

Determinants of Exclusive Breastfeeding Practice Amongst Mothers with Children Ages Below Six Months Living in Dayah IDP Camp Mogadishu, Somalia

Abstract

Aims: Breastfeeding is pivotal for the infant to grow healthy. The features influencing breastfeeding ought to be perceived so as to help it and give effective breastfeeding counselling. Prevalence of EBF is modest globally (35 percent), and it varies between 22 and 33 percent in Sub-Saharan Africa. The goal of this study was to look into the factors that influence exclusive breastfeeding among mothers with children under the age of six months who live in the Dayah IDP Camp in Mogadishu, Somalia. The study specifically aimed at establishing knowledge level about exclusive breast feeding (EBF) among mothers with children below six months living in Dayah IDP camp in Mogadishu, Somalia; to determine socio-demographic factors that influence (EBF) in the camp and to determine socio-cultural factors affecting EBF in the IDP camp.

Study design; A descriptive cross-sectional study design was deployed.

Methodology: The target population in the camp was 900 mothers with children. Study population worked out to 399 and 10% was added to account for loss of respondents. A total of 438 respondents were chosen for the study using systematic random sampling. Structured questionnaire was used to collect qualitative data. Quantitative data were collected at the Camp from two Focus Groups Discussion comprising nine mothers who delivered at home with the assistance of Traditional Birth Attendants and nine who delivered who delivered at a healthcare facility within Dayah IDP camp. The gathered data was analyzed using statistical program for social studies (SPSS) Version 25 and a regression model was utilized to determine the association between variables. Ethical approval for the study was obtained from the Mount Kenya University ethical review committee. Study participants gave written consent prior to responding to the questionnaires.

Results: The findings on the respondents recorded that 92.7% were knowledgeable about EBF but only 20.1% of them were practicing EBF, 44.6% provided water and breast milk although 76.2% believed that breast milk is sufficient for infants. In terms of age, marital status, literacy and employment 47.4% of the women were aged between 26 and 35 years, 73.2% of them were married, 56.1% were illiterate and 69.4% unemployed. Mothers with babies that were 6 months were 20.8% of whom 52.6% were females.

Conclusion: In conclusion results of the study show that respondents' knowledge level and socio-cultural factors had a substantial impact on exclusive breastfeeding practices, however sociodemographic parameters had no impact. This gap could be explained by the huge number of respondents who acquired information from health facilities. The study subjects received accurate information from health facilities regardless of their demographic characteristics. It is recommended that programmes focusing on informing expectant mothers and those that are nursing infants about exclusive breast feeding be emphasised. In addition, impeding socio-

cultural norms ought to be identified and addressed to enhance the WHO recommended practice of feeding babies below six months strictly on breast milk. Additionally, expectant mothers must be encouraged to deliver in health facilities where they are attended to by female trained staff and are coached to solely breastfeed the infants.

Keywords: *Exclusive Breastfeeding, Children Ages below Six Months*

1.0 Introduction

Global target of 50% for exclusive breast feeding (EBF) of infants below six months by 2025 was set by World Health Assembly in 2012 (World Health Assembly, Geneva, May 2012; WHO Global targets 2025: 2014). Exclusive breastfeeding is nourishing an infant solely on its mother's milk without any other source of nutrition, though medicine and mineral supplements are permitted. Conversely, partial breastfeeding allows other food sources example bottle and cup. Mothers ought to start breastfeeding in the first one hour after delivery and continue doing the same for the following six months exclusively for up to two years as collectively recommended by WHO/UNICEF in 2019. However, Zong et al (2021) reported that in fifty seven low and middle income countries (LMICs) the prevalence for early introduction of breast feeding was 51.9% and only 45.7% for EBF. They concluded that although there is continued improvement globally towards EBF policy the practice is below the WHO/UNICEF recommendations and that there are considerable regional variations in adherence.

Breastfeeding is the natural method of feeding a child and involves two major methods namely partial and exclusive breastfeeding (Tampa-Naah et al 2019). The partial breastfeeding is most fashionable but is not healthy for the infants. Exclusive breastfeeding is the most valuable method for the infant and has numerous benefits such as emotional, physical, mental and psychological health. Besides, it creates natural bonding with the mother (Hunegnaw, 2017; Tampah-Naah et al, 2019). It leads to protection from diarrhoea and respiratory infections because the mother imparts immunity against the various diseases and consequently reduce deaths arising from the infectious diseases (Abdulla et al 2020; North et al 2022).

