ISSN 2278 – 859X

Asian Academic Research Journal of Social Sciences & Humanities

Volume 1 Issue 9 March 2013

Journal By:-

Asian Academic Research Associates

ISSN 2278 – 859X (Online)
Asian Academic Research Journal of Social Sciences & Humanities
&
ISSN 2319-2801 (Online)
Asian Academic Research Journal of Multidisciplinary

Editorial Board

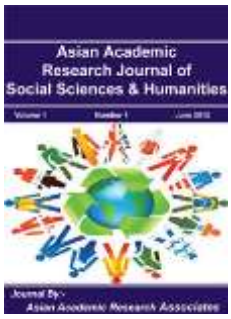
Asian Academic Research Journal of Social Sciences and Humanities
Year 2013, Volume-1, Issue-9 (March 2013)
Online ISSN : 2278 – 859X

INDEX PAGE

A Peer Reviewed International Journal of Asian Academic Research Associates

AARJSH

ASIAN ACADEMIC RESEARCH JOURNAL OF SOCIAL SCIENCE & HUMANITIES



DETERMINANTS OF BOTTLE FEEDING PRACTICES IN SOLIGA TRIBE OF MYSORE DISTRICT, KARNATAKA, INDIA

DR RENUKA M*; DR K JAGADISH KUMAR; DR PRAVEEN KULKARNI***; DR KHYRUNISSA BEGUM****; DR M R GANGADHAR*****

*Professor,
Dept. of Community Medicine, JSS Medical College (A constituent college of JSS University), Mysore, Karnataka

**Professor,
Dept. of Pediatrics, JSS Medical College, Mysore

***Assistant Professor,
JSS Medical College, Mysore

****Professor,
Dept. of Food Science and Nutrition, Manasagangotri, University of Mysore, Mysore,

*****Professor,
Dept. of Anthropology, Manasagangotri, University of Mysore, Mysore

ABSTRACT

Background: Exclusive Breast Feeding for first six months of life followed by safe and adequate complementary feeding together with continuous breast feeding is recommended by WHO to achieve optimal growth, development and health of young children. Despite this, bottle feeding in infants is still practiced across our country due to various socio-cultural reasons. Tribal communities having less access to the correct health messages together with the tendency to mimic urban counterparts encounter such incorrect feeding practices resulting in high childhood morbidity and mortality.

Keywords: Bottle feeding, under-five children, Standard of Living Index, Soliga tribe, Karnataka

1 Introduction

The complexity and variation in methods of infant breast feeding in India is due to diverse socio-cultural factors in various communities including the tribes who represent about eight percent of our population. Exclusive Breast Feeding for first six months of life followed by safe and adequate complementary feeding together with continuous breast feeding is recommended by World Health Organisation. It has been stipulated that feeding bottle with a nipple should not be used at any age in order to achieve optimal growth, development and health of young children.

Bottle use is a public health issue in poor and illiterate mothers of developing countries and is widely practiced across India, due to various socio-cultural reasons as evidenced by studies conducted by Vivek Lal and Apurba S et al from Northern India. National Family Health Survey -3 data has revealed that overall bottle feeding rates has increased from 13.4% in 1998 to 17.3% in 2005-06 and Bottle feeding has increased from five percent under age two months to 18 percent at age 9-11 months and declined at older ages. Tribal families having less access to the correct health messages through different sources/media, together with the tendency to mimic urban counterparts encounter high childhood morbidity and mortality. In this background, present study was undertaken to know the magnitude and various socio-demographic factors associated with bottle feeding practice in Soliga tribe of Mysore District, Karnataka, India.

2 Materials and Methods

2.1 Study Design

This Cross sectional community based study was conducted in Soliga tribe residing in 10 Haadi's / settlements in Hunsur and HD Kote Taluk of Mysore District, Karnataka from July to December 2011. Sample size of 100 was obtained with 10% absolute permissible error and 95% confidence limit based on 49% reported prevalence of bottle feeding among infants below one year of age in a study from rural areas of central karnataka by Banapurmath et al.

