Determinants of initiation of breast feeding among lactating women in rural area of Bangalore

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Abstract
Background: Mother's milk undoubtedly represents the best nourishment for the child during first months of life. WHO recommends breastfeeding to be initiated within 1 hour after giving birth. Early initiation of breast feeding has lifetime benefits for the mother and the child. In India, breastfeeding in rural areas appears to be shaped by the beliefs of a community, which are further influenced by social, cultural, and economic factors. Hence this study was undertaken to know the rate of early initiation of breast feeding and its determinants among Bangalore rural women.
Material and Method: 160 lactating women were interviewed by house to house visit by simple random technique and were assessed as per the study objective by pre structured questionnaire.
Result: As per our study 48.2% of the mothers were in the age group of 18 – 22 years and 12.50% of mothers were illiterates. Majority of the mothers were 96.3% (154) home makers. As per the number of antenatal visit the mean visits was 6.57. 62.5% of the mothers initiated breast feeding within 1 hour of birth and 96% of the women have given colostrum to their Newborns.
Conclusion: 37.5% of newborns were not given breast feeding within first hour of birth, colostrum was not fed in 4.4% newborns, honey and other prelacteal feeds was given in 5.6% newborns.

Key words: Lactating Women, Breast Feeding, Colostrum, Prelacteal Feeds, Newborns.

Introduction

Mother's milk undoubtedly represents the best nourishment for the child during first months of life. There is a universal consensus about the fundamental importance for children's adequate growth and development and for their physical and mental health.[1] Breastfeeding has an important role in public health due to its numerous health benefits for children and mothers.[2]

WHO recommends breastfeeding to be initiated within 1 hour after giving birth.[3] Early initiation of breast feeding has lifetime benefits for the mother and the child. Mothers benefit from early suckling because it stimulates breast milk production and facilitates the release of oxytocin, which helps the contraction of the uterus and reduces postpartum haemorrhage. Moreover, early initiation of breastfeeding helps infants to get the first breast milk, known as colostrum. Colostrum is highly nutritious and has antibodies that protect the Newborn from disease.[4] Early initiation also facilitates bonding of the mother and Newborn.

In India the rate of initiation of breast feeding within 1 hour of birth in rural areas is only 22.4% [5] and also from International Baby Food Action Network (IBFAN), 24.5% mother initiated breast feeding within 1 hour. It is worthwhile to mention here that the neonatal mortality rate in India is 43 per 1000 live births, in comparison with for example Australia, which has 1 per 1000 live births.[6] Early initiation of breastfeeding is also a contributing factor towards the achievement of the Millennium Development Goal of increased levels of child survival.

Breastfeeding practices vary among different regions and communities. In India, breastfeeding in rural areas appears to be shaped by the beliefs of a community, which are further influenced by social, cultural, and economic factors.[7] Identification of initiation of breastfeeding and factors influencing at its initiation will help design targeted interventions to promote breastfeeding. Hence this study was undertaken to know the rate of early initiation of breast feeding and its determinants among Bangalore rural women.

Material and Method
Study Design: Cross Sectional Study
Study Period: October 2013 to September 2014.
Sample Size: The HUNGaMA (fighting hunger and malnutrition) Survey conducted in India in 2011, showed that 38.9% (p)[8] of mothers gave breast milk to their Newborn within an hour of birth. Sample size is calculated using the below mentioned formula.

$$n = \frac{4pq}{d^2}$$

Where p is prevalence, q is 100 – p and d is the allowable error.

$$n = \frac{4*38.9*61.1}{(7.78)^2}$$

$$= \frac{9507.16}{60.53} = \textbf{157.06}$$

The sample size of 160 was decided for this study.

Data collection and sampling: Under Primary health centre of Hesaraghatta, there are 4 sub-centres and 27 Anganwadi centres. Out of these, 3 Anganwadi centres were selected from each sub-centre by simple random sampling method. Information regarding recent deliveries was collected from Medical officer of Hesarghatta, Primary health Centre, Health workers of all sub-centres and Anganwadi workers. Lactating mothers within 15 days of delivery were interviewed with the help of semi-structured questionnaire by house to house visit until the sample size of 160 is reached.

