Social Environmental Predictors of Non-adoption of Exclusive Breast feeding Practices among Lactating Mothers in a Selected State in South-South Nigeria.

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Abstract

Background: Despite concerted efforts made by world health bodies to encourage lactating mothers to adopt and practice exclusive breast feeding (EBF) as the optimum method of infant feeding, researchers have consistently reported low rate of EBF practices among lactating mothers, globally^{1,4,5,6,9}. Therefore, efforts are on-going to finding solutions to non-adoption of EBF practices among lactating mothers.

The **objective** of the study is to find out the relationship between social environmental factors and non-adoption of EBF practices among CBMs in Bayelsa State Nigeria and suggest strategies for enhancement.

Materials/methods: The *study* employed cross-sectional descriptive research survey. *The population for study consisted of 27,283 lactating mothers who registered and attended Infant Welfare Clinics in the selected health care facilities from November 2015 to April 2016. Seven hundred and thirteen (713) LMs who participated in the study were drawn by means of multistage sampling technique. Data were collected by means of four instruments: questionnaire, in-depth interview, focused group discussion and key informant interview. The standard descriptive statistics were applied to describe data pattern, Frequency count and percentage were used to analyze the research questions one. Phi coefficient was used to analyze research question two while Chi-square test was used to examine the significance of the association between categorical data at 0.05 alpha levels.*

Findings: 448(68.5%) of the LMs initiated breast feeding within the routine one hour of child birth, but 401 (56.8%) weaned the infant before six months of age 230(32.3%) of the LMs fed the newborn with other drinks before the commencement of breast feeding after twenty-four hours because of inability to establish lactation. However, 294(41.2%) of the LMs were able to attempt EBF for the first six months and only 43(6.0%) breast fed up to two years. There was found a moderate positive relationship between investigated social environmental factors and non-adoption of EBF Practice among LMs in Bayelsa State with overall cluster Phi value ($\varphi =$

.47). The study found no significant association between maternal age and NAEBF practice p-value (χ^2 5.477, df-2, p-value =0.65 > .05) but there were significant association between marital status p-value (χ^2 =8.806, df=2, p-value =.012 < .05), parity (χ^2 =2.541, df=2, p-value =.28 >05) and location χ^2 = 12.492, df 1, p-value =.000 < .05.

Conclusion: The finding of this study revealed that low proportion of LMs 294(41.2%) of the LMs were able to attempt EBF for the first six months and only 43(6.0%) breast fed up to two years. This shows that LMs do not practice EBF as stipulated by UNICEF/WHO. Meanwhile UNICEF/WHO target is that 90% of LMs should be able to practice EBF by the year 2020.

Recommendations: Public education and enlightenment programmes on the benefits of EBF practices should involve the media. Training of more Health Care Workers on lactation support to help the CBMs to sustain EBF practices should be advocated by health care workers and EBF practice should be made a societal issue to be addressed by all the segments of the society and be discussed in various groups such as; social and religious organizations emphasizing the need for involvement of family member to support the LMs during EBF practice periods.

Keyword: Exclusive Breast Feeding Practices, Non-adoption, Social environment, Lactating mothers.

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I. Introduction

Exclusive Breast Feeding (EBF) has been endorsed as the most cost effective method of infant feeding globally and is described by WHO/UNICEF¹ as the panacea to curbing the scourge of malnutrition and its consequent high morbidity and mortality rates in infancy and early childhood. Various research findings both local and international, including the report of American Academy of Pediatricians (AAP)² revealed that EBF has the ability to reduce dramatically infant and childhood deaths globally and more so in the developing countries where water and sanitary conditions are not at their best. Exclusive breast feeding practices reduce the risk of diarrhea and infectious diseases associated with traditional inclusive breast feeding practices (TIBFPs)³.

