

Prevalence and Factors Influencing Exclusive Breastfeeding Among Lactating Mothers Attending KIU Teaching Hospital in Ishaka-Bushenyi District, Uganda

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ABSTRACT

Globally, the prevalence of EBF across 140 countries increased in the developing world from 33% in 2014 to 40% in 2019 among infants aged 0–5 months. EBF increased in West and Central Africa by more than twofold, i.e., from 12% in 2014 to 28% in 2018). The study assessed factors influencing exclusive breastfeeding among lactating mothers attending KIUTH in the Bushenyi district. The objectives were to determine the prevalence, socio-demographic factors, and maternal health factors influencing exclusive breastfeeding among lactating mothers attending KIUTH in Bushenyi district. The study design involved 200 participants, selected by simple random sampling, in which questionnaires were used as data collection tools. The study showed that there was a lower percentage (72, or 36.0%) of mothers who had practiced exclusive breastfeeding. The study showed that post-primary education, 52.8%, and age above 30 years (p-value = 0.011, OR = 0.17(0.05–1.75)) were significant factors in practicing exclusive breastfeeding while having experienced post-partum illness (OR = 0.2790.12–4.62, p-value = 0.012), and having a breast disorder (p-value = 0.001, OR = 0.83(0.25–9.25)) were influencing no exclusive breastfeeding. The study concluded that there was a low exclusive breastfeeding rate, and the following was recommended: mothers attending ANC services should be health-educated about the importance of exclusive breastfeeding; health workers should teach mothers after delivery proper positioning of the children for breastfeeding; and mass sensitization should be done in communities regarding the importance of exclusive breastfeeding.

Keywords: Infants aged 0–5 months, Exclusive breastfeeding, Lactating mothers, KIUTH in Bushenyi district, Mothers attending ANC services.

INTRODUCTION

Exclusive Breastfeeding (EBF) means an infant receives breast milk from his or her mother or expressed breast milk for the first six months of life, and no other solids or semisolids are given with the exception of vitamins, mineral supplements, or medicine [1]. Early initiation of breastfeeding facilitates emotional bonding between the mother and the newborn and has a positive impact on the duration of exclusive breastfeeding. Early initiation of breastfeeding reduces child morbidity and mortality in the first two years of life [2, 3]. If all infants started breastfeeding within the first hour of birth, 22% of neonatal deaths could be saved [4]. This is because early human milk is rich in a variety of immune and non-immune components that may accelerate intestinal maturation, resistance to infection, and epithelial recovery from infection [2]. Globally, the prevalence of EBF across 140 countries increased in the developing world from 33% in 2014 to 40% in 2019 among infants aged 0–5 months [5, 6]. EBF increased in West and Central Africa by more than twofold, i.e., from 12% in 2014 to 28% in 2018 [7]. The proportion of babies breastfed at birth in the UK rose by 5%, from 76% to 81% [8]. The initial breastfeeding rate in 2018 was highest in England at 83% (compared with 74% in Scotland, 71% in Wales, and 64% in Northern Ireland). Exclusive breastfeeding at six weeks was 24% in England and 22% in Scotland, compared to 17% in Wales and 13% in Northern Ireland [9]. In Sub-Saharan Africa, where there are high rates of malnutrition and infant and child mortality rates, the overall prevalence of EBF in 2018 was 28% [10]. According to the Centres for Disease Control and Prevention breastfeeding rates have decreased in sub-Saharan countries from 33% in 2016 to 27% in 2021 [11, 12]. Prime lactating mothers said they breastfed their infants any time of the day, but the percentage who said they breastfed for six months had declined from 41.2% to 30.5% during a one-year study period, and the percentage who said they breastfed for one year had also declined from 22.6% to 18.4% [13]. Uganda continues to struggle with a high mortality rate among children under the age of five, and diarrhoea and pneumonia are two of the top killers for this age group. Yet exclusive breastfeeding of infants and young children could save many lives [14]. In Uganda, only 42% of new-borns are breastfed in the first hour of life; thus, a large proportion of newborns miss out on the

disease-protective benefits of Colostrum (“first” milk, of yellowish colour) and only 63% are breastfed up to six months [15, 16]. The number of stunted children in southwestern Uganda has reached epidemic proportions, according to the findings of a health research project [17], a situation that can be traced back to early infant feeding practices. The most recent study in the area of Bushenyi by Akello [18] showed that only 31.5% of the mothers had practised exclusive breastfeeding for 6 months.