Dependent Variables: Time of breastfeeding initiation was defined as when after birth the women commenced breastfeeding. Breastfeeding was initiated immediately (i.e. within one hour of the delivery) within 24 hours (i.e. after one hour to 24 hours) of the delivery or after 24 hours of the delivery.

Independent Variables: Demographic factors were defined as age, education level of mother's, occupation, socio economic status, religion and caste, antenatal visits. Age was categorised into four groups (below 18 yrs, 18- 22 yrs, 23- 27 yrs, above 27 yrs.), education was graded as 6 groups (illiterate, primary, secondary, high school, intermediate/diploma, graduate), socio-economic status as class I, II and III based on modified BG Prasad classification, occupation classified under 2 groups (home maker, working mother's), religion as Hindu, Muslim, Christian, others and number of antenatal visits (less than 4 and more than 4 visits).

Statistical Analysis: The proportions and Chi-square tests were performed to explore the cross-relationships between dependent and independent variables. Dependent variables were breastfeeding initiation. Independent variables were demographic factors.

Ethical Clearance: Informed consent was obtained from the study participants. Ethical approval was obtained from institution.

Result

Table 1 shows about details of socio demographic characteristics of study participants. As per the study 48.2% of the mothers were in the age group of 18–22 years and only 6.2% were above 28 yrs. The mean age for the mothers was 23.15 years with standard deviation of 3.1. Majority of the mothers were 96.3% (154) home makers & remaining 3.7% were working mothers.

According to modified BG Prasad socio-economic classification scale 73.1%, 21.3% and 5.6% belongs to class I, Class II and Class III respectively and 41.3% of the respondents belonged to nuclear families.

The mean age of marriage among mothers was 19.81 years, with standard deviation of 2.14 years. 83.8% of the mothers were married between the age group of 18-22 years. About 7.5% of mothers were married before the age of marriage that is below 18 years.

From this study 47.5% (n=76) of mothers had education till high school level; whereas fathers 41.25% (n=66) had education till high school level. Only 12.50% of mothers were illiterates whereas 13.125% of the fathers were illiterates (Fig. 1).

As per the number of antenatal visit the mean visits was 6.57. It's remarkable to note that 91.2% of the mothers had ≥4 antenatal visits as cross checked with records as well. 62.5% of the mothers initiated breast feeding within 1 hour of birth and 96% of the women have given colostrum to their Newborns (Table 2).

There is still prevailing practices in our study area such as giving pre lacteal feeds to newborns. 2.5% had given honey and 3.1% had given Sugar water/ Top milk/ artificial teats as pre lacteal feeds.

There was no statistical significant difference between initiation of breast feeding within an hour($p =0.21$) and feeding of newborns with colostrum ($p =0.18$) with respect to the literacy status of mothers (Table 3).

It's clear that among the mothers who had ≥ 4 antenatal visits i.e. 96.6% (112) had given colostrum as compared to 93.2% (41) mothers who had < 4 antenatal visits. We can say that, irrespective of number of antenatal visits the mothers had, colostrum feeding practices there is a slight difference is there however there was no statistically significant difference between the two (p - 0.295). This could be because of effective work done by health care workers.

Discussion

In our study 48.2% of the mothers were in the age group of 18–22 years. Where as in a study by Madhu et al[9] showed that majority of the mothers were between the ages of 21 and 25 years old (60%).

As per the literacy status 12.50% of mothers were illiterates and majority belonged to Class I and II socio economic class (Fig. 1), when compared to study conducted by Madhu et al[9] concluded that about 52% of the mothers were illiterate and belonged to a low to medium socio-economic class (55%).

83.8% of the mothers were married between the age group of 18-22 years and only 7.5% of mothers were married before the age of marriage that is below 18 years.

Whereas Madhu et al[9] study shows that the age at marriage among participants were between 15 and 20 years old (69%). Approximately 11% of the mothers were less than 15 years old at the time of marriage.

