©IDOSR PUBLICATIONS
International Digital Organization for Scientific Research ISSN: 2579-0781
IDOSR JOURNAL OF EXPERIMENTAL SCIENCES 9(3) 59-73, 2023.
https://doi.org/10.59298/IDOSR/JES/111.1.10105

Factors Influencing Exclusive Breastfeeding in Lactating Mothers Attending Kaabong District Hospital in Kaabong District

Lokapel Peter Lotyang

Faculty of Clinical Medicine & Dentistry Kampala International University Western Campus Uganda.

ABSTRACT

This study aimed to evaluate the factors influencing exclusive breastfeeding among lactating mothers at Kaabong district hospital. A total of 93 mothers were recruited using a simple random sampling technique. STATA software was used for data analysis, and crude odds ratios were used to determine the level of significance. The majority of participants were aged 18-25, married, and had no formal education. The majority of participants exclusively breastfed their children. Factors influencing exclusive breastfeeding included the mother's age and education level. Barriers to exclusive breastfeeding included the mother's positive HIV status and insufficient breast milk production. The exclusive breastfeeding rate at Kaabong General Hospital falls above the World Health Organization's recommended level. To maintain this high rate, breastfeeding promotion messages should be provided to mothers to raise awareness about the benefits of exclusive breastfeeding using mass media. The study highlights the need for further support for exclusive breastfeeding among lactating mothers in the area.

Keywords: Infants, lactating mothers, Exclusive breastfeeding, Positive HIV status, No formal education.

INTRODUCTION

Exclusive breastfeeding (EBF) is one of the optimal infant and young child feeding practices. EBF is feeding infants (0–6 months of age) exclusively with breast milk for the first 6 months [1]. Such children may take only Oral Rehydration Salt (ORS), drops, and syrups (vitamins, minerals, and medicines) in addition to their mother's milk [1]. Goal four of the eight Millennium Development Goals is entirely devoted to reducing child mortality by two thirds between 1990 and 2015 [1]. Progress in many African countries is insufficient in achieving this goal. As a result, the World Health Assembly passed a resolution recommending exclusive breastfeeding for the first 6 months of life as part of the initiative to reduce infant mortality [1]. Globally, <40% of infants under 6 months of age are exclusively breastfed. This is expected to increase to 50%by 2025. However, little is being done to give greater priority to increasing the rates of exclusive breastfeeding, despite repeated and emphatic agreement of its benefits. Although the rates of EBF for the past two decades have been increasing, it is still a long road to reaching the world's 100% coverage target recommended by UNICEF. This is evident in the current low prevalence of EBF in much of the developing world especially in West and Central Africa which happens to have one of the highest rates of infant malnutrition in the world [2]. The global EBF rate for infants aged below 6 months between the years 2000 and 2007 was 38%. Within the same time, only 23% of infants <6 months were breastfed exclusively in West and Central Africa while a slightly higher rate (26%) was recorded in the Middle East and North Africa. Exclusive breastfeeding rates of 39, 43 and 44% were observed in

Eastern and Southern Africa; East Asia and the Pacific; and South Asia respectively [3]. Ghana's EBF rate has risen steadily from 7% in 1993 to 31% in 1998 and then to 53% in 2003 findings of the 2008 Ghana Demographic and Health Survey (GDHS) suggest that the percentage of Ghanaian children ever breastfed is between 97–98%. Within the same period, the percentage of infants who initiated breastfeeding within 1 h after delivery was 52%, a 6% increase over the 2003 figure of 46%. Additionally, 82% of infants aged <2 months were reported to have been breastfed exclusively (Ghana Statistical Service. Ghana MICS with an enhanced malaria module and biomarker, summary report of key findings. Ghana: [4] Conversely, only 49% of infants were still being breast-fed exclusively by 4–5 months. Furthermore, a total of 63% of infants below 6 months were breast-fed exclusively in 2008. Though this was an improvement upon the 2003 rate of 53%, it was still below the 100% coverage target. The results of the recent Multiple Indicator Cluster Survey (MICS) (2011) suggest that the rate of EBF has declined from 63 to 46%. In Ghana Statistical Service. Ghana MICS with an enhanced malaria module and biomarker, a summary report of key findings. [4]. According to recent papers in the sub-Saharan Africa region, only 53.5% of infants in East African countries were EBF for six months [5], which is way below the WHO target of 90% [6]. In developing countries, the lives of one million infants can be saved each year just by promoting breastfeeding [7].In East Africa, one systemic review indicated that almost 96.2% of mothers had ever heard about EBF, and 49.2% knew that the duration of EBF was the first six months only. In regards to attitude, 42.1% of mothers disagreed and 24.0% strongly disagreed that giving breast milk to a newborn immediately and within an hour is important. In contrast, 55.9% of them had practiced EBF for at least six months [8]. A study conducted by [9]. In Uganda showed that among children less than six months who were breastfeeding, 31.5% (34/108) were exclusively breastfeeding and the rest were mixed feeding. In view of these declining trends, new initiatives like International Code of Marketing Breast milk Substitutes and Baby Friendly Hospital Initiative (BFHI) are put in place globally to encourage exclusive breast feeding. In line with the WHO guidelines, the Government of Uganda, through the Ministry of Health, is highly committed to enhancing breastfeeding. Through the Ministry of Health, [10] launched the Baby-friendly Hospital Initiative (BFHI) in Uganda intended to encourage breast-feeding through education of healthcare workers in maternity and neonatal services [11]. The present study will therefore assess factors influencing exclusive breastfeeding among lactating mothers attending Kaabong district hospital in Kaabong district.