Exclusive Breast Feeding refers to a method of infant feeding practice whereby the infant is feed sorely on human breast milk from birth to the age of six months. Adoption of exclusive breast feeding practices involve timely initiation of lactation after delivery and sustenance of breast feeding from birth to up to two year of age or beyond. It entails that the infant receives nothing else but human breast milk (no water or any other drink or food for the first six months of life except for medications where necessary³. Adoption of exclusive breast feeding practices also require that at six months of age, other foods and drinks should be introduced to the infant's feeding (weaning) in addition to breast feeding, and that after weaning of the infant at six months of age, breastfeeding should be continued along with other foods/drinks for up to two years or beyond ³. Exclusive Breast Feeding practice is the new and ideal method of infant feeding which is different from the old Traditional Inclusive Infant Feeding Method (TIIFM) that represents non-adoption of EBF practices. Unlike EBF, TIIFM involves feeding infants with breast milk and either infant formula or other foods/drinks before six months of age and withdrawing breast feeding from the young child before the age of two years¹.

Despite the WHO/UNICEF's ¹ recommendations and evidence of high level of knowledge of the benefits of EBF practices among lactating mothers globally, among others reported that majority of the mothers they investigated did not practice EBF^{1,5,6} and only 39 per cent of newborn globally were put to breast within one hour of birth, while another 37 per cent of infants less than six months of age were exclusively breastfed worldwide^{4,5,6}. The study also reported that in Sub-Sahara Africa countries (including Nigeria), twenty per cent of women reported weaning their infants before four months of age⁷. It was also reported that in North Africa, the rate of EBF is forty-one per cent, forty-four per cent in Asia and thirty per cent in Latin America countries respectively, meanwhile WHO/UNICEF's target is that ninety percent of women will practice EBF by the year 2020¹. These reports indicate non-adoption of EBF practices.

Non-adoption of EBF practices by lactating mothers has been associated with chronic malnutrition and poor health status among infants and young children thereby predisposing them to be susceptible to diseases and death. Pathak and Gupta in their study pointed out that non-adoption of EBF practices among LMs account for about 1.4 million deaths of infants annually in Nigeria⁸. The World Bank similarly reported that persistent high rates of infant and childhood mortality in Nigeria and inability to attain millennium development goal target number 4 as scheduled was attributed majorly to non-adoption of exclusive breast feeding practices and the subsequent infant and early childhood malnutrition ⁴. Also, various research reports indicated that LMs have high level of awareness of the benefits and the need to practice EBF as the ideal infant feeding method but have not been able to adopt and practice it as recommended by UNICEF and WHO^{1,9,6}.

Incidentally, in spite of all the numerous benefits of adoption of exclusive breast feeding practices, several research studies globally reported that the practice level of EBF among lactating mothers has been very low. For instance, evidence revealed that Health educators are perpetually frustrated by low rate of breastfeeding among American Women¹⁰. The study reports from the literature buttressed that the practice of exclusive breastfeeding is almost non-existence in both rural and urban setting globally ^{5,6}. Furthermore, it was also identified that lack of social support to help the LMs perform other roles that are conflicting with the onerous task of EBF is one major reason accounting for LMs inability to comply with EBF practices¹¹.

The consequences of compromising EBF practices contributes to high infant and childhood morbidity and mortality rates especially in the developing countries where hygiene and safe water supplies were yet to be perfected. UNICEF/WHO⁻¹ reported that more than 800,000 child deaths are linked to poor breastfeeding practices every year and that initiating breastfeeding immediately after birth can reduce the risk of new born death by up to 20 per cent, by boosting the child's immune system. Also children who are exclusively breastfed for the first six months of life are 14 times more likely to survive than non-breastfed children, maintain that EBF practices can reduce child mortality by 13%. This portrays the need to address aggressively the problem of nonadoption of EBF practices and find out ways of encouraging LMs to adopt and practice EBF to promote nutritional health and well-being of the infant and the young child. Investigating the influence of social environmental factors on the adoption and practice of EBF as well as strategies to overcoming associated challenges may help to enhance adoption of EBF.