To encourage mothers to suckle their children, breastfeeding was initiated from the maternity centers (Mohamed, Mativo and Muhamud 2021). Suckling comes naturally to mothers in Africa making this practice a great success however breastfeeding declines as the child grows older. As per International Baby Food Action Network (IBFAN) figures for breastfeeding at three to four months were as follows:

Malawi and Eritrea tied at 72 percent, Botswana was solo at 37 percent, Ghana was next at 43 percent, Kenya at a paltry 35% and last on the list was Lesotho with 54% (Liamputtong, 2012). In most societies south of the Sahara suckling babies is still seen as the best option for feeding infants especially for parents whose HIV/AIDS status is unknown though it is being challenged by feasibility studies (Belay and Wubneh, 2019). In Somalia, a study done by World Commemorates showed that three out of ten mothers exclusively breastfed their young ones till six months (WHO, 2017).

WHO recommended exclusive breastfeeding (EBF) of newborn babies until the age of six months (WHO, 2016). Complementary nutrition may be added beyond the age of six months with continued breastfeeding (Tampah-Naah et al 2019). Globally, however, there are a number of impediments to implementing the WHO recommendation of EBF (Arif et al 2021). Low

production of milk and insufficient nutrition for the mother are common in a number of low and medium income communities around the world. In Somaliland, a country across the border to Somalia, Jama et al (2020) reported that lack of formal education of the mother, low income, lack of support of the husband and delivery of a female child are associated with low exclusive breastfeeding. Talbert et al (2020) conducted a study among first-time mothers in a rural location and reported that there are varied factors determining EBF among them are age and marital status of the mother. Elderly female relatives have major influence of exclusive breastfeeding of babies. There is a perception that when a newborns cries it is suggestive of hunger and that a baby needs to be fed with maize porridge to provide semi solid feed from the age of three months (Talbert et al 2020). Manyeh et al (2020) in Southern Ghana reiterated that age of the mother determines the extent of adhering to WHO recommendation of EBF for the first six months. Additionally they reported that employment, size of household and environment within which the mothers live; that higher numbers of unemployed mothers practice EBF compared to employed, mothers in larger household are more likely to practice EBF and those in a farming communities in Southern Ghana adhere to EBF more than in a fishing area.

WHO (2017) and UNICEF (2017) published policy documents on infant and young child feeding and on practices of breastfeeding, complementary feeding respectively. Early introduction of solid meals and other liquids limits the child's capacity to take enough mother's milk, reduces their ability to properly absorb the nutrients in the milk, increases the child's risk of diarrhea and serious respiratory infections, and causes poor growth (Zong et al, 2021). It also has a negative impact on the mother by decreasing postpartum amenorrhea and increasing the likelihood of multiple pregnancies (Saeed et al 2020). Approximately 1.24 million infants die every year because mothers do not understand the importance of exclusive suckling until the sixth month (Abdulla et al 2022).

Dahiya IDP camp is a restrictive environment accommodating over 900 mothers caring for babies and infants of various age groups. This study focused on babies below the age of six months. According to Jama et al (2020) education level of mothers, gender of the baby and level of income influence EBF of the baby in a broader no-restrictive zone. Therefore, it was of great interest to determine the factors which set the tone in a camp accommodating people up-rooted from their natural environments. Dahiya was a suitable habitat where the occupants are not in control of their accustomed day to day life.

This research utilized King's Conceptual system (King, 1981) to build up the interactive theory of breast feeding. Ruler's Conceptual System is made out of three intuitive frameworks: individual; relational; and social. The idea of an individual framework incorporates seven angles: observation; self; self-perception; development; improvement; time; and space. A relational framework is made out of individuals who collaborate in this framework and it incorporates the ideas of cooperation, correspondence, exchange, job, and stress. A social framework is shaped by the mix of relational frameworks with the accompanying pertinent ideas: association; expert; control; status; and basic leadership.