Studies have shown that EBF as well as breastfeeding lower the risk of chronic health conditions later in life such as obesity, high cholesterol, high blood pressure, diabetes, childhood asthma and leukemia [12]. This feeding method of infants is the most preventive, natural, pure and economical prevailing both in developed and developing countries. However, mothers' age, residential locations, educational levels, maternal health status and occupation are affecting the early initiation of breastfeeding which is the basis of EBF among mothers in Dutsin-Ma. Virtual all mothers can breastfeed exclusively, if given appropriate support, advice and encouragement as well as practical assistance to resolve any problems such as maternal age and home location which are influencing EBF [12]. [13], also asserted that virtually all mothers can breastfeed, provided mothers have accurate information, and the support of their family, the health care system and society at large. Based on this situation, the researchers become motivated to investigate factors affecting EBF in Dutsin-Ma community, Katsina State, Nigeria. The World Health Organization and UNICEF had launched several programmes like the baby friendly hospital initiative and the International Code of Marketing of Breast Milk

Substitutesin order to protect, promote and support breastfeeding in response to persistent decline in the rate of breast feeding globally [14]; [12]. In 1991 was launched in Uganda through the ministry of health. In order to achieve the EBF targets of 80% by the year 2015, the government of Uganda further introduced other initiatives and policies like the labor law on maternity leave; mobilization of male partners to support breastfeeding mothers and at the community level, peer counselors provided support for breastfeeding mothers. Despite these policies and programmes, the EBF targets still seem to far from being achieved especially in rural areas like those in Kaabong district. Concerning the low exclusive breastfeeding practice in North Eastern Uganda couple with the limited empirical data on EBF in Uganda especially in rural areas, this study intends to investigate the socio-demographic and physiological factors which may influence EBF among lactating mothers attending kaabong district hospital. This study identified the factors that influence exclusive breastfeeding hence provided information and data on exclusive breastfeeding practices in rural areas like those in Kaabong district.

METHODOLOGY

Research Design

The research design was facility based cross-sectional and descriptive using quantitative approaches via face to face interviews. This design entails that the information or data gathered will represent the population and is obtained at only one point in time. The quantitative methods under this design was employed to collect numerical data presented for example the level of EBF.

Area of Study

The study was conducted in kaabong district in northeastern Uganda.

Study population

The study population comprised of lactating mothers of children aged 1 to 12 months seeking health services from kaabong district hospital in Kaabong district.

Sample size and sampling technique

The sample size was determined using wyne Daniel (1986) method.

$n = z^2pq/d^2$

Where n = Estimated minimum sample size required

Z=standard normal deviation usually set at 1.96

P=the proportion of study population that are at risk of maternal mortality (6.25%) WHO 2010

Q=1-P

D=amount of error (0.05 levels)

By substitution

$1.96^2 \times 0.0625 \times 0.9775/0.05^2$

n =93 mothers

Sampling technique

Simple random sampling was used to get the consented lactating mothers.

Data collection methods

Quantitative data

Quantitative data was collected using structured interview. Interviewers read the questions exactly as they appeared on the survey questionnaires for the respondents to answer.

Data collection instruments

Quantitative data collection was conducted using a structured questionnaire to obtain all of the required information. These questionnaires had close ended questions developed in English.

Data collection procedure

All mothers attending the district hospital during the days of data collection were approached. Those who never understood the study criteria were told the purpose of the study verbally and after consent, they were enrolled for the study.

Inclusion criteria

Inclusion criteria included breastfeeding mothers of babies 0-12 months and lactating mothers who are willing to consent.

Exclusion criteria

Exclusion criteria included lactating mothers who did not consent, Women who never breastfed their children during the first six months and mothers who abandoned breastfeeding in the first one month of delivery.

Quality control

The data collection team comprised of four research assistants who were university graduates in the area of Foods science, Nutrition and Dietetics. The study team were recruited based on the experience they had in conducting similar research. Two-day training was conducted by the principal researcher.

Pre-testing of questionnaires

The principal researcher and the data collection team conducted the pre-testing of the questionnaires over a period of two days in kaabong west sub-county. A total of 10 households were covered with each research assistant covering two households. Pre-testing was done to impart practical experience to the team in administering questionnaires as well giving the researcher an idea of the population characteristics.

Validity and Reliability of Research instrument

Data collection instruments were designed by the principal researcher who ensured that the questions and items were suitable to answer or measure the specific objectives of the study. Quality of data collected was ensured through close supervision of the data collection team daily by the principal researcher. Completed questionnaires were reviewed daily for inconsistent or incomplete responses and corrected. Sets of data were entered onto an excel spreadsheet. Data was entered using the Statistical Products and Service Solution (SPSS) data entry module version 12.0 software which had an inbuilt verification ability to check for range and logistical errors.

Data process and analysis

Data from the survey were statistically analyzed using the Statistical Package for Social Sciences (SPSS) (version 17.0). Basic descriptive analysis was done using frequency distributions. Qualitative data was sorted, categorized and conceptualized systematically to see the patterns of exclusive breastfeeding. Measures of central tendency were used to give expected summary statistics of variables studied. Descriptive statistics were used to describe a distribution of scores. Findings were presented using frequency distribution tables, charts and graphs. Inferential statistics and chi-square were performed to compare the effects of different factors on exclusive breastfeeding practice. Since the study was about a relationship (dependency between exclusive breastfeeding practice and other factors), chi-square statistic (χ 2) were used to establish whether relationships exists among the variables. Statistical significance was assumed for P – values, < or = 0.05. Associations between significant variables in the Chi-square test were further examined using adjusted odds ratios.

