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Research Article

Breastfeeding Knowledge and Factors Associated with Breastfeeding Initiation among Post-partum Mothers in Selected Areas in Ibadan, Nigeria

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ABSTRACT

Breastfeeding knowledge of the mothers and support given to them by health care providers after delivery can influence mothers' attitude to breastfeeding and their willingness to initiate breastfeeding early. The study assessed breastfeeding knowledge and factors associated with breastfeeding initiation among postpartum mothers in urban and rural areas of Ibadan. This cross-sectional study was conducted among three hundred and sixty (360) postpartum mothers who attended Primary and Private Health Centres in rural and urban areas of Ibadan, Oyo State, Nigeria. A semi-structured, interviewer-administered questionnaire was used to collect information on the socio-demographic characteristics, knowledge of breastfeeding, intention to breastfeed and factors which influence the breastfeeding initiation. Majority of the respondents were young adults within the age of 25-35 years, with mean age of 28.9±5.73years. Two third (71.4%) of them had good knowledge of breastfeeding and only 48.6% initiated breastfeeding early. A positive significant association was observed between breastfeeding knowledge and breastfeeding initiation ($p<0.05$). Complication during or before childbirth, mothers being educated by the health workers on breastfeeding initiation, help given to the mothers during initiation of breastfeeding by healthcare provider and rooming-in of mother and child were found to be significantly associated with breastfeeding initiation among the postpartum mothers ($p<0.05$). Adequate knowledge on the benefits of breastfeeding should be promoted among pregnant women during antenatal care and adequate supports should be given to postpartum mothers after delivery to enhance early breastfeeding initiation and practice of adequate breastfeeding.

Keywords: *knowledge; breastfeeding; initiation; postpartum mothers*

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INTRODUCTION

Human breast milk is essential for the survival and low morbidity of infants placed on breast to suck within the first one hour after their delivery (UNICEF, 2018). Globally, neonatal deaths account for 47% of all child deaths among under five children (WHO, 2018); thus, making this period a critical stage of life, a target for health promotion and a start-up of adequate nutrition for life. This has caused World Health Organisation (WHO) to recommend placing a newborn baby to breast for sucking within one hour postpartum (WHO, 2017).

Breastfeeding initiation within one hour postpartum has been shown to prevent neonate infections, mortality resulting from sepsis, pneumonia, diarrhea, and hypothermia; and to facilitate sustained breastfeeding and increase a mother-child bond (Himani, 2011; Moore *et al., 2012*; Khan *et al.,* 2015). In addition to this, the risk of postmenopausal breast cancer, ovarian cancer, cardiovascular diseases and having higher bone density after menopause is very minimal among mothers who breastfeed their children (Salari *et al* 2014; Anstey *et al.* 2017; Nguyen *et al.* 2019).

However, the information provided to the mothers before or during pregnancy, especially during antenatal care visit and the support received by the mothers after delivery could determine their attitude to breastfeeding and the time they will be willing to initiate breastfeeding their babies (Pawan *et al*., 2015; UNICEF, 2018). This study seeks to evaluate knowledge of breastfeeding and factors which are associated with delay in breast feeding initiation among postpartum mothers in Ibadan, Oyo State, Nigeria.

MATERIALS AND METHODS

Study Design, Population and Location: This study was cross-sectional in design. Four (4) Local Government Areas were selected in Ibadan city through balloting; two (2) each from the urban and rural areas of Ibadan.

Selection of Respondents: Three hundred and sixty (360) postpartum mothers who attended selected Primary and Private Health Centres and gave their verbal consent to participate in the study were randomly selected.

Data Collection Procedure: Information on socio-demographic characteristics, time of initiating breastfeeding of mothers and knowledge of mothers on breastfeeding were obtained through a semi-structured, interviewer-administered questionnaire. The respondents gave verbal informed consent before the data could be obtained from them. Placing a child to breast for sucking within one hour postpartum is referred to as early initiation; while late initiation refers to time a child is placed to breast after one hour postpartum. The knowledge of mothers on breastfeeding was assessed using eleven (11) questions. The results were categorized into three (3) categories namely; poor knowledge, fair knowledge and good knowledge. Poor (0-4 points), fair (5-8 points) and good (9-11 points) knowledge.

