

## **Immediate Post-delivery Infant Feeding Practices in Benin City**

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### Summary

Oparaocha HU, Ibadin MO, Muogbo DC. **Immediate Post-delivery Infant Feeding Practices in Benin City.** *Nigerian Journal of Paediatrics* 2001; 28: 123. A prospective and community based study which was carried out in Oredo LGA of Edo State between March and June, 1998, was predicated on the fact that immediate post-delivery breast-feeding is essential to the success of exclusive breast-feeding. Using a semi-structured questionnaire, the immediate post-delivery breast-feeding practices were assessed in 780 mothers. Mothers who had children aged less than one year were selected using a multistage cluster sampling method. Immediate post-delivery breast-feeding was significantly associated with the place of delivery of the index infant ( $p < 0.05$ ), the facility utilized in the latest antenatal care ( $p < 0.05$ ), maternal age ( $p < 0.05$ ), maternal education ( $p < 0.05$ ) but not maternal religion ( $p > 0.05$ ) or maternal occupation ( $p > 0.05$ ). Only 52.4 per cent of the respondents practised immediate post-delivery breast-feeding. Improvement in this index of infant nutrition would require addressing these maternal socio-demographic parameters.

### Introduction

CHILDHOOD malnutrition is one of the leading causes of morbidity and mortality in Nigeria and other developing countries.<sup>1,2</sup> The 1970s and 1980s witnessed substantial changes in infant nutrition as formula feeds were made popular by manufacturing companies and used on a large scale by mothers.<sup>3,4</sup> This was occasioned by the socio-economic changes in Europe that gave rise to commercial formula which enabled mothers to balance the demands of their work in and outside the home.<sup>5</sup> In a study carried out in 1977, 93.0 per cent of mothers of child bearing age in Edo State were reported to have subscribed to the use of formula feeds which they believed should be introduced within the first three months of life.<sup>3</sup> Following on the acceptance and widespread use of formula feeds, was the sharp decline in the practice of breast-feeding<sup>4</sup> with an attendant increase in the incidence of malnutrition, infections, diarrhoeal diseases and deaths.<sup>6,7</sup> Attempts at reversing these led to the adoption of the principle of optimal infant feeding, a major component of which is the commencement of breast-feeding within half an hour of birth.<sup>8</sup> This step is essential for the achievement of

another important phase, which is the practice of exclusive breast-feeding for the first six months of life.<sup>9,10</sup> Immediate post-delivery breast-feeding ensures prompt intake of colostrum to the exclusion of water, glucose water and herbal fluids.<sup>9</sup>

Since the introduction of the practice of optimal childhood nutrition in Benin City as part of a deliberate national policy of promoting breast-feeding, the extent of compliance by mothers with the recommendation has not been evaluated. The present study was therefore, carried out in order to assess the immediate post-delivery feeding practices among mothers in Benin City.

### Subjects and Methods

The study was carried out in Benin City, the capital of Edo State, between March and June 1998. The subjects consisted of mothers of infants aged 0-364 days. The minimum sample size was determined using the one sample situation for estimating population proportion with specified absolute precision of five per cent.<sup>11</sup> Because cluster sampling was used instead of simple random sampling method, it became desirable to recruit twice the size needed if random sampling had been done.<sup>11</sup> Thus, a sample size of 780 was used instead of 390. Over probability ranges of 5.0 per cent to 95.0 per cent and for sample size of at least 96, selection of an equal number from at least, 30 randomly selected clusters would suffice.<sup>12</sup> Therefore, 26 study subjects were recruited from each of 30 (out of a total of 1822) randomly selected clusters.

Subjects were identified by visiting households between the hours of 4.00-7.00 p.m. and the first house visited in

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each cluster was randomly selected. The family whose door was closest to the entrance of the house was chosen as first, and subsequent household was that nearest to the one just visited. The process was continued until the desired number of subjects was enrolled.