Social environmental factors have great influence on the adoption and practice of EBF among lactating mothers. Social environmental factors according to Sadoh, Sadoh, and Oniyelu¹² contribute enormously to the building of an individual's psychological make-up and are capable of influencing EBF practices. Social

environmental factors refer to the immediate physical and social settings in which people live or in which something happens or develops. It includes the culture that the individual was socialized or lives in, and the people and institutions with whom they interact. Berman and Synder ¹³ asserted that environment is the internal and external surroundings that affect the client care (LMs). The authors explained that social environmental factors comprise of the people in the physical environment such as the health facilities, health care workers, family members, friends, and significant others, cultural beliefs and support network. Similarly, Bassavanthappa ¹⁴ identified social environmental factors as situation and circumstances physical and psychological that surrounds the LMs, such as the influence of place of delivery, birth protocols during child birth, peer group influence during pre and post-natal periods, quality of antenatal and post-natal services available to the LMs, physical and psychological support given to LMs by health care workers and family members which may

influence adoption of EBF practices. In this study social environmental factor that was focused on: Health Facility EBF policy (Baby Friendly Hospital Initiative BFHI) availability of Crèche in LMs work place to sustain EBF practice even at the termination of maternity leave, availability of adequate information on EBF practice from delivery facility, availability of peer group reference, availability of lactation consultants in delivery facilities. This is because literature revealed that some of the reasons given by LMs for non-adoption and the low EBF practices rates include inability to establish lactation within twenty four hours of delivery, cultural and traditional beliefs of the mothers that colostrum (the first part of breast milk on establishment of lactation) is dirty and should not be given to the newborn, and so must be discarded, while the new born is feed with other water based drinks until the breast milk becomes clean enough for the new born to be feed with. Adequate information could correct such practices that the LMs engaged in due to ignorance. Furthermore, some of the lactating mothers believe the 'old mothers' tells' that the newborn is protected by giving herbs at birth and that he/she cannot survive without water especially in hot climates condition like in Nigeria. These anti EBF practice tells are usually indoctrinated into the mindset of the young LMs the older mothers around her (mothers' in-law, her own mother and significant others) in the social environmental network ^{11.}

This study aimed at determining the influence of social environmental factors on non-adoption of EBF practices and ways to tackle the problem. specifically, it sorts to first find out the Proportion of LMs who exhibited non-adoption of EBF practices in Bayelsa, State, the relationship between social environmental factors and non-adoption of EBF practices, and the association between marital status, parity and location and non-adoption of EBF practices among LMs in Bayelsa, State.

II. Materials and Methods

The study adopted a descriptive cross-sectional survey design. Target population was Lactating mothers in Bayelsa State. The population for this study consisted of 27,283 lactating mothers who registered and attended Infant Welfare Clinics in the selected health care facilities from November 2015 to April 2016. Seven hundred and thirteen (713) LMs who participated in the study were drawn by means of multistage sampling technique (stratified, purposive and convenience). Stratified in the sense that health facilities from which participants were drawn were stratified into urban and rural locations. Purposive in the sense that only mothers breastfeeding their infants within six months of age were selected for the study. Convenience in the sense that LMs mothers in different health facilities who had time and expressed consent in responding to our questionnaire and participating in the FGDs were used. Also, the purposive sampling technique was used to draw 30 LMs breastfeeding their infants within six months of age used for in-depth interviews; 10 midwives drawn from some of the health facilities studied used as key informants; and 28 LMs breastfeeding their infants within six months of age used for FGDs.

A structured Social-environmental Predictors of Non-adoption of EBF Practices Questionnaire (SPNAEBFPQ) adapted from UNICEF/WHO scale for EBF practices, in-depth interview guide, key informant interview schedule, and focus group discussions (FGD) guide were used for data collection. The SPNAEBFPQ consisted of 10 questions divided into parts A and B. Part A consisted of five socio-demographic variables (age, marital status, parity, and location of residence). Part B consisted of five questions with dichotomous response options of yes and no. The SPNAEBFPQ was validated by five experts from Nursing and Public Health areas, and as well was tested for internal consistency. The internal consistency of SPNAEBFPQ was determined using alpha Split half (Spearman's Brown Coefficient) with an index of .875.

Procedure methodology

In-depth interview was done on 30 CBMs in some of the health facilities studied. Key informant interview was done on 10 midwives in some of the health facilities studied. A total of 4 FGDs, were conducted with seven LMs mothers in a group, sampled from some of the selected health facilities in rural and urban areas in Bayelsa State, that is, 28 discussants in four groups.

