Original Research Article

Early initiation of breastfeeding and Prelacteal Feeding Among Women Attending Postnatal Clinic in the University of Port Harcourt Teaching Hospital.

ABSTRACT

One of the World Health Organization ~~(WHO)~~ and the United Nations Children's Fund ~~(UNICEF)~~ recommendations for improved feeding of infants and young children is breastfeeding. This study aims to investigate the knowledge of breastfeeding, the practice of early initiation of breastfeeding and the practice of prelacteal feeding in Port Harcourt, Rivers state. This cross-sectional study was conducted among 249 women attending the six-week postnatal clinic in Port Harcourt, Rivers State South-South Nigeria. An interviewer-administered questionnaire was used to collect the data. The Statistical Product and Services Solutions version 25.0 was used for data analysis. The results of the study showed that 81.5% of respondents had a good knowledge of breastfeeding. However, only 23.7% of respondents practised early initiation of breastfeeding. The prevalence of prelacteal feeding in this study was 30.9%. The practice of prelacteal feeding was significantly associated with early initiation of breastfeeding (p=0.005; X^2=10.779), mode of delivery (p=0.008; X^2=9.691), and baby's birth weight (p=0.022; X^2=7.655). In conclusion, to promote exclusive breastfeeding for six months and continued breastfeeding for two years and beyond, interventions should focus on early initiation and breastfeeding.

Keywords*: Breastfeeding, Early initiation of breastfeeding; Prelacteal feeding, University of Port Harcourt Teaching Hospital.*

INTRODUCTION

Breast milk is the most reliable source of optimal nutrition in infants [1]. Breast milk is ~~cheap~~freely available, easily digestible, and contains all the nutritional requirements for the baby [2]. The antibodies in breast milk provide the necessary immune support against both acute and long-term diseases [1,3]. Studies have shown that breastfeeding can prevent malnutrition, diarrhoea and pneumonia in infants, thereby decreasing the risk of morbidity and mortality from these diseases [4,5]. Breastfeeding helps the mother bond with her baby, promotes contraction of the uterus after birth and acts as a form of contraception [6]. Breastfeeding is preventive for ovarian [7] and breast cancer [8].

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) endorsed the global strategy for infant and young child feeding [9]. A key component of this strategy is exclusive breastfeeding followed by timely, adequate, safe, and appropriate complementary feeding [1]. The global strategy also recommends continued breastfeeding for up to two years and beyond [9]. To encourage the practice of exclusive breastfeeding for six months and continued breastfeeding for two years and beyond, the WHO has described the first hours and days of a newborn infant's life as a critical window for providing mothers with the support they need to establish and sustain breastfeeding. Immediate and uninterrupted skin-to-skin contact, initiation of breastfeeding within the first hour of life, giving only breast milk to the infant, breastfeeding as often and as long as the baby wants, avoiding pre-lacteal feeding, and avoiding the use of teats and pacifiers will encourage exclusive breastfeeding and continued breastfeeding for two years and beyond [1].

Although the importance of establishing and sustaining breastfeeding during the first hours and days of an infant's life is known, the utilization of this critical window has been poor. According to WHO, 72% of women in a community should practice early initiation of breastfeeding [10]. However, global data shows that only 44% of neonates receive breast milk within one hour of birth [1,11]. Demographic Health Survey in West Africa shows that the prevalence of early initiation of breastfeeding is 43% [12]. In Edo state, southern Nigeria only 44.5% of women initiate breastfeeding within one hour of birth [13]. The delay in initiation of breastfeeding has been attributed to poor knowledge of breastfeeding, level of education, lower socioeconomic

Comment [UB1]: Please recheck the data WHO recommends that every newborn baby to feed breast milk within 1 h