According to a World Health Organisation (WHO) report, the overall prevalence of exclusive breastfeeding (EBF) stands at 36%, with the highest rates of EBF found in East Asia/Pacific (43%), and the lowest rates of EBF in West/Central Africa (20%) [19]. In sub-Saharan Africa, the overall prevalence of EBF was lower, standing at 28% in 2019 [4]. In Uganda, only six in ten Ugandan children below the age of six months are exclusively breastfed, with only half the proportion of the children in the South Western district exclusively breastfed (34%). [20]. The number of stunted children in southwestern Uganda has reached epidemic proportions, according to the findings of a health research project [18], a situation that can be traced back to early infant feeding practices. A study conducted by Akello [18] in western Uganda showed that most (84.5%, 164/194) of the mothers had ever breastfed their infants; the rest had exclusively been breastfed since birth; and among children less than six months who were breastfeeding, 31.5% (34/108) were exclusively breastfeeding, and the rest were mixed feeding. To achieve the EBF target of 80% by the year 2022, the government of Uganda introduced breastfeeding initiatives and policies like the labour law on maternity leave, the mobilisation of male partners to support breastfeeding mothers, and, at the community level, peer counsellors providing support for breastfeeding mothers. Despite these policies and programmes, the EBF targets still seem far from being achieved, especially in rural areas like those in the Bushenyi district, according to unpublished data. Following the number of breastfeeding mothers who attended KIU-TH services in March 2022, 20 mothers among them were sampled, and it was found that only 6 mothers had practised exclusive breastfeeding, and 8 children of the 14 whose mothers had not practised EBF were malnourished and admitted to the Paediatric Nutrition Unit. Therefore, this study sought to identify the prevalence and factors influencing exclusive breastfeeding among lactating mothers, hence providing information or data on exclusive breastfeeding practices in rural areas like those in the Bushenyi district. The study was designed to assess the prevalence and factors influencing exclusive breastfeeding among lactating mothers attending KIUTH in the Bushenyi district.

METHODOLOGY

Study design

The study design was descriptive cross-sectional, which employed both quantitative and qualitative methods in data collection. The quantitative method under this design was used to collect data that can be numerically presented, for example, the prevalence of EBF, while the qualitative method was used to collect non-numerical data.

Area of Study

The study was carried out at Kampala International University Teaching Hospital, located in Ishaka-Bushenyi District, Western Uganda. KIU-TH is a private hospital with specialised clinics, including the ANC/MCH, among others. It also comprises inpatient departments like the surgical, medical, paediatrics, and private wards. It is located approximately 100 m north of the junction of the Ntungamo-Kasese Road with the Mbarara-Ishaka Road. Its location is approximately 77 kilometres (48 miles) by road, west of Mbarara, the largest city in the sub-region. This location lies approximately 360 kilometres (224 miles) by road, southwest of Kampala, the capital city of Uganda and the largest city in that country. The coordinates of Ishaka-Bushenyi Municipality are: 0° 32' 40.00"N, 30° 8' 16.00" E (latitude: -0.544445; longitude: 30.137778).

Study population

The study population consisted of lactating mothers of children aged 0 to 6 months seeking health services at KIUTH in the Bushenyi district.

Inclusion criteria

Breastfeeding mothers whose children were aged 0–6 months and attended any of the KIUTH services and would consent would constitute the inclusion criteria.

Exclusion criteria

Breastfeeding mothers whose children were above 6 months of age. Breastfeeding mothers whose children were aged 0–6 months attended any of the KIUTH services and would not consent to participate in the study.

Sample size determination

The sample size was calculated using the formula Kish Leslie (1965): $n = z^2 p (1-p) / E^2$ [21].

Where n = estimated minimum sample size required P = proportion of a characteristic in a sample (84.5% [Babriye, 2017]) Z = 1.96 (for a 95% confidence interval) e = Margin of error set at 5% $n = \frac{1.96^2 \times 0.845 (1 - 0.845)}{0.05^2}$

$n = 200$ mothers

Sampling Technique

Simple random sampling was used to sample the participants taking part in the study. This was done using a lottery where a yes and a no were written on pieces of paper and folded. Members were asked to pick papers; whichever member picked a yes would participate in the study, and whoever picked a no would not. This was repeated until the desired number was obtained.

Data Collection Methods

Quantitative data

This data was collected using structured interviews. The structured interviews involved a self-administered questionnaire. The interviewers read the questions exactly as they appeared on the survey questionnaires and asked the respondents to give their responses.