Data Analysis: Data were analysed using Statistical Package for Social Science (SPSS) version 20. Mean, standard deviation, frequency and percentage were determined. Association of variables was determined by Chi square test and level of significance at 5% ($p < 0.05$).

Ethical Consideration: This study was registered for ethical approval in University of Ibadan/University College Hospital (UCH), Ibadan Institutional Review Board, Institute of Advanced Medical Research and Training (IAMRAT); with registration number; NHREC/0/01/2008a

RESULTS

Socio-demographics of the Respondents: More than half (60.6%) of the mothers in the study were within the age of 25-34 years with the mean age of 29±5.73years (Figure 1).

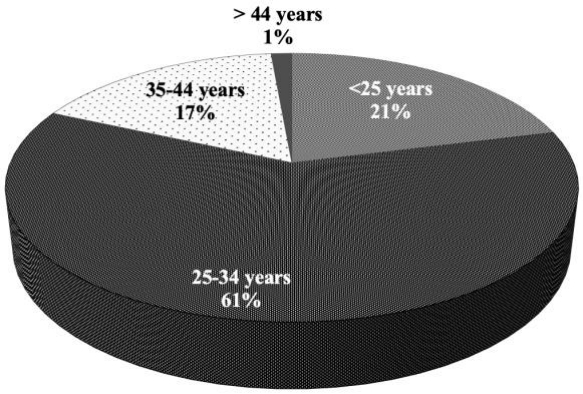

Figure 1.
Age of Respondents

Majority (95.3%) of them were married and monogamous. About half (52.3%) of the mothers already had 2-3 children. Only 53.3% had secondary, 35.3% had tertiary and 2.2% had no formal education. Large proportion (63.1%) of the mothers resided in urban area and 36.9% resided in rural area. More than half (63%) of the mothers were self-employed. Only 16.9% of them earned more than N30,000 as income every month. Majority (88.8%) of the post-partum mothers were Yoruba, 7.8% were Igbo and 2.8% were Hausa and others (1.1%) were Bini, Ijawa, Efik and Fulani (Table 1).

Table 1
Respondents' Socio-demographics by Breastfeeding Initiation

Characteristics	Early Initiation 144(40.0%)	Late Initiation 216(60.0%)	Total 360(100.0%)
Marital status			
Single	6(42.9)	8(57.1)	14(3.9)
Married	138(40.2)	205(59.8)	343(95.3)
Separated	0(0.0)	3(100.0)	3(0.8)
Marriage type			
Monogamy	126(40.0)	189(60.0)	315(87.5)
Polygamy	14(41.2)	20(58.8)	34(9.4)
Parity			
1	44(38.6)	70(61.4)	114(31.7)
2-3	79(42.1)	109(57.9)	188(52.3)
4-5	21(36.8)	36(63.2)	57(15.8)
6	0(0.0)	1(100.0)	1(0.3)
Level of education			
Primary	11(33.3)	22(66.7)	33(9.2)
Secondary	74(38.5)	118(61.5)	192(53.3)
Tertiary	56(44.1)	71(55.9)	127(35.3)
No formal education	3(37.5)	5(62.5)	8(2.2)
Employment status			
Employed	42(48.8)	44(51.2)	86(23.9)
Self-employed	94(38.1)	153(61.9)	247(68.6)
Unemployed	8(29.6)	19(70.4)	27(7.5)
Place of residence			
Urban	98(43.2)	129(56.8)	227(63.1)
Rural	46(34.6)	87(65.4)	133(36.9)
Monthly Income (N)			
<10,000	47(38.2)	76(61.8)	123(34.2)
10,000-30,000	65(40.4)	96(59.6)	161(44.7)
>30,000	24(39.3)	37(60.7)	61(16.9)
Religion			
Christianity			
Islamic	86(42.4)	117(57.6)	203(56.4)
Traditional	56(36.8)	96(63.2)	152(42.2)
Others	2(66.7)	1(33.3)	3(0.8)
	0(0.0)	2(100.0)	2(0.6)
Tribe			
Yoruba	123(38.7)	195(61.3)	318(88.3)
Igbo	11(39.3)	17(60.7)	28(7.8)
Hausa	8(80.0)	2(20.0)	10(2.8)
Others	2(50.0)	2(50.0)	4(1.1)