The Research Ethical Committee in Federal Medical Centre Yenagoa (The highest Tertiary Health Care Facility in Bayelsa State) approved the study. The researchers explained the objectives of research for the participants and assured them of privacy of their personal data provided. After their consent was gotten, LMs mothers were contacted in the selected health facilities where they attended Infant Welfare Clinics in Bayelsa State for data collection. A total number of 804 questionnaires were distributed, but 713 were properly filled and used for analyses.

Statistical analysis

The IBM Statistical Package for Social Sciences (SPSS) version 23.0 was used for all the statistical analyses. Frequency count and percentage were used to analyze the research questions contained in section A of the questionnaire, phi-coefficient (φ) was used to analyzed the association between social environmental factors and

non-adoption of EBFP. The null hypotheses were tested using Chi-square statistic technique. All the tests were 2-tailed, and the probability values less than 0.05 (p<0.05) were considered significant.

	Proportion of LMs that exhibited no	n-adoption EBF p	ractices in Bayelsa	, State (n=71	3)
s/n	EBFP Variables				
		YES	NO		
		F %	F %	Total	%
1.	Initiated EBF one hour after child birth	488 68.5	225 31.5	713	100
2.	Practiced pre-lacteal feeding	230 32.3	483 67.7	713	100
3.	Weaned infant before 6 months of age	401 56.8	312 43.8	713	100
4.	Practiced EBF for the 1 st 6 months	294 41.2	419 58.8	713	100
5.	Breast fed baby up to 2 years	43 (6.0)	670 94.0	713	100

III. Result Table 1 adoption EBE practices in Bayalea, State (n=713)

Data on table shows that 448(68.5%) of the LMs initiated breast feeding with one hour of child birth, but 225(31.5%) were not able to initiated breast feeding with one hour of child birth. 230(32.3%) feed the newborn with other drinks before the commencement of breast feeding, 401 (56.8%) weaned the infant before six months of age, 294(41.2) were able to attempt EBF for the first six months and only 43(6.0%) breast feed up to two years.

FGD and EBFPKII revealed that majority of the participants unanimously expressed that LMs who had their newborns delivered in health facilities, attempted initiation of breast feeding within the routinely stipulated one hour of delivery, but when they were discharged home out of the "watchful eyes" of the health care workers, they were influenced by either family members (mother-in laws, grandmothers, aunties), friends or neighbors to give the newborn water or other drinks thus contravening the principle of EBF practice.

			1 a.01				
Relationship	between S	Social Environme	tal Factors and I	Non-adoption of EBF	F Practices	among LMs	in Bayelsa
			State (n:	= 713)			
	CAL	T4			D	• •	

Table 2

S/N	Item	φ	Decision
a.	Availability of crèche in work place	.30	MR
b.	Adequate information on EBFP	.55	MR
с.	Availability of Peer reference group	.54	MR
d.	Enforcement of BFHI Policy in the Health Care facilities	.47	MR
e.	Availability of lactation consultants	.50	MR
	Cluster φ	.47	MR

Key

MR – Moderate Relationship

Data in Table 4 show the overall cluster Phi value ($\varphi = .47$) which indicates a moderate positive relationship between Social Environmental Factors and Non-adoption of EBF Practice among LMs in Bayelsa State. The table also shows the Phi values for adequate information ($\varphi = .55$), Availability of Peer reference group ($\varphi = .54$) availability of lactation consultants ($\varphi = .50$), which fall between ±.30 -59, indicating moderate positive relationship with non-adoption of EBF practices.

Findings from the FGDs conducted also revealed that majority of the participants collectively expressed that most LMs lacked adequate information and lactation consultations for EBF management and so were unable to practice EBF in the phase of challenges associated with EBF practices. Findings from the FGDs also revealed that majority of the participants collectively expressed that lack of peer reference group affected

some LMs and discouraged them from the practice of EBF. For instance, both participants in FGD and EBFKII unanimously, expressed their disappointment over high level of NAEBF practices among their peers who are health workers (doctors and Nurse), who were expected to have the lead in EBF practices, but adopted mix-feeding instead.