Therefore, a total of 103 mothers of underfive children were included in the study. Details regarding socio-demographic characteristics and bottle feeding practice were obtained using a pretested semi structured questionnaire by interview technique. Approval from Institutional Ethics Committee of JSS Medical College, Mysore was obtained prior to the start of the study.

2.2 Statistical analysis

Data obtained was entered in MS Excel-07 spread sheet, analyzed and interpreted using descriptive statistical measures like mean, SD and percentages as appropriate. SPSS version 16 was used for Chi-square test to find out the association between bottle feeding and various socio demographic factors under study.

3 Results

Table 1 shows that out of the total 103 mothers interviewed, majority were in the age group of 21-25 years and 73.7% were housewives. The youngest mother was 18 years and eldest mother was 35 year with the mean age was 22.8±3.2 years. 34 (33%) and 69(67%) had male and female children respectively. Majority of children were in the age group of 13-24 months (33%). Median age of the children was 24 months.

Table 2 shows that magnitude of bottle feeding practice was 16(15.5%). Bottle feeding practice was more with male child, mothers in the age group of 21-25 years, working mothers, joint family, larger family size, one child, lower birth order, high Standard of Living Index(SLI), presence of pallor, illness(diarrhoea or respiratory infection. However factors like type of family, number of children and Standard Living Index did exhibit statistically significant association with bottle feeding practice.

Median age of starting bottle feeding was nine months. In Majority (87.5%) it was parents who decided to bottle feed. Cow's milk was the commonest component of bottle feed (93%). Inadequate milk secretion was cited as most common reason for starting bottle feeding (37.5%). Other reasons

quoted were bottle feeding gives more nutrition, poor weight gain, subsequent pregnancy and child refusing to eat family food.

4 Discussion

Bottle feeding predisposes the child for various infectious diseases like diarrhoea and respiratory infections it is often difficult to sterilize the nipple properly which inturn may have deleterious effect on nutritional status of child as remarked by Paula MS et al.[6] It also has a direct effect on the mothers exposure to the risk of pregnancy because the period of amenorrhea may be shortened when breastfeeding is reduced or replaced by bottle feeding.

Present study showing the higher magnitude of bottle feeding (15.5%) signifies the practice in vogue in this tribal population though they reside away from urban area. This may be attributed to the absence of counselling in antenatal period and easy access to the purchase of feeding bottles to mimic urban counterparts. This is comparable with results of Wamani et al. at Western Uganda *(10%),* Bekele et al. among rural communities of Ethiopia (11.3%) and Pandey et al. in rural West Bengal, where 17.6% of infants under age six months had received bottle feeding, compared to 23.3% under age 12 months. This is in contrast to the observations of Banapurmath et al. from central karnataka (49.4%), Nirojini et al study in kashmiri pandits (86%) and Dogras(90%) Razia Chaudhry et al. from Lahore (50%)

A community based study from West Bengal among 647 children aged less than two years revealed no infants aged less than two months used bottle-feeding. However, on the whole 10.2% of the study children were bottle-fed.[3] Shiv lal et al study done among 335 mothers of urban migrant tribes in Jaipur revealed that no bottle feeding practices was done which is favourable sign though they resided in urban area with good accessibility contrary to our study where breast feeding practice has infiltrated quite widely into this tribal community though residing atleast 10-15 kms from the

outlets situated at taluk head quarters which sell feeding bottles which is fetched mostly by male members who come in search of daily wage work.

In the present study bottle feeding practice was significantly associated with joint family, single child and high SLI. Probable reasons may be due to lack of focused attention on the child in joint family along with more number of dependents on few economically productive age group persons, more attention to the first borne child believing that breast feeding gives more nutrition and doubt about inadequacy of milk production against the child's nutritional needs and affordability by families belonging to higher standard of Living. The practice being common among working mothers in the present study calls for effective protection through awareness, maternal entitlements and counselling. Bekele et al. in their study found that the residence, maternal education and occupation to be significantly associated with bottle feeding practice. Samina et al reported that the attributes associated with increased bottle use to be mother's older age, illiteracy and increased parity.