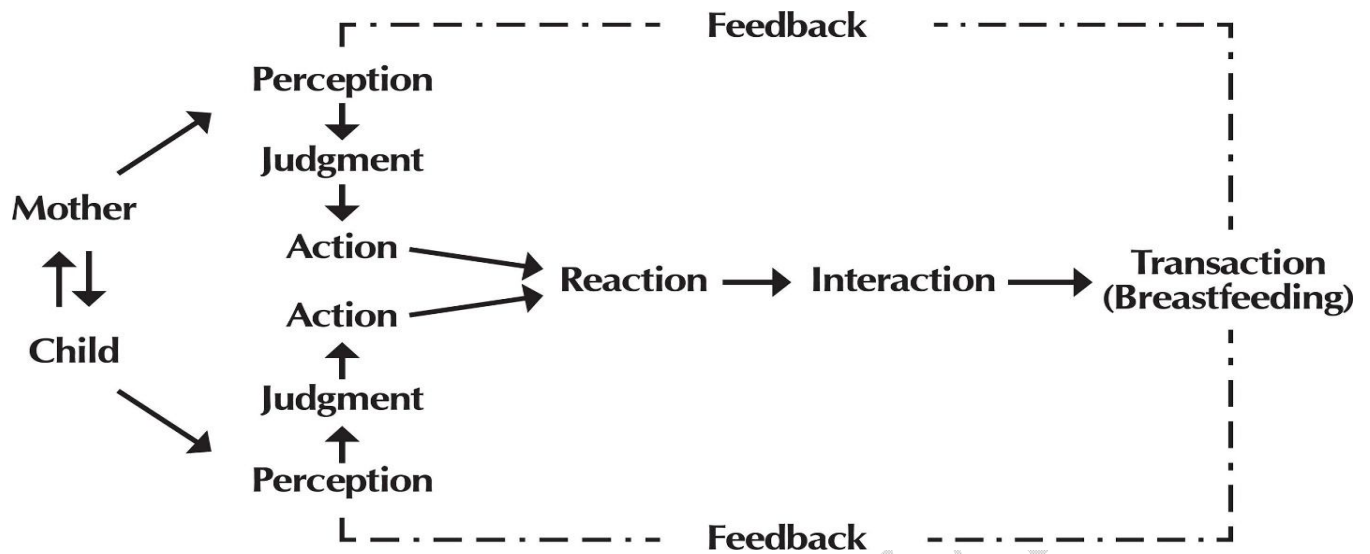


Figure 1: King's interaction-transaction process

2.0 Methodology

A descriptive cross-sectional study design was deployed. The target population in the camp was 900 mothers with children. Study population worked out to 399 and 10% was added to account for loss of respondents. A total of 438 respondents were chosen for the study using systematic random sampling. Structured questionnaire was used to collect qualitative data. Quantitative data were collected at the Camp from two Focus Groups Discussion comprising nine mothers who delivered at home with the assistance of Traditional Birth Attendants and nine who delivered who delivered at a healthcare facility within Dayah IDP camp. The gathered data was analyzed using statistical program for social studies (SPSS) Version 25 and a regression model was utilized to determine the association between variables. Ethical approval for the study was obtained from the Mount Kenya University ethical review committee. Study participants gave written consent prior to responding to the questionnaires.

3.0 Results and Discussion

The data was gathered from the field through the use of questionnaires, which were given to 438 people. Only 399 surveys were returned out of this total, representing a 91.1 percent response rate.

3.1 Knowledge level of mothers on EBF

The researcher wanted to discover if the participants were knowledgeable about benefits of EBF. The results indicated that majority of the respondents (92.7%) knew about exclusive breastfeeding compared to 7.3% who did not know. Over two thirds (67.2%) of them obtained the information from health institutions while 6% did not know anything about EBF. Less than half of the respondents (44.6%) reported that breast milk and water were recommended to give a child under six months and 4.4% maintained that it is any other food. Over three-quarters (76.2%) said breast milk alone was sufficient for newborns during the first six months, while the rest (23.8%) disagreed. EBF for the first six months is believed to prevent diarrheal and

respiratory disorders in infants by the vast majority (83.5%), while 5.3 percent disagree. Majority of respondents agreed with the statement that giving breast milk to an infant immediately after birth is important ($M=1.38$, $sd=.590$) but disagreed with the other statements: discarding colostrum before giving it to a newborn is important ($m= 3.04$, $sd=.570$), giving three-month-olds only breast milk may not be sufficient and they may need water and other nutrients ($m= 3.04$, $sd=.570$), and giving infants.

3.2 Mothers' Exclusive Breastfeeding Practice Is Influenced by Socio-Demographic Factors

The study's second goal was to find out what socio-demographic characteristics influence mothers' exclusive breastfeeding practices. The results are listed below.