status, not attending antenatal care, delivery outside a health facility, and low birth weight baby [13,14]. Caregivers may administer an artificial feed before establishing breastfeeding especially if the mother had a difficult vaginal delivery, delivered by caesarean section, or is not able to produce breast milk. Another reason for the administration of prelacteal feeds is the misconception that colostrum, which is the first milk produced by the mother, is not enough to sustain the baby. Although the quantity of colostrum may be less than 10ml in the first few feeds, this amount is adequate for the baby who is still learning how to suck, swallow and breathe [15]. This practice of prelacteal feed may replace colostrum thereby increasing intolerance to allergy. Prelacteal feed also interferes with suckling and this can lead to satisfying the baby's hunger so they suck less, leading to less breast stimulation and ~~it becomes more~~making it difficult ~~in~~ to establish~~ing~~ breastfeeding [1]. The practice of prelacteal feeding is common in Africa. For example, a study in Zaria, Northern Nigeria reported that 82% of women practiced prelacteal feeding [16]. The practice of early initiation of breastfeeding and prelacteal feeding is influenced by the community, ~~Knowledge~~ knowledge of breastfeeding, place of delivery, and individual factors [12,14]. In ~~other~~ order to carry out future interventions to improve breastfeeding practice in our environment, there is a need to understand the practice of breastfeeding in our environment. Therefore, this study aims to investigate the ~~Knowledge~~ knowledge of breastfeeding, the practice of early initiation of breastfeeding, and the practice of prelacteal feeding in Port Harcourt, Rivers State.

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METHODOLOGY

This study was a hospital-based cross-sectional study among women who presented for a six-week postnatal clinic visit at the University of Port Harcourt Teaching Hospital, Rivers State South-South Nigeria. Only women who delivered at the facility were recruited for the study. The sample size was calculated using the formula for cross-sectional studies [17] $n = z^2pq/d^2$. Where "n" was the sample size, "z" was the level of significance (at 95%=1.96), "d" was the margin of error (0.05), "p" was the percentage of women who knew about breastfeeding (0.8 as reported in the previous study in Port Harcourt),[18] and q = 1- p = 0.2. A minimum sample size of 244 was used. The sampling method was systematic. An interviewer-administered questionnaire was used

to collect the data. Data analysis was done using the Statistical Product and Services Solutions version 25.0.

RESULTS

The study was conducted among 249 women who visited the health facilities for postnatal care services. Most of the women (77.9%) were between 25 and 35 years of age. The mean (Standard Deviation) age was

31.58 (3.76) years ~~and the standard deviation was 3.76 years~~. ~~Seventy nine (31.7%) of the women had a primary level of education, 54 (21.7%) had a secondary level of education while~~Most women (116, ~~(~~46.6%) had a tertiary level of education. (Table 1)

Table 1: Socio-demographic characteristics

	Frequency (n=249)	**Percent**
Age (years)		
<25	13	5.2
25-35	194	77.9
>35	42	16.9
Mean (SD)	31.58 (3.76)	
Level of education		

Primary	79	31.7
Secondary	54	21.7
Tertiary	116	46.6
Parity		
No child	2	0.8
1 child	36	14.5
2 to 4 children	211	84.7

SD=Standard deviation

About three-quarters 187 (75.1%) of the women had ~~SVD~~a vaginal delivery. Among the 63 w~~W~~omen who were admitted for more than 24 hours after their delivery, ~~was 63 (25.3%). m~~M~~ost ~~of the women (87.3%) who were admitted for more than 24 hours~~ remained ~~on admission~~admitted for 4 days or more. The mean (SD) duration of admission for women who were admitted for more than 24 hours after their delivery was 4.19~~±~~(0.93) days. The baby was admitted in 19 (7.6%) ~~of the~~ cases, ~~most~~ among which 13 (68.4%) ~~of whom~~ were admitted for 6 days. The mean (SD) duration of admission of the admitted bab~~y after delivery~~ies was 6.47~~±~~(0.96) days. See Table 2.

Table 2: Outcome of delivery

Comment [UB3]: Birth weight missing

Mode of delivery	**Frequency (n=249)**	**Percent**
SVD	187	75.1
Elective C/S	36	14.5
Emergency C/S	26	10.4
Sex of baby		

Male	131	52.6
Female	118	47.4
Mother admitted more than 24 hours		
No	186	74.7
Yes	63	25.3
Duration of admission (n=63)		
3 days or less	8	12.7
4 days or more	55	87.3
Mean (SD)	4.19 (0.93)	
Baby admitted		
No	230	92.4
Yes	19	7.6
Duration of admission of baby (n=19)		
5 days	1	5.3
6 days	13	68.4
8 days	5	26.3
Mean (SD)	6.47 (0.96)	

Most (232, (93.2%) of the mothers agreed that breast milk is beneficial to the mother and the baby. More than half of the respondents (167, (67.1%) agreed that breastfeeding should be started within one hour of birth. Most respondents (121, (48.6%) were indifferent about giving an artificial feed to the baby before establishing breastfeeding, most (165, (66.3%) agreed that the baby should receive only breast milk for the first six months of life. Most (104, (41.8%) agreed that breastfeeding should be continued for up to two years and beyond. (Table 3).

