

Knowledge and practice of exclusive breastfeeding among women with children aged between 9 and 12 months in Al-Sabah Children Hospital, Juba, South Sudan

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INTRODUCTION: Breastfeeding is an important tool for preventing childhood illnesses, and obesity, and hypertension later on in life, and it reduces the cost of food for the family and the country. Appropriate practices that support exclusive breastfeeding in the first six months reduce childhood morbidity and mortality.

METHODOLOGY: 384 mothers with children aged 9 to 12 months attending the immunization and paediatric outpatient clinics were interviewed. Statistical Package for Social Sciences (SPSS) was used for data handling. Descriptive statistics and univariate logistic regression were used to analyse the data.

RESULTS: The majority of mothers were aged between 21 – 25 years (43.5%), had 2 - 4 children (55.5%) and primary education (48.2%). Most mothers had started breastfeeding within the first hour of delivery (76.8%), and knew that breastfeeding was nutritious to the baby. Parity and mother's level of education were significant factors associated with exclusive breastfeeding ($p < 0.05$). There was no statistically significant association between occupation, age of the mother, mode of delivery and exclusive breastfeeding ($p > 0.05$). There was no statistical difference in rate of exclusive breastfeeding in mothers attending the OPD and the immunization clinic (p value=0.09).

CONCLUSION: Most mothers knew the benefits and definitions of exclusive breastfeeding. The early measures supporting breastfeeding are well practiced. Parity and mothers' education significantly affected exclusive breastfeeding.

Keys words: Exclusive breast feeding, child, nutrition

Introduction

Breast milk is the optimal food for infants. The World Health Organization (WHO) recommends that infants are breastfed exclusively (EBF) for their first six months, and then start complementary feeding while continuing to breastfeed for a minimum of two years [1].

The 2010 Sudan Household Health Survey [2] reported that only 45% of babies are exclusively breastfed for their first 6 months probably because of inadequate information on the importance of early initiation and giving only breast milk, inadequate family and community support, lack of counseling and mothers' heavy workloads keeping them away from their children [3].

The primary objective of this study was to assess the practice of EBF during their babies first 6 months among mothers with infants now aged between 9 and 12 months attending the immunization and the outpatient clinics at

Al-Sabah Hospital, Juba. Secondary objectives were to:

- Assess mothers' knowledge of EBF.
- Identify factors affecting the success of EBF.

Methodology

This was a cross-sectional descriptive hospital-based study conducted at Al-Sabah Hospital from September 1st to October 20th 2014. The study population was women with children aged between 9 and 12 months attending the immunization and the paediatrics outpatient clinics. Consecutive sampling was done on mother/child pairs until the sample size of 384 was reached.

A questionnaire was used to obtain information on socio-demographic status, birth related events, knowledge, and practices related to breastfeeding during the first six months, sources of breastfeeding education and family support.

A Statistical Package for Social Sciences (SPSS) was

used for data entry and analysis. Descriptive analysis is presented in terms of mean, median. Frequencies are reported as numbers and percentages. Five point Likert scale was applied to questions on knowledge, ranging from strongly agreed (1) to strongly disagreed (5). The mean and SD was calculated for each answer. Univariate analysis was done.

Ethical approval was given by the Kenyatta National Hospital, University of Nairobi Ethics and Research Committee and the Directorate of Research and Planning, Ministry of Health, South Sudan. Consent was obtained from all mothers whose confidentiality was ensured.

Results

The median age of the 384 mothers was 23 years, IQR=20 - 26. 54.2 % of their children were females.

The rate of EBF was 63.2%. The majority (70%) of the mothers had skin-to-skin contact with their babies immediately after birth, 76.8% started breastfeeding in the first hour, and 98.1%. 'roomed in' with their babies. 40.6% of mothers gave prelacteal feeds. Only few (36) were Exclusive breast feeding, child, nutrition not breastfeeding during the period of study, of which 75% stated that child refused by himself. Only 4.4% of the mothers stopped breastfeeding due to maternal breast problems.

The mothers' knowledge about breastfeeding was assessed using the Likert scale (where 1 = strongly agree and 5 = strongly disagree) and given as means and SDs.

