

Determinants of Exclusive Breastfeeding among Infants Attending the Immunization Clinic at Jinja Regional Referral Hospital

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ABSTRACT

The study aimed to identify factors influencing exclusive breastfeeding among infants at Jinja regional referral hospital. Results showed that 37.3% of lactating mothers attended immunization clinics exclusively breastfeed. Socio-demographic factors such as mother's age, education level, occupation, and residence area influenced exclusive breastfeeding. Physiological factors like HIV status, breastfeeding problems, and parity of ANC and PNC attendance also influenced exclusive breastfeeding. The study recommends that supportive individuals, including spouses, help mothers with household chores to allow time for breastfeeding. The ministry of health and district health teams should provide continuous training on exclusive breastfeeding management, knowledge and skill updates, and attitude changes to improve exclusive breastfeeding prevalence.

Keywords: exclusive breastfeeding, infant, immunization

INTRODUCTION

Health is a common denominator to all populations of the world. A well-defined and efficient health system is a major determinant to achieving a healthy population or society. Like other countries of the world, Uganda faces many challenges with regards to it living conditions, health being one of them. Recognizing this fact, the current Ugandan Government since coming to power in 1986 created a needs-based and cost-effective health care system [1]. In order to achieve this, the Ugandan government carried out a decentralization of the health sector to increase responsibility, accountability and participation on the lower level.

Breast milk contains all the nutrients required by infants in the first 6 months of life for good health and development. It also contains bioactive factors that augment the infant's immature immune system, providing protection against infection, and other factors that help digestion and absorption of nutrients. The breast milk produced from 37 weeks of gestation to about seven days after delivery called Colostrum which is yellowish and sticky is very significant

for immune defenses of the baby during the initial days of life. Subsequently, the mature milk which is whitish in color is effectively produced from about 10th day following delivery. Breastfeeding therefore, is an important public health strategy for reducing infant and child morbidity and mortality as well as reducing maternal morbidity and mortality [2, 3, 4].

The World Health Organization (WHO) recommends that breastfeeding should start immediately following delivery for the baby to get Colostrum. Thereafter, the infant should be breastfed exclusively for up to six months of life, day and night on child's demand [5].

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/semisolids are given with exception of vitamins, mineral supplements or medicine [3]. When the infants are exclusively breastfed for the first six months of life, their immune system is stimulated and this goes hand in hand with protecting them from diseases like diarrhea and acute

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respiratory infections, which are considered to be two of the major causes of infant mortality in the developing world [2].

Over the last couple of decades, there has been an increasing interest in the promotion of exclusive breastfeeding as the 'best' feeding method for newborns.

Research Design

The research design was cross-sectional and descriptive using quantitative and qualitative approaches [6].

Study population

The study population comprised of lactating mothers of children aged 0 to 12 months seeking immunization services from JRRH in Jinja district.

Inclusion criteria

Inclusion criteria include mothers who have given birth 0 - 6 months prior to the study and lactating mothers who are willing to consent.

Exclusion criteria

Exclusion criteria include lactating mothers who did not consent, and mothers whose infants were above 12 months. Women who never breastfed their children during the first six months.

Sample size determination

The sample size was calculated using the formula Kish Leslie (1965) below:

$$n = z^2 p (1-p) / e^2$$

Where n = Estimated minimum sample size required

P= Proportion of a characteristic in a sample (84.5% [7])

Z=1.96 (for 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 = 201 mothers

Sampling technique

Simple random sampling technique was used to select the mothers who took part in the research. This was done by making a lottery where papers with numbers 1 to 10 are put in a basket and every mother who picks numbers 2,4,6,8, and 10 were selected to give consent for the research.

Data collection instrument

The researcher used questionnaires for data collection. The questionnaire is a pre-set form with questions relevant to

This, to a large extent, has been inspired by mounting scientific evidence on the importance of exclusive breastfeeding in reducing infant morbidity and mortality. It has been estimated that EBF coverage of 90% will help to improve child survival [2].

METHODOLOGY

the research objectives. Questionnaires were distributed to the eligible respondents who consented to take part in the study. The study had one set of questionnaires that is constructed strategically to capture all the necessary information from the study participants in respect to the specific objectives of the study [8].

Data management and analysis

The responses from the data collection tools i.e., questionnaires were edited, coded and entered in Microsoft Excel so as to derive the meaning from it. Data from the survey was statistically analyzed using the Statistical Package for Social Sciences (SPSS) (version 17.0). Basic descriptive analysis was done using frequency distributions. 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 was performed to compare the effects of different factors on exclusive breastfeeding practice. Since the study is about a relationship (dependency between exclusive breastfeeding practice and other factors), chi-square statistic (χ^2) was used to establish whether relationships existed among the variables. Statistical significance was assumed for P - values, < or = 0.05.