 Table 3

 Summary of Chi-square (χ^2) Analysis of Association Between Maternal Age and NAEBF Practices Among LMs in Bayelsa State

		NAEBH					
Variable	Ν	Yes O(E)	No O(E)	χ^2 value	Df	p-value	Dec
Age							
< 20 years	48	39 (34.3)	9(13.7)				
20-35years	576	401 (412.0)	175 (164.0)	5.477	711	.065	Not rejected
36years & above	89	70(63.7)	19(25.3)				-

Results in Table 3 shows the overall p-value (χ^2 5.477, df-2, p-value =0.65 > .05) indicated that the null hypothesis was not rejected. Therefore, there is no significant association between maternal age and NAEBF practice. This implies that maternal age has no association with non-adoption of EBF.

 Table 4

 Summary of Chi-square (χ^2) Analysis of Association Between Marital Status and NAEBF Practices among LMs in Bayelsa State

			LIVIS III Dayeis	Sa State			
		NAEB					
Variable	Ν	Yes	No	χ^2 value	Df	p-value	Dec
		O(E)	O(E)	~		-	
Marital Status							
Married	527	362(377.0)	165 (150)	8.806	711	.012	Rejected
Single	87	72(62.2)	15(14.8)				
Cohabiting	99	76(70.8)	23(28.2)				

Results in Table 4 shows the overall p-value ($\chi^2 = 8.806$, df=2, p-value = .012 < .05) indicating that the null hypothesis was rejected. Therefore, there is a significant association between marital status and NAEBF practice. This implies that marital status has effect on non-adoption of EBF

 Table 5

 Summary of Chi-square (χ^2) Analysis of Association Between Parity and NAEBF Practices among LMs in Bayelsa State

		NAEBF					
Variable	Ν	Yes O(E)	No O(E)	χ^2 value	Df	p-value	Dec
Parity							Not
1-2 Children	290	203(207.4)	87 (82.6)	2.541	711	.28	Rejected
3-5 children	388	278(277.5)	110(110.5)				
6 children & above	35	29(25.0)	6(10.0)				

Results in Table 5 showed the overall p-value ($\chi^2 = 2.541$, df=2, p-value = .28 >05) indicated that the null hypothesis was not rejected. Therefore, there is no significant association between Parity and NAEBF practice.

Summary of Chi-squ	tare (χ^2)) Analysis of Ass among	Table 6sociation BetwCBMs in Bay	veen Place elsa State	of Resid	lence and l	NAEBF Practices
Variable	Ν	NAEBF Yes O(E)	No O(E)	χ²value	df	p-value	Dec
Place of Residence Urban Area Rural Area	510 203	303(281.8) 207 (228.2)	91(112.2) 112(90.8)	12.492	711	.000	Rejected

Key: Significant (p<0.05)

Results in Table 6 showed that the overall p-value was $\chi^2 = 12.492$, df 1, p-value = .000 < .05 indicating that the null hypothesis was rejected. Therefore, there is significant association between Place of Residence and NAEBF practice. This implies that place of residence influences non-adoption of EBF practice.

IV. Discussion

Data in Table 4 showed the relationship between social environmental factors and non-adoption of exclusive breast feeding practice, the findings showed the overall Phi cluster value

(φ =.47, p-value =.00) which indicated a moderate positive relationship between social environmental factors and non-adoption of exclusive breast feeding practices, since the φ value falls between ±.30-59. The finding is expected and therefore not surprising. The findings were consistent with literature assertions and the finding of other research reports such as: Uchendu, Ikenna and Emodi⁶, Ajayi, Hellandendu, Garba, Oyedele, Anyebe & Sani¹⁵ and Tyndal, Kamai and Changchangi¹⁶, who in their separate studies reported positive relationship between exclusive breast feeding practice and social environmental factors. According to Berman and Synder ¹³, social environmental factors as pertains to the CBMs' practice of EBF by CBMs, include the physical, emotional, and people surrounding the CBMs in the course of practice of EBF. It also extends to the availability of trained medical personnel (midwives or obstetricians), nature of birth procedures, and place of confinement, peer group influence, availability of EBF information and support policies as well as level of implementation of breastfeeding policies in the health care facilities. Prominent among social environmental factors investigated in this study was inadequate information on EBF practice from the place of confinement with Phi value ($\varphi = .55$, p-value = .00) indicating moderate positive relationship with NAEBF practice. Several research reports indicated that inadequate information on EBF practice contributed greatly to non-adoption of EBF practice. For instance, Sadoh, Sadoh and Oniyelu¹² reported that many people including some medical and health care workers expressed unawareness that breast feeding up to two years or beyond is also part of EBF practice, therefore emphasis are not extended to that aspect of EBF practice.