Most mothers agreed that:

- breastfeeding is nutritious to the baby (mean: 1.15, SD=0.53);
- increases mother-baby bonding (mean 1.18, SD 0.46);
- protects babies from infection (mean 1.25 SD 0.66);
- HIV can be transmitted via breast milk (mean: 1.57, SD: 0.66).
- babies should be breastfed on demand day and night (mean: 1.04, SD: 0.22), from both breasts at each feed (mean: 1.06, SD: 0.27) and with good attachment to the breast (mean: 1.28, SD: 0.4).
- that a cup and spoon (mean: 1.74, SD: 0.77) and not a bottle should be used for feeding expressed milk (or formula) although use of expressed breast milk was low (mean 3.15, SD: 1.06).
- bottle feeding can cause diarrhoea (mean: 1.72, SD: 0.68).
- the definition of EBF was 'giving only breast milk (and modern medicines only if prescribed)' (mean: 1.39, SD: 0.54).

Table 1. Characteristics of the mothers

Maternal data	n	Percent (%)
Mother's age (n=340*)		
16 – 19 years	37	10.8
20 – 29 years	263	77.3
30 – 39 years	40	11.8
Mode of delivery		
Vaginal (SVD)	370	96.4
Caesarean section (CS)	14	3.7
Parity (n=353**)		
1	137	38.8
2-4	196	55.5
Above 4	20	5.7
Level of Education		
None	53	13.8
Primary	185	48.2
Secondary	112	29.2
Tertiary	34	8.9
Occupation		
Housewife	324	84.4
Salaried employee	34	8.9
Self-employed	24	6.3
Student	2	0.5
Marital status		
Single	112	29.2
Married	261	67.9
Divorced	10	2.6
Widowed	1	0.3
Religion		
Christian	369	96.1
Muslim	15	3.9
ANC visit		
Yes	370	96.4
No	14	3.7
Number of ANC visits (n=348)		
1	11	3.1
2	30	8.6
3	55	15.8
> 4	252	72.4
Place of delivery		
Hospital	225	58.6
Health Centre	81	21.1
Home	78	20.3

* excluding 40 missing data

** excludes 31 missing data

*** excludes 36 missing data

Table 2. Univariate analysis of factors affecting the success of exclusive breastfeeding

Variable	Category	Variable Category				Chi square / *F	P value
		Yes		No			
		N	%	N	%		
Age	16-19 years	26	70.3%	11	29.7%	3.990	0.136
	20-29 years	219	83.3%	44	16.7%		
	30-39 years	34	85.0%	6	15.0%		
	>=40 years	0	0.0%	0	0.0%		
Level of Education	None	46	93.9%	3	6.1%	14.358	0.002
	Primary	142	82.1%	31	17.9%		
	Secondary	79	73.8%	28	26.2%		
	University	30	96.8%	1	3.2%		
	Others	0	0.0%	0	0.0%		
Occupation	Housewife	250	81.7%	56	18.3%	0.917	0.632
	Salaried Employee	28	87.5%	4	12.5%		
	Self Employed	19	86.4%	3	13.6%		
	Student	0	0.0%	0	0.0%		
	Others	0	0.0%	0	0.0%		
Marital Status	Single	95	88.0%	13	12.0%	3.408	0.182
	Married	202	80.2%	50	19.8%		
	Divorced	0	0.0%	0	0.0%		
	Separated	0	0.0%	0	0.0%		
	Widowed	1	100.0%	0	0.0%		
Religion	Christian	285	82.1%	62	17.9%	1.074	0.300
	Muslim	13	92.9%	1	7.1%		
	Others	0	0.0%	0	0.0%		
ANC Visit	Yes	289	83.0%	59	17.0%	1.155	0.282
	No	7	70.0%	3	30.0%		
Number of ANC visits	1	11	100.0%	0	0.0%	22.254	<0.0001
	2	30	100.0%	0	0.0%		
	3	51	92.7%	4	7.3%		
	>4	122	72.6%	46	27.4%		
Mode of Delivery	SVD	281	82.2%	61	17.8%	1.736	0.784
	CS	12	92.3%	1	7.7%		
Place of Delivery	Hospital	176	82.2%	38	17.8%	0.249	0.883
	Health Centre	56	81.2%	13	18.8%		
	Home	64	84.2%	12	15.8%		
	Others	0	0.0%	0	0.0%		
Parity	1	127	96.2%	5	3.8%	76.250	<0.0001
	2	65	69.1%	29	30.9%		
	3	47	97.9%	1	2.1%		
	4	16	42.1%	22	57.9%		
	>5	13	72.2%	5	27.8%		
Mean mothers' age		22.77		24.10		2.509	0.114
Parity		2.03		2.95		23.828	<0.0001