Ethical considerations

Permission was granted by the District health officer (DHO) before undertaking this research. Ethical approval was also sought from various sources to ensure that the study adhere to acceptable ethical guidelines. In addition, the researcher explained the purpose of the study to each study participant after which an informed consent was obtained from the participants before participating in the study. In order to ensure confidentiality, names of the respondents were not to be taken and the information given during the interview sections was released to anyone. To further gain the trust and safeguard the privacy of respondents, the interviews were done privately and in secured areas of the hospital.

RESULTS

Descriptive Statistics of Characteristics of the Study Participants

Socio-demographic Characteristics

Table 1 below shows the socio-demographic characteristics of the study participants. It can be observed that that majority of the study participants 49.46% (46/93) were in the age group of 18 – 25 years, were married 90.32% (84/93), had no formal education 53.76% (50/93) and had occupation of housewife 77.42% (72/93). Furthermore, majority of the study participants 85.87% (79/93) Catholics living in rural areas of residence 61.29% (57/93) and had their children falling sick monthly in the first six

months after delivery with 45.67% (42/93) suffering from Diarrhea.

Table 1: Descriptive statistics for socio-demographic Characteristics of the Study Participants.

Variable	Frequency (n)	Percentage (%)
Age of Mother in years		
18-25	46	49.46
26-33	33	35.48
34-41	13	13.98
42-49	01	01.08
Marital status of Mother		
Married	84	90.32
Single	05	05.38
Separated	03	03.23
Divorced	01	01.08
Education Level		
No formal education	50	53.76
Primary school	23	24.73
Secondary school	18	19.35
Post-Secondary education	02	02.15
Continuation of table 1		
Occupation		
Employed	01	01.08
Self employed	14	15.05
Peasant	06	06.45
House wife	72	77.42
Religion		
Catholic	79	85.87
Protestant	11	11.96
Muslim	02	02.17
Area of Residence		
Urban	36	38.71
Rural	57	61.29
Frequency of Baby falling sick		
Daily	01	01.08
Weekly	18	19.35
Monthly	62	66.67
Has not fallen sick	12	12.90
Can't remember	00	0.00
Diseases Baby has suffered from		
Diarrhea	42	45.65
Malaria	29	31.52
Difficult breathing	09	09.78
Others	12	13.04

Physiological Characteristics of Study Participants

Presented in table 3 below is the frequency distribution of physiological characteristics of study participants. Majority of the study participants 91.40% (85/93) had a vaginal birth meanwhile 07.53% (07/93) delivered through caesarean section with 50.00% (04/07) of those who delivered through caesarean section starting breastfeeding 4 – 11 hours after birth. Just a few 03.30% (03/93) of the study participants were HIV positive and out of those, 33.33% (01/03) practiced exclusive breastfeeding. On the other hand, 16.13% (15/93) of the mothers experienced problems during breastfeeding with 46.67% (07/15) having engorged painful breasts and the same proportion 46.67% (07/15) had breast

abscess. The study showed that 17.39% (16/93) of the women had severe bleeding either during or after birth with 23.66% (22/93) having infections during or after child birth meanwhile only one woman 01.83% (01/93) had high blood pressure and no woman 0.00% (00/93) had fistula. Postnatal pain was experienced by 15.05% (14/93%) of the woman meanwhile maternal distress was experienced by no woman. When asked to rate breast milk production for the baby, majority of the women 60.22% (56/93) rated it as sufficient, 67.74% (63/93) of the women said that they had two meals a day 6 months after delivery with 64.52%(60/93) saying that they had average appetite in the first 6 months after delivery.

Table 2: Frequency Distribution table for Physiological Characteristics of Study Participants

Variable	Frequency (n)	Percentage (%)
Mode of Delivery		
Vaginal Birth	85	91.40
Caesarean Section	07	07.53
Instrumental	01	01.08
Start of breastfeeding for C/S Cases		
Less than 1 hour after birth	02	25.00
1 – 3 hours after birth	02	25.00
4 –11 hours after birth	04	50.00
HIV status of the Mother		
Negative	88	96.70
Positive	03	03.30
EBF despite HIV positive Status		
Yes	01	33.33
No	02	66.67
Continuation of table 2		
Experienced problems during Breastfeeding		
Yes	15	16.13
No	78	83.87
Problems Experienced		
Engorged Painful breast	07	46.67
Sore / cracked nipples	01	06.67
Breast abscess	07	46.67
Severe bleeding During/After Child birth		
Yes	16	17.39
No	76	82.61
Infections During/After Child birth		
Yes	22	23.66
No	71	76.34
High blood pressure During Child birth		
Yes	01	01.08
No	92	98.92
Fistula After Child birth		
Yes	00	00.00
No	93	100.00
Postnatal pain After Child birth		
Yes	14	15.05
No	79	84.95
Maternal Distress During Child birth		
Yes	00	0.00
No	93	100.00

Rating of breast milk production		
Sufficient	56	60.22
Average	34	36.56
Insufficient	03	03.23
Number of meals in first six months		
One	04	04.30
Two	63	67.74
Three	26	27.96
Appetite in the First six months		
High	30	32.26
Average	60	64.52
Low	03	03.23

The Level of Exclusive Breastfeeding among Lactating Mothers Attending Kaabong District Hospital in Kaabong District.