Using a semi-structured questionnaire, information on antenatal care (ANC), delivery, infant feeding practice, and maternal socio-economic characteristics were obtained from each respondent. Indicators for assessing nutritional practices were based on a 24-hour recall period.<sup>9</sup> Timely first suckling rate was defined as the proportion of infants less than 12 months of age who first suckled within one hour of birth.<sup>9</sup>

### Statistics

Associations between categorical variables were assessed using the chi-squared test and Yate's correction, where applicable.

### Results

Of the 780 mothers, 409(52.4 per cent) commenced breast-feeding within one hour of delivery, with 230(29.5 per cent) and 179(22.9 per cent) starting within the first 30 minutes and subsequent 30 minutes, respectively. Two hundred and forty one (30.9 per cent) mothers

**Table I**

*Relationship between Places of Delivery of Infants and Immediate Post-delivery Breastfeeding Practices*

Place of Delivery	No of Mothers who Practised		Total n(%)
	Ideal Immediate Post-delivery Feeding n(%)	Non-ideal Immediate Post-delivery Feeding n(%)	
Maternity Home	192(53.0)	170(47.0)	362(100)
Hospital	135(60.3)	89(39.7)	224(100)
Health Centre	11(73.3)	4(26.7)	15(100)
TBA's place	11(34.4)	21(65.6)	32(100)
Home	58(40.8)	84(59.1)	142(100)
Church premises	2(40.0)	3(60.0)	5(100)
Total	409	371	780

TBA = Traditional birth attendant

$\chi^2 = 17.74$ ;  $df = 5$ ;  $p < 0.05$

**Table II**

*Place of the Last Antenatal Care in 701 Mothers and Immediate Post-delivery Feeding Practices*

Place of Antenatal Care	No of Mothers who Practised		Total n(%)
	Ideal Immediate Post-delivery Feeding n(%)	Non-ideal Immediate Post-delivery Feeding n(%)	
Maternity Home	187(54.5)	156(45.5)	343(100)
Hospital	151(56.3)	117(43.7)	268(100)
Health Centre	40(71.4)	16(28.6)	56(100)
TBA's place	10(29.4)	24(70.6)	34(100)
Total	388	313	701

TBA = Traditional birth attendant

$\chi^2 = 15.27$ ;  $df = 3$ ;  $p < 0.05$

commenced their children on breast milk within the first day of life but later than one hour, while 130 (16.7 per cent) started at 24 hours of life. The timely suckling rate was therefore 52.4 per cent. Timely suckling was significantly associated with the place of delivery of the infants ( $p < 0.05$ ; Table I). About 73.3 per cent of infants delivered in health centres, 60.3 per cent in hospitals and 53.0 per cent in maternity homes were timely suckled in comparison with those delivered at homes (40.8 per cent), church premises (40.0 per cent) and traditional birth attendants' (TBAs) places (34.4 per cent). A significantly higher ( $\chi^2 = 23.50$ ;  $p < 0.05$ ) proportion of mothers who received routine ANC (388/701 or 55.3 per cent), correctly practised immediate post-delivery breast-feeding than those who did not (21/79 or 26.6 per cent). The facility

where ANC was obtained was also significantly associated with correct immediate post delivery breast-feeding ( $p < 0.05$ ; Table II), as a lower proportion (29.4 per cent) of mothers who had ANC in TBAs' places practised immediate post-delivery breast-feeding in comparison with those that utilized the services of hospitals (56.3 per cent), maternity homes (54.5 per cent) and health centers (71.4 per cent).