Demography of Respondents

Age, marital status, education level, work status, infant's age, times mother visited antenatal clinic, parity, place of delivery, and mode of delivery are the demographic features of the study respondents. Table 3 shows that 47.4% were 26 and 35 years old, with those aged 45 and up accounting for only 4% of the total. About three quarters of the respondents (73.2%) were married while 8% were widowed. Over half 56.1% were illiterate and 12.8% had secondary education and above. Those who were unemployed accounted for over two thirds (69.4%) and more than a quarter (30.6%) were employed. Majority of the infants were aged between 6 and 12 months whereas less than a quarter (20.8%) who were below 6 months; 53% of the infants were females and less than half (47.4%) male. More than a third (35.6%) of the respondents had attended antenatal clinic three times while less than a quarter (19.5%) had only done so for only one time. Almost half (46.9%) of the respondents were on multi para and slightly below a quarter (24.1%) were on primary gravida. Majority of the respondents (84.2%) had delivered in a health facility compared to the 15.8% who delivered at home. Almost all the deliveries were normal (98.2%) with only 1.8% delivering through caesarian section.

3.3 Socio-cultural factors affecting EBF

The researcher went ahead to inquire about the exclusive breastfeeding practices. The respondents' exclusive breastfeeding practices are shown in Table 4. Over a third (36%) of the respondents believed that EBF helps their child to grow well while less than a third (30%) breastfed for the health of the infant. Nearly all (98.2%) had breastfed their infants and the rest (1.8%) did not. Over three quarters (78.2%) exclusively breastfed their children while less than a quarter did not. After delivery, more than half (57.4%) breastfed their infant within an hour compared to the 11% who did not remember what they did. Majority (87.7%) breastfed their child with the first milk and 12.3% discarded it. More than three quarters (78.9%) had given fluids to their infant in the first six months while 21.1% did not. Over half (55.9%) started giving food and drink to their infant within the first three months compared to 6.5% who gave within five months. Less than half (45.9%) gave food and fluids to their infant within the first 6 months because of hot weather while 6.8% did so because they could not combine work with breastfeeding. Majority of the respondents (85.2%) breastfed their infants every less than 8 hours compared to 14.8% who breastfed after 8 hours or more. Over two thirds (68.4%) of the respondents did not give prelacteal feeding to their infants before breast milk compared to the 31.6% who gave. Finally, less than half (41.6%) breastfed their infant when it cried and 19% did so on schedule.

3.4 Hypothesis Testing

The researcher went ahead to test the study hypotheses. The study's hypotheses were as follows:

H₀ 1. The association between socio-demographic characteristics and exclusive breastfeeding practice has little statistical significance.

H₀ 2. There is no statistical significance of relationship between knowledge level of the mothers and exclusive breast feeding practice?

H₀ 3. The association between socio-cultural factors and exclusive breastfeeding practice has little statistical significance.

A Pearson correlation test was used to test the hypotheses as shown in Table 1.

Table 1: Hypothesis Testing

Determinants of EBF		Exclusive Breastfeeding
Socio-demographic characteristics	Pearson Correlation	-.002
	Sig. (2-tailed)	.963
	N	399
Knowledge of EBF	Pearson Correlation	-.287**
	Sig. (2-tailed)	.000
	N	399
Sociocultural factors	Pearson Correlation	.183**
	Sig. (2-tailed)	.000
	N	399

** . Correlation is significant at the 0.01 level (2-tailed).

Table 1 shows the correlation analysis on determinants of exclusive breastfeeding. There was no statistically significant relationship between sociodemographic characteristics and EBF ($r(399)=.002$, $p=.963$). As a result, the null hypothesis one was accepted as:

H₀: There is no statistically significant link between sociodemographic factors and the practice of exclusive breastfeeding. A statistically significant negative correlation was found to exist between knowledge and exclusive breastfeeding ($r(399)=-.287$, $p=.000$) and the null hypothesis 2 was rejected therefore:

H_A: There is a statistically significant link between breastfeeding knowledge and exclusive breastfeeding.

The null hypothesis 3 was rejected since there was a statistically significant link between sociocultural practices and exclusive breastfeeding ($r(399) =.183$, $p=.000$).

H_A: Exclusive breastfeeding has a statistically significant association with sociocultural factors.

This implies mothers' sociodemographic characteristics may not determine the practice of EBF. Additionally, mothers' knowledge level and sociocultural factors may determine the practice of EBF.

The researcher then performed a regression analysis to assess the impact of the independent variable on the dependent variable.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.315 ^a	.099	.093	3.04700

a. Predictors: (Constant), Sociodemographic factors, Knowledge of EBF, sociocultural factors

Table 2 reveals a R Square value of .099, indicating that sociodemographic, knowledge level, and sociocultural factors may account for 9.9% of changes in exclusive breastfeeding by mothers in the Dayah IDP camp.

