

Postnatal Mothers' Demographic Characteristics and the Breastfeeding Patterns They Adopt For Their Infants

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Abstract

Although breastfeeding is a natural phenomenon, individual differences exist in the patterns adopted by Child-bearing women while breastfeeding their infants. This study examined how the demographic characteristics of postnatal mothers influence the breastfeeding patterns they adopt for their infants. It was a cross-sectional research design covering two primary, two secondary and two tertiary health care institutions in the South-East Zone of Nigeria. Convenient sampling technique was used to select 299 postnatal mothers who visited infant welfare clinics along with their infants. One research question and three null hypotheses guided the study. The instruments used for data collection in the study were questionnaire on patterns of breastfeeding by postnatal mothers (QPBF) and checklist on Health status of infants whose mothers had varied breastfeeding patterns (CHSIVBP). Frequency distribution and percentages were used to answer the research question while Wilcoxon W, Chi-square and Mann-Whitney U tests were adopted in testing the null hypotheses at 0.05 level of significance. The result showed that religion, marital status and educational levels significantly influence breastfeeding patterns of postnatal mothers.

Keywords: Breastfeeding patterns, Educational level, Marital status; Religion, Postnatal mothers

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I Introduction.

Breast milk is nature's most precious gift to the newborn, an equivalent of which is yet to be innovated by the scientific community despite tremendous advances in science and technology (Faridi, 2008). Scientific research studies have clearly proved that breastfeeding provides the most suitable nutrition for infants and protects them against infections, allergies and asthma (WHO, 2001). Other documented benefits of breastfeeding to the mother include emotional wellbeing, economic benefits, spacing of pregnancies, protection against breast cancer and reduced incidence of Type 1 diabetes mellitus (Sadauskaite- kuehne et al, 2004; WHO, 2001).

In the context of Millennium Development Goal 4, scientific evidences have highlighted initiation of breastfeeding immediately after birth without squeezing out colostrum and exclusive breastfeeding for the first six months as the key to tackle infant nutrition and also survival of infants (WHO and UNICEF, 2003). Studies on accelerating child survival published in the Breastfeeding Promotion Network of India (BPN) Lancet clearly established that universalization of early initiation of breastfeeding within half an hour after birth has tremendous potential in reducing 31% of neonatal deaths which is about 10% of total child deaths (Gupta, 2007). WHO (2001) warned that early introduction of supplementary feeding usually has a negative effect on the return to exclusive breastfeeding. Piwoz et al (1994) observed that supplements may not be given daily but they are unlikely to be withdrawn once they are introduced. According to Wilmoth and Elder (1995), supplemental feeding exposes infants to foreign contaminants and infection at a very vulnerable stage of life. Brown, Dewey and Allen (1998) added that this may likely explain the higher infant mortality rate of partially bottle-fed infants compared with exclusively breastfed infants. Researches have shown that exclusive breastfeeding is associated with increased weight gain among babies of normal birth weight (Scarlett et al, 1996). Despite this observed benefit, studies have also shown that early introduction of infants formula and other foods have remained a problem among postnatal mothers (Almroth and Latham, 1982). Moreover, although breastfeeding is a natural phenomenon, successful breastfeeding can be a complex task for the mother-infant dyad considering the fact that peculiarities and individual differences exist among humans. Hence this study determined postnatal mothers' demographic characteristics and the breastfeeding patterns they adopt for their infants.

Research Question.

- To what extent do religion determine the breastfeeding patterns of postnatal mothers?

Hypotheses.

- Marital status of postnatal mothers has no significant influence on the patterns of breastfeeding they adopt.
- Educational level of postnatal mothers does not significantly influence the pattern of breastfeeding they adopt.
- Employment status of postnatal mothers does not significantly influence the pattern of breastfeeding they adopt.

II Materials And Methods.

Design and Sampling.

This study was a cross-sectional research design. A convenient sample of 299 postnatal mothers who visited infant Welfare clinics along with their infants in three levels of health care institutions (two Health Centers, two General Hospitals and two Teaching Hospitals) were used for the study. Ethical approval was obtained for the study and informed consent was obtained from the mothers. Inclusion criteria for the study were all healthy postnatal mothers irrespective of parity who were breastfeeding their infants and all infants born at term aged 0-12 months who were breastfed irrespective of the pattern of breastfeeding. Exclusion criteria were preterm babies and babies with any other underlying disorder (organic and inorganic) and mothers with medical disorders that could interfere with breastfeeding. Also mothers who indicated not to participate were excluded from the study, and also their infants were not used. The mothers were approached by the researcher at the time of their visits to the infant Welfare clinics along with the infants. Interview method was adopted by the researcher to obtain data from the respondents at that time as well. Confidentiality was ensured by not including names of the respondents in the data collection

Instrument.