The prevalence of correct practice of immediate post-delivery breast-feeding was significantly lower (42.0 per cent) among mothers aged, 31-35 years when compared with women aged, 30 years and below (52.2 - 59.2 per cent) and older women over 35 years (51.4 - 64.0 per cent) ( $p < 0.05$ ; Table III). Although the correct practice of immediate post-delivery breast-feeding was more

Table III

Maternal Age and Immediate Post-delivery Feeding Practices

Maternal Age (Years)	No of Mothers who Practised		Total n(%)
	Ideal Immediate Post-delivery Feeding n(%)	Non-ideal Immediate Post-delivery Feeding n(%)	
16-20	45(59.2)	31(40.8)	76(9.7)
21-25	105(55.0)	86(45.0)	191(24.5)
26-30	121(52.2)	111(47.8)	232(29.7)
31-35	71(42.0)	98(58.0)	169(21.7)
36-40	48(64.0)	27(36.0)	75(9.6)
> 41	19(51.4)	18(48.6)	37(4.7)
Total	409	371	701

$\chi^2 = 13.29$ ;  $df = 5$ ;  $p < 0.05$

Table IV

Relationship between Maternal Religion and Immediate Post-delivery Feeding Practices

Religion	No of Mothers who Practised		Total n(%)
	Ideal Immediate Post-delivery Feeding n(%)	Non-ideal Immediate Post-delivery Feeding n(%)	
Christianity	364(54.2)	307(45.8)	671(100)
Islam	24(43.6)	31(56.4)	55(100)
Traditional Religion	18(38.3)	29(61.7)	47(100)
Others (Atheism)	3(42.9)	4(57.1)	7(100)
Total	409	371	780

$\chi^2 = 5.55$ ;  $df = 3$ ;  $p > 0.05$

prevalent among mothers who were Christians as compared with other religious beliefs, the differences were not significant ( $p > 0.05$ ; Table IV).

The proportion of mothers with post-secondary education who practised immediate post-delivery breast-feeding was 83/104 or 79.8 per cent; this contrasts with figures for those with secondary, primary and no formal education which were 51.0 per cent, 44.5 per cent and 42.9 per cent, respectively (Table V). Overall, immediate post-delivery breast-feeding was significantly more prevalent among mothers who received formal education ( $p < 0.05$ ). However, although maternal occupation was not significantly associated with immediate post-delivery infant feeding practices ( $p > 0.05$ ; Table VI), the prevalence of timely suckling was highest among mothers who were involved in hair dressing/fashion designing, and lowest among farming mothers and nurses.

Table V

*Relationship between Maternal Education and Immediate Post-delivery Feeding Practices*

<i>Educational Status</i>	<i>No of Mothers who Practised</i>		<i>Total n(%)</i>
	<i>Ideal Immediate Post-delivery Feeding n(%)</i>	<i>Non-ideal Immediate Post-delivery Feeding n(%)</i>	
No formal education	21(42.9)	28(57.1)	49(100)
Primary (attempted or completed)	102(44.5)	127(55.5)	229(100)
Secondary (attempted or completed)	203(51.0)	195(49.0)	398(100)
Post Secondary	83(79.8)	21(20.2)	104(100)
<b>Total</b>	<b>409</b>	<b>371</b>	<b>780</b>

 $\chi^2 = 5.55; df = 3; p > 0.05$ 

Table VI

*Relationship between Maternal Occupation and Immediate Post-delivery Feeding Practices*

<i>Maternal Occupation</i>	<i>No of Mothers who Practised</i>		<i>Total n(%)</i>
	<i>Ideal Immediate Post-delivery Feeding n(%)</i>	<i>Non-ideal Immediate Post-delivery Feeding n(%)</i>	
Trading	185(54.1)	157(45.9)	342(100)
Full time housewife	117(51.3)	111(48.7)	228(100)
Civil Servants	40(50.6)	39(49.4)	79(100)
Hair dressing/Fashion designing	34(65.4)	18(34.6)	52(100)
Nursing	18(45.0)	22(55.0)	40(100)
Farming	4(23.5)	13(76.5)	17(100)
Others	11(50.0)	11(50.0)	22(100)
<b>Total</b>	<b>409</b>	<b>371</b>	<b>780</b>