Qualitative Data

Written consent was obtained from the participants, which enabled the exploration of factors influencing the practice of exclusive breastfeeding and was useful in verifying information collected by the questionnaires. Using a prepared guide (appendix), probing was done on the prevalence and factors influencing exclusive breastfeeding. This assisted in identifying factors that influence exclusive breastfeeding practices in the study area. The discussions were facilitated by the principal researcher as the assistant recorded the responses.

Data collection procedure

All mothers who came to MCH Clinic KIUTH during the days of data collection were approached one by one after a group talk in the waiting area. Those who met the study criteria were explained the purpose of the study verbally, and confidentiality of response was assured. Their questions and concerns were answered and clarified. Those willing to participate would give verbal consent.

Quality Control

The data collection team was comprised of four research assistants who were university graduates. The study team was recruited based on the experience they had in conducting similar research. A two-day training was conducted by the principal investigator. The training focused on the administration of questionnaires, interviewing techniques, and translating the questions into the local language.

Pre-testing of questionnaires

Pre-testing of questionnaires was conducted over two days in Ishaka Division. A total of 20 households were covered, with each research assistant covering five households. The principal investigator and the data collection team conducted the pre-test. This was done to impart practical experience to the team in administering questionnaires and taking anthropometric measurements. Any ambiguities were noted, and necessary corrections were made in the process of finalising questionnaires and procedures after the pre-test. The research assistants were retrained after the pretesting of the questionnaires for one day before actual data collection commenced.

Reliability and validity

The quality of the data collected was ensured through the close supervision of the data collection team daily by the principal researcher. Completed questionnaires were reviewed daily for inconsistent or incomplete responses and corrected before transportation to the office for data entry. Sets of data were entered into an Excel spreadsheet. Data was entered using the Statistical Products and Service Solution (SPSS version 20.0) Data Entry Module version 3.0 software, which has an inbuilt verification ability to check for range and logistical errors.

Ethical considerations

The study was reviewed by the Institutional Research and Ethics Committee of Kampala International University, and after the ethics clearance, permission was sought from the hospital executive director. Before undertaking the research, ethical approval was sought from various sources to ensure that the study adhered to acceptable ethical guidelines. In addition, informed consent was obtained from each study participant. Each respondent was informed about the purpose of the study and that the findings would inform policymakers and other concerned bodies. Any inclusion in the study was after their verbal and written consent. The right to freedom from harm and discomfort was maintained, as participants were not subjected to any risk of harm or injury.

RESULTS
Prevalence of exclusive breastfeeding
Table 1: shows the prevalence of exclusive breastfeeding

Prevalence of exclusive breastfeeding	Frequency	Percentage
Initial breastfeeding		
Less than 30 minutes		
Less than 1 hour	122	61.0
Greater than 1 hour	60	30.0
	18	9.0
Child exclusively breastfed		
True		
False	72	36.0
	128	64.0

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From Table 1 above, the majority of the mothers (122) 61.0% said they breastfed their children in less than 30 minutes of life. The study also showed that the majority of the participants 128(64.0%) did not breastfeed their children exclusively, while only 72 (36.0%) participants breastfed exclusively.

Social demographic factors and exclusive breastfeeding

Table 2 shows an association between social demographic factors and exclusive breastfeeding

Social demographic factors	EBF done		EBF Not done		Odds Ratio	p-value
	Freq (72)	%age	Freq (128)	%age		
Age					95% CI	<0.05 sg
18-30	31	43.1	71	55.5	Ref	
Above 30	41	56.9	57	44.5	0.17(0.05-1.75)	0.011
Education						
Primary educated	34	47.2	87	68.0	Ref	
Post-primary educated	38	52.8	41	32.0	0.88(0.50-6.67)	0.034

Table 2 above, which shows the association between social demographic factors and exclusive breastfeeding, shows that the majority of the mothers who had done exclusive breastfeeding were above 30 years of age, that is, 41 (56.9%), while at least 71 (55.5%) of those who had not done exclusive breastfeeding were aged between 18 and 30 years at an odds ratio of 0.17 (0.05–1.75) and a p-value of 0.011. The study showed that age above 30 years was significantly influencing exclusive breastfeeding. The study also showed that the majority of mothers who had done exclusive breastfeeding had attended a post-primary level of education (38, 52.8%), while at least 87 (68.0%) of mothers who had not done exclusive breastfeeding had attained a primary level of education; hence, the study showed that having a post-primary level of education was significantly influencing breastfeeding at an odds ratio of 0.88 (0.50–6.67) and a p-value of 0.034. From Table 2 above, the majority of the participants, both for exclusive breastfeeding and non-exclusive breastfeeding, said they were Christians, with a p-value of 0.178 and an odds ratio of 0.65 (0.45–11.89). The study showed that religion was not significantly influencing exclusive breastfeeding. The study shows that the majority of the participants, both for exclusive breastfeeding (57.2%) and nonexclusive breastfeeding (105.0%), were married; hence, the study showed that marital status was not significantly influencing exclusive breastfeeding at an odds ratio of 0.91 (0.06–9.50) and a p-value of 0.064. The study also showed that the majority of the participants, both exclusive and non-exclusive, were peasants, and the study showed that employment status was not significantly influencing exclusive breastfeeding at a p-value of 0.082 and an odds ratio of 0.22 (0.15–3.65). Maternal health factors and exclusive breastfeeding.