Two instruments (Questionnaire and Checklist) were used among the mother-infant pair for data collection. Questionnaire on patterns of Breastfeeding by postnatal mothers (QPBF) was used to obtain data on the characteristics of the postnatal mothers. Section A of the instrument elicited information on the demographic characteristics of the respondents (age, marital status, educational level, parity and employment status, etc). Section B of the questionnaire elicited information on the breastfeeding patterns adopted by the postnatal mothers (eg. time of commencement of breastfeeding, duration of exclusive breastfeeding, time of commencement of partial breastfeeding, frequency of breastfeeding, additional feeds with breastfeeding, etc). The responses to section B of QPBF were scored on a 4-point scale ranging from 1 point for poor pattern of breastfeeding, 2 points for fair pattern of breastfeeding, 3 points for good pattern of breastfeeding and 4 points for normal/ideal breastfeeding pattern.

Checklist on the Health status of infants with varied breastfeeding patterns (CHSIVBP) was developed for the study by the researcher to obtain information on the responses of the infants to the breastfeeding patterns adopted by their mothers. These data were obtained confidentially from the medical records of the infants, and included such information as the infant's birth weight, age, weight gain pattern, height, nutritional status, vulnerability to infection, etc. The instruments (QPBF and CHSIVBP) were tested for reliability, and a test-retest reliability coefficient of 0.72 and 0.75 respectively were obtained over a one month interval.

III Data Analysis.

Standard descriptive statistics of means and standard deviation were used to summarize the variables. Frequencies and percentages were used to answer the research question while Wilcoxon-W, Chi-square and Mann-Whitney-U tests were adopted in testing the null hypotheses at 0.05 level of significance. SPSS Version 21 was used for the data analysis.

IV Results.

Table 1. Descriptive statistics of the measured variables

	N	Mean	Std. Deviation
Age of Mother	297	27.5926	5.81171
Level of health institution	299	1.9967	.81717
Level of Health institution 2	299	1.9967	.81717
MS	299	1.0301	.17115
Edu	299	3.3344	.60909
Parity	299	1.5886	.49291
Employment Status	299	1.3746	.48483
Family Type	299	1.0100	.09983
Religion	299	1.0100	.09983
Place of Residence	299	1.3378	.47375
Time of Commencing Breastfeeding	281	3.7331	.70958
EBF Duration	197	2.6447	1.17179
Commencement of Partial BF	241	2.0415	1.26423
Breastfeeding Frequency	296	3.6892	.71641
Breast Sucking Duration	299	3.0602	.94641
Additional Food	230	2.7522	1.44003
Breastfeeding Pattern	299	2.6210	.70112
Sex of Infant	299	1.5619	.49699
Birth Weight	296	3.3274	.49365
Present Weight	89	5.3719	2.14391
Weight Gain Pattern	288	1.0556	.22946
Height Pattern	298	1.0470	.22728
Nutritional Status	299	1.0635	.24435
General Body System	299	1.1271	.36255
Vulnerability of the Infant to infection	299	1.1204	.32598
Thriving of Infant	299	1.0870	.28224
Health Status	299	1.0797	.24013

Table 1 shows the descriptive statistics of the measured variables. The mean age of the postnatal mothers was 27.5926 with standard deviation (SD) of 5.81171, mean for the levels of health care institutions 1.9967 with SD of 0.81717; for marital status (MS) of the mothers, the mean was 1.0301 with SD of 0.17115, mean for educational level of the mothers 3.3344 with SD 0.60909, mean for parity of the mothers was 1.5886 with SD of 0.49291; mean for employment status of the mothers was 1.3746 with SD of 0.48483. Family type of the mothers had mean score of 1.0100 with SD of 0.09983; religion had mean score of 1.0100 with SD of 0.09983; place of residence of the mothers had mean of 1.3378 with SD 0.47375; for time of commencement of breastfeeding the mean was 3.7331 with SD 0.70958; mean for exclusive breastfeeding (EBF) duration was 2.6447 with SD 1.17179; mean for time of commencement of partial BF was 2.0415 with SD of 1.26423; breastfeeding frequency had mean of 3.6892 with SD of 0.71641; breast suckling duration had mean of 3.0602 with SD 0.94641; mean for additional food was 2.7522 with SD 1.44003; for breastfeeding patterns the mean was 2.6210 with SD 0.70112; mean for sex of the infants was 1.5619 with SD of 0.49699; birth weight of the infants had mean of 3.3274 with SD of 0.49365; mean of the present weights of the infants at time of data collection was 5.3719 with SD of 2.14391. Weight-gain pattern of the infants had mean of 1.0556 with SD of 0.22946; mean height for the infants was 1.0470 with SD 0.22728; mean for the infants nutritional status 1.0635 with SD 0.24435; for infants' general body system the mean was 1.1271 with SD of 0.36255. For vulnerability of the infants to infection, the mean was 1.1204 with SD 0.32598; mean for thriving of the infants was 1.0870 with SD of 0.28224 while the health status of the infants had mean of 1.0797 with SD of 0.24013.

