

Infant and Young Child Feeding (IYCF) practices in Udupi district, Karnataka

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Abstract

The IYCF practices have a great impact on the physical and mental development of the child. The objective of this study was to study the compliance to IYCF practices along with the factors influencing the same. Cross-sectional study was done in a community based survey. Children in the age group 18-40 months in and around Udupi were studied. 34% of the mothers initiated breast-feeding within an hour after birth. Exclusive breast-feeding for 6 months was practiced only by 9% of the mothers. 43% of the mothers started complimentary feeding at 6 months and 49% of the infants were breast fed for 2 years. Lack of knowledge among the mothers is an important factor responsible for low compliance and therefore there is a need for greater awareness that can be met with improvised health education sessions/ programs carried out by the hospitals and Anganwadis during antenatal and post natal checkups.

Key words: Infant and Young Child Feeding (IYCF), breast feeding, mother's knowledge assessment

Introduction

In India, one third to half of the deaths taking place in children under 5 years of age is due to under-nutrition (IYCF Guidelines, Government of India, 2013). Poor breast feeding and

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complimentary feeding practices are wide spread. Worldwide, it has been estimated that only 34.8% of infants are exclusively breast fed for the first 6 months of life, the majority receiving some other food or fluid in the early months (WHO, 2009). About 70% of the world's 182 million stunted children aged less than 5 years live in Asia. One in every third malnourish children lives in India (Raval et al. 2011). From HUNGaMA Survey Report 2011, in 100 focus districts 58.8% of children are moderately or severely stunted, 42.3% are moderately or severely underweight and 11.4% are moderately or severely wasted (HUNGaMA Survey Report, 2011). In India for the period of 2006-2010, 43% were either severely or moderately underweight, 20% had wasting and 48% of the children were stunted who were less than 5 years of age (UNICEF, 2012). India ranks 46th in the world when under 5 mortality rate is concerned (UNICEF, 2012).

Infant and Young Child Feeding (IYCF) is a set of well-known and common recommendations for appropriate feeding of newborn and children under two years of age and is a critical component of care in childhood. It is a major determinant of short and long term health outcomes in individuals, and hence of social and economic, development of communities and nations. Optimal IYCF practices rank among the most effective interventions to improve child health. Breast feeding is the first fundamental right of the child (WHO, 2009). Early and exclusive breast feeding is also recognized as one of the most effective interventions for child survival to address morbidity and mortality relating to three major conditions i.e. neonatal infections, diarrhea and pneumonia (IYCF Guidelines, Government of India, 2013). Various studies that have been done in the country have shown that practices like pre lacteal feeding, giving water to the child before 6 months, early initiation of complimentary feeding and bottle feeding are prevalent and are contributing to the poor growth and development of the infants majorly relating to lack of awareness and traditional/religious practices being followed (MCH Community 2008; Raval et al. 2011; Kulkarni et al. 2004).

Optimal Infant and Young Child Feeding (IYCF) is presented in the WHO/UNICEF Global Strategy for Infant and Young Child Feeding (2003) as follows: "As a global public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development

and health. Thereafter, to meet their evolving nutritional needs, infants should receive safe and nutritionally adequate complementary foods while breastfeeding continues for up to two years of age or beyond. Exclusive breastfeeding from birth is possible except for a few rare medical conditions as specified by WHO and UNICEF, and virtually every mother can breastfeed. In addition, a growing body of recent evidence underscores the important global recommendation that breastfeeding be initiated within the first hour of birth". (WHO/UNICEF 2003)

Guidelines for enhancing Optimal IYCF practices as recommended by the Ministry of Health and Family Welfare, Government of India in 2013 are as follows-

- a. Early initiation of breastfeeding; immediately after birth, preferably within one hour.
- b. Exclusive breastfeeding for the first six months of life i.e. 180 days (no other foods or fluids, not even water; but allows infant to receive ORS, drops, syrups of vitamins, minerals and medicines when required)
- c. Timely introduction of complementary foods (solid, semisolid or soft foods) after the age of six months i. e 180 days.
- d. Continued breastfeeding for 2 years or beyond
- e. Age appropriate complementary feeding for children 6-23 months, while continuing breastfeeding. Children should receive food from 4 or more food groups [(1) Grains, roots and tubers, legumes and nuts; (2) dairy products ; (3) flesh foods (meat fish, poultry); (4) eggs, (5) vitamin A rich fruits and vegetables; (6) other fruits and vegetables] and fed for a minimum number of times