Table 3 shows the level of exclusive breast feeding among the study participants. As observed from the table, majority of the study participants 92.47% (86/93) at a 95% CI of 87.01 – 97.94 exclusively breastfed their children.

Table 3: The Overall Level of Exclusive Breastfeeding among Lactating Mothers

Exclusive Breast Feeding	Frequency (n)	Percentage (%)	95% Confidence Interval
No	07	07.53	02.06 – 12.99
Yes	86	92.47	87.01 – 97.94

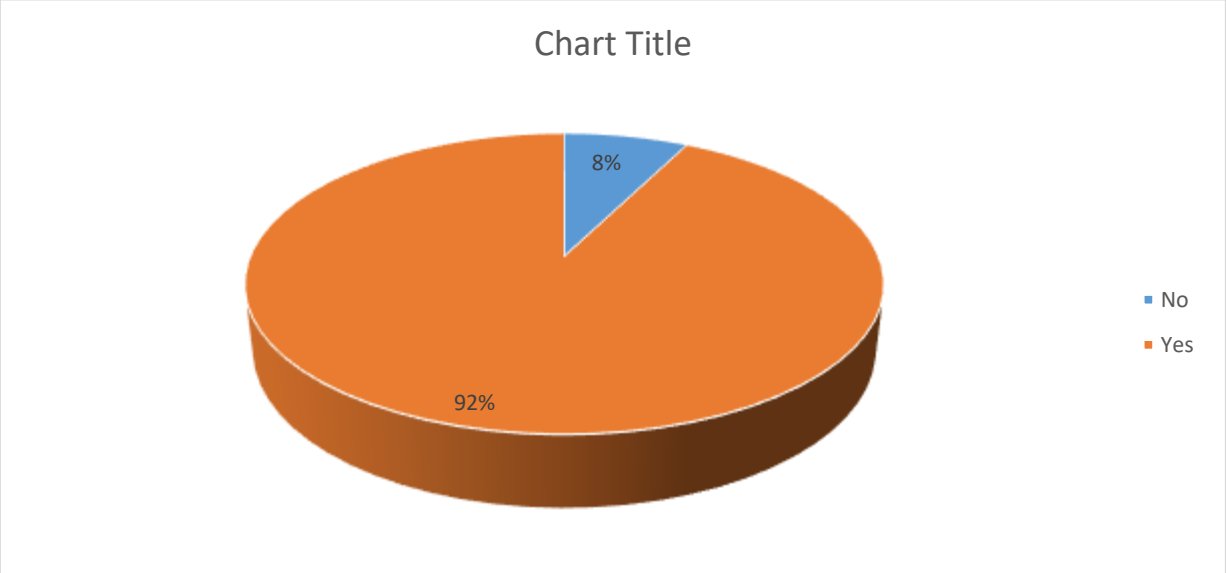

Figure 1: Pie Chart Showing Overall Level of Exclusive Breastfeeding among Lactating Mothers

Age-Specific Level of Exclusive Breastfeeding among Lactating Mothers.

Shown in table 4 is the age-specific level of exclusive breastfeeding among the study participants. It can be observed that the age group with the highest level of exclusive breast feeding was the age group of 26 – 23 years having a percentage of 96.97% (32/33) with a 95%CI of 90.80-100.03. The difference in the level of exclusive breast feeding across the different age groups was not statistically significant as the p value was more than 0.05.

Table 4: Age-Specific Level of Exclusive Breastfeeding among Lactating Mothers

Age of the participants in Years	Total	Exclusive Breast Feeding		Chi Square (X^2)	P Value
		No Count, % (95% CI)	Yes Count, % (95% CI)		
18 - 25 years	46	04 08.70% (00.24-17.16)	42 91.30% (82.84-99.76)		
26 - 33 years	33	01 03.03% (-03.14-09.20)	32 96.97% (90.80-100.03)		
34 - 41 years	13	02 15.38 % (-07.31-38.08)	11 84.62% (61.92-100.07)	2.283	0.516
42 - 49 years	01	00 0.00 % (--)	01 100.00% (--)		

CI = Confidence Interval, p Value is Significant at 0.05 level

Timing of Initiation of Breast Feeding After Child Birth

The researcher assessed how soon after child birth the mothers initiated their babies on breast milk. Results showed that majority of the mothers 74.44% (67/93) initiated their children on breast milk 1 – 3 hours after birth, 21.11% (19/93) did the initiation of breast feeding less than 1 hour after birth and 04.44% (04/93) initiated their babies on breast milk 4 – 11 hours after birth.

Table 5: Timing of Initiation of Breast Feeding After Child Birth

Timing of Initiation of Breast Feeding	Frequency (n)	Percentage (%)
Less than 1 hour after birth	19	21.11
1 – 3 hours after birth	67	74.44
4 –11 hours after birth	04	04.44

The Socio-Demographic Factors Influencing Exclusive Breastfeeding Among Lactating Mothers Attending Kaabong District Hospital in Kaabong District.

To identify socio-demographic factors influencing exclusive breastfeeding, a bivariate logistic regression was run and the results are presented in table 6 below. Results of the analysis showed that Age of the mothers and Education level were the only socio-demographic factors influencing the exclusive breastfeeding. Study participants who were aged 18 – 25 years were 3.77 times more likely to exclusively breast feed their children compared to those who were aged 24 – 41 years (cOR 3.77, 95%CI 2.31-6.15, P=0.024). Women had attained primary education were 3.66 times more likely to exclusively breastfeed their children (cOR 3.66, 95%CI 1.47-9.11, P=0.005). Three factors were kicked out of the bivariate model namely: Occupation, Frequency of Baby falling sick and Frequency of Baby falling sick.

