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Attitudes of Nursing Mothers to Breast Milk Banking

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Summary

Ogala WN. Attitudes of Nursing Mothers to Breast Milk Banking. *Nigerian Journal of Paediatrics* **1987; 14:0.** The attitudes of 500 nursing mothers to breast milk (BM) banking were evaluated by means of a structured questionnaire. Of the 500 mothers, one hundred and ninety four (38.8%) would neither accept another woman's BM for their babies nor donate their own BM to another woman's baby while 184 (36.8% would do both if it became necessary. However, 120 mothers (24%) who would not accept donor BM for their babies would agree to donate theirs to the needy. Willingness to accept donor BM was significantly influenced by the ethnic group ($p<0.001$), employment ($p<0.001$), religion ($p<0.001$) and level of formal education ($p<0.01$) of the mothers but not by previous experience in nursing a baby. Willingness to donate BM was significantly influenced only by employment ($p<0.01$) and previous experience in nursing a baby ($p<0.05$). Fears of transfer of disease (53.5%) and introducing "foreign" characteristics into the family (18.4%) were the two most important of the reasons given for negative responses. Health education may lead to a near total acceptance of BM banking in our community.

Introduction

THE superiority of human breast milk over cows' milk in infant feeding is now accepted.[1-4] In order to ensure that most newborns, especially the preterm ones, are fed human milk, it may be necessary for Baby Care Units to store breast milk (BM) pooled from donor nursing mothers for certain categories of babies such as those whose mothers are unable to establish lactation early or sustain lactation long enough and those whose mothers live far away or are dead. It has been shown in Lagos[5] and Benin[6] that if bacterial contamination is minimised at the time of collection, expressed breast milk, stored in a domestic refrigerator, may be fed safely to infants within 24 hours of collection. Thus, BM banking is possible in our environment. However, it needs to be shown whether nursing mothers in any given community would be willing to accept donor BM for their babies or to donate their own BM to other women's babies, when necessary. The purpose of the present study is therefore, to evaluate the attitudes of nursing mothers towards BM banking in Zaria.

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Subjects and Methods

Randomly selected mothers whose babies were admitted to the Special Care Baby Unit or postnatal ward and who took their babies to the postnatal or immunization clinics at the Ahmadu Bello University Teaching Hospital, Zaria, were the subjects of the study. Mothers who were ill or showed any evidence of peurperal instability or whose babies were very ill were excluded.

The mothers who consented to being interviewed were requested to respond to a structured questionnaire specially designed for this purpose. Among the information sought was whether or not they would be willing to accept BM from another woman for their babies or donate their own BM to other women's babies; they were requested to give reasons for negative responses. Other items in the questionnaire included information on ethnic group, religion, educational background, occupation and previous experience in nursing a baby.

Responses of the various sociodemographic groups of the mothers were compared with one another statistically, using the chi-square test.

Results

Five hundred nursing mothers responded fully to the questionnaire.

Sociodemographic data of the respondents

Table I shows the sociodemographic data of the respondents. The Hausas were the single most numerous ethnic group interviewed; they constituted 38%. Three hundred (60%) of the 500 women had had some formal Western education although only a handful (3.8%) had university education. The majority (69.6%) of the respondents were housewives with no paid employment. The religion professed by the women was either Islam or Christianity.

Willingness to accept or donate breast milk

As shown in Table II, there were far more women (60.8%) who were willing to donate their BM than those (37.2%) who were willing to accept donor BM for their babies. However, further analysis of the responses (Table II) shows that the proportion of women who would both accept and donate BM (36.8%) was similar to those who would neither accept nor donate BM (38.8%).

Reasons for negative responses

The majority of the 316 nursing mothers who were willing to accept donor BM or donate own BM did so for fear of transfer of disease or foreign characteristics from the donor mother to the recipient infant (Table III). Fear of inadequate nutrient content of the donor BM was also a major reason for negative responses.

Responses according to sociodemographic data

Willingness to accept donor BM varied significantly with ethnic group, religion, level of formal education and employment but not with experience in nursing a baby (Table IV). Unwillingness to accept donor BM was significantly higher in the Yoruba, Ibo and women of the other ethnic groups than the Hausa mothers ($x^2 = 13.320$, $p<0.001$, $x^2 = 21.558$, $p<0.001$, $x^2=15.348$, $p<0.001$ respectively). Similarly, compared with the non-educated mothers, the post-secondary and the university educated mothers were significantly more unwilling to accept donor BM ($x^2=6.856$, $p<0.01$, $x^2=8.687$, $p<0.01$ respectively).

Mothers with paid employment were significantly more unwilling to donate BM than housewives as were mothers with previous experience in nursing a baby than those without (Table IV). It is shown also in Table IV that unwillingness to donate BM was not significantly influenced by the ethnic group, religion and level of formal education of the mothers.