Table 3. Logistic regression of factors affecting the success of exclusive breastfeeding

	Coefficient	Standard error of coefficient	P value	OR	95% C.I. for OR	
					Lower	Upper
Mother's age	.057	.032	.072	.944	.887	1.005
Parity	.559	.121	.000	1.749	1.380	2.217
Education level	.483	.205	.018	1.621	1.085	2.423

Adjusting for mother's age, women with fewer children and those with lower level of education were more likely to exclusively breastfeed.

Most mothers knew that and that the recommended duration for EBF was six months (84.9%).

The univariate and multivariate analysis of the factors affecting the success of breastfeeding among mothers are shown in Tables 2 and 3.

Adjusting for mother's age, women with fewer children and those with lower level of education were more likely to exclusively breastfeed.

Discussion

The study showed that more mothers tend to breastfeed their infants for the first six months than previously reported [2]. The factor that support the success of EBF in Tanzania and Kenya is starting within the first one or two hours after delivery [(4 5)]. We found that of those who did not start breastfeeding in the first hour had assumed that there was no milk and 7% reported that colostrum was harmful to the baby

More than 70% of the mothers had skin-to-skin contact with their babies immediately after birth, much higher than the 39.7% in the study in California [6]. Other good practices were not offering prelacteal feeds and rooming-in with babies, which were similar or better than in other studies [4,7,8]. Most of the children got sick at some point during their first 6 months but only 20 mothers stopped breastfeeding during the period of sickness. The fear that mothers' breast milk can cause diarrhoea or aggravate a child's illness contributed to this.

Our mothers had not expressed breast milk. This practice is not accepted by most of the mothers, partly because they did not know about it or thought the milk would be bad if kept for long. Most mothers started complementary feeding after six months of age (67.7%).

Forty one mothers had stopped breastfeeding at the time of the study. Child's refusal to breastfeed or mother becoming pregnant were the frequent reasons given – also a common finding in Tanzania [9, 4].

Mothers tended to breastfeed longer where there was support from husbands or provision of work-based designated areas for breastfeeding.

Most mothers knew the advantages of breastfeeding, that HIV could be transmitted in milk, the definition of EBF and proper techniques of breastfeeding - all indications of good ANC practices and family support.

Some studies have shown that women who had a vaginal delivery were more likely to breastfeed exclusively [9]. However, no association was found in this study, as similarly reported in Kenya [10]. Widespread use of spinal anaesthesia for Caesarean Section (CS) deliveries could play a role in allowing mothers to initiate breastfeeding within one hour of birth; also the myth that CS delivery affects mothers' belly shape makes them work hard on EBF so as ensure quick uterine involution and later on a small belly.

This study found that parity, mother's level of education, age and status were associated with EBF. A longer duration of EBF was associated with first time parenthood [10] and level of education. The lower the level of education the more likely the mother was to exclusively breastfeed; however, the majority of university-educated mothers exclusively breastfed. Other studies contradict this assertion [11].

There were no significant association with marital status or rate of EBF. Infants exclusively breastfed should be protected against infection, so we should expect less sickness compared to non-exclusively breastfed babies. But in this study no difference was found.

Conclusion

Knowledge on breastfeeding was generally good, although use of expressed breast milk was low. Early practices that support exclusive breastfeeding were done by the majority of the mothers. Parity and maternal level of education affect the success of exclusive breastfeeding.

Recommendations

1. Carry out more training and awareness campaigns to maintain the high rate of EBF.
2. Conduct house-to-house surveys to establish more in-depth understanding on the practices and knowledge of EBF.
3. Advocate the use of expressed breast milk.

Study limitations

1. Recall bias: some mothers could not recall all the details of their practices in the first six months.
2. The clinical sample of women represented a group which might be more compliant and better informed about infant feeding than a random population sample of women.
3. Being more informed, mothers who come to the hospital might give the desired answers even if they do not practice.
4. The population studied might not represent the whole country, as representatives of some of the states were too small

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