Ethical Issues consideration

Ethics is defined by [9, 10] as a code of behavior appropriate to academic of research. The researcher followed the KIU-WC ethical procedure as; -

- A letter of introduction from the faculty of clinical medicine and dentistry and permission was sought from the Administration of Jinja Regional Referral Hospital where data was collected.

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- The researcher ensured the confidentiality and privacy of the participants' information which will be given out.
- In obtaining the information, the use of force or questions, which might infringe the ethical issue and was avoided and discouraged.
- A letter of consent was availed to the participants' caretakers by the researcher to declare that they are willing to participate or not in the study and declining this does not attract any penalty.
- The researcher explained to the participants that there is no physical or financial benefits for the participating in the study because it was voluntary.
- The researcher fully explained to the purpose, objectives, risks and benefits of the study to the participants before taking part in the study.
- The researcher provided her contact to the participants to call her for any inquires or questions about the study.

RESULTS

Table 1: Demographic characteristics of respondents

Variable	Frequency (N=201)	Percentage (%)
Age group		
Less than 25 Years	48	23.9
26-33 Years	93	46.3
34-41 Years	55	27.4
42-49Years	5	2.5
Level of education		
No formal education	16	8.0
Primary	80	39.8
Secondary	50	24.9
Post-Secondary education	55	27.4
Occupation		
Self-employed	74	36.8
Formally employed	41	20.4
Peasant	25	12.4
House wife	61	30.3
Marital status		
Single	23	11.4
Married	173	86.1
Separated	1	0.5
Widow/er	4	2.0
Religion affiliation		
Catholics	88	43.8
Protestants	69	34.3
Muslims	20	10.0
Others	24	11.9
Area of Residence		
Rural	125	62.2
Urban	76	37.8

From the table above,

On age of the respondents, most of the study participants i.e., 93(46.3%) were in

the age group of 20-33years; 55(27.4%) were in the age group of 34-41 years;

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48(23.9%) were less than 25years; and only 5(2.5%) were in the age group of 42-49. On the level of the education, most of the respondents i.e., 80(39.8%) were of primary education level; 55(27.4%) were of post-secondary education level; 50(24.9%) had secondary education level and finally, 16(8.0%) had no formal education. On the occupation of the study participants, most of the respondents i.e., 74(36.8%) were self-employed; 41(20.4%) were formally employed; 25(12.4%) were peasants; and finally, 61(30.3%) were house-wives. On the marital status of the study participants, most of the

respondents i.e., 173(86.1%) were married; 23(11.4%) were single; 4(2.0%) were widowed and only 1(0.5%) was separated. On the religious affiliation of the respondents, majority of the respondents i.e., 88(43.8%) were Catholics; 69(34.3%) were protestants; 20(10.0%) were Muslims and 24(11.9%) were falling in other religions such as seventh day Adventists and born-again. Finally, on the area of residence, most of the respondents i.e., 125(62.2%) were living in rural areas and 76(37.8%) were living in urban areas.