Table 3: shows the association between maternal health factors and exclusive breastfeeding.

Maternal factors	EBF done		EBF not done		Odds Ratio	p-value
	Freq(72)	%age	Freq(28)	%age	95% CI	<0.05 sg
Mode of delivery						
SVD	64	88.9	110	85.9	Ref	
Cesarean operation	08	11.1	18	14.1	0.44(0.09-3.02)	0.255
HIV status						
Negative	70	97.2	121	94.5	Ref	
Positive	02	2.8	07	5.5	0.53(0.38-7.11)	0.105
Post-partum illness						
Yes	31	43.1	65	50.8	Ref	
No	41	56.9	63	49.2	0.27(0.12-4.62)	0.012
Breast disorder						
Yes	28	38.9	67	52.3	Ref	
No	44	61.1	61	47.7	0.83(0.25-9.25)	0.001

Sg; significance < 0.05, EBF: Exclusive Breast feeding

From Table 3, the study showed that the majority of the participants, 64 (88.9%), had done exclusive breastfeeding, while 18 (14.1%) had not done exclusive breastfeeding, at an odds ratio of 0.44 (0.09–0.02), which showed that mode of delivery was not significantly influencing exclusive breastfeeding. The study also showed that the majority of the participants, 70 (97.2%) who had done breastfeeding, were HIV negative, while 7 (5.5%) who had no exclusive breastfeeding were HIV positive. This shows that HIV status was not a significant factor in exclusive breastfeeding at an odds ratio of 0.53 (0.38–7.11) and a p-value of 0.105. From the table, the study also showed that among participants who had done exclusive breastfeeding, 31 (43.1%) had a postpartum illness, and 41 (56.1%) of the participants who had done exclusive breastfeeding did not have a post-partum illness, while the other 63 (49.2%) who had post-partum illness had not done exclusive breastfeeding. This showed that post-partum illness was significantly associated with exclusive breastfeeding at an odds ratio of 0.27 (0.12-4.62) and a p-value of 0.012. The study also showed that the majority of the participants who had no breast disorder (44, or 61.1%) had done exclusive breastfeeding, while those who had breast disorders (67, or 52.3%) had not done exclusive breastfeeding at a p-value of 0.001 and an odds ratio of 0.83 (0.25-9.25) which showed that breast disorder was significantly influencing exclusive breastfeeding.

DISCUSSION

Prevalence of exclusive breastfeeding

According to the study, the majority of the mothers (122) and 61.0% said they breastfeed their children in less than 30 minutes of life. The study also showed that only 72 (36.0%) participants did exclusive breastfeeding, while the majority of the participants, 128 (64.0%) did not breastfeed their children exclusively. This could be because of a lack of information on the importance of exclusive breastfeeding among mothers. When compared with other studies, Akello et al. [18] showed that the rates of breastfeeding since mid-2014 in the majority of the cities and provinces are above 80% at four months, but very few reached the national target of exclusive breastfeeding of 80% among Chinese cities. A related study by Joseph and Earland [22] in the UK showed that breastfeeding initiation rates were high at 76%, and at one week, 45% were still exclusively breastfeeding, but at six months, this dropped to less than 1%.

