Prevalence of Exclusive Breastfeeding and associated factors among young Women attending Mbarara Municipal Council Health Centre IV.

Allion Asiimire[a,1], Eve Katushabe[a]

[a] Department of Nursing, Faculty of Nursing and Health Sciences, Bishop Stuart University, P.O. Box 09, Mbarara, Uganda.

Abstract

Background:[a]

Exclusive breastfeeding for six months provides the nurturing, nutrients and energy needed for physical and neurological growth and development. However, nearly 2 out of 3 infants are not exclusively breastfed for the recommended 6 months, a rate that has not improved in 2 decades In addition, efforts to increase EBF particularly in Uganda have stagnated, with rate remaining the same for many years. There is limited documented information specifically at Mbarara Municiple Council Health Centre IV (MMC H/C IV) regarding prevalence of exclusive breast feeding and associated factors among young women. This study is therefore aimed at assessing the prevalence of exclusive breast feeding and associated factors among young women

Methodology:

A health Centre-based cross-sectional study was conducted among 93 pregnant women attending postnatal clinic at Mbarara municipal council health center IV. Information was collected using a structured question.

Results

The prevalence of exclusive breastfeeding was 31.2%. The following variables were found to be significantly associated with exclusive breastfeeding, marital status OR 3.798 (CI.381-8.484) P=0.045, monthly income OR 2.750 (CI.380-8.058) p= 0.033

Conclusion and recommendations:

Low prevalence of exclusive breastfeeding was noted among young women attending Mbarara Municipal Council Health Centre IV. The factors associated with exclusive breast feeding include marital status and monthly income

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1 Background

Globally, the rate of exclusive breastfeeding (EBF) was 43% in 2015 (WHO, 2016). It is also estimated that only 38% of infants 0 to 6 months of age are exclusively breastfed worldwide (Senghore *et al.*, 2018). In Sub-Saharan Africa and East Africa it was 31% and 42%, respectively (WHO, 2016). Approximately 22% of infant deaths could be prevented if mothers practiced EBF. (Manson *et al.,* 2013: Joshi *et al.,* 2014). In Uganda exclusive breastfeeding was estimated at 60%. (kabwijamu, 2016).

Exclusive breastfeeding for six months provides the nurturing, nutrients and energy needed for physical and neurological growth and develop-

ment. However, nearly 2 out of 3 infants are not exclusively breastfed for the recommended 6 months, a rate that has not improved in 2 decades (WHO/UNICEF 2018).

In low and middle income countries (LMIC including Uganda), where access to clean water, adequate sanitation, and basic health and social services are often limited, the effects of suboptimal breastfeeding are even more prominent (Ahmed *et al.,* 2019). Lack of EBF is the most important risk factor for infant and young child morbidity and mortality including life-long impact like poor school performance, reduced productivity, and impaired intellectual development. (Tadesse *et al.,* 2016)

The World Health Organization and the United Nations Children's Fund recommends early initiation of breastfeeding within the first hour of birth and exclusive breastfeeding (EBF) for the first 6 months of life, as well as continued breastfeeding until the child is 2 years of age (WHO/UNICEF 2009). Exclusively breastfed infants can only take oral rehydration solution, vitamins and minerals, and prescribed medications.(UNICEF, 2017).

The benefits of breastfeeding both to the mother and the baby are clearly documented (Black *et al.,* 2008; Wambach & Riordan, 2014; Rollins *et al.,* 2016;). Research has shown that children who are breast feed have low risks of suffering from diarrheal diseases and other illnesses (Richard *et al.,* 2018). Mothers who breastfeed their babies are able to bond with their infant, loss of the pre-pregnancy weight, child spacing by lactation amenorrhoea and their uterus contracts well (Kair, Flaherman, Flaherman, Newby, &Colaizy, 2015).

Despite several interventions, the rate of EBF continues to be inadequate in developing countries (UNICEF 2008, Nkala *et al.,* 2017). The aim of this study therefore is to determine the prevalence of exclusive breastfeeding and associated factors among young women attending Mbarara municipal council health centre IV.