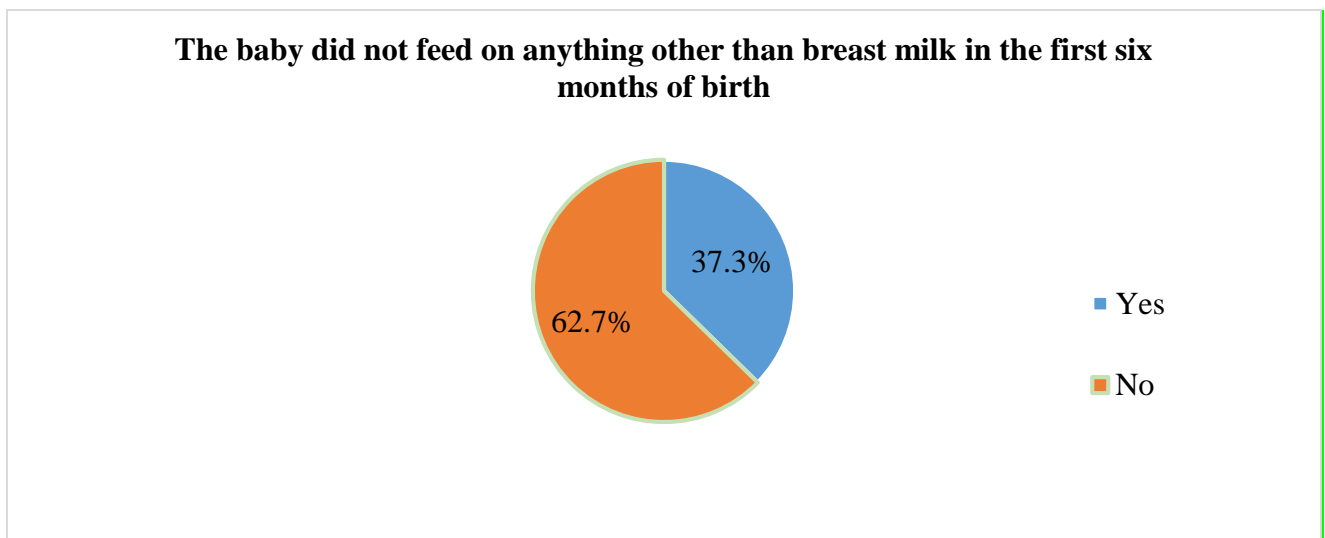


Figure 1: prevalence of exclusive breastfeeding among lactating mothers attending immunization clinic in JRRH, Jinja district

From the figure above, most of the lactating mothers attending immunization clinic in JRRH, Jinja district i.e., 62.7% fed the baby in the first six months after birth; and only 37.3% did not feed the babies on anything other than breast milk

in the first six months of birth. Therefore, the prevalence of exclusive breastfeeding among lactating mothers attending immunization clinic in JRRH, Jinja district was 37.3%.

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Table 2: socio-demographic factors influencing exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	24.500 ^a	0	0	.
Age	33.112	12.312	1	0.030
Level of education	28.542	8.490	1	0.047
Occupation	34.673	6.585	1	0.052
Marital status	30.523	1.135	1	0.769
Religion	36.239	1.096	1	0.295
Area of residence	34.231	7.779	3	0.027

Statistically significant at 95% Confidence Interval

Regarding the age, significance level ($p=0.030<0.05$) meant that age of the mother had a significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. Regarding the level of education, significance level ($p=0.047<0.05$) meant that level of education had a significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. For the occupation, significance level ($p=0.052>0.05$) meant that the mother's occupation significantly had a significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. Significance level

($p=0.769>0.05$) implied that the marital status did not significantly have a significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. Significance level ($p=0.295>0.05$) showed that the religion did not significantly have a significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. Finally, regarding the area of residence, significance level ($p=0.027<0.05$) showed that mother's the area of residence had a significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district.

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Table 3: physiological factors influencing exclusive breastfeeding among lactating mothers attending immunization clinic in JRRH, Jinja district

Variable	Frequency	Percentage (%)	Chi-square (X ²)	DF	p value
Mode of delivery			0.975	1	p=0.100
Vaginal Birth	164	81.6			
Cesarean Section	37	18.4			
HIV status			5.277	1	p=0.030
Negative	193	96.0			
Positive	8	4.0			
Experience breastfeeding problems			4.983	2	p=0.041
Yes	77	38.3			
No	124	61.7			
Parity			7.730	1	p=0.021
Primipara (mother having the first child)	48	23.9			
Multipara (mother having more than one child)	153	76.1			
Attended ANC			18.938	3	p=0.000
Yes	201	100.0			
No	0	0.0			
Place of delivery			0.053	3	p=0.451
Health facility	175	87.1			
Home	21	10.4			
Traditional Birth Attendant	5	2.5			
Post-natal Attendance			16.006	4	p=0.001
Yes	201	100.0			
No	0	0.0			

Statistically significant at 95% Confidence Interval

From the findings presented in the table above, most of lactating mothers who were attending immunization clinic in JRRH, Jinja district i.e. 164(81.6%) delivered by vaginal birth; and only 37(18.4%) delivered by caesarean section. The $p=0.100 > 0.05$ showed that mod of delivery had no significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district.

On the HIV status, most of lactating mothers who were attending immunization clinic in JRRH, Jinja district i.e. 193(96.0%) were HIV-negative; and only 8(4.0%) were HIV-positive. The

$p=0.030 < 0.05$ showed that HIV status had a significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district.

Regarding whether lactating mothers experienced breastfeeding problems, most of lactating mothers who were attending immunization clinic in JRRH, Jinja district i.e. 124(61.7%) were not experiencing any breastfeeding problems; while 77(38.3%) were not experiencing any breastfeeding problem. The $p=0.041 < 0.05$ showed that experiencing any breastfeeding problem significantly influenced on exclusive breastfeeding

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among lactating mothers at attending immunization clinic in JRRH, Jinja district.