Table 6; Results of Bivariate Logistic Regression to show Socio-Demographic Factors Influencing Exclusive Breastfeeding

Variables	Exclusive Breast Feeding		cOR (95% CI)	P Value
	No Count, (%)	**Yes Count, (%)**		
Age of Mother in years				
18-25	04 (08.70)	42 (91.30)	3.77 (2.31-6.15)	**0.024**
26-33	01 (03.03)	32 (96.97)	1.04 (0.42-2.59)	0.930
34-41	02 (15.38)	11 (84.62)	1.00	-
42-49	00 (0.00)	01 (100.00)	Omitted	-
Marital status of Mother				
Married	05 (05.95)	79 (94.05)	1.00	-
Single	01 (20.00)	04 (80.00)	0.25 (0.02-2.71)	0.256
Separated	01 (33.33)	02 (66.67)	0.13 (0.01-1.65)	0.114
Divorced	00 (0.00)	01 (100.00)	Omitted	-
Education Level				
No formal education	03 (06.00)	15 (83.33)	1.00	-
Primary school	01 (04.35)	22 (95.65)	3.66 (1.47-9.11)	**0.005**
Secondary school	03 (16.67)	47 (94.00)	1.2 (0.39-3.66)	0.749
Post-Secondary education	00 (0.00)	02 (100.00)	Omitted	-
Continuation of table 6				
Religion				
Catholic	05 (06.33)	74 (93.67)	1.00	-
Protestant	02 (18.18)	09 (81.82)	0.30 (0.05-1.80)	0.190
Muslim	00 (0.00)	02 (100.00)	Omitted	-
Area of Residence				
Urban	05 (13.89)	31 (86.11)	1.00	-
Rural	02 (03.51)	55 (96.49)	4.44 (0.81-24.23)	0.086

CI = Confidence Interval, cOR = Crude Odds Ratio, P Value is Significant at 0.05 level

The Physiological Factors Influencing Exclusive Breastfeeding among Lactating Mothers Attending Kaabong District Hospital 1n Kaabong District

Table 7 below shows the results of a bivariate logistic regression which was run to establish physiological factors influencing exclusive breastfeeding among the study participants. The statistically significant factors include; HIV status of the mother and Rating of breast milk production. Participants who were HIV positive were 97% less likely to exclusively breastfeed their children (cOR 0.03, 95%CI 0.002-0.39, P=0.007) and women who rate their breast milk

production as insufficient were 98% less likely to exclusively breastfeed their children (cOR 0.02, 95%CI 0.001-0.30, P=0.005). A number of variables were not able to fit in the bivariate logistic regression model and they were kicked out. Those variables include Mode of delivery, Timing of breastfeeding among women who delivered by caesarean section, problems experienced during breastfeeding, High blood pressure during child birth, Fistula after child birth, Maternal Distress During Child birth, Number of meals in first six months and Appetite in the First six months after birth.

Table 7: Bivariate Logistic Regression to show Physiological Factors Influencing Exclusive Breastfeeding among Lactating Mothers

Variables	Exclusive Breast Feeding		cOR (95% CI)	P Value
	No Count, (%)	Yes Count, (%)		
HIV status of the Mother				
Negative	05 (05.68)	83 (94.32)	1.00	
Positive	02 (66.67)	01 (33.33)	0.03 (0.002-0.39)	**0.007**
Experienced problems during Breastfeeding				
Yes	03 (20.00)	12 (80.00)	1.00	
No	04 (05.13)	74 (94.87)	4.63 (0.92-23.29)	0.063
Severe bleeding During/After Child birth				
Yes	01 (06.25)	15 (93.75)	1.00	
No	05 (06.58)	71 (93.42)	0.95 (0.10-8.70)	0.961
Infections During/After Child birth				
Yes	02 (09.09)	20 (90.91)	1.00	
No	05 (07.04)	66 (92.96)	1.32 (0.24-7.33)	0.751
Postnatal pain After Child birth				
Yes	01 (07.14)	13 (92.86)	1.00	
No	06 (07.59)	73 (92.41)	0.94 (0.14-8.43)	0.953
Rating of breast milk production				
Sufficient	02 (03.57)	54 (96.43)	1.00	
Average	03 (08.82)	31 (91.18)	0.38 (0.06-2.42)	0.307
Insufficient	02 (66.67)	01 (33.33)	0.02 (0.001-0.30)	**0.005**

CI = Confidence Interval, cOR = Crude Odds Ratio, P Value is Significant at 0.05 level

Multivariate Analysis to Show Factors Independently Influencing Exclusive Breastfeeding among Lactating Mothers Attending Kaabong District Hospital.

To determine factors independently influencing exclusive breastfeeding, factors which p-values less than 0.20 at bivariate analysis were added to the model for multivariate analysis. Through a stepwise regression with removal of least significant variables in each step the following factors remained independently associated with exclusive breastfeeding among the study participants: Age of the mother; 18 – 25 years versus 34 – 41 years (aOR 2.17, 95%CI 1.38-3.44, P=0.001). Education level; Secondary versus no education (aOR 2.40, 95%CI 1.22-4.74, P=0.011), Positive HIV status of the mother (aOR 0.005, 95%CI 0.002-0.79, P=0.034) and Insufficient rate of breast milk production (aOR 0.008, 95%CI 0.03-0.22, P=0.004).