Only six in 10 Ugandan children below the age of six months are exclusively breastfed. On average, 56% and 46% initiated breastfeeding in the first hour and practiced exclusive breastfeeding respectively. (Baale,2014). This is contrary to the best practice recommended by World Health Organization.In a study done at Mbarara regional referral hospitalexclusive breast feeding, was found at 49.8%(Ampeire., 2008).

Early introduction of complementary feeding escalates the risk of diarrhea, malnutrition and death (WHO, 2012). The immediate consequence of poor feeding practices during 0–6 months of age leads to morbidity, mortality, and delayed mental and motor development. However, efforts to increase EBF particularly in Uganda have stagnated, with rate remaining the same for many years(UBOS and IMF, 2012). There is limited documented information specifically at MMC H/C IV regarding prevalence of exclusive breast feeding and associated factors among young women. This study is therefore aimed at assessing the prevalence of exclusive breast feeding and associated factors among young women.

2 METHODS

3 Study design

A Cross Sectional study design was carried out since data was collected at one point in time from a representative sample (Polit & Beck, 2014).

4 Study settings

The study was carried out from Mbarara Municipal Council Health Centre IV. It is located in Mbarara district, approximately 265 kilometres by road southwest of Kampala, Western Uganda. MMC HC IV is a public health facility with a 10 bed capacity admitting only pregnant women that are sick or in labour. The catchment population is estimated at over 400,000 people (UBOS 2016).The majority of the women coming for ANC are from Mbarara district. As elsewhere in the country, a HC IV is manned by a medical officer and offers the following services: Immunization, Family planning, PMTCT, ART services, general OPD, Maternity and laboratory services. It has a theatre that only operates on minor surgeries like circumcision. The cadres of staff include the following: One medical officer, five clinical officers, one laboratory technologist, four laboratory technicians, one laboratory assistant, one anesthetic assistant, one dispenser, one public dental officer, one Senior nursing officer, five registered nurses, two registered midwives, one enrolled nurse, 08 enrolled midwives, two comprehensive enrolled nurses and ten support staff.

The Antenatal clinic operates on an outpatient basis offering services including: prenatal care, Health Education, routine counseling and testing

for HIV and Tetanus Toxoid vaccination to pregnant women. However, the very sick pregnant women identified are transferred to the Maternity Ward for admission. According to the ANC clinic records the average attendance is 35 pregnant women (both new cases and re -attendance) per day from Monday to Friday excluding Thursday which is reserved for pregnant women that are HIV positive.

5 Study population

The study population included all women aged 15-24 with children of 6 months and above attending family planning and postnatal clinics at Mbarara Municipal Council Health Centre IV during the time of data collection, who voluntarily agree to participate in the study.

6 Sample size estimation

Using Kish and Leslie's standard formula (1965), $N=Z^2\ PQ/E^2$.

Where N is the sample size,

Z-score responding to 95% of confidence interval which is 1.96,

P= percentage of respondents, estimated to be 50%.

Q=1-P=1-0.5=0.5

E=Level of error expected which is 5% (0.05)

$N= (1.96)^2 x0.5\ (0.5)/0.05^2$

N=384

The study was adjusted for finite population,

Using Fisher's et al. (1998) formula;

nf =n/(1+(n/N)

Where; nf =desired sample for population < 10 000

n=calculated sample size for population > 10 000.

N=estimate of the population size (125)

nf = 384/(1+ (384/125)

=384/4.072

nf= 94.3 respondents; 95 respondents were considered.

7 Sampling technique

Women attending family planning and postnatal clinics were purposively selected to participate in the study.

8 Inclusion criteria

The study included all women aged 15-24 with children of 6 months and above attending family planning and postnatal clinics Mbarara Municipal Council Health Centre iv during the time of data collection.

9 Exclusion criteria

The study excluded women who were in much pain and those with mental issues like puerperal psychosis.

10 Validity

To ensure internal validity, the questionnaire was translated into Runyankole and back translation to English. In addition, the questionnaire was pretested on five women to address any ambiguities prior to the data collection process.

11 Reliability.

The researcher administered the questionnaire as this did not allow participants to discuss questions with other women. The researcher ensured that information got was relevant to exclusive breastfeeding and this helped in obtaining the correct responses. The questionnaire was short and clear for mothers to understand easily. The collected data was organized daily after a day's work

12 Data Collection Procedure

The researcher wrote down the responses. Data collection was carried out in a period of 14 days.