On parity, most of lactating mothers who were attending immunization clinic in JRRH, Jinja district i.e. 153(76.1%) were multipara (mother having more than one child); while 48(23.9%) were Primipara (mother having the first child). The $p=0.021<0.05$ showed that parity of the mothers significantly influenced exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district.

On ANC attendance, all lactating mothers who were attending immunization clinic in JRRH, Jinja district i.e. 201(100%) had attended ANC before birth. The $p=0.000<0.05$ showed that ANC attendance significantly influenced exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district.

The first objective of the study was to establish the prevalence of exclusive breastfeeding among lactating mothers attending immunization clinic in JRRH, Jinja district; the study established that the prevalence of exclusive breastfeeding among lactating mothers attending immunization clinic in JRRH, Jinja district was 37.3%. In this context therefore, the rate of exclusive breast feeding was still very low. The study findings were consistent with the findings of [11] that showed that there were low rates of exclusive breastfeeding in sub-Saharan Africa, the available data indicate that these rates improved between 2010 and 2014 -going from 25% to 42%. The findings of the study were also not far different from the findings of [12] in Uganda that revealed that mothers exclusively breastfeed approximately six in ten children younger than age 6 months (38%). Among sub-groups the percentage of young children who are exclusively breastfed decreases sharply from 82% of infants age 0-1 month to 69% of those age 2-3 months and, further, to 38% among infants 4-5 months.

On the second objective which was to determine the socio- demographic factors

On place of delivery, most of lactating mothers who were attending immunization clinic in JRRH, Jinja district i.e. 175(87.1%) delivered from health facilities; 21(10.4%) delivered from home and only 5(2.5%) delivered from traditional birth attendants. The $p=0.451>0.05$ showed that place of delivery did not significantly influenced exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district.

Finally on PNC attendance, all lactating mothers who were attending immunization clinic in JRRH, Jinja district i.e. 201(100%) were attending post natal care. The $p=0.000<0.05$ showed that ANC attendance significantly influenced exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district.

DISCUSSION

influencing exclusive breastfeeding among lactating mothers attending immunization clinic in JRRH, Jinja district; the study revealed that age of the mother had a significant ($p=0.030<0.05$) influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. The study also found out that the level of education had a significant ($p=0.047<0.05$) significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. Also, mother's occupation significantly ($p=0.052>0.05$) influenced exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. Finally, mother's the area of residence had a significant ($p=0.027<0.05$) influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. The study findings were in agreement with [13] who revealed that exclusive breastfeeding was associated significantly with, current marital status, and economical status; they also added that maternal characteristics that have shown significant associations with

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exclusive breastfeeding include maternal age, higher parity and experience of breastfeeding problems. [14] added that maternal level of education and employment status were positively associated with initiation, exclusiveness and duration of breastfeeding.

On the third objective which was to the physiological factors influencing exclusive breastfeeding among lactating mothers attending immunization clinic in JRRH, Jinja district; the study found out that factors such HIV status ($p=0.030<0.05$) had a significant influence on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district; in this context, HIV-positive mothers have fear of breast feeding their children in fear of transmitting the virus. Also, experiencing any breastfeeding problem significantly ($p=0.041<0.05$) influenced on exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district; the breastfeeding problems such as breast pain and insufficient breast milk hinder breast feeding and such mothers end up not practicing exclusive breast

feeding. Parity of the mothers significantly influenced exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. ANC and PNC attendance also significantly ($0.000<0.05$) influenced exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. During ANC and PNC attendances, mothers are given education on parenting and nutrition education which includes breastfeeding practices; hence influencing exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district. The findings were in line with Ayisi (2013) who revealed that the attendance of Ante Natal Clinic (ANC) during the previous pregnancy was found to influence exclusive breastfeeding practice. [15] added that Gestation at the first ANC visit, number of times counseled on infant feeding, birth order of index child, birth spacing with the previous child and knowledge of mother on the age at introduction of complementary feeding did not influence exclusive breastfeeding.

CONCLUSION

The prevalence of exclusive breastfeeding among lactating mothers attending immunization clinic in JRRH, Jinja district was 37.3%. The socio- demographic factors that influenced exclusive breastfeeding among lactating mothers attending immunization clinic in JRRH, Jinja district were age of the mother, the level of education, mother's occupation

and mother's the area of residence. The physiological factors such HIV status, experiencing any breastfeeding problem, parity ANC and PNC attendance influenced exclusive breastfeeding among lactating mothers at attending immunization clinic in JRRH, Jinja district.

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