Table 8: Multivariate Analysis to Show Factors Independently Influencing Exclusive Breastfeeding

Variables	Exclusive Breast Feeding		aOR (95% CI)	P Value
	No Count, (%)	**Yes Count, (%)**		
Age of Mother in years				
18-25	04 (08.70)	42 (91.30)	2.17 (1.38-3.44)	**0.001**
26-33	01 (03.03)	32 (96.97)	0.77 (0.34-1.71)	0.518
34-41	02 (15.38)	11 (84.62)	1.00	-
42-49	00 (0.00)	01 (100.00)	Omitted	-
Education Level				
No formal education	03 (06.00)	15 (83.33)	1.00	-
Primary school	01 (04.35)	22 (95.65)	1.65 (0.68-4.03)	0.269
Secondary school	03 (16.67)	47 (94.00)	2.40 (1.22-4.74)	**0.011**
Post-Secondary education	00 (0.00)	02 (100.00)	Omitted	-
Area of Residence				
Urban	05 (13.89)	31 (86.11)	1.00	-
Rural	02 (03.51)	55 (96.49)	5.29 (0.49-57.34)	0.171
HIV status of the Mother				
Negative	05 (05.68)	83 (94.32)	1.00	-
Positive	02 (66.67)	01 (33.33)	0.05 (0.002-0.79)	**0.034**
Rating of breast milk production				
Sufficient	02 (03.57)	54 (96.43)	1.00	-
Average	03 (08.82)	31 (91.18)	0.45 (0.05-3.78)	0.459
Insufficient	02 (66.67)	01 (33.33)	0.008 (0.03-0.22)	**0.004**

DISCUSSION

The Level of Exclusive Breastfeeding among Lactating Mothers Attending Kaabong District Hospital in Kaabong District

Findings of this study have shown that 92.47% (86/93) of study participants with 95% CI of 87.01 – 97.94 exclusively breastfed their children. This is higher compared to the WHO recommended EBF coverage of 90 % [15]. The result of the present study is much higher than the result of a study done among mothers of infants aged 6 to 12 months in Gwanda District, Zimbabwe which showed that only 36% of the mothers exclusively breastfed their children [16]. The discrepancy in the study findings can be explained by the fact that the previous study was conducted within the community meanwhile the present study was conducted in a hospital setting. The result of a study conducted from Sudan showed that 38% of the participants practiced exclusive breast feeding [17]. This figure is lower than was found in the present study probably because there are a number of NGOs which are supporting nutrition programs in the area within which the hospital where the study was conducted is located. The level of exclusive breast feeding found in the present study is higher than the 14.6% of mothers who practiced EBF in a study conducted in rural Communities of Cross River State, Nigeria [18]. Mothers living in rural communities face a number of

constraints which make it hard for them to practice exclusive breast feeding. For example, they may need to travel long distances to work in the farm or to go and collect firewood and in such cases the baby has to remain at home. In Tanzania, a study conducted by [19] reported that the prevalence of EBF was 24.1 % which very low when compared to the 92.47% found in the present study. In northern part of Uganda, [20] found that only 42.1% exclusively breastfed their babies which is way too low compared what was found in the present study. In child survival strategy, breastfeeding is a fundamental component as it provides all the energy and nutrients that the infant needs for the first months of life.

The Socio-Demographic Factors Influencing Exclusive Breastfeeding among Lactating Mothers Attending Kaabong District Hospital in Kaabong District

Age of the Mother: This study showed that women who were in the age bracket of 18 – 25 years were 2.17 times more likely to exclusively breastfeed their children compared to those in the age bracket of 34 – 41 years. This is mainly due to the fact that mothers within the age group of 18 – 25 years are still energetic and possibly having their first children at this age whom they treasure a lot and are willing to do whatever it takes to provide the best for that child. The older mother, who had a number of children, might have gotten fed up with breastfeeding due to the time and commitment involved with her previous children. However, according to other studies done elsewhere, older mothers (39 – 49 years old) were found to have better breastfeeding practices including exclusive breastfeeding than younger mothers with an odd of 2.6 [19]. This was because older mother has breastfeeding experience with their older children and know the related benefits of exclusive breastfeeding. The difference between the two studies might be due to demographic differences in the study population where the former study involved very few mothers above 35 years old and therefore, their age could not clearly reflect its effect on exclusive breastfeeding when compared to the later study which was mainly conducted among older mothers. However, [21] did not find any association between age of the mothers and practice of exclusive breastfeeding. Education level of the mother: This study showed that having a secondary education positively influenced the practice of exclusive breastfeeding. The mother's level of education empowers her with relevant knowledge and awareness of the importance of breast feeding both to the mother and the baby. Mothers who have gone through formal education to higher levels are more likely to practice exclusive breast feeding due to scientific knowledge as regards breastfeeding that is imparted to them during their academic years [22]. Therefore, they can apply such knowledge when they get babies, unlike mothers who have low levels of formal education as well as those who never got any kind of formal education. In contrast above findings, [23] in their study conducted in South Africa found that those with a grade 12 or less level of education had a higher likelihood of practising EBF who attained tertiary level of education. The possible reason for the discrepancy in the study findings could be because the previous study recruited only HIV-positive women.