Social demographic factors and exclusive breastfeeding

From the study, the majority of the mothers who had done exclusive breastfeeding were above 30 years of age, that is, 41 (56.9%), while at least 71 (55.5%) of those who had not done exclusively. Breastfeeding was aged between 18

and 30 years at an odds ratio of 0.17 (0.05–1.75) and a p-value of 0.011. The study showed that age above 30 years was significantly influencing exclusive breastfeeding. This could be because mothers are used to breastfeeding from previous deliveries and no longer observe it as a challenge. When compared with other studies, it showed a correlation with a study conducted in Sweden by Hornell *et al.* in 2014 in which they reported that younger women are less likely to breastfeed compared to older mothers, a fact that they attributed to a lack of experience in breastfeeding by these younger mothers. Another study in UK also reported younger mothers being more likely to practice mixed feeding than older mothers because of their dependency on older family members' advice for child rearing [23]. The study also showed that the majority of mothers who had done exclusive breastfeeding had attended post-primary education (38, 52.8%), while at least 87 (68.0%) of mothers who had not done exclusive breastfeeding had attained a primary level of education. The study shows that having a post-primary level of education significantly influences breastfeeding at an odds ratio of 0.88 (0.50–6.67) and a p-value of 0.034. This could be because educated mothers have more access to information regarding exclusive breastfeeding. When compared with other studies, a study in Uganda by Dukuzumerenyi *et al.* [24] showed that the duration of exclusive breastfeeding mainly influences information and knowledge about breastfeeding. Another study by Abdulla *et al.* [25] also showed that the maternal level of education positively influences initiation, exclusiveness, and duration of breastfeeding. From the study, the majority of the participants, both for exclusive breastfeeding and non-exclusive breastfeeding, said they were Christians, with a p-value of 0.178 and an odds ratio of 0.65 (0.45–11.89).

Maternal Health Factors and Exclusive Breast Feeding

The study showed that the majority of the participants, 64 (88.9%), had done exclusive breastfeeding, while 18 (14.1%) had not done exclusive breastfeeding, at an odds ratio of 0.44 (0.09–0.02), which showed that mode of delivery was not significantly influencing exclusive breastfeeding. The study also showed that the majority of the participants, 70 (97.2%) who had done breastfeeding, were HIV negative, while 7 (5.5%) who had not done exclusive breastfeeding were HIV positive. This showed that HIV status was not a significant factor in exclusive breastfeeding at an odds ratio of 0.53 (0.38–7.11) and a p-value of 0.105, most mothers who are HIV positive tend not to breastfeed. Their children for fear of HIV infection, although children usually risk the effects of malnutrition. When compared with other studies, Akello *et al.* [18] found that HIV-positive mothers feared disclosing their HIV-positive status during breastfeeding due to stigmatisation, the reason being the strong cultural position that breastfeeding is the only acceptable infant feeding method and the only way to fulfil the ideals of being good mothers. From the study, it also showed that 41 (56.9%) participants who had done exclusive breast feeding had no post-partum illness while 65 (50.8%) who hadn't done EBF had post-partum illness, this showed that post-partum illness was significantly associated with exclusive breast feeding at an odds ratio of 0.27 (0.12–4.62) and p-value of 0.012, this could be because, a mother who gets a post-partum illness, concentrates more on her own health than breastfeeding of the child, when compared with other studies, Hyattsville, in 2020 had showed that post-partum, Maternal illnesses such physical and psychologic conditions resulted from or are aggravated following delivery and have an adverse effect on a woman's health and the most severe complications after delivery included puerperal sepsis, puerperal psychosis, and these affect more than 10% of women every year, another study by Abdulla *et al.* [25] had also noted that separation of mother and infant in the moments after birth following a maternal complication, can also interfere with breastfeeding, especially if the birth was medicated. The study also showed that the majority of the participants who had no breast disorder 44 (61.1%) had done exclusive breastfeeding while those who had breast disorders 67 (52.3%) had not done exclusive breastfeeding at a p-value of 0.001 and the odds ratio of 0.83 (0.25–9.25) which showed that breast disorder was significantly influencing exclusive breastfeeding, breast disorders make it uncomfortable for the mother to breastfeed and will most likely stop if breast disorder progresses when compared with other studies, the study shows a correlation with studies by Scime *et al.* in [26] who showed that breast disorder practicality affecting many women is the problem of getting the baby latching on properly, and then the resulting nipple cracking, bleeding and/or pain, Even women who end up being able to breastfeed successfully often experience problems early on.

CONCLUSION

There was a lower number of mothers who had practised exclusive breastfeeding, which was 72 at 36.0%. The study also concluded that post-primary education, 52.8%, and age above 30 years (p-value, 0.011, OR, 0.17, 0.05–1.75) were significant factors in practising exclusive breastfeeding. The study also concluded that having experienced post-partum illness (OR, 0.2790.12–4.62) and a p-value of 0.012 and having breast disorder (p-value of 0.001) and an odds ratio of 0.83 (0.25–9.25) were significant factors influencing no exclusive breastfeeding.

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