Table 2. Extent to which religion determine breastfeeding patterns of postnatal mothers.

Variable	Religion	Frequency	Percentage (%)
Breastfeeding pattern	Christianity	296	99
	Moslem	3	1
	Total	299	100

Table 2 shows that Christianity determined breastfeeding pattern of postnatal mothers with a score of 296(99%) while score for moslem score was 3(1%).

Table 3. Wilcoxon -W test of the influence of marital status on the pattern of breastfeeding by postnatal mothers.

Variable	Marital Status	N	Mean Rank	Sum of Ranks	Z-cal	P-value	Level of significance
Breastfeeding pattern	Married	290	150.52	43652.00	0.597	0.551	0.05
	Single	9	133.11	1198.00			
	Total	299					

In table 3, the Wilcoxon W test statistics of the influence of marital status of postnatal mothers on their pattern of breastfeeding was $Z=0.597(p=0.551)$. Therefore the null hypothesis is rejected

Table 4. Chi-square comparison of the breastfeeding patterns of postnatal mothers across the educational levels of the postnatal mothers.

Variable	Level of education	N	Mean rank	df	X ² -cal	p-value	Level of significance
Breastfeeding Pattern	Illiterate	1	282.00	3	4.995	0.172	0.05
	FSLC	19	118.50				
	0 th level	158	151.30				
	Tertiary	121	152.16				
	Total	299					

In table 4, the X² of 4.995 was more than the p-value of 0.172 at 0.05 level of significance. The null hypothesis is rejected. Breastfeeding patterns of postnatal mothers differ significantly with regard to their levels of education.

Table 5 Mann-Whitney U test of the influence of employment status on the breastfeeding pattern of postnatal mothers.

variable	Employment status	N	Mean rank	Sum of ranks	Z-cal	p-value	Level of significance
Breastfeeding pattern	Employed	187	155.62	29101.50	1.458	0.145	0.05
	Unemployed	112	140.61	15748.50			
	Total	299					

In table 5, the calculated Z- score of 1.458 was more than the p-value of 0.145 at 0.05 level of significance. The null hypothesis is rejected. Employment status of postnatal mothers significantly influence their patterns of breastfeeding.

V Discussion.

Findings from the study indicate that the religion of majority (99%) of the postnatal mothers was christianity while 1% were moslems (table 2). The religion of the participants in this study may have influenced their breastfeeding patterns. Subbiah and Jeganathan (2012) noted that there are certain beliefs and practices that do not encourage early initiation of breastfeeding, and thus creating opportunities to give artificial feeding to the newborn baby. Studies have also revealed that in some cultures, postnatal mothers wait for some rituals prior to initiation of breastfeeding(Subbiah and Jeganathan, 2012).

The significant influence of marital status on the breastfeeding patterns of the postnatal mothers($Z=0.597$, $p\text{-value}=0.551$) (table 3) is a demonstration of the role the marital partner in childbearing. Dennis(2002) stated that fathers who receive breastfeeding information from professionals are more likely to promote and support their partners' breastfeeding efforts. Thulier and Mercer (2009) found out that breastfeeding continuation is associated with father's knowledge, attitude and support. Matich and Sims (1992) found that more women who were married or in a stable relationship intended to breastfeed.

The significant difference in the breastfeeding patterns of the postnatal mothers across their educational levels ($X^2=4.995$, $p\text{-value}$ 0.172) (table 4) is line with previous studies. Some researchers had observed that in some developing countries, higher socio-economic status and better education are associated with poorer rates of breastfeeding(Haider et al, 1997; Hamilton et al, 2002), while the converse is true in developed countries(Grummer- Strawn, 1996). It is widely acknowledged that women who are older, better educated and of higher income breastfeed longer(Thulier and Mercer 2009; Meedya, Fahy and kable, 2010). This finding calls for more emphasis on women education and enlightenment because the educated woman will better understand the benefits of breastfeeding to both the breastfeeding mother and her infants.