Breastfeeding Knowledge of Respondents: The breastfeeding knowledge of mothers is presented by table 2. It was observed that more than two-third (78.3%) of the mothers knew that breastfeeding was beneficial to the mothers and majority (99.2%) of them attested that it was beneficial to the

infants. Regarding mothers' knowledge of exclusive breastfeeding, more than three quarters (82.3%) claimed to know about it, 76.8% got the information from the health facility. Majority (91.7%) indicated that breast milk should be first thing to give to baby after birth and more than half (60.6%) of them knew that a baby should be placed on breast for sucking within one hour after birth. About 50.8% of the mothers indicated that water should be given alongside breast milk to a child less than six months of age. Large proportion (83.6%) of the mothers knew that exclusive breastfeeding should last for six months (Table 2).

Time of Initiating Breastfeeding by the Mothers: Figure 2 presents information on the time of initiating breastfeeding by the mothers. It was observed that one third (40%) of the mothers early initiation while the remaining two-third (60%) of them had late initiation.

Table 2
Knowledge of Respondents on Breastfeeding

Variables	n (%)
Breastfeeding is beneficial to mother	
Yes	282(78.3)
No	78(21.7)
Breastfeeding is beneficial to infants	
Yes	357(99.2)
No	3(0.8)
The time a baby should be put to breast after delivery	218(60.6)
Less than one hour	141(39.2)
Above one hour	
The first thing to be given to baby after birth is	330(91.7)
Breastmilk	7(1.9)
Cow's milk (not formula)	1(0.3)
Evaporated milk	3(0.8)
Tea including herbal	17(4.7)
Plain water	1(0.3)
Others	
What is usually done to the first milk that comes out of breast after delivery	
Given to baby	342(95.0)
Pour away	18(5.0)
Water could be given to baby before 6 months	
Yes	183(50.8)
No	174(48.3)
Mothers should attend antenatal care for breastfeeding information	
Yes	299(83.1)
No	61(16.9)
Duration for exclusive breastfeeding	
3 months	33(9.2)
6 months	301(83.6)
7 6 months and above	26(7.2)
Breastfeeding should be performed on demand or schedule	338(93.9)
Demand	22(6.1)
Schedule	
Should Artificial teets, pacifiers or dummies be given to breastfeeding infants?	
Yes	55(15.3)
No	297(82.5)
I don't know	8(2.2)

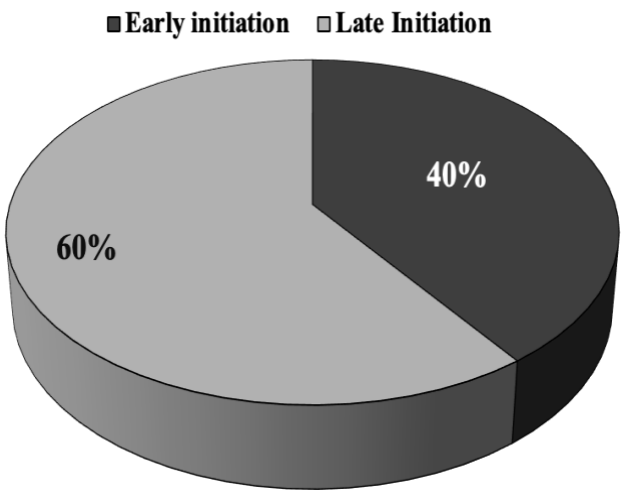

Figure 2
Time of breastfeeding initiation

Table 3
Association between knowledge of breastfeeding and time of breastfeeding Initiation

Knowledge	Breastfeeding Initiation		Total	χ^2	p-value
	Early Initiation n (%)	Late Initiation n (%)			
Poor	0 (0.0)	2 (100.0)	2 (0.5)	28.22	0.000*
Fair	19(18.8)	82(81.2)	101(28.1)		
Good	125(48.6)	132(51.4)	257(71.4)		
Total	**144(40.0)**	**216(60.0)**	**360 (100.0)**		

Knowledge of Breastfeeding of Mothers and their Breastfeeding Initiation: The two mothers (0.5%) who had poor knowledge initiated breastfeeding late. Out of those (28.1%) mothers who had fair knowledge, 18.8% practiced early breastfeeding initiation while the remaining 81% initiated breast milk late. Out of the 71.4% mothers who had good knowledge of breastfeeding, only 48.6% carried out early breastfeeding initiation. There was a significant association between breastfeeding knowledge and breastfeeding initiation among the post-partum mothers ($p=0.000$, $\chi^2= 28.22$) (Table 3).