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	405.057	3	135.019	14.543	.000 ^b
	Residual	3667.259	395	9.284		
	Total	4072.316	398			

a. Dependent Variable: Exclusive Breastfeeding

b. Predictors: (Constant), Sociodemographic factors, Knowledge level and sociocultural factors

Table 3 above shows the F-test ($F(3,395)=14.543$, $p<.000$) of the test suggesting that a linear relationship existed between the variables of sociodemographic factors, knowledge level and sociocultural factors and exclusive breastfeeding (EBF). The significance level for $p=.000$ is less than 0.05. This means the model was accurate enough to predict the impact of the specified factors on exclusive breastfeeding among moms in the Dayah IDP camp.

Table 4: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	20.447	1.999		10.230	.000
1 Sociodemographic factors	-.010	.078	-.006	-.132	.895
Knowledge of EBF	-.511	.095	-.262	-5.385	.000
Sociocultural factors	.301	.110	.134	2.748	.006

a. Dependent Variable: Exclusive breastfeeding

The following regression model was developed using table 4.

$EBF = 20.447 - 0.010$ socioeconomic variables $- 0.511$ EBF knowledge $+ 0.301$ sociocultural factors. The regression provides a statistical model for determining the effects of the components. In the current study, keeping all of the variables at zero results in a 20.447 percent increase in exclusive breastfeeding. A .010 drop in EBF is caused by a change in a unit of sociodemographic variables. When all other parameters are held constant, a change in one unit of knowledge equals a .511 drop in EBF, and a change in one unit of sociocultural factors equals a .301 increase in EBF. All of the independent variables of sociodemographic characteristics, understanding of EBF, and sociocultural factors had non-zero coefficients. As a result, all of the independent variables were discovered to have an effect on the dependent variable.

4.0 Conclusion

In the Dayah IDP camp, sociodemographic factors had no significant impact on mothers' exclusive breastfeeding. As a result, any interventions aimed at improving EBF can be implemented to women regardless of their social standing, such as age, residency, economic situation, or educational level.

The level of information has a substantial impact on the practice of exclusive breastfeeding. As a result, if moms are trained on how to facilitate exclusive breastfeeding, greater outcomes for the child's health may be reached than if they are not implemented.

There was also a significant influence of socio-cultural factors on exclusive breastfeeding. This means that sociocultural practices that facilitate proper EBF may need to be empowered and encouraged and those that hamper it may need to be discouraged for better outcomes on the health of the child.

5.0 Consent

All authors declare that 'written informed consent was obtained from the patient (or other approved parties) for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editorial office/Chief Editor/Editorial Board members of this journal

References

- Abdulla F, Hossain M.M, Karimuzzaman M., Ali M, Rahman A (2022) Likelihood of infectious diseases due to lack of exclusive breastfeeding among infants in Bangladesh. PLoS ONE 17(2): e0263890. <https://doi.org/10.1371/journal.pone.0263890> E
- Babakazo P, Donnen P, Akilimali P, Ali NMM, Okitolonda E. 2015 Predictors of discontinuing exclusive breastfeeding before six months among mothers in Kinshasa: a prospective study. *Int Breastfeed J.*;10:19.
- Bahl R, Barros AJD, França GVA, Horton S, Krasevec J, Murch S, Sankar MJ, Walker N, Rollins NC. 2016 Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet.*;387:475–9.
- Belay, G. M. and Wubneh, C. A. 2019 Infant feeding practices of HIV positive mothers and its association with counseling and HIV disclosure status in Ethiopia: A systematic review and meta-analysis. *AIDS Research and Treatment.* Vol 2019. <https://doi.org/10.1155/2019/3862098>
- Chachar, B., Azam, N. and Hassan, U. 2019. Assessment of exclusive breastfeeding (EBF) knowledge and practices among lactating mothers in Sanghar, Sindh. *Pak Armed Forces Med J.* 69(3): 522-27
- Chakona, G. 2020. Social circumstances and cultural beliefs influence maternal nutrition, breastfeeding and child feeding practices in South Africa. *Nutrition Journal,* 19:47 <https://doi.org/s12937-020-00566-4>
- Dukuzumuremyi, J. P. C., Acheampong, K., Abesig, J. and Luo, J. 2020 Knowledge, attitude, and practice of exclusive breastfeeding among mothers in East Africa: a systematic

