

Influence of Educational Attainment on Nigerian Mothers' Preference for Breast or Artificial Feeding for Infants

IKPONMWOSA OWIE, BSc, MSc

A PHENOMENAL DECLINE in breast feeding—first among educated mothers and lately among uneducated and relatively poor mothers—has occurred in both developed and developing countries (1–3). Probably the most ironic aspect of this decline is the extent to which uneducated and lower socioeconomic level women in developing countries are using artificial feeding in the name of modernization (4). Artificial feeding is contrary to the traditional prolonged lactation period in most of these countries. Recent investigations in North America and parts of Western Europe have shown some encouraging increases in breast feeding by educated mothers, but this has not been the case in the developing nations (3).

Under normal traditional circumstances, mothers in developing countries have breast fed through 1½ to 3 years. Breast feeding supplies cheap but excellent quality protein food when it is most needed and at the same time provides natural passive immunity against a considerable number of infantile diseases. For example, lactoferrin in breast milk has been identified as containing a bacteriostatic property against *Escherichia coli*. Probably a more important and most often overlooked benefit of breast milk is its relatively hygienic condition.

The study reported here was designed to determine if there were specific differences in the educational levels of mothers who preferred to breast feed and those who preferred to artificially feed their infants and if a community health education program was needed.

Mr. Owie is a doctoral candidate in health education at Indiana University, Bloomington, and a lecturer in health education at the University of Benin, Benin City, Nigeria.

Tearsheet requests to Ikponmwosa Owie, Evermann Apts., #330, Indiana University, Bloomington, Ind. 47401.

Study Sample and Methods

The sample consisted of 105 volunteers at varying gestational periods who had different levels of education and were attending the prenatal clinic at the government general hospital in Owerri, Imo State, Nigeria.

The sample represented five categories of educational levels, ranging from no formal education to those who had completed the 11th grade, as shown in the following tabulation.

<i>Years of schooling</i>	<i>Number</i>	<i>Percent</i>
0–2	28	27
3–4	22	21
5–6	19	18
7–9	22	21
10–11	14	13

Because the respondents were volunteers, it was not possible to have equal numbers of subjects in each category of educational level. Respondents were asked to indicate which method they expected to use, breast or artificial feeding. They were also asked to give two reasons for their preference of one method over the other. All of the respondents were married, had resigned their employment, or were unemployed before the investigation. The unemployment variable was used to control the influence of employment, which in most cases would not give a mother time to breast feed her infant.

The prenatal clinic of the general hospital attracts a cross section of the population, especially those in the medium to lower socioeconomic strata. Because this sample does not include a significant number of persons of the upper socioeconomic stratum, the observations and findings may be more relevant to those in the medium to lower socioeconomic strata.

Chi-square and simple proportion were used in the analysis of data. The criterion measure was the frequency with which respondents from each of the five

groups preferred to artificially feed or breast feed their infants. The hypothesis being tested was that there is no significant difference between educational level and preferred method of feeding infants among expectant mothers. Level of significant at .05 was chosen for the interpretation of data.

Results

With a chi-square value of 11.27 against the table value of 9.49, it was concluded that preference for breast or artificial feeding of infants is not independent of educational level; thus, the hypothesis as stated was rejected.

The women with 3 to 4 years of schooling contributed the highest value, 3.62, to the chi-square. In this group, 77 percent opted for breast feeding.

Those with 0-2 years of schooling contributed the second highest value to the chi-square. In this category, 71 percent preferred breast feeding. Those with 10 to 11 years of schooling contributed the third highest value to the chi-square. In this group, 64.27 percent chose artificial feeding. Those with 5 to 6 years of schooling contributed the least to the chi-square. In this group, 52 percent preferred artificial feeding and 47.4 percent preferred breast feeding. Except for two groups—those with 0 to 2 years of education and those

with 3 to 4 years—the majority of respondents in all other groups preferred artificial to breast feeding. The relative proportion also tended to increase as the level of education increased from the sixth year of schooling. Thus, 52 percent of those with 5 to 6 years of schooling, 54 percent with 7-9 years, and 64.27 percent with 10 to 11 years preferred artificial over breast feeding. The chart shows the proportion of respondents who preferred breast to artificial feeding.

The predominant reason given for preferring artificial feeding was that breast feeding is "primitive" and thus not suitable for the modern woman. Specifically, 28 percent of those who gave this reason pointed to the "bad" behavior of many women who breast feed their infants in public.

Of those who preferred to breast feed, 40 percent seemed to have taken this position because they would feel more comfortable with it. A similar proportion indicated that they would still breast feed even if given free supplies of artificial milk. Another 14 percent pointed out that since they could not afford artificial feeding they had no alternative. All respondents indicated that their husbands did not influence significantly their preference for breast or artificial feeding.

Comments

The study results suggest that there is a significant relationship between educational attainment and kind of infant feeding preferred. Specifically, as the level of education increases, at least through the 11th year of schooling, there seems to be a heightened preference for artificial feeding. Health education in Nigeria in primary and secondary schools is still in its developmental stages and is concerned primarily with general hygiene. The need, therefore, to pursue vigorous programs in public health education with particular references to infant care is indicated.

Obviously, some form of "special education" is indicated, because formal education, as it operates in Nigeria at present, seems to lead to negation of breast feeding. Consumer education to counteract the sleek and incessant advertisements of producers of artificial baby milk would help to overcome this situation.

References

1. Mitra, A.: The nutrition movement in India. Report of the workshop on family health. Population Council of India, New Delhi, 1977.
2. Jelliffe, D. B.: Infant nutrition in the sub-tropics and tropics. WHO Monograph No. 29. World Health Organization, Geneva, 1955.
3. Meyer, H. F.: Breast feeding in the United States. *Clin Pediatr* 7: 708-711 (1968).
4. Jelliffe, D. B.: Breast-milk and the world protein gap. *Clin Pediatr* 7: 910-913 (1968).

Proportion of respondents who preferred breast feeding and their educational levels