13 Data analysis

Data was analyzed using SPSS by establishing the relationship between the independent and dependent variables

Data presentation

Data was presented by use of variable tables which was put in representative graphs and pie-charts, to ease the process of interpretation of findings.

14 Ethical considerations

The researcher obtained an introductory letter from the Head of Nursing Department to carry out research at the health facility. Permission was

obtained from the Town Clerk Mbarara municipal council and MbararaMunicipal Council Health Centre iv management. Voluntary and informed consents were always sought from respondents and assured of confidentiality of the information provided.

15 Dissemination of results

The findings of the study were compiled into a report and three copies were produced and disseminated to the university library, Mbarara Municipal Council Health Centre IVand a copy for the Researcher.

16 Results:

17 Participants' socio-demographic characteristics

Table 1 summarizes the participants' social demographic characteristics. Of the 93 participants, 45.1% were aged 15-20, 54.6%were aged 21-24, 61.3% were married, 14.0% were single, 21.5 were divorced while 3.2% were widowed, and 61.3% were living in urban areas while 51.6% were earning less than 100,000 shillings. More than a third (39.8%) were peasants and 48.4% had parity of two while 68.8% had their deliveries at health facilities. In addition to this 48.4% had studied up to secondary level.

18 Prevalence of exclusive breastfeeding

Figure below shows that 68.8% of the participants gave other foods to their babies other than breast milk while 31.2% did not give anything to their babies in the first six months after delivery.

Bivariate analysis of factors associated with exclusive breast feeding.

At bivariate analysis, Married women had a higher percentage (36.8%) of exclusive breastfeeding as compared to single women (15.4%), those divorced (20.0%), and the widowed (33.3%). More percentage (42.9%) of none educated was able to exclusively breast feed compared to other levels, primary 26.1%, secondary 33.3% and tertiary 27.8%. Women who delivered from health facilities were more likely to exclusively breastfeed with a percentage of 42.2% as compared to those who delivered from home (4.2%) and from a traditional birth attendant (20.0%). In addition, being influenced by a health worker had a greater percentage (55.6%) of exclusive breast feeding than being influenced by the partner (33.3%), self (18.2%) and partner (33.3%). Mothers earning <100,000 were less likely to exclusively breast feed (20.8%) compared to one's earning 110,000 -250,000 (30.4%), 260,000-500,000 (77.8%) and >500,000 (38.5%).

Multivariate analysis of factors associated with exclusive breastfeeding

Independent variables with $p<0.2$ at bivariate level were analyzed using multivariate logistic regression and then adjusted for age. Results showed that being married and the participants' monthly income were the only factors found to be significantly associated with exclusive breastfeeding. (aOR: 3.798 (0.381, 8.484), p=0.045, aOR: 2.750 (.380, 8.058), p= 0.033) respectively.

19 Discussion

20 Prevalence of exclusive breast feeding

The study revealed that the prevalence of exclusive breastfeeding was 31.2%. This is consistent with the finding of world health organization (WHO) which reported the prevalence of exclusive breast feeding in East Africa to be 31% (WHO, 2016).

The current study's proportion of exclusive breast feeding is also accordant with a study done by Chekol *et al.,* (2017) in south East of Ethiopia where 33% of the women attending postnatal clinic practiced exclusive breast feeding. The prevalence of exclusive breast feeding in this study is also relatively conformable with findings from a study by Setegn *et al.,* (2012) in Bangladesh that revealed the proportion of mothers classified as practicing exclusive breast feeding to be 34.5%. In addition, the results are similar to the Kenya national estimates of 32%. (Okanda *et al.,* 2014) This consonancy can be attributed to the similarity in the data collection tool, study design, cross-sectional design(Setegn *et al.,* 2012; Mgongo *et al.,* 2013; Cresswell *et al.,* 2017) and to the fact that all these studies were health facility-based.