- review. *International Breastfeeding Journal* 15:70 <https://doi.org/10.1186/s13006-020-00313-9>
- Jama, A., Gebreyesus G., Wubayehu, T., Gebregyorgis, T., Teweldemedhin, M., Berhe, T., and Berhe, N. (2020). Exclusive breastfeeding for the first six months of life and its associated factors among children age 6-24 months in Burao district, Somaliland *International Breastfeeding Journal*. Open Access
- Lio, R. M. S., Maugeri, A., La Rosa, M. C., Cianci, A., Panella, M., Giunta, G., Agodi, A., and Barchitta, M. 2021 The impact of socio-demographic factors on breastfeeding: Findings from the “Mamma & Bambino” cohort. *Medicina* 57:103 <http://doi.org/10.3390/medicina57020102>
- Manyeh, A. K., Amu, A., Ekpakli, D. E., Williams, J. E. and Gyapong, M. 2020 Estimating the rate and determinants of exclusive breastfeeding among rural mothers in Southern Ghana. *International Breastfeeding Journal* 15:7
- Mensah KA, Acheampong E, Anokye FO, Okyere P, Appiah-Brempong E, Adjei RO. *BMC Res Notes*. 2017 Sep 7; 10(1):466. Epub
- Mulol, H., and Coutsoydis, A. 2018 Limitations of maternal recall for measuring exclusive breastfeeding rates in South African mothers. *International Breastfeed Journal*, 13:19
- Ndakwe, R. and Tari, A. (2020). Barriers to exclusive breastfeeding among children in Gedo region, Somalia, January 0001. www.enonline.net/barrierstoexclusivebreastfeeding (ENN_6458)
- North, K., Gao, M., Allen, G, 2022. Breastfeeding in a global context: epidemiology, impact, and future directions. *Clinical Therapeutics*, 44(2):228-244
- Ogbo F. A., Nguyen, H. Naz, H., Agho, K. E., and Page, A. 2018 The association between infant and young childfeeding practices and diarrhoea in Tanzanian children. *Tropical Medical Health*. 46:2
- Roberts T. J., Hoy-Schulz Y. E., Jannat K., Parsonnet J. 2018 Evidence of inflated exclusive breastfeeding estimates from a clinical trial in Bangladesh. *International Breastfeed J*. 13:39
- Rollins NC, et al. 2016 Why invest, and what it will take to improve breastfeeding practices? WHO. 2003 Global strategy for infant and young child feeding. Geneva.
- Samburu, B. M., Kimiywe, J., Young, S. L. and Kimani-Murage, E. W. 2021 Realities and challenges of breastfeeding policy in the context of HIV: a qualitative study on community perspectives on facilitators and barriers related to breastfeeding among HIV positive mothers in Baringo County, Kenya. *International Breastfeed Journal* 16, 39. <https://doi.org/10.1186/s13006-021-00385-1>
- Shifraw T, Worku A, Berhane Y. 2015 Factors associated exclusive breastfeeding practices of urban women in Addis Ababa public health centers, Ethiopia: a cross sectional study. *Int Breastfeed J*. 10:22

- Somali Government, UNICEF and WHO mark World Breastfeeding Week with a call to protect, promote and support breastfeeding Aug 2021[jjukkikikiikjmm
- Talbert, A., Jones, C., Mataza, C., Berkley, J. A., and Mwangome, M. (2020) Exclusive breastfeeding in first-time mothers in rural Kenya: a longitudinal observational study of feeding patterns in the first six months of life. *International Breastfeeding Journal* 15:17
<https://doi.org/10.1186/s13006-020-00260->
- Tampah-Naah AM, Kumi-Kyereme A, Amo-Adjei J (2019) Maternal challenges of exclusive breastfeeding and complementary feeding in Ghana. *PLoS ONE* 14(5): e0215285.
<https://doi.org/10.1371/journal.pone.0215285>
- Victora CG, Bahl R, Barros AJD, França GVA, Horton S, Krasevec J, Murch S, Sankar MJ, Walker N, Rollins NC. 2016 Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet*. 387:475–90.
- Wardlaw T, Brown DW. 2016, Global trends in exclusive breastfeeding. *Int Breastfeed J*.
https://www.unicef.org/nutrition/index_breastfeeding.html.
- World Health Organization. 21 Nov 2016. Maternal, newborn, child and adolescent health; Breastfeeding. Geneva:
http://www.who.int/maternal_child_adolescent/topics/newborn/nutrition/breastfeeding/en/.