 $\chi^2 = 8.57; df = 6; p > 0.05$ 

### Discussion

The importance of immediate post-delivery breast-feeding as a necessary prerequisite for exclusive breast-feeding and optimum infant feeding cannot be over emphasized.<sup>9,10</sup> In this study, only 20.5 per cent of respondents commenced breast-feeding within 30 minutes of delivery; this figure is lower than the 28.6 per cent reported from Benin by Ibhanebhor and Muogbo<sup>13</sup> in 1995. However, the timely suckling rate was 52.4 per cent, which was a marked improvement on the 7.4 per cent obtained in the same geopolitical zone seven years earlier.<sup>14</sup> This increase in timely suckling rate could be attributed to improved infant nutrition consequent on recent nutrition advocacy by both governmental and non-governmental organizations. Nonetheless, the rate remains

unacceptably low especially when viewed against the backdrop that current but renewed international efforts at improving infant nutrition were initiated over a decade ago – a period sufficient enough for a more substantial impact. The place where mothers obtained ANC may partly explain the prevailing but low timely suckling rate. Unlike those who utilized the services of TBA, those who had ANC in standard orthodox health facilities had higher proportion of babies who were appropriately suckled. The place of delivery of the index baby may also be a contributory factor as timely suckling was less likely in babies born to mothers who utilized the Traditional Birth Attendant (TBA)'s places, homes and church premises. Such mothers are less likely to benefit from routine ANC and its attendant health education on improved infant nutrition. This is further buttressed by the fact that timely suckling was more prevalent among babies born to

mothers who had antenatal care in comparison with those who did not. Surprisingly however, mothers who used health centres as against hospitals and maternity homes had a greater proportion of their babies timely suckled. Most health clinics are run by qualified medical personnel who tend to have fewer patients to deal with, thus leading to more time for supervision by staff, and adherence to nutritional guidelines by mothers in such clinics. It is also possible that better educated mothers with improved economic power attended such health centres rather than maternity homes. As revealed by this study, immediate post delivery feeding of infants improved with greater maternal educational attainment.

Maternal occupation did not significantly influence immediate post delivery breast-feeding practices. Nevertheless, the prevalence of timely suckling of babies was highest among fashion designers/hair dressers and lowest among farming mothers and nurses. With the downturn in the national economy, economic power now correlates poorly with education as many school graduates are unemployed and less economically endowed to afford highly commercialized health services. The hair dresser/fashion designer with the necessary economic leverage would tend to utilize the services of clinics. The observed low timely suckling rate among babies born to nurses cannot be excused on the basis of ignorance or poverty. Perhaps deliberate resistance to changing health trend or policy, as with infant nutrition, is responsible.

Timely suckling was also significantly influenced in the present study by maternal age, as a greater proportion of babies born to women aged 31-35 years were not timely suckled when compared to other age groups. It is not readily apparent why this should be so, except to infer that educated mothers are more likely to fall within the younger age brackets. Babies born to mothers who are over 35 years of age may be viewed with some unique importance that could compel their mothers to adhere strictly to current nutritional instructions or use orthodox health facilities. Timely suckling, though commonest among Christians, was not significantly associated with maternal religion. The reason why those who practise traditional religion and atheism had proportionately fewer children that were timely suckled could be explained by the fact that such individuals were less likely to utilise orthodox health facilities where nutritional education are taught during pregnancy. Some Christian denominations compel their adherents to use faith healing and quasi-maternity services resident in their premises as against routine health facilities for ANC and delivery. Such practices could adversely affect timely suckling of babies. However, the proportion of such denominations in comparison with other Christian bodies in Benin City is small, and this may therefore, explain the negligible effect

it had on timely suckling rate.

Since the present study has indicated that the low timely suckling rate may be attributable to certain economic and socio-cultural determinants prevalent in the locality, we conclude that programmes designed to enthrone optimal infant feeding must take such factors into consideration.

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