Inadequate milk secretion was the reason cited by 38% in the present study compared to 45% cited by Shankar et al in study done among rural women in Tamil Nadu and 58% in Banapurmath et al. This calls for a need to build confidence about the age appropriate adequacy of breast milk to the child.

However, there is still a ray of hope as evident by study done by Paula MS et al that have reported positive impact of lactation counselling of mothers about correct infant and young child feeding practice and sensitization of community based peer counsellors along with all cadres of health personnel about the same and hazards of bottle feeding on child's health through in-service training and regular reinforcement. This program can be evaluated through focus group discussions with health care providers and child care takers which was effective is documented by Nankunda et al and Kronberg et al. Educating prospective mothers about the correct feeding practices and hazards of bottle feeding on child health specially belonging to families living in poor environmental

conditions is an effective means to promote better feeding practices as evidenced by study conducted by Bland et al. in Antenatal clinic setting in South Africa which demonstrated that a simple and inexpensive counselling interventions along with home support had a great effect on EBF rates. The current study is a live demonstration that reaching the unreached should be prioritized activity of the national programs in the interest of the tribal/rural upliftment and welfare.

To conclude, there is need for concentrated efforts from both health and social welfare departments to design area-specific programmes to create an enabling environment for comprehensive nutrition and health education of mothers/care-givers, health and nutrition workers to protect, promote, and sustain the optimal IYCF practices in this tribal community so as to reach these unreached.

Acknowledgement

Authors would like to thank the management of JSS Medical College (A constituent college of JSS University), Mysore for providing permission to conduct the study and express their gratitude to all the study subjects.

5 References

1. Apurba S, Dipta KM, Tanman KP, Asit BS, Nirmal KM, Akhil BB. Infant and young child feeding practices in Bankura District, West Bengal, India. Journal of Health, Population and Nutrition 2010; 28(3):294-99.
2. Banapurmath CR, Nagaraj MC, Shobha Banapurmath, Nirmala Kesaree. Breast feeding practices in villages of central karnataka. Indian Paediatrics 1996; 33:477-79.
3. Bekele A, Berhane Y. Magnitude and determinants of bottle feeding in rural communities. East Afri Med j 1999; 76(9):516-9

4. Bland RM, Little KE, Coovadia HM, Coutsoudis A, Rollins NC, Newell ML. Intervention to promote exclusive breast feeding for the first 6 months of life in a HIV prevalence area. AIDS 2008; 22:883-91.

5. Kronborg H, Vaeth M, Olsen J, Iversen L, Halder I. Effect of early postnatal breastfeeding support: a cluster randomized community based trial. Acta Paediatrica 2007; 96(7): 1064-70.

6. Nankunda J, Tumwine J, Soltvedt A, Semiyaga N, Ndeezi G, Tylleskar T. Community based peer counsellors for support of exclusive breastfeeding: experiences from rural Uganda. International Breastfeeding Journal 2006; 1:19.

7. National Family Health survey. URL available from www.nfhsindia.org. [downloaded on 10.05.2012 at 13:00hrs]

8. Nirojini B, Payal Mahajan, Bandana B. A comparative study of breast feeding practices among kashmiri Pandits ad Dogras. Anthropologist 2004;6(4):261-63.

9. Pandey GK, Hazra S, Vajpayee A, Chatterjee P. Breastfeeding indicators from a rural community in West Bengal. Ind J Public Health. 1997;41:71–74.

10. Paula MS, Cheryl AL, Robert GD, Kenneth JG. Lactation counselling for mothers of very low birth weight Infants: Effect on maternal anxiety and infant intake on human milk. Paediatrics 2006; 117(1):67-75.