Table 3: Knowledge exclusive breastfeeding

	Frequency (n=249)	**Percent**
Breast milk is beneficial to the mother and the baby		

Disagree	0	0.0
Neutral	17	6.8
Agree	232	93.2
Breastfeeding should be initiated within one hour of birth		
Disagree	0	0.0
Neutral	82	32.9
Agree	167	67.1
No artificial feed should be given to the baby before establishing breastfeeding		
Disagree	55	22.1
Neutral	121	48.6
Agree	73	29.3
The baby should receive only breast milk for the first six months of life		
Disagree	44	17.7
Neutral	40	16.1
Agree	165	66.3
Breastfeeding should be continued for up to two years and beyond.		
Disagree	86	34.5
Neutral	59	23.7
Agree	104	41.8

Early initiation of breastfeeding was practiced by ~~Fifty-nine~~59 (23.7%) mothers ~~practised early initiation of breastfeeding~~. The reason why most 114 (60.0%) mothers did not practice early initiation of breastfeeding was that they wanted to rest after delivery. ~~Twenty-seven women (14.2%) did not lactate, 19 (10.0%) had surgery, 16 (8.4%) their baby was admitted and the remaining 14 (7.4%) wanted to have their bath.~~ The baby was given colostrum in 168 (98.2%) cases. One-third 77 (30.9%) of the mothers gave some artificial feed before establishing

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breastfeeding. More than half (41, (53.2%) did so because they felt breast milk was not enough. It was also shown that more than three-quarters of 190 (76.3%) gave colostrum. See table 4.

The practice of prelacteal feeding was also found to be significantly related to the mode of delivery, birth weight, and practice of early initiation of breastfeeding. The practice of prelacteal feeding was significantly lower among mothers who delivered through elective C/S (88.9%) than among those who delivered through SVD (67.4%) than among those who delivered through emergency C/S (53.8%); p=0.008; X^2=9.691. The practice of prelacteal feeding was also found to be significantly lower among mothers who gave birth to a child with normal weight (72.3%) than among those who gave birth to a child with overweight (50.0%), than among those who gave birth to a child with low birth weight (20.0%); p=0.005; X^2=10.779. It was also shown that 100% of children who were breastfed within 1 hour of birth did not practice prelacteal feeding, compared to 67.0% of those who breastfed between 1 hour and 24 hours and 66.7% of those who breastfed after 24 hours, and this difference was also shown to be statistically significant. See Table 5.

Table 4*:* Breastfeeding practice

	Frequency (n=249)	**Percent**
The time interval between birth and the first session of breastfeeding		
≤1hr	59	23.7
>1hr to 24hrs	178	71.5

>24hrs	12	4.8
Reason mother did not feed within the first hour of birth (n=190)		
Resting after delivery	114	60.0
No breast milk	27	14.2
Mother had surgery	19	10.0
Baby was admitted	16	8.4
Wanted to have my bath	14	7.4
Baby was given prelacteal feed		
Yes	77	30.9
No	172	69.1
Reason baby was given prelacteal feed (n=77)		
No Breast milk	41	53.2
Mother had surgery	16	20.8
Baby was on admission	12	15.6
No reason	8	10.4
Baby was given colostrum		
No	59	23.7
Yes	190	76.3

Table 5 : Practiced prelacteal feeding

	Practiced prelacteal feeding				**X^2**	**p-value**
	Yes		**No**			
	F	**%**	**F**	**%**		
Mode of delivery						
SVD	61	32.6%	126	67.4%	9.691	**0.008***
Elective C/S	4	11.1%	32	88.9%		
Emergency C/S	12	46.2%	14	53.8%		

Sex of baby						
Male	40	30.5%	91	69.5%	0.020	0.889
Female	37	31.4%	81	68.6%		
Birth weight (Kg)						
<2.5	4	80.0%	1	20.0%	10.779	**0.005***
2.5 to 3.9	61	27.7%	159	72.3%		
≥4	12	50.0%	12	50.0%		
The mother admitted more than 24 hours						
No	61	32.8%	125	67.2%	1.206	0.272
Yes	16	25.4%	47	74.6%		
Baby admitted						
No	73	31.7%	157	68.3%	0.938	0.333
Yes	4	21.1%	15	78.9%		
Overall knowledge about breastfeeding						
Poor	17	37.0%	29	63.0%	0.961	0.327
Good	60	29.6%	143	70.4%		
The time interval between birth and the first session of breastfeeding						
≤1hr	0	0.0%	16	100.0%	7.655	**0.022***
>1hr to 24hrs	73	33.0%	148	67.0%		
>24hrs	4	33.3%	8	66.7%		

Comment [UB5]: How was it calculated?