TABLE 1

Sociodemographic Data of the 500 Nursing Mothers

Data	*No of Respondents*	*% of Total*
Ethnic group		
Hausa	190	38.0
Yoruba	71	14.2
Ibo	50	10.0
*Southern Zaria	48	9.6
Others	141	28.2
Formal education		
None	200	40.0
Primary	147	29.4
Secondary	101	20.2
Post-secondary	33	6.6
University	19	3.8
Number of babies previously nursed		
None	142	28.4
1-3	210	42.0
4-6	110	22.0
> 6	38	7.6
Employment		
Employed	152	30.4
Housewife	348	69.6
Religion		
Islam	253	50.6
Christianity	247	49.4

*Comprises Jaba. Kataf. Marwa. Kagoro etc.

TABLE II

Willingness to accept or donate Breast Milk by 500 Nursing Mothers

Response	*No of Respondents*	*% of Total*
Willingness to accept		
Yes	186	37.2
No	314	62.8
Willingness to donate		
Yes	304	60.8
No	196	39.2
Willingness to accept and donate		
Yes	184	36.8
No	316	63.2
Willingness to accept but not donate		
Yes	2	0.4
No	498	99.6
Willingness to donate but not accept		
Yes	120	24.0
No	380	76.0
Unwillingness to accept or donate		
Yes	194	38.8
No	306	61.2

TABLE III

Reasons for unwillingness to accept or donate Breast Milk in 316 Nursing Mothers

Reasons	*No of Respondents*	*% of Total*
Fear of transfer of disease	169	53.5
Fear of transfer of foreign characteristics	58	18.4
*Bloods/bodies are different	41	13.0
Donor milk may be insufficient in nutrients	25	7.9
Practice unislamic	7	2.2
Can't give any reason or non-specific reason	16	5.0

TABLE IV

Sociodemographic data of Nursing Mothers willingness to accept or donate Breast Milk

	Willingness to accept				*Willingness to donate*			
Data	*Yes*	*No*	X^2	*P*	*Yes*	*No*	X^2	*P*
Ethnic group								
Hausa	96	94			125	65		
Yoruba	18	53			41	30		
Ibo	7	43	37.577	<0.001	29	21	3.406	NS
Southern Zaria	24	24			29	19		
Others	41	100			80	61		
Religion								
Islam	112	141	10.955	<0.001	159	94	0.899	NS
Christianity	74	173			145	102		
Formal education								
None	91	109			129	71		
Primary	52	95			84	63		
Secondary	34	67	16.047	<0.01	58	43	2.612	NS
Post-secondary	7	26			21	12		
University	2	17			12	7		
Employment								
Employed	35	117	18.782	<0.001	77	75	9.425	<0.01
Housewife	151	197			227	121		
Previous nursing experience								
None	57	85	0.734	NS	96	46	3.854	<0.05
*Yes	129	229			208	150		

*Have nursed one or more children of their own

NS ≡ Not significant

Discussion

The general resentment of the idea of feeding a baby with human milk other than the mother's as established in the present study, was observed as far back as the 18th century when the practice of wet nursing was first suggested.[7] The resentment becomes stronger when such donor milk has to come from an unrelated nursing mother which is inevitably the case in human milk banking. However, it was encouraging to have established in this study, that the majority of the women interviewed were willing to donate their own BM when requested to do so. The finding of unwillingness to accept donor BM but unwillingness to donate own BM by women in the community studied was similar to that reported by Egri-Okwaji, Bamisaiye and Ahmed in Lagos.[8]

The most encouraging finding in this study was that the main reasons given by the women for their unwillingness to accept donor BM—fear of transfer of disease or abnormal family trait and insufficiency of nutrients in the donor BM—have some scientific rather than cultural or religious base. It would therefore, seem easy to educate the community successfully on the principles and importance of human milk banking using scientific evidence especially with regard to microbial contamination and nutrient content of donor BM. For instance, the meticulous measures taken in the collection and storage of the milk[2 9 10] could be carefully explained or even demonstrated. According to Davies,[1] deficiencies of certain contents of banked donor human milk, especially if pasteurised, have been described but not to the extent that it becomes inferior to cow's milk. Moreover, only healthy nursing mothers will be requested to donate milk for the bank.

A few of the women claimed that the practice of human milk banking was unislamic. The author has since learnt (Jibril-personal communication) that according to islamic religion, any two persons who have fed from the same breast become blood relations and therefore should not marry. If the emphasis in this religious belief is on the milk and not on suckling, then the belief is directly at variance with the principles and functions of a human milk bank since the banked milk is pooled and the identities of the participants are not necessarily available. Therefore, in order to successfully organise a human milk bank in Northern Nigeria, a predominantly islamic region, the above belief needs a more careful and deeper evaluation. It is however, noteworthy that muslim nursing mothers were more willing to accept donor BM than christian mothers in this study.

The reasons for the differences between the various sociodemographic groups of the nursing mothers for their unwillingness to accept donor BM for their babies were not clear. It could be suggested that the highly educated women were more likely to understand the "implications" of feeding a baby with another woman's BM. In the case of the unemployed versus the employed women, it could be postulated that the difference was due to the fact that those employed could afford to purchase formula milks while the unemployed might not be able to do so. The latter would therefore accept "free" donor BM if her own failed her.

In conclusion, since the reasons given for unwillingness to accept or donate BM were based mainly on scientific principles, appropriate health education may help to achieve a near-total acceptance of breast milk banking in Northern Nigeria.

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