Majority of the mothers initiated breastfeeding and only 5.6% had given pre lacteal feeds whereas study by Madhu et al[9] states that most of the mothers initiated breastfeeding (97%) and the other 3% were not able to initiate due to separation from mother (2%) or due to advice from the mother-in-law (1%). A total of 13% of the babies were fed with sugar water alone for more than 48 hours. Honey (6%) and ghee (3%) were also commonly used pre lacteal feeds. Also in a study done in Meerut, 53.5% of the newborns were fed colostrum. Almost all the mothers 93.6% gave some prelacteal

feed before starting breastfeeding. The most common Prelacteals given were herbal concoction, black tea, honey, plain water and sugar water.[10]

Table 1: Distribution of Mothers according to Socio-Demographic Characteristics

Age (in Years)	No	Percentage
18 – 22	77	48.2%
23 – 27	73	45.6%
>28	10	6.2%
Occupation		
Home makers	154	96.3%
Other work	6	3.7%
SES		
Class I	117	73.1%
Class II	34	21.3%
Class III	9	5.6%
Type of family		
Nuclear	66	41.3%
Joint	81	50.6%
Three Generation	13	8.1%
Age of marriage(yrs)		
Below 18 years	12	7.5%
18– 22 years	134	83.8%
23-27 years	13	8.1%
Above 27 years	1	0.6%

Graph 1: Distribution of parents according to educational status
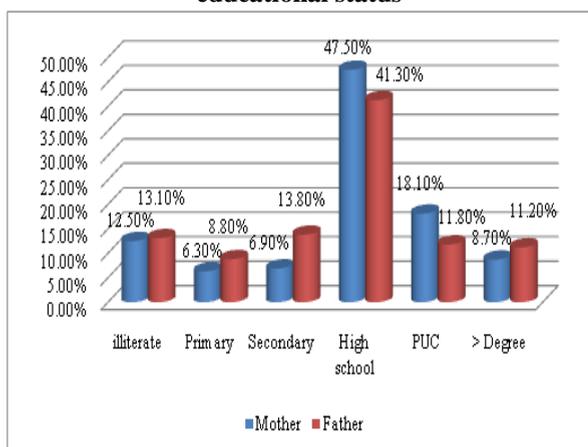
Table 2: Distribution of newborns according to the MCH services

Antenatal visits	No	Percentage
<4 ANC visits	14	8.8%
4 & above ANC visits	146	91.2%
Time of initiation of breast feeding		
≤1 hour	100	62.5%
1-4 hour	38	23.8%
4-8 hour	7	4.4%
≥8 hour	15	9.3%
Colostrum fed		
Yes	153	95.6%
No	7	4.4%
First feed after birth		
Breast milk	151	94.4%
Honey	4	2.5%
Sugar water/ Top milk/ artificial teats	5	3.1%

Table 3: Relationship between the Mothers literacy status and Breast feeding initiation

Variables	Literacy Status		Total	X^2 (p value)
	Literates	**Illiterates**		
Breast feeding initiated				
< 1hour	85 (60.71%)	15 (75%)	20	1.52 (p=0.21)
> 1 hour	55 (39.29%)	5 (25%)	140	
Colostrum given to Newborn				
Yes	135	18		1.73(0.18)
No	5	2		

Table 4: Relationship between the Antenatal visits and Colostrum given to Newborn

Antenatal visits	Colostrum given to Newborn		Total	X^2 (p value)
	Yes	**No**		
<4 visits	41 (93.2%)	3 (6.8%)	44 (100%)	0.86 (0.295)
>4 visits	112 (96.6%)	4 (3.4%)	116(100%)	
Total	153 (95.6%)	7 (4.4%)	160 (100%)	

Conclusion

More number of the females was educated. There were few harmful Newborn care practices observed like 37.5% (60) of newborns were not given breast feeding within first hour of birth, Colostrum was not fed in 4.4%[7] newborns, honey and other prelacteal feeds was given in 5.6%[9] newborns.

Recommendation

Even though the higher rates of early initiation of breastfeeding and exclusive breast-feeding were observed, few mothers are not practicing. The breast feeding intervention programmes should be effectively implement to create awareness especially for the mother during antenatal and postnatal check-ups. The information regarding the importance of exclusive breastfeeding and duration of breastfeeding should be provided to the whole family, discarding the Colostrum can be discouraged.

Acknowledgement

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