

DOES MATERNAL EMPLOYMENT AFFECT BREASTFEEDING IN PLATEAU STATE, NIGERIA?

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ABSTRACT

There are competing priorities between maternal employment and breastfeeding. This study was conducted to determine the influence of the maternal employment status and the time of return to work postpartum on breastfeeding. This will provide vital information that could be used in promoting breastfeeding among working mothers in the future. A cross-sectional study of 763 pregnant women who had previously given birth was conducted in Plateau State, Nigeria. Data were collected using a validated questionnaire and the women participated voluntarily. Exclusive breastfeeding for at least five months was recorded in 75.4 per cent (270/358) of employed women and 78.4 per cent (225/287) of unemployed women. An overall duration of 13 months' of breastfeeding was reported in 72.9 per cent (256/351) of women who were working at the time of the birth compared to 84 per cent (241/287) of women who were not working. For the overall duration of breastfeeding (any breastfeeding), results revealed that women who return to work early after delivery are more likely to stop breastfeeding earlier than the recommended period. Maternal employment at the time of delivery may therefore have an influence on breastfeeding. Accordingly, working mothers in this setting require additional breastfeeding support or counselling, and also, workplace breastfeeding support in Plateau State requires evaluation.

Keywords: breastfeeding; employment; exclusive breastfeeding; maternal employment; Plateau State

INTRODUCTION

Malnutrition among children under five years is associated with child mortality and disability globally (WHO 2013, 2). Mortality among these children can be reduced by 19 per cent if they are exclusively breastfed for six months and receive appropriate complementary feeding (WHO 2013, 12). There are competing priorities between maternal employment and child feeding practices (Shuhaimi and Muniandy 2012, 53) and this may even be a barrier to breastfeeding (Matias, Nommsen-Rivers, and Dewey 2012, 53) especially if there is no adequate planning for breastfeeding mothers in the workplace. The Sustainable Development Goals, particularly goals one, two, five and eight, cover hunger eradication, equal rights to economic resources, promoting gender equality and empowerment of women (UN 2015, 18). The focus on promoting gender equality has consequently resulted in an increase in the number of women in the labour force (NPC 2014, 42). The increased participation of women (especially in their reproductive age) in employment and increasing numbers of women returning to work early after birth have implications for breastfeeding (Kimbrow 2006, 25). Breastfeeding reduces the incidence of childhood illnesses and ensures good cognitive development (Kimbrow 2006, 19), but the increase in the number of women joining the work force could affect infant feeding. Therefore, protecting, promoting and supporting breastfeeding are important public health actions.

Working outside the home after birth is associated with reduced likelihood of exclusive breastfeeding at six months (Matias, Nommsen-Rivers, and Dewey 2012, 53). The return to work has been identified as an important factor that influences breastfeeding because of the challenges women face in trying to sustain adequate infant feeding practices while working (Kimbrow 2006, 26). Women who are unemployed are less likely to quit breastfeeding and are more likely to exclusively breastfeed (Taddele, Abebe, and Fentahun 2014, 503; Tan 2011, 4). This implies that women who work many hours are likely to engage in mixed-feeding practices. Similarly, an analysis of three national nutritional surveys in Mexico to determine the relationship between breastfeeding and maternal employment revealed that maternal employment has a negative association with breastfeeding (Rivera-Pasquel, Escobar-Zaragoza, and González de Cosío 2015, 1167). Formally employed mothers were 20 per cent less likely to breastfeed compared to non-formally employed mothers (Rivera-Pasquel, Escobar-Zaragoza, and González de Cosío 2015, 1167). An Australian study reported that women employed full time are less likely to breastfeed their infants than their unemployed counterparts (Cooklin, Donath, and Amir 2008, 620). The study concluded that maternal employment within six months postpartum contributes to premature cessation of breastfeeding (Cooklin, Donath, and Amir 2008, 620).

Employed women who plan to return to work within the first six months postpartum, are likely to practice mixed feeding practices and quit breastfeeding earlier ((Rivera-Pasquel, Escobar-Zaragoza, and González de Cosío 2015, 1168). Because of the challenges associated with breastfeeding by working mothers due to poor support for

breastfeeding in the work place, the WHO (2013, 14) recommended that all women who work should be supported to sustain breastfeeding when they return to work by giving them a minimum of one break per day and providing an appropriate place in which to feed their infants or express breast milk.