The Physiological Factors Influencing Exclusive Breastfeeding Among Lactating Mothers Attending Kaabong District Hospital in Kaabong District

HIV Status: This study showed that HIV-positive women were 99.50% less likely to exclusively breastfeed their children. Contrary to the result of this study, the result of a study done in Kenya revealed that maternal HIV positively influenced EBF [24]. This could be due to the Prevention of Mother-to-Child Transmission of HIV intervention which at first advocates for it during the first months of life. Furthermore, the result of the present study is not in agreement with the result of a study conducted in Zimbabwe which revealed that maternal Human Immuno-deficiency Virus positive status was a predictor of EBF [16]. Probably because the education given to pregnant women by health workers in the

areas where the previous study was conducted was consistent with the WHO guidelines. In the past HIV positive mothers were strictly advised against breast feeding their babies so as to reduce the risk of mother to child transmission of HIV through breast milk. However, with the availability and consistent use of ARVs for both the mother and baby can reduce the risk of HIV-transmission from mother to child. Hence HIV-positive mothers can exclusively breast-feed their babies and continue breast feeding with complimentary feeds up to one year of age and gradually wean the baby with the provision of nutritional diet [15]. Whereby EBF practices among HIV positive mothers is high from birth to 2 months (80%), decreasing rapidly at age 3 to 4 months 34% and lowest among infants of six months 13.3% [25]; [26]-[34]. Breast Milk Production: This study indicated that women who rate their breast milk production as insufficient were less likely to exclusively breastfeed their children. This in in line with the results of a study conducted in Nigeria which revealed that inadequate breast milk hindered exclusive breastfeeding [18]. The finding of the present study is similar to what was found in a study conducted in Tanzania which revealed that the majority of the participants perceived that breast milk was not sufficient to breast feed their children [19]. When mothers rate themselves as having insufficient breast milk for their children it implies that they have low confidence in their ability to exclusively breastfeed their children thereby resorting to mixed feeding and in the end they cease breastfeeding earlier than expected. Early introduction of complementary feeding escalates the risk of diarrhoea, malnutrition and death.

CONCLUSION

The exclusive breastfeeding rate among lactating mothers attending Kaabong general hospital falls above the level recommended by World Health Organization. Maternal age of 18 – 25 years and secondary level of education were the socio-demographic factors which positively influenced exclusively breastfeeding among lactating mothers attending Kaabong General Hospital. The study has concluded that the HIV positive status of mothers and insufficient production of breast milk hindered exclusive breast feeding.

Recommendations

The Level of Exclusive Breastfeeding among Lactating Mothers Attending Kaabong District Hospital in Kaabong District.

- ✓ The high level of exclusive breast feeding found in this study needs to be sustained by providing breastfeeding promotion messages for mothers to raise awareness about the benefits of exclusive breastfeeding using mass media, such as television, radio, newspaper and magazines.
- ✓ Implementation of national health education campaigns that encourage women to breastfeed, especially during pregnancy by all primary health care nurses can also help to sustain the high level of exclusive breastfeeding.
- ✓ The high level of exclusive breastfeeding found in this study can be sustained through the enhancement and development of policies, rules, regulations, legislation and laws that appropriately promote as well as support breastfeeding in and outside work locations.

REFERENCES

1. World Health Organization. 10 facts on child health. Geneva: World Health Organization; 2012.
2. WHO (2013). Protecting Breastfeeding in Peru. Retrieved 3rd November, 2015 from http://www.who.int.
3. UNICEF (2011) State of the world's children 2011, adolescence. Age of opportunity. United Nations Children's Fund. New York, USA.
4. Ghana Statistical Service. Ghana MICS with an enhanced malaria module and biomarker, summary report of key findings. Ghana: Accra; 2011.

5. WHO. (2020). Infant and young child feeding. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding.
6. Issaka, A. I., Agho, K. E., & Renzaho, A. M. N. (2017). Prevalence of key breastfeeding indicators in 29 sub-Saharan African countries: a meta-analysis of demographic and health surveys (2010–2015). BMJ Open, 7(10).
7. Ayed, A. (2014). Knowledge, attitude and practice regarding exclusive breastfeeding among mothers attending primary health care centers in Abha city. International Journal of Medical Science and Public Health, 3(11), 1355. https://doi.org/10.5455/ijmsph.2014.140820141.
8. Domenico, D. M., & Karen, H. J. (2014). Career aspirations of women in the 20th century. Journal of career and technical education. Vol. 22, no.2.
9. Bai, D. L., Daniel, T. F., & Marie, T. (2014). Factors associated with breastfeeding duration and exclusivity in mothers returning to paid employment postpartum. Maternal and child health Journal.Pp1-10.
10. UNICEF and WHO (2011). Annual report, 12,000 fewer children perish daily in 2010 than 1990'. New York/Geneva; http://www.unicef.org/media/media_59795.html
11. Bailey, J., Clark, M., & Shepherd, R. (2008). Duration of breastfeeding in young women: psychological influences. British Journal of Midwifery, vol. 16 no.3, pp172- 178.
12. UNICEF (2015) Breastfeeding. Retrieved 7th August, 2015 from http://www.unicef.org
13. WHO, W. H. O. (2017). Guideline: protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services. World Health Organization.
14. Flower, K. B., Willoughby, M., Cadigan, R. J., Perrin, E. M., Randolph, G., & Family Life Project Investigative Team (2008). Understanding breastfeeding initiation and continuation in rural communities: a combined qualitative/quantitative approach. Maternal & Child Health Journal, vol.12, pp402-414.
15. WHO (2001). The World Health Organization's Infant Feeding Recommendation. Retrieved 7th August, 2015 from http://www.who.int.
16. Mundagowa, P. T., Chadambuka, E. M., Chimberengwa, P. T., & Mukora-Mutseyekwa, F. (2019). Determinants of exclusive breastfeeding among mothers of infants aged 6 to 12 months in Gwanda District, Zimbabwe. International Breastfeeding Journal, 14(1), 1–8. https://doi.org/10.1186/s13006-019-0225-x.
17. Idris, S. M., Gordiano, A., Tafeng, O., & Elgorashi, A. (2013). Factors Influencing Exclusive Breastfeeding among Mothers with Infant Age 0-6 Months. International Journal of Science and Research (IJSR) ISSN (Online Index Copernicus Value Impact Factor, 14(8), 2319–7064. https://doi.org/10.21275/SUB157153.
18. Ella, R. ., Ndep, A. ., & Akpan, M. I. (2016). Factors Affecting Exclusive Breastfeeding Practice in Rural Communities of Cross River State, Nigeria. International Journal of Humanities, Social Sciences and Education, 3(4), 101–110. https://doi.org/10.20431/2349-0381.0304012
19. Maonga, A. R., Mahande, M. J., Damian, D. J., & Msuya, S. E. (2016). Factors Affecting Exclusive Breastfeeding among Women in Muheza District Tanga Northeastern Tanzania: A Mixed Method Community Based Study. Maternal and Child Health Journal, 20(1), 77–87. https://doi.org/10.1007/s10995-015-1805-z.
20. American Academy of Pediatrics. (2012): 'Breastfeeding and the use of human milk'. Paediatrics, vol.129 no.3, pp 827-841.