Findings in Table 4 also showed lack of peer reference group with Phi value ($\varphi = .54$, p-value = .00) and Non-availability of Lactation Consultants in the health care facilities with, Phi value ($\varphi = .50$, p-value = .00) indicating moderate positive relationship with NAEBF practice. The finding is of concern. It is worthy to note that establishment of peer reference group was one of the ten steps (step 10: Foster the establishment of breast feeding support group and refer mothers to them on discharge from the hospital or clinic) stipulated by WHO/UNICEF¹ at the launching of Baby Friendly Hospital initiatives, to protect, promote and support EBF practice among CBMs. Furthermore, step two of that WHO/UNICEF¹ EBF Policy stipulated that all health care staff should be trained in skills necessary to implement EBF Policy. Incidentally, the findings of this study indicate an aberration in the implementation of BFHI policy on EBF practice. According to Binns and Scott¹⁷, most health care workers have surprisingly little training in lactation and lactation support and so are unable to render the needed support and help which can help the CBMs to initiate and sustain EBF practices.

Findings from FGDs conducted revealed unanimous agreement among the participants that inadequate information on EBF practice contributed to NAEBF practices among CBMs. Participants also unanimous expressed disappointment over the rate of non-practice of EBF among their peer counterparts who are health care workers, whom they looked up to for emulation in the practices of EBF. Furthermore, the researcher observed that CBMs that attended Infant Welfare Clinics where trained healthcare workers on lactation management were available practiced EBF more readily than their other counterparts who attend IWC where such personnel were not available. Moreover, in the IWCs where trained personnel were available, those health care personnel, though very few in numbers, consistently promoted EBF practice through persistent and continuous teaching, encouragement and persuasions. Some of these health workers were passionate to convince the CBMs to practice EBF and therefore they employed communication of the benefits of EBF to the CBMs through songs, dance, poem, group talks, individual counseling, demonstrations, home visits and follow-ups. Thus, many CBMs in their domain practiced EBF more than the CBMs in other domains were those encouraging activities were not available. Incidentally, the researcher did not see where the BFHI policy was displayed in any of the health facility of study as stipulated by WHO/UNICEF¹. This implies that the administrators of the health care facilities lacked commitment to EBF practice on their own part.

Findings from EBFPKII revealed that majority of the participants blamed and accused the CBMs of being difficult and unyielding towards the implementation of teachings about EBF practice in the clinics. In the words of one of the participants, "These women are resistant to change, they do not come to the clinics on time as to listen to the health workers' health talks, even when some of them came, they usually do not pay attention to the health talks, instead they heed the tells of their peers and obliged to traditional practice. There was unanimous consensus among participants that non-adoption of exclusive breast feeding practice lays majorly on the CBMs' lack of commitment to it than any other issue, while the participants of FGDs (who are CBMs) were

insistent that they were willing to practice EBF but socio-economic and social environmental conditions constitute impediment to their practice of EBF.

V. Conclusion

In conclusion, findings form this study indicated that the practice level of EBF in this setting had been under reported both in literature and media (17%) as against the findings of this study which was (46%). Although, the proportion of CBMs that exhibited non adoption of EBF practices are still unacceptably high and nowhere yet to meet the WHO standard which is 90% EBF practice rate by 2020. Therefore, there is room for improvement with the implementation if all stakeholders involved adhere to strategies like; poverty alleviation and socio-economic improvement, increased awareness of the benefits of EBF, provision of maternal leave for paid workers, provision of lactation consultants, family planning, crèche for CBMs that are paid workers in their work place. Also, improvement on training more health workers on lactation support to help CBMs improvement in health education methods and female education, involvement of husbands and family members, the media, education sectors, the society leaders, government and non- governmental agencies at all levels of development.