The aim of the main study was to determine infant feeding intentions and practices of women in Plateau State, Nigeria. This article focuses on the influence of employment on breastfeeding. The effect of maternal employment on breastfeeding in this setting is not clear. This study is the first to determine this aspect in Plateau State.

HYPOTHESES

HO1: Employment status at birth does not influence breastfeeding practices (duration of exclusive breastfeeding, frequency of breastfeeding and overall duration of breastfeeding).

HO2: Time of return to work after delivery does not influence breastfeeding practices.

METHOD

This is a cross-sectional study conducted in Plateau State, Nigeria, and was informed by the Health Belief Model (HBM) (Brieger 2006, 4–5). According to the model, the perception that an individual has about health behaviour determines the practice of such behaviour. It further posited that some modifying variables such as socio-demographic profiles could also play a vital role in influencing health behaviour.

The target population were women attending antenatal clinics in selected hospitals. A multistage sampling strategy was adopted in which women from the three senatorial zones of Plateau State had an equal chance of being selected. The sampling procedure ensured that women were equally drawn from primary and secondary health institutions. For a woman to participate in this survey, she must have given birth to a live baby within the past three years. Women whose previous baby had not survived for at least 24 hours were excluded, as they were unlikely to be able to provide any useful infant feeding history. A total of 864 women voluntarily participated in the study.

Data collection was done using an instrument adapted from Begley et al. (2008, 229–261). The adapted instrument was validated, translated into Hausa (the predominant language in Plateau State) and pilot tested before administration (Emmanuel and Clow 2017). Results were analysed using chi-square statistics and presented in tables.

All the respondents were given information about the study, and informed consent was obtained from them. Respondents were assured of anonymity and confidentiality. They understood that the information they provided will be used for research purposes only and that no information will be linked to them personally. Ethical approval was obtained from the Human Research Ethics Committee of the Faculty of Health Sciences,

University of Cape Town (HREC REF: 316/2014). Permission was obtained from the Plateau State ministry of health to gain access to the women.

FINDINGS

This section presents results of information retrieved from 763 women, representing 88.3 per cent of women recruited from three senatorial zones of the state (i.e. 273 women from the northern zone, 241 women from the central zone and 249 women from the southern zone). The information represents previous breastfeeding practices. The variation in denominators of variables is associated with non-responses to some items on the questionnaire. The various breastfeeding practices included the duration of exclusive breastfeeding, the frequency of feeding per day and the overall duration of breastfeeding, and are reported in relation to the employment status, working hours, and the age of the baby when the mother resumed work.

DEMOGRAPHIC CHARACTERISTICS

Table 1 shows that respondents cut across various socio-demographic characteristics. The mean age of the participants was 27 (SD \pm 5.2) years. The average number of children per respondent was 2.4 (SD \pm 1.6), and 50.7 per cent (385/759) of the respondents were employed. The proportion of women who reported that they had formal education was high (715/751) (95.2%).

Table 1: Socio-demographic characteristics of respondents

Characteristics	Frequency	Percentage
Age (years)	(N = 757)	
≤ 20	96	12.7
21–30	464	61.3
31–40	175	23.1
≥ 41	22	2.9
Parity	(N = 722)	
1–2	458	63.4
3–4	196	27.1
5–6	59	8.2
More than 6	9	1.2
Maternal level of education	(N = 751)	
No formal education	36	4.7
Primary	112	14.9
Secondary	351	46.7
Tertiary	252	33.6
Marital status	(N = 674)	
Single	73	10.8
Married	601	89.2

EMPLOYMENT STATUS

Table 2 shows a cross-tabulation and chi-square analysis of previous breastfeeding practices (the duration of exclusive breastfeeding, the frequency of breastfeeding per day and the overall duration of breastfeeding, i.e. the total duration of breastfeeding) and the employment status. Findings revealed that 75.4 per cent (270/358) of employed women and 78.4 per cent (225/287) of unemployed women reported exclusive breastfeeding for at least five months. For the frequency of feeding per day, which is defined as the number of times a woman fed her baby in a day, 57.9 per cent (205/354) of employed women and 56.8 per cent (159/280) of unemployed women at the time of giving birth breastfed on demand. For the overall duration of breastfeeding (the total duration of breastfeeding), i.e. from when breastfeeding started to when it was stopped, 72.9 per

cent (256/351) of women who were working during a previous birth breastfed for at least 13 months while 84 per cent (241/287) of women not working breastfed for at least 13 months.