Findings from the study also indicate that employment status of postnatal mothers significantly influence their pattern of breastfeeding (Table 5. $Z=1.458$, $p\text{-value}=0.145$). Thulier and Mercer (2009) observed that maternal employment negatively affect breastfeeding behavior. Ryan, Zhou and Arensberg (2006) noted that returning to full-time work outside the home is associated with reduced duration of breastfeeding. Dennis (2002) and Thurman and Allen (2008) observed that among the major factors that affect exclusivity and duration of breastfeeding are societal barriers such as employment and length of maternity leave.

VI Conclusions.

This study indicates that demographic characteristics like marital status, educational level and employment status significantly influence the breastfeeding behaviours of postnatal mothers.

References

- [1]. Almoth S, Latham MC. (1982). Breastfeeding practices in rural Jamaica. *Journal of Tropical Pediatrics*, 28,103-109.
- [2]. Brown KH, Dewey KG, Allen LH.(1998). Complimentary feeding of young children in developing countries: a review of current scientific Knowledge. Geneva: WHO.
- [3]. Dennis CL. (2002). Breastfeeding initiation and duration: a 1990-2000 Literature review. *Journal of Obstetric, Gynecology and Neonatal Nursing* , 31(1), 12-32.
- [4]. Faridi MMM. (2008). Health Care System in the Protection, Promotion and Support of Breastfeeding. *Solution Exchange for MCH Community Newsletter, Breastfeeding Month Special, August 2008*, 7-8.
- [5]. Grummer-Strawn LM. (1996). The effect of changes in the population characteristics on breastfeeding trends in fifteen developing countries. *International Journal of Epidemiology*, 25,94-102.
- [6]. Gupta A. (2007). Faulty Feeding practices and malnutrition. Breastfeeding Promotion Network of India. Available from URL:http://www.bpni.org/cgi/wbw_2006.asp. Viewed on 2 December 2006.
- [7]. Haider R, Kabir I, Hamandi JD, Habte D.(1997). Reasons for the failure of breastfeeding counseling: mothers perspectives in Bangladesh. *Bulletin World Health Organization*, 75,191-196.
- [8]. Hamilton P, Jackson J, Lee A, Leitch J. (2002). Evaluation of the Breastfeeding Programme and The Baby Friendly Hospital Initiative, Ministry of Health, Kingdom.
- [9]. Matich JR, Sims LS.(1992). A comparison of Social support variables between women who intend to breastfeed. *Social Science Medicine*,34,919-927.
- [10]. Meedya S, Fahy K, Kable A.(2010). Factors that positively influence breastfeeding duration to 6 months: a literature review. *Women and Birth*, 23(4), 135-145.
- [11]. Piwoz EG, Black RE, Lopez de Romana G, Greed de Kanasiario M, Brown KH. (1994). The relationship between infants proceeding appetite, illness and growth performance and mothers' subsequent feeding practice decisions. *Social Science Medicine*, 1994,39,851-860
- [12]. Ryan AS, Zhou W, Arensberg MB.(2006). The effect of employment status on breastfeeding in the United States. *Women's Health Issues*, 16 (5), 243-251.
- [13]. Sadauskaitė Kuehne V, Ludvigsson J, Padaiga Z, Jasinskiene E, Samuelsson U. (2004). Longer breastfeeding is an independent protective factor against development of Type 1 diabetes mellitus in childhood. *Diabetes Metab Res Rev*, 20, 150-157.
- [14]. Scarlett D, Cargil M, Lyn – Sue J, Richardson S, McCaw – Binns A. (1996). Breastfeeding prevalence among six-week old infants at the University Hospital of West Indies, *West Indian Medical Journal*, 45, 14- 17.
- [15]. Subbiah N, Jeganathan A. (2012). Socio-cultural Beliefs Influencing Breastfeeding practice among Primi postnatal mothers residing in urban slum Area of Delhi. *Health population: Perspective and Issues*, 35(2), 61-73.
- [16]. Thulier D, Mercer J. (2009). Variables associated with breastfeeding duration. *Journal of Obstetric, Gynecology and Neonatal Nursing*, 38 (3), 259- 268.
- [17]. Thurman SE, Allen PJ. (2008). "Integrating lactation consultants into primary health care services: are lactation consultants affecting breastfeeding success?" *Pediatric Nursing*, 34,5,419-425.
- [18]. WHO(2001). Global strategy for infant and young child feeding; the optimal duration of exclusive breastfeeding. Fifty-fourth World Health Assembly, Provisional Agenda item 13.1. A54/INF. DOC./4. 1 May 2001.
- [19]. WHO and UNICEF. (2003). Global Strategy for infant and young child feeding.
- [20]. Wlmoth TA, Elder JP. (1995). An assessment of research on breastfeeding promotion strategies in developing countries. *Social Science Medicine*, 41,579-594.

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