The results of this study are much lower than the findings in Goba District, Bale Zone 71.3%, Jordan

Table 1. (N=93)

Variable	Frequency	Percent (%)
Age		
15-20	42	45.1
21-24	51	54.6
Status		
Married	57	61.3
Single	13	14.0
Divorced	20	21.5
Widowed	3	3.2
Religion		
Protestant	28	30.1
Catholic	37	39.8
Muslim	13	14.0
Seventh day Adventist	11	11.8
Others	4	4.3
Education		
None	7	7.5
Primary	23	24.7
Secondary	45	48.4
Tertiary	18	19.4
Occupation		
Civil servant	10	10.8
Business	27	29.0
Peasant	37	39.8
Housewife	12	12.9
Others	7	7.5
Residence		
Urban	57	61.3
Rural	36	38.7
Birth Oder		
1	41	44.1
2	45	48.4
3	6	6.5
4	1	1.1
Income		
<100,000	48	51.6
110000-250000	23	24.7
260000-500000	9	9.7
>500000	13	14.0
Source of information		
Radio	47	50.5
Phone	27	29.0
Television	19	20.4
Why other feeds		
MILK DID NOT COME	35	37.6
LBW	12	12.9
Advised by relatives	7	7.5
Others	14	15.1
Birth place		
Home	24	25.8
health facility	64	68.8
TBA	5	5.4
Type of delivery		
Normal	62	66.7
Cesarean	31	33.4
Health problems (both mother and infant)		

Table 2. Bivariate analysis of factors associated with exclusivebreast feeding

Variable	Exclusive breast feeding		P value
	NO (%)	**YES (%)**	
Age			
15-20	38(74.5)	13(25.5)	.093
21-24	26 (61.9)	16(38.1)	
Status			
Married	35(61.4)	22(36.8)	.043
Single	11(84.6)	2(15.4)	
Divorced	16(80.0)	4(20.0)	
Widowed	2(66.7)	1(33.3)	
Religion			
Protestant	22 (78.6)	6 (21.4)	
Catholic	22 (59.5)	15 (40.5)	0.695
Muslim	11 (84.6)	2 (15.4)	
Seventh day Adventist	8 (72.7)	3 (27.3)	
Others	1 (25.0)	3 (75.0)	
Education			
None	4 (57.1)	3 (42.9)	
Primary	17 (73.9)	6 (26.1)	.007
Secondary	30 (66.7)	15 (33.3)	
Tertiary	13 (72.2)	5 (27.8)	
Occupation			
Civil servant	6 (60.0)	4 (40.0)	.310
Business	19 (70.4)	8 (29.6)	
Peasant	28 (75.7)	9 (24.3)	
Housewife	6 (50.0)	6 (50.0)	
Others	5 (71.4)	2 (28.6)	
Residence			
Urban	40 (70.2)	17 (29.8)	0.324
Rural	24(68.6)	11 (31.4)	
Birth Oder			
1	30(73.2)	11 (26.8)	
2	29 (64.4)	16 (35.6)	0.746
3	4 (66.7)	2 (33.3)	
4	1 (100)	0 (0)	
Place of delivery			
Home	23(95.8)	1(4.2)	
health facility	37(57.8)	27(42.2)	.002
TBA	4(80.0)	1(20.0)	
Type of delivery			
Normal	44(66.7)	17(33.3)	.335
Cesarean	19(63.3)	11(36.7)	
Mother/infant issue			
Milk did not come	34(97.1)	1(2.9)	
LBW	9(75.0)	3(25.5)	.320
Advised by relatives	7(100)	0(0)	
Others	14(100)	0(0)	
Health problem			
maternal illness	24(96.0)	1(4.0)	
infant illness	14(87.5)	2(12.5)	
Others	4(100)	0(0)	.621
None	22(95.6)	1(4.4)	
Influential person			
Partner	10(66.7)	5(33.3)	

