Original Research Article

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20163915

Early initiation of breast feeding in tribal children

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Received: 28 August 2016 Accepted: 29 September 2016

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ABSTRACT

Background: The World Health Organization recommends provision of mother's breast milk to infants within one hour of birth. Despite this, the national data suggest only 40.8% infants were put to breast within one hour of birth and these figures are considerably lower among the tribal population. The objectives were to find out the proportion and socio-demographic factors associated with early initiation of breast feeding among tribal children aged 0-23 months residing in tea gardens of Jalpaiguri district, West Bengal, India.

Methods: A community-based cross-sectional study was undertaken among 219 tribal children aged 0-23 months in two tea gardens of Jalpaiguri district, West Bengal. The mothers of the selected children were interviewed and information on gender of child, socio-economic and educational status of the mother; feeding history and feeding practices of children was collected. Binary logistic regression was performed for statistical analysis using SPSS version 20.

Results: The proportion of breast feeding initiation within one hour of birth was 68.5%. The odds of early initiation of breastfeeding was found to be higher among male infants those belonging to Hindu families and upper socioeconomic status, whose mothers were more educated and among those who were delivered at any health institution than their counterparts.

Conclusions: The results signify that early initiation of breastfeeding was suboptimal. Therefore, efforts should also be made to increase the awareness of infant and child feeding practices for improved health status of the children of the tribal population.

Keywords: Breastfeeding, Early initiation, Tribal children

INTRODUCTION

Breastfeeding is an unequalled way of providing young infants with the nutrients they require for healthy growth and development; it is also a fundamental determinant of the maternal and child health with important implications for the health of mothers, economic stability of the family

and thereby, society. Provision of mother's breast milk to infants within one hour of birth is stated to be as "early initiation of breastfeeding" and warrants that the infant receives the colostrum, or "first milk". 2

Colostrum is the yellowish, sticky milk produced during the initial days of birth, and as a global public health

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recommendation, is recommended by WHO as the perfect food for the newborn, and feeding should be started within the first hour after birth.^{3,4}

Breastfeeding within one hour of life protects the child from infections and reduces the possibility of death by up to 22 per cent in the first month of life. Moreover, early initiation of breastfeeding can help in the development of the new-born's intense suckling reflex and it also stimulates breastmilk production.

Mounting evidence points to the impact of early initiation of breastfeeding on neonatal mortality. A 2006 study in rural Ghana showed that early initiation within the first hours of birth could prevent 22% of neonatal deaths, and initiation within the first day, 16% of deaths, while a study in Nepal found that approximately 19.1% and 7.7% of all neo-natal deaths could be evaded with universal initiation of breastfeeding within the first hour and first day of life respectively. ^{7,8}

With this perspective, in 2002, the World Health Organization and UNICEF formulised the Global Strategy for infant and young child-feeding, to revitalise world attention to the impact that feeding practices have on the nutritional status, growth and development, health, and survival of infants and youngchildren.⁹

Despite these strategies and guidelines, the national data suggest only 40.8% infants were put to breast within one hour of birth. ¹⁰The figures are considerably lower among the tribal populations, who form a special risk group- the risk being associated with child bearing in women and growth, development and survival in children accentuated with poverty, illiteracy, lack of environmental sanitation and hygiene. The breastfeeding rates among tribal and indigenous population have been noted to be lower than the national average by different authors. ¹¹⁻¹³

The districts of northern part of West Bengal are characterized by a higher proportion of scheduled tribes. ¹⁴ In this context, a community-based study was done with the objective to find out the proportion and socio-demographic factors associated with early initiation of breast feeding among tribal children aged 0-23 months residing in tea gardens of Jalpaiguri district, West Bengal.

METHODS

A community-based cross-sectional descriptive study was undertaken from June 2016 to July 2016 in two tea gardens of Jalpaiguri district of West Bengal, namely Saraswatipur and Shikarpur. The study population consisted of all children aged 0-23 months whose parents were tribals and permanent residents of the tea garden. However, children whose parents refused to give consent and children who were severely ill were excluded from the study.

In the absence of any previous study in the area, the proportion of children breastfed within one hour of birth in Darjeeling district as reported in the District Level Household Survey-4 (i.e. 50.4%) was used for calculating the sample size. Sample size is computed by using the formula n=4P (1-P)/L²; considering 10% absolute precision (L) and design effect of 2, the yielded sample size comes out to be 192. Considering 20% non-response, the final sample size became 230. ¹⁴

First, line listing of all the children aged 0-23 months whose parents were permanent residents of the tea gardens was done by house-to-house visits with the help of the local health worker. A sampling frame was chosen and all the houses were visited during the study period of 2 months to select 230 children by systematic random sampling. In the absence of child in a particular house, it was visited for a maximum number of 2 times; after which the child was excluded from the study.

The mothers of the selected children were interviewed at their home with the help of a pre-tested pre-designed schedule and information on age of child, gender of child, socio-economic status, and educational status of the mother; feeding history and feeding practices of the study children was collected. The outcome variable 'Early initiation of breastfeeding' was defined as proportion of children born in the last 24 months who were put to the breast within one hour of birth.

After data collection, data entry was done in Microsoft Excel. Data was organized and presented by applying principles of descriptive statistics. Binary logistic regression analysis was used for inferential statistical analysis. In this analysis, early initiation of breastfeeding' was used as the dependent variables, which was made dichotomous in nature, where initiation of breast feeding within one hour was taken as 1 and not as 0. Gender of child, religion, socio-economic status, maternal literacy and place of delivery were included in the analysis as predictors. All statistical analyses were done using SPSS version 20.

RESULTS

Of 230 infants approached in the study, 219 finally participated; the response rate being 95.2%. There were 110 males and 109 females and majority were Hindus (61.2%) and belonged to a lower socio-economic status (88.6%). Most of the infants were delivered at a health institution and only 18.3% had home delivery.