11. Razia C, Naheed H. Weaning practices and their determinants among mothers of Infants. Biomedica 2007;23:120-24.

12. Samina S, Waseem J, Farah N Determinants of bottle use amongst economically disadvantaged mothers. J Ayub Med Coll Abottabad 2006; 18(1):1-4.

13. Shankar R, Sangeetha B. Prevalence of Exclusive Breastfeeding practices among rural women in Tamil Nadu 2012;1:64-67.

14. Shiv L. Bhardwaj, Madan S. Rathore, Paliwal A. A Study of Breast Feeding and Neonatal Care Practices in some ethnic Communities in Periurban Slums at Jaipur Rajasthan. Anthropologist 2012 14(5): 459-65.

15. Vivek lal, Sanjay K Rai. The culture of bottle feeding. Indian Journal of Community Medicine 2009; 34 (3):247-48.

16. Wamani H, Astrøm AN, Peterson S, Tylleskär T, Tumwine JK. Infant and young child feeding in western Uganda: knowledge, practices and socio-economic correlates. J Trop Pediatr. 2005;51:356–61.

17. WHO 2008- The International Code of Marketing of Breast-Milk Substitutes. guidelines

Table 1 Age and sex wise distribution of the study population

Age Group (in months)	Sex		Total
	Male	Female	
0-12	09 (26.5)	13(18.9)	22(21.4)
13-24	11(32.4)	23(33.4)	34(33.0)
25-36	05 (14.7)	11(15.9)	16(15.5)
37-48	06(17.6)	11(15.9)	17(16.5)
49-59	03(8.8)	11(15.9)	14(13.6)
Total	34(33.0)	69 (67.0)	103(100.0)

Table 2 Socio demographic characteristics and its association with bottle feeding practices (N=103)

Socio demographic variable		Total number of children	Bottle feeding	*P**
Age of the child (in months)	0-12	22	01(4.5)	
	13-24	34	09 (26.5)	
	25-36	16	02 (12.5)	0.29
	37-48	17	02 (11.8)	

	49-59	14	02 (14.3)	
Sex	Male	34	07 (20.6)	0.38
	Female	69	09 (13.0)	
Mother's Age (in years)	16-20	19	01 (5.3)	0.97
	21-25	56	15 (26.8)	
	26-30	07	0 (0)	
	>30	03	0 (0)	
Mother's Occupation	Housewife	76	11 (14.5)	0.75
	Working	27	05 (18.5)	
Mother's Education	Illiterate/Primary	46	07 (15.2)	NS
	Middle school and higher	57	09 (15.8)	
Type of Family	Nuclear	50	03 (6.0)	**0.013**
	Joint	53	13 (24.5)	
Family Size	≤4	58	06(10.3)	0.110
	>4	45	10 (22.2)	
Place of delivery	Home	36	05 (13.9)	0.78
	Institutional	67	11 (16.4)	
Number of children	One child	35	09 (25.7)	**0.04**
	More than one child	68	07(10.3)	

Birth Order	First	61	12 (19.7)	0.18
	Second and above	42	04 (9.5)	
Standard of Living Index(SLI)	Low	32	02 (6.2)	**0.05**
	Middle	52	08 (15.4)	
	High	19	06 (31.6)	
Pallor	Yes	38	08 (21.1)	0.26
	No	65	08 (12.3)	
Illness(Diarrhoea/Respiratory Infection)	Yes	23	04 (17.4)	NS
	No	80	04 (15.0)	
Underweight	Yes	47	07 (14.9)	NS
	No	56	09 (16.1)	
Stunting	Yes	52	07 (13.5)	0.59
	No	51	09 (17.6)	
Wasting	Yes	78	11 (14.1)	0.52
	No	25	05 (20.0)	

Note: 1. Figure in parenthesis indicate percentage 2. * chi square test- where expected frequency was less than 5 Fischer's exact probability test used 3. Not significant if $P>0.05$