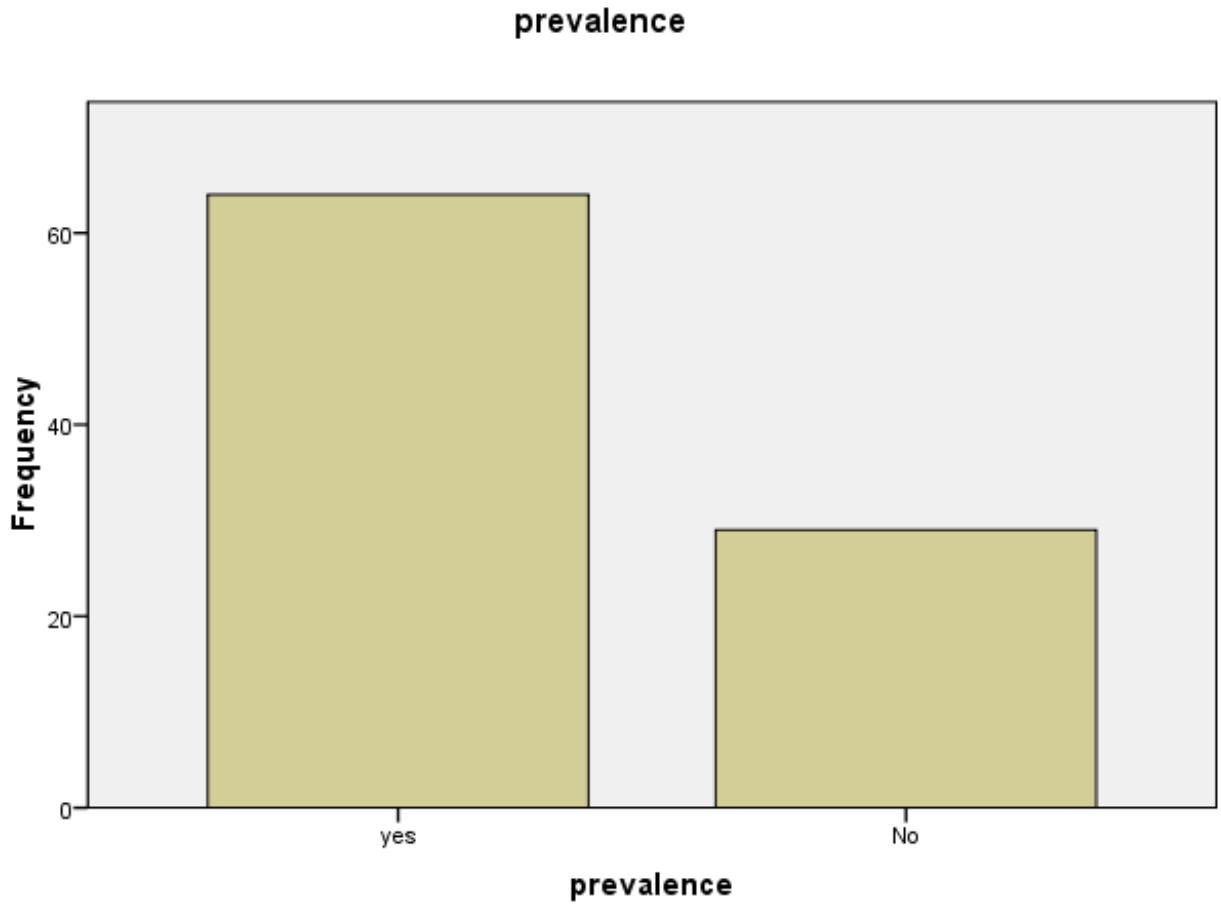

Figure 1. Prevalence of exclusive breastfeeding

Table 3. Multivariate analysis of factors associated with exclusive breastfeeding

Variable	aOR ((95%CI))	P value
Age		
15-20	1	0.802
21-25	1.676 (.502-5.590)	
Status		
Married	3.798 (.381-8.484)	0.045*
Not married	1	
Education		
None formal	1	
Formal	1.546(0.516,12.568)	0.251
Birthplace		
Home	1	0.589
health facility	1.498 (.091-2.736)	
Income		
<100,000	1	
>100,000	2.750 (.380-8.058)	0.033*

(77%), Madagascar, (70%), Zambia, (74%), Ghana, (79%) and Bolivia (65%). Amhara Region, (81%), Oromia Region, (62%) and South Nations and Nationalities Peoples Region (64%). In addition, higher prevalence of exclusive breast feeding was reported in other numerous studies such as 49.8% at Mbarara Regional Referal Hospital (Ampeire IP 2008), 46 % in Uganda (Baale), 44% among employed women in north-western Uganda (Seid, *et al.*, 2013) 50% in Ethiopia (chekol, *et al.,* 2017), 58% in Brazil (Setegn, *et al.,* 2012). The methodological differences between studies might attribute to the difference in the prevalence of exclusive breast feeding among these countries.