21. Joshi, B., & Timilsina, A. (2019). Factors Influencing Exclusive Breast Feeding Practice among the Mothers of Infants in Pokhara. 9(1), 83–89. http://103.69.125.201/index.php/JHAS/article/view/624.
22. UDHS, I. C. F. (2011). Uganda demographic and health survey. Uganda Bureau of Statistics, Kampala Uganda.
23. Goon, D. Ter, Ajayi, A. I., & Adeniyi, O. V. (2020). Factors associated with the practice of exclusive breastfeeding for six months among mothers on antiretroviral therapy in the Eastern Cape, South Africa. 1–19. https://doi.org/10.21203/rs.3.rs-40582/v1.
24. Nyanga, N. M., Musita, C., Otieno, A., & Kaseje, D. (2012). Factors influencing knowledge and practice of exclusive breastfeeding in Nyando District, Kenya. African Journal of Food, Agriculture, Nutrition and Development, 12(6), 6632–6645. http://www.ajfand.net/Volume12/No6/Nyanga9530.pdf.
25. Alemayehu, T., Haidar, J., & Habte, D. (2009). Determinants of exclusive breastfeeding practices in Ethiopia. Ethiopia Journal Health Development. Vol. 23, no.1, pp12-18.
26. Maru, Y., & Haidaru, J. (2009). Infant feeding practice of HIV positive mothers and its determinants in selected health institutions of Addis Ababa, Ethiopia. Ethiopia Journal of Health development, vol.23, no.2, pp. 107-114.
27. Arthur, Ganafa. (2023). Knowledge, Attitude and Practices regarding Exclusive Breastfeeding among Mothers Attending Maternal Child Health Clinic at Kitagata Hospital, Sheema District, Uganda. IAA Journal of Applied Sciences. 9 (1), 17-26.
28. Adaobi, M. I., Emmanuel, I. O., Chinonye, I., Chisom, E., Onyekwuo, C. V., Ibekwe, A. D., Chioma, B. I. (2023). Challenges of Exclusive Breastfeeding among Working Class Women in a Teaching Hospital South East, Nigeria. Journal of Pharmaceutical Research International. 34 (64A),1-10.
29. Musisi, A. L. (2023). Prevalence and Factors Hindering First Time Mothers from Exclusively Breast Feeding in Kyabugimbi Health Centre IV, Bushenyi District Uganda. IDOSR Journal of Biochemistry, Biotechnology and Allied Fields. 8 (1), 53-63.
30. Osman, A. H., Muhumuza, J., & James, N. M. (2022). Factors associated with Immediate Adverse Maternal Outcomes among Referred Women in Labor attending Kampala International University Teaching Hospital. IAA Journal of Applied Sciences, 8(1):117-125.
31. Emmanuel, I. O., Sunday, B. Y., Getrude, U. O., Esther, U. A., Okechukwu, P. C. U. (2023). Anaemia and Risk Factors in Lactating Mothers: A Concern in Africa. International Journal of Innovative and Applied Research, 11 (2): 15-17.
32. Idris, S. M., Tafang, A. G. O., & Elgorashi, A. (2015). Factors influencing exclusive breastfeeding among mother with infant age 0-6 months. International Journal of Science and Research, 4(8):28–33.
33. Ketbi, A. l., Noman, S., & Ali, A. *et al.* (2018). Knowledge, attitudes, and practices of breastfeeding among women visiting primary healthcare clinics on the island of Abu Dhabi, United Arab Emirates. *Int Breastfeed J.,* **13**, 26. https://doi.org/10.1186/s13006-018-0165-x.
34. Angel, M. M. (2023). First-Time Motherhood and Exclusive Breastfeeding Practice in some Health Facilities in the Bushenyi District. Eurasian experiment journal of biological sciences (EEJBS), 4(1), 22-35.

CITE AS: Lokapel Peter Lotyang (2023).Factors Influencing Exclusive Breastfeeding in Lactating Mothers Attending Kaabong District Hospital in Kaabong District. IDOSR JOURNAL OF EXPERIMENTAL SCIENCES 9(3) 59-73. https://doi.org/10.59298/IDOSR/JES/111.1.10105.