When the mothers were enquired about the time of initiation of breast feeding, only 150 (68.5%) of them answered that they fed breast milk to the children within one hour of delivery.

Table 1 demonstrates logistic regression showing the relationship between initiation of breast feeding (dependent variable) and the predictors. On adjustment,

the odds of early initiation of breastfeeding was found to be higher among male gender, infants belonging to Hindu families and upper socio-economic status, whose mothers were more educated and who were delivered at any health institution than their counterparts.

Table 1: Predictors of initiation of breast feeding.

	Initiation of breast feeding		Total	AOR (95% CI)
	<1 hour	1 hour or more	Total	AOR (95% CI)
Gender of the child				
Male	80 (72.7%)	30 (27.3%)	110 (50.2%)	1 (Referent)
Female	70 (64.2%)	39 (35.8%)	109 (49.8%)	0.492 (0.259 - 0.934)
Religion				
Hindu	100 (74.6%)	34 (25.4%)	134 (61.2%)	1 (Referent)
Others	50 (58.8%)	35 (41.2%)	85 (38.8%)	0.551 (0.294 - 1.035)
Literacy status of mother				
Primary school and above	121 (73.3%)	44 (26.7%)	165 (75.3%)	1 (Referent)
Less than primary school	29 (53.7%)	25 (46.3%)	54 (24.7%)	0.522 (0.257 - 1.059)
Socioeconomic status				
Upper SES	19 (76.0%)	6 (24.0%)	25 (11.4%)	1 (Referent)
Lower SES	131 (67.5%)	63 (32.5%)	194 (88.6%)	0.696 (0.247 - 1.963)
Place of delivery				
Institution	134 (74.9%)	45(25.1%)	179 (81.7%)	1 (Referent)
Home	16 (40.0%)	24(60.0%)	40 (18.3%)	0.262 (0.124 - 0.554)
Total	150 (68.5%)	69 (31.5%)	219 (100%)	

DISCUSSION

The first hour of a baby's life is very vital for the initiation and maintenance of breastfeeding, and to create the sensitive bond between mother and baby. Literature suggests that delay in initiation of breastfeeding after the first hour greatly enhances the chances of neonatal mortality, especially deaths due to infections. ^{7,16,17}

Despite this well-recognized importance of breastfeeding, the worldwide figures are quite dismal. The studies done in different parts of India, too, reflect a poor picture. The present study, done among tribal children, reveals 68.5% of the mothers put their children to breast within one hour of delivery. In a study by Romola et al, in Manipur, only 53 (17.5%) mothers initiated breastfeeding within 1 h. 18 Compared to this finding, a study conducted in a tertiary care hospital showed that 32.6% of mothers initiated breastfeeding within 1 h of delivery. 19 A study conducted by Kulkarni showed that 70.2% of mothers practiced early breastfeeding. 20 Another study conducted in South India also showed quite dissimilar findings, with only 28% of mothers starting breastfeeding within 1 h. 21

Predictors

Gender

In a patriarchal society like India, gender inequalities still exist and a girl child is still considered less essential than a boy child. These discriminations may start even before birth of a child resulting in nutritional deprivation of the girl child.²² Similar findings were found in the present study. A study by Pal et al in a village of Hooghly, also confirms the point where 18% of females had early initiation of breast feeding, compared with 26.7% males.²³

Religion

The practice of initiating breast feeding may vary in different communities. In Hindu communities, breastfeeding is nearly universal and continues for most children beyond infancy.²⁴ While in the other communities, the practice of prelacteal feeds, is performed soon after the baby is born and before initiation of breastfeeding.²⁵ Similarly, in the present study, the odds of early initiation of breast feeding were higher among children belonging to Hindu families.

Maternal literacy

Education status of the mother has been identified as an important social demographic contributor of health for children. Maternal education was found to be constantly associated with early initiation of breastfeeding in a systematic review by Scott et al. Similar to the findings of the present study, a study in Nepal found newborn babies from the mothers with primary education and secondary or higher education were more likely to be

breastfed within the first hour after birth compared to the babies from the mothers with no education.²⁷ This maybe due to increasing importance of education for uptake of 'messages' about breastfeeding that have emerged in government policy.

Socioeconomic status

The relationship between SES and breast feeding practices is multifaceted and may be linked with knowledge, attitudes, experiences, and beliefs leading a woman to a particular infant feeding choice. The present study and a study in Bhopal, Maharashtra provides similar evidence where higher socioeconomic classes were more likely to have early initiation of breast feeding.²⁸

Place of delivery

In our study, mothers who delivered in a health institution were more likely to initiate breastfeeding within 1 h of birth as compared to mothers who delivered at home. This can be explained by the fact that BFHI has been adopted by all the health care delivery institutions in this part of the country and local health workers regularly encourage and assist in the process of achieving earlier initiation in the mothers. Similar finding were noted by others authors in different parts of the country and world.^{29,30}

The strength of the study is that it provides useful baseline data for health care providers, public health specialists and policy makers. One potential limitation of this study could be the small localized population. Hence, the findings in this study cannot be generalized to cover the state or India as a whole.

CONCLUSION

The results of the present study signify that early initiation of breastfeeding was suboptimal. Efforts should also be made to increase the awareness of maternal and child health including infant and child feeding practices for improved health status of the children of the tribal population. Health programmes should be initiated to improve the demographic, socioeconomic and general living conditions of tribal families for improved maternal and child health.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

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Cite this article as: Sarkar TK, Bhattacherjee S, Mukherjee A, Saha TK, Chakraborty M, Dasgupta S. Early initiation of breast feeding in tribal children. Int J Community Med Public Health 2016;3:3081-5.