Factors Associated with Initiation of Breastfeeding among the Postpartum Mothers: Table 4 presents the factors associated with initiation of breastfeeding among the postpartum mothers. It was observed that complications experienced by the mothers during or before delivery significantly lowered the proportion of mothers who had early breastfeeding initiation ($p=0.001$). None of the baby's factors had any significant effect on the time of breastfeeding initiation. Hospital factors such as education on early initiation of breastfeeding ($p=0.025$), help received by the mothers from the healthcare providers on initiation ($p=0.000$) and having mothers roomed with the child one hour after delivery ($p=0.022$) were significantly associated with the breastfeeding initiation..

Table 4
Factors Associated with Breastfeeding Initiation among Postpartum Mothers

Influencing Factors	Early Initiation n (%)	Late initiation n(%)	Total n (%)	χ^2	p-value
Mother Factors					
Antenatal attendance					
Yes	131(40.2)	195(59.8)	326(90.6)	0.713	0.676
No	14(39.4)	20(58.8)	34(9.4)		
Place of delivery					
Hospital/health centres	121(39.5)	183(60.2)	304(84.4)	0.859	0.32
Others	23(41.1)	33(58.9)	56(15.6)		
Complication during or before childbirth					
Yes	13(20.6)	50(79.4)	63(17.5)	11.90	.001*
No	13(7.4)	163(92.6)	176(82.5)		
Baby factor					
Baby term					
Full term	140(39.9)	211(60.1)	351(97.5)	0.783	0.076
Preterm	4(44.4)	5(55.6)	9(2.5)		
Hospital factors					
Educated on early breastfeeding initiation					
Yes	126(42.7)	169(57.3)	295(81.9)		
No	18(27.7)	47(72.3)	65(18.1)	5.01	0.025*
Help in initiation by healthcare provider					
Yes	113(50.9)	109(49.1)	222(61.7)		
No	31(22.5)	107(77.5)	138(38.3)	28.67	0.000*
Mother roomed-in with child					
Together	136(42.0)	188(58.0)	324(90.0)	5.27	0.022*
Separated	8(22.2)	28(77.8)	36(10.0)		

DISCUSSION

Mothers who participated in this study were majorly young adults, and this might explain the reason for low complications among them because giving birth at advanced age has been found to be associated with several complications such as fetal loss, low birth weight, preterm delivery, stillbirth, preeclampsia and gestational diabetes (Lean *et al.*, 2017; Goisis *et al.*, 2017).

The mothers were also found to have low socio-economic status which was reflected in their income, education and occupation. Many of them were self-employed and earned low income per month even though they had secondary and tertiary education. Low maternal socioeconomic status has been found to be responsible for poor pregnancy outcomes in several studies (Seabrook & Avison, 2015; Campbell *et al.*, 2018).

Previous studies had affirmed the importance of putting a baby and the mother together in the same room after delivery as a means of enhancing body contact and as one of the clinical procedures to achieve successful breastfeeding (Moore *et al., 2012;* Karim *et al., 2018*; UNICEF, 2018). It is essential to put an infant to breast within one hour of life as this enhances suckling which is needed for breastmilk let down. Immediate skin-to-skin contact has been found to help in regulating body temperature of the newborns and to allow their bodies to derive beneficial bacteria from their mother's body which can protect the baby against infectious diseases and to build body immune systems (Rollins *et al.*, 2016; UNICEF, 2018).