References

- [1]. UNICEF/WHO (2015). The state of the world's children. Geneva: https://www.unicef.org/media/84891/file/SOWC-2015.pdf
- [2]. American Academy of Pediatricians (2005). Breastfeeding and the use of human milk. Pediatrics, 115 (2) 496-506; DOI: https://doi.org/10.1542/peds.2004-2491.
- [3]. World Health Organization. (2008). Indicators for assessing Infant and young Child feeding practice: Conclusions of a consensus meeting held 6-8 November 2007 in Washington DC, USA.
- [4]. World Bank (2013): Nigeria demographic health survey. <u>www.worldbank</u>.
- [5]. Kuswara, K., Campbell, K.J., Hesketh, K.D., Zheng, M. & Laws, R. (2020) Patterns and predictors of exclusive breastfeeding in Chinese Australian mothers: a cross sectional study. International Breastfeeding Journal 2020 July13 5(1). 61.10,1186/s13006-020-00304-w.
- https://pubmed.ncbi.nlm.nih.gov/32660501/
 [6]. Uchendu, U.O., Ikefuna, A.N. & Emodi I.J (2009).Knowledge and practice of EBF among mothers in South-East Nigeria. Am J Obstet Gynecol (2): 138el-8. DOI: 10.1016/j.ajog.2008.10.001.PMC 2684022.PMID 19110223.
- [7]. Reddy, S. & Abuka, T. (2014) studied Determinants of exclusive breastfeeding practice among mothers of children under two years old in Dilla Zuria District, Gedeo Zone, Snnpr, Ethiopia. Science Journal of Clinical Medicine 2013; 2(6): 153-159http://www.sciencepublishinggroup.com/j/sjcmdoi10.11648/j.sjcm.20130206.12.
- [8]. Pathak, S. & Gupta, A. (2010): Promoting and supporting breastfeeding for optimal nutrition during infancy. JAMA 98:543-557.
- [9]. Nwosu, U.M., Eke, R.A., & Enwereji, E.E. (2006): Factors influencing the practice of exclusive breastfeeding in rural communities of Abia State Nigeria. Journal of applied psychology; (2) 138-142.
- [10]. Jacobs, F.S. (2012). Contaminants in Human milk: weighting the risks against the benefits of breastfeeding. Environmental health prospect 116(10): a426-34 DO1: 10.1289/ehp.116-ad46.PMC2569122.PMID 18941560.
- [11]. Isabu, A. C. (2018). Determinants of and intervention strategies for non-adoption of exclusive breastfeeding practices among childbearing mothers in Bayelsa State, Nigeria (Unpublished doctorate thesis). University of Nigeria, Nsukka.
- [12]. Sadoh, A.E, Sadoh, W.E & Oniyelu, P. (2011) Breast feeding practice e among medical women in Nigeria. Nigerian Medical Journal 52 (1) 7-12.
- [13]. Berman, E.D, & Synder, M.N. (2012) in Corzier and Erb's Fundamentals of nursing. New Delhi: Jaypee Brothers Medical Publishers.
- [14]. Bassavanthappa, B.T. (2013). Community health nursing. New Delhi: Jaypee Brothers Medical Publishers.
- [15]. Ajayi, A.D., Hellandendu, J., Garba, S.N Oyedele, E.A & Anyebe & Sani, D.K. (2011). Factors Associated with the practice Exclusive Breastfeeding Among Mothers in Kogi State, Nigeria. Nursing and Midwifery Council of Nigeria Research journal 2011:1(1)20-23.
- [16]. Tyndal, Kamai and Changchangi (2016). Knowledge attitude & practice of exclusive breast feeding in Adamawa Nigeria. American Journal of Public Health Research 4(3), 112-119. DOI: 10.12691/ajphr-4-3-6.
- [17]. Binns, L.W and Scott, J.A., (2012). Breastfeeding: reasons for starting, reasons for stopping and problems along the way. Breastfeeding rev 12:13-19 PubMed.

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