Table 2: Employment status

Variable (breastfeeding practices)		Employment status during birth			P value
		Employed	Unemployed	Total	
Duration of exclusive breastfeeding	1–2 months	31	23	54	0.007
	3–4 months	57	39	96	
	5–6 months	142	108	250	
	More than 6 months	128	117	245	
Total		358	287	645	
Frequency of breastfeeding per day	1–3 times	21	20	41	< 0.001
	4–7 times	41	33	74	
	On demand	205	159	364	
	Cannot remember	87	68	155	
Total		354	280	634	
Overall duration of breastfeeding	< 6 months	26	25	51	< 0.001
	6–12 months	69	21	90	
	13–18 months	134	144	278	
	More than 18 months	122	97	219	
Total		351	287	638	

The relationship between the duration of exclusive breastfeeding and the employment status is statistically significant ($P = 0.007$). Similarly, the frequency of breastfeeding and the overall duration of breastfeeding relate significantly to the employment status ($P = 0.001$). Therefore, it is concluded that the relationship between the employment status at birth and the breastfeeding practice is statistically significant ($P < 0.05$).

The women who were employed worked for an average of 6.9 (SD \pm 2.6) hours a day. Table 3 reflects that 80.4 per cent (152/189) of the women who worked one to five hours a day breastfed exclusively for at least five months, 72.6 per cent (130/179) of the women who worked six to 10 hours a day breastfed for at least five months, while

78.7 per cent (74/94) of the women who worked more than 10 hours a day breastfed for at least five months. The relationship between the duration of exclusive breastfeeding and the hours of work per day is statistically significant ($P < 0.05$).

AGE OF BABIES WHEN MOTHERS RESUME WORK

The mean age of the babies when the mothers returned to work was 4.9 (SD \pm 2.2) months. Of the women who breastfed exclusively for at least five months, 74.3 per cent (153/206) returned to work one to three months after the birth, 77.3 per cent (126/162) returned to work four to six months after the birth, 91.3 per cent (42/46) returned to work seven to 12 months after the birth, and 68.3 per cent (28/41) returned to work more than 12 months after the birth. There is a statistically significant relationship between the time of return to work and exclusive breastfeeding ($P < 0.05$). This means that early return to work after birth is negatively associated with the duration of breastfeeding in this setting.

Breastfeeding on demand was reported by 61.6 per cent (122/198) of the women who returned to work in one to three months, 56.8 per cent (92/162) of the women who returned to work in four to six months, 26.1 per cent (12/46) of the women who returned to work in seven to 12 months, and 32.5 per cent (13/40) of the women who returned to work more than 12 months after delivery. This implies that the earlier a woman returns to work after birth, the more likely it is that she will feed on demand as recommended by the WHO (2013, 14).

There was an overall duration of breastfeeding for at least 13 months for 78.3 per cent (159/203) of the women who returned to work in one to three months after the birth, 71.7 per cent (114/159) of the women who returned to work four to six months after the birth, 39.1 per cent (18/46) of the women who returned to work seven to 12 months after the birth, and 92.7 per cent (36/41) of the women who returned to work more than 12 months after the birth. There was a statistically significant relationship between the time of return to work and the overall duration of breastfeeding ($P < 0.05$). Therefore, resumption to work within the first three months after birth is associated with a longer duration of breastfeeding.

Table 3: The age of the baby when the mothers returned to work

Variable		Age of the baby when the mother returned to work (in months)				Total	P value
		1–3	4–6	7–12	More than 12		
Duration of exclusive breast-feeding	1–2 months	23	8	1	12	44	< 0.001
	3–4 months	30	28	3	1	62	
	5–6 months	74	57	33	7	171	
	More than 6 months	79	69	9	21	178	
Total		206	162	46	41	455	
Frequency of feeding per day	1–3 times	9	10	1	8	28	< 0.001
	4–7 times	24	27	3	7	61	
	On demand	122	92	12	13	239	
	Cannot remember	43	33	30	12	118	
Total		198	162	46	40	446	
Overall duration of breast-feeding	< 6 months	20	19	0	2	41	< 0.001
	6–12 months	24	26	28	3	81	
	13–18 months	90	62	7	18	177	
	More than 18 months	69	52	11	18	150	
Total		203	159	46	41	449	

DISCUSSION

The aim of this article was to report on the findings relating to the effect of the employment status on breastfeeding practices. The employment status is a modifying variable of the HBM and could potentially affect infant feeding choices in general and breastfeeding in particular. According to the HBM, modifying variables influence perception and the practice of health behaviour. This study examined the maternal employment status as a modifying variable that influences breastfeeding practices. Understanding the influence of the employment status on breastfeeding will be important in planning interventions and policies that will promote breastfeeding among working mothers.