Comment [UB6]: Data mismatch with Table 4

DISCUSSION

The study shows most postnatal women at the University of Port Harcourt Teaching in Rivers State agree that breastfeeding should be initiated within one hour of birth but still, almost half of them don't mind if their child receives any artificial feed before establishing breastfeeding. This is evident in this study where only 59 women (23.7%) practised early initiation of breastfeeding.

This is very low compared to reports from other parts of Nigeria. In Edo State, Southern Nigeria, 44% of women practiced early initiation of breastfeeding [13]. A study in Gombe state reported that 37% practiced early initiation of breastfeeding [19]. A higher prevalence of early initiation of breastfeeding has been reported in other African countries such as Ghana (72%) [20] and Namibia (74.9%) [21]. A 16-year survey in Ethiopia showed that the prevalence of early initiation of breastfeeding increased from 48.85 to 75.7% [22]. This increase was attributed to the National infant feeding strategy which promoted the early initiation of breastfeeding.

~~Most of the w~~The main reasons why women did not practice early initiation of breastfeeding ~~because~~ were: they wanted to rest after delivery, no breast milk, surgery, the baby was admitted ~~and~~ or the woman wanted to have her ~~birth~~bath. These were similar reasons ~~why~~ given by women ~~did not practice early initiation of breastfeeding~~ in studies at Ghana and Namibia [19,20]. Delivery by caesarean section was a major reason why women in this study did not practice early initiation of breastfeeding. A study in Ethiopia also reported that caesarean section was a reason why some women did not practice early initiation of breastfeeding [22]. Women with a higher level of education were more likely to practice early initiation of breastfeeding. This is similar to the study in Ethiopia and Namibia where education was associated with early initiation of breastfeeding [21,22].

Comment [UB7]: But in caesarean deliveries pre lacteal feeding is lower according to table 5

Comment [UB8]: Not demonstrated in results

In this study, 30.9% of women gave an artificial feed before the establishment of breastfeeding. This prevalence is slightly higher than the prevalence of 26.7% gotten in Ile-Ife, South-West Nigeria which is classified as a semi Urban settlement [23] but much lower than the prevalence of 85% reported in a study in a rural community in Zaria Northern Nigeria [16]. A common reason why most women and caregivers give artificial feeds before breast milk is because the mother has not produced breast milk [20]. From this study, a delay of more than one hour increases the likelihood of giving an artificial feed. This is similar to a study in Ife where initiation of breastfeeding after one hour of birth was significantly associated with prelacteal feeds [23].

Factors related to prelacteal feeding in this study are the mode of delivery. Women who had an elective abdominal delivery are less likely to practice prelacteal. This is similar to a report in a rural community in Zaria with a high prevalence of prelacteal feeding, women who had

abdominal delivery were less likely to practice prelacteal feeding [16]. This may be because they had support from health workers to establish early breastfeeding. However, some studies have shown that abdominal delivery and instrumental vaginal delivery are associated with the use of prelacteal feed [23,24].

Birth weight was another factor that was significantly associated with prelacteal feeding. In this study, women who had babies with normal birth weight are unlikely to practice prelacteal feeding. This is similar to a report in Sagnarigu, Northern Ghana, where women who had normal weight babies were found to have a lesser likelihood of practicing prelacteal feeding [20]. Fetal macrosomia may be complicated by hypoglycaemia if breastfeeding is not initiated immediately and may be a reason for administering an artificial feed before breastfeeding. Low birth weight babies may be admitted into the neonatal care unit and caregivers may give other feeds if the mother does not provide breast milk.

CONCLUSION

This study showed that postnatal women in Rivers state have good knowledge of breastfeeding. However, the practice of early initiation of breastfeeding is poor. Most of the women did not initiation of breastfeeding early because they wanted to rest after delivery or they did not lactate. The practice of prelacteal feeding is high in our environment. Determinates of prelacteal feeding in this study were delay in initiating breastfeeding, mode of delivery, and birth weight. Interventions to promote breastfeeding should be focused on initiation and establishing breastfeeding in the first hours and days after birth by encouraging the practice of early initiation of breastfeeding and discouraging prelacteal feeding.

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