However, lower prevalence of exclusive breast feeding as compared to results of this study, was reported in other numerous studies such as 20.7% in Kilimanjaro (Mgongo, *et al.,* 2013), 24.4% Al-HussaSauda Arabia (Gilan, *et al.*, 2011), 13.8% in Canada (Al-Sahab *et al.,* 2010) and 24% in Myanmer. The socio demographic factors including marital status might attribute for the difference in breastfeeding practices between this study and studies from other countries. The difference in study designs used in other studies could also be a reason for this.

21 Factors associated with exclusive breastfeeding

In this study, mothers who were earning highly (>100,000Ugs) were positively associated with exclusive breastfeeding (OR=2.750). This is similar with the results reported in studies by Tan, 2011 and Prakash *et al.,* (2014), who found that mothers with high household income had higher odds of exclusive breastfeeding compared to mothers with low household income. Furthermore, studies by Okeh *et al.*, (2010); Ekanem, *et al.,* (2012); Ajibade, Okunlade *et al.,* (2013) revealed that high socioeconomic status was significantly related to high exclusive breastfeeding rate, and long duration of overall breastfeeding. This is because mothers with high income are able to afford to balance diet meal rich in foods which support breast milk production and thus have enough breast milk for their infants. Many other scholars have posited that maternal employment is in a continuous competition with breastfeeding (Okeh, 2010). However, the result contradict with a study by Setegn *et al.,* (2012), which revealed that mothers who were earning less had a significant association with a exclusive breastfeeding. This was because of the fact that less maternity leave, which makes employed mothers have less opportunity to stay at home, compromising exclusive breastfeeding. Mothers also may have to leave their babies to search for a job.

Married women had significantly higher odds of EBF (OR=3.79) compared to unmarried women. This is in line with a study by Mgongo *et al.,* (2013) which showed that women living with their partners were more likely to exclusively breastfeed their infants. This could be due to the fact that unmarried women lack social support to continue practicing EBF as they have to earn for the family. Additionally, in other studies, sub optimal infant feeding was common with single mothers (Tampah-Naah *et al.,* 2013). Studies concluded that single mothers are less likely to exclusively breastfeed adequately and longer due to absence of partners' support and confidence compared with married mothers.

22 Conclusion:

Low prevalence of exclusive breastfeeding was noted among young women attending Mbarara Municipal Council Health Centre IV. The factors associated with exclusive breast feeding include marital status and monthly income.

23 Recommendations :

Given the low prevalence of exclusive breastfeeding, I recommend:

- Improved quality of service delivery in regard to breastfeeding practices
- Integration of exclusive breast feeding services with existing maternal health care among public health centers
- Continued promotion of partner involvement in maternal health especially after delivery should also be emphasized as this can bridge the existing chasm.
- Lastly, more research is recommended especially a community based study may can be pursued to determine the magnitude of exclusive breastfeeding in the community as this study might have underestimated the prevalence since it was health centre-based.

Area for further research

Impact of health workers on breastfeeding practices

24 Limitations:

The findings may not be generalizable to the entire breast feeding women in the community since not all of them seek care from the government facility.

Additionally, the study was facility-based so it may not be representative of the entire community since not all people in that area visit the health facility.

25 Operational definitions

Factors: refers to anything that affects life events either positively or negatively.

Exclusive breast feeding; refers to the infant feeding method whereby mothers feed their infants with only breast milk for the first six months of life without any other supplement not even water except for prescribed drugs and vitamins.

HIV: this is an infection that affects the body's immune system by infecting helper T-cells causing immune suppression.

Sub-optimal breast feeding refers to inability to adhere to standard recommendations like initiation of breastfeeding within one hour, giving colostrums and breastfeeding for six months plus breast feeding up to 2 years.

Prevalence: This is the proportion of cases in the population at a given time. It is the measurement of all individuals affected by the disease at a particular time .

Abbreviations

HIV: Human Immune Virus

SSA: Sub Saharan Africa

EBF: Exclusive Breast feeding

WHO: World Health Organization

UNICEF: United Nations Children's Fund

WLWH: Women living with HIV

KAP: Knowledge attitude and practices

H/C IV : Mbarara Municiple Council Health Centre IV

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