It was observed in this study that the proportion of mothers who had early breastfeeding initiation was lower compared to those who initiated later despite that high proportion of the mothers claimed to have good knowledge of breastfeeding. The level of early initiation of breastfeeding in this study is higher than 38.4% reported among mothers in India (Mise *et al.*, 2017); but lower than 42.2%, 43.6%, 56.5% and 67% reported by Vishnu *et al.* 2015; Akinyinka *et al.*, 2016; Karim *et al.*, 2018, and Ahmed and Salih, 2019 among women in Nepal, Saudi Arab, other part of Nigeria and Bangladesh respectively. Early initiation of breastfeeding is essential in reducing neonatal mortality and stimulating early suckling which enhances secretion of oxytocin, a factor which reduces the risk of haemorrhage and anaemia among mothers following childbirth (Vishnu *et al.*, 2015; Mise *et al.*, 2017).
There was a significant association between breastfeeding initiation and knowledge of breastfeeding in this study. This agrees with the reports of previous studies by Saleha *et al.*, 2016; Mulugeta *et al.*, 2017 and Gavhane *et al.*, 2018. Knowledge of the importance of breastfeeding has been known as one of the motivating factors which influence the mothers' decision and practice of breastfeeding, and early initiation of breastfeeding (Akinyinka *et al.*, 2016; *Gavhane et al.*, 2018; UNICEF 2018).

It was evident that high proportion of mothers in this study attended antenatal clinic and gave birth in health facilities, but this did not reflect in the number of them who initiated breastfeeding early. It was only 40.2% mothers who attended antenatal clinic and 39.5% mothers who delivered in health facilities that initiated breastfeeding early. There was no significant association between attendance of antenatal clinic, place of delivery, place of residence and time of breastfeeding initiation. This is similar to the findings of Vishnu et al. (2015) and Gavhane *et al.* (2018) among mothers in Nepal and India where there attendance of antenatal clinic was not significantly associated with early initiation of breastfeeding.

Likewise, previous studies also confirmed that no significant association existed between place of residence and time of initiating breastfeeding among mothers (Adhikari *et al.*, 2014; Vishnu *et al.*, 2015).

In contrast to our findings, a significant association was observed between the place of delivery and initiation of breastfeeding among Nepalese women (Adhikari et al., 2014). This suggests that the health management needs to evaluate the quality and mode of presentation of health talk given to the pregnant women during antenatal clinic in their locality and also ensure that the health facilities are structured in a way which supports maternal care after delivery. Of all the mother's factors, complications experienced by the mothers during or before delivery significantly influenced the time of initiating breastfeeding. This agrees with what Mise *et al.*, (2017) reported in their study at Hubli, India where complications experienced by the mothers before and during childbirth significantly affected the time of breastfeeding initiation. This explains the reason for having larger number of mothers who had complications of childbirth having late initiation.

Furthermore, a strong significant association was observed between breastfeeding initiation and breastfeeding education provided to the mothers during antenatal care; help they received in the initiation process by health care workers and mothers' room-in with children practice. The support provided by health workers to mothers after childbirth has a positive significant effect on early initiation of breastfeeding, thus antenatal and postnatal health care providers should encourage this practice (Khanal *et al.*, 2015). Glover and Wiessinger, (2013) also emphasized the need for the midwives to acquire various skills necessary to support educations of mothers in a way to accept responsive breastfeeding practice among breastfeeding mothers rather than just giving information on the breastfeeding. The support provided by the health workers is useful in building the mothers' confidence and encouraging them to start practicing breastfeeding early (UNICEF, 2018).

In conclusion**,** two third of the mothers had good knowledge of breastfeeding and only one-third of them initiated breastfeeding early. Breastfeeding knowledge was significantly associated with the time of breastfeeding initiation. Knowledge of exclusive breastfeeding was generally low in this study. Complication during or before childbirth, mothers being educated by the health workers on breastfeeding initiation, help given to the mothers during initiation of breastfeeding by healthcare provider and rooming-in the mother and child together after delivery were factors observed to have significant association with the time of breastfeeding initiation among postpartum mothers. Adequate knowledge on relevance of breastfeeding and early initiation of breastfeeding to pregnant women during antenatal clinic and, encouragement and support to the mothers after childbirth needs to be provided by health workers to enhance self-confidence in initiating breastfeeding early. Health facilities also should be structured in a way to promote rooming-in of mother and child together after delivery and to provide comfort mother need during the time she breastfeed her baby.

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