The various breastfeeding practices examined were the duration of exclusive breastfeeding, the frequency of feeds per day, and the overall duration of breastfeeding

(total duration of breastfeeding). The socio-demographic characteristics of the respondents indicated that the women cut across various socio-demographic characteristics. This is a strong indication of the external validity of the findings. As such, the findings can be generalised for the whole population.

Employment Status and Breastfeeding Practices

Exclusive breastfeeding is beneficial for mother and child. Among the women who breastfed exclusively for at least five months, the proportion of unemployed women was greater than that of employed women and was statistically significant ($p = 0.007$). Employment had an influence on the duration of exclusive breastfeeding. Furthermore, employed women experienced challenges with exclusive breastfeeding. Programmes that could assist these women in overcoming breastfeeding challenges will go a long way in promoting infant feeding. This is consistent with Rivera-Pasquel et al. (2015, 1167) who reported that mothers not employed were more likely to breastfeed at six months than women who are formally employed. The chi-square test revealed a statistically significant relationship between the duration of exclusive breastfeeding and the employment status. Our findings, just like others, have underlined the need for government and employers to formulate workplace policies that will promote exclusive breastfeeding or to refine existing policies.

It is recommended that women breastfeed on demand for optimal growth and development of their infants (WHO 2013, 21). Although the practice of feeding on demand by both unemployed and employed women is almost the same (57.9% versus 56.8%), the relationship between the material employment status and the frequency of feeding is statistically significant. Women in this setting tend to breastfeed on demand irrespective of their employment status.

The overall duration of breastfeeding was longer among unemployed women than employed women and this was statistically significant ($p < 0.001$). These findings illustrate that the employment status has an influence on breastfeeding practices. Therefore, H_01 is rejected. The current study suggests that employed women in Plateau State are less likely to breastfeed exclusively and they are also less likely to breastfeed for a long duration overall.

Time of Return to Work after Birth and Breastfeeding Practices

Studies have shown that the return to work is an important determinant of infant feeding (Kimbrow 2006, 26). This study revealed that the time of return to work (i.e. the age of the baby) had an influence on breastfeeding, hence, H_02 is rejected. Women who return to work between one and three months postpartum are less likely to exclusively breastfeed for at least five months (Table 3). Exclusive breastfeeding for six months is beneficial for both mother and child. Children born to mothers who return to work early after delivery may not enjoy the benefits of exclusive breastfeeding. This has an implication

for child survival. However, the frequency of breastfeeding was not negatively affected by maternal employment. Therefore, the maternal employment status at the time of delivery has an influence on breastfeeding in this setting. In attempting to boost breastfeeding in Plateau State, strong efforts are needed to establish workplace policies that promote and support breastfeeding to ensure that women are able to continue breastfeeding for as long as they wish.

CONCLUSION

We conclude that maternal employment has a negative influence on breastfeeding. Employed mothers are less likely to exclusively breastfeed longer and are more likely to quit breastfeeding earlier. In addition, early return to work after birth is associated with poor breastfeeding practices.

RECOMMENDATIONS

1. Special breastfeeding counselling should be directed to employed mothers in Plateau State.
2. A follow-up study should be conducted on the challenges that employed women face in seeking support for ongoing breastfeeding and the nature of support they receive from their employers.
3. A study should be conducted to assess the workplace breastfeeding support in Plateau State to understand how women may be assisted to breastfeed adequately while working.
4. Government policy should allow women to stay longer at home (at least six months) during the postpartum period to care for their infants, thereby encouraging them to breastfeed.

STRENGTHS AND LIMITATIONS OF THE STUDY

This study is the first to report the influence of maternal employment on breastfeeding in Plateau State. It establishes baseline information that will be helpful to health workers who have an interest in promoting and supporting breastfeeding practices. However, this study was not without limitation. Given the fact that women were required to recall information for three years, recall bias might have occurred.

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