practiced and the reduction in the rate of EBF is taken as a serious problem, especially in developing countries [5,12].

In the present study: The prevalence of EBF in Surman city was (44,5%) which lower than Global Nutrition Targets 2025, (50%), and among mothers in East Africa with 55.9% in 2020. (13) The slight difference between the 2020 East Africa rate and the present study can be attributed to the sample size used. whereas more higher to compared Albida City rate with (32.28%) in2019 (14), Benghazi City with 25.9% at (age 0-3 m), 10.4% at (age 4-6m) in 1992 (15), and more higher than Global rate with only 38% (16., 17, 18).

Our study identified three factors to be associated with exclusive breastfeeding in Surman City. These factors were, type of delivery, assistance during delivery and fathers' education. In the present study, The crude prevalence rates of cesarean delivery were 54.2%. This prevalence greatly exceeds the rate for C-section deliveries of 10–15% suggested by the WHO [19]. The mothers who delivered by caesarean section had lower odds (OR=0.664) of EBF than those who delivered normally. Ideally, all hospitals are required to practice ten steps to successful breastfeeding recommended by WHO [20] but it is seldom practiced. This could be one of the reasons why mothers who delivered by caesarean section did not practice EBF. As a result, the baby may be fed prelacteals even before breastfeeding is initiated for the first time. Furthermore, the mother and her family often think that breast milk itself is not sufficient and infant formula is necessary which is easily available around the hospital premises. Our Study was similar to other studies conduct in Sydney, Australia found that C-section delivery was associated with EBF (OR = 0.27). (21), and Study in Lebanon with (OR= 0.39), (22)

Furthermore, the study found that mothers who Assistance with Nurse/sisters and others during delivery had low probability to practice exclusive breastfeeding compared to mothers who assistance with Ductor with (OR=0.593). The possible reason could be the information provided during counseling by Ductor assistance may help the mothers to increase their awareness about the importance

of breastfeeding that brought attitudinal changes on exclusive breastfeeding

Previous studies conducted in other countries indicated that sex of the infant [23, 24], age of the mother [24,25, 26], maternal education [27, 28, 26] occupation of the mother [29–30], ANC [27, 29] and PNC [29, 25] practices of the mother were reported as predictors of EBF among infants less than 6 months old. However, none of these factors were associated with EBF in this study which could be due to the socio-cultural differences on breastfeeding among the study participants, study design or the sample size might not be able to capture the association between the aforementioned factors and exclusive breastfeeding

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Limitations of the study

This study shares the limitation of any other cross-sectional studies of drawing cause and effect relationship between the factors and the prevalence of exclusive breastfeeding in the study area. The prevalence of EBF might be overestimated due to the nature of the used for data collection: the 24-h recall method. Some of the independent variables were not associated with the dependent variable which has been reported as factors associated with exclusive breastfeeding in many studies. This might be due to the sample size which was not able to justify the relationship between the factors and the dependent method variable.

Conclusion

The prevalence of EBF (44.5%) in Surman city is lower than Global Nutrition Targets 2025, (50%). These findings indicate that the breastfeeding has not yet been universally practiced in Surman City, support provided by health services is weak. Further, there were no breastfeeding promotional activities going on in that area.

ence, promotion of EBF during the first six months of life and continuation of breastfeeding after six months along with appropriate complementary feeding, One way to reach this goal is to encourage breastfeeding, which has many benefits for infants and children. People from all walks of life play a part in reaching this goal. When health care professionals, legislators, employers, business owners, and community and family members work together, their efforts can increase the number of women who breastfeed their babies and the number of months that they breastfeed them.

Disclaimer

The article has not been previously presented or published, and is not part of a thesis project.

Conflict of Interest

There are no financial, personal, or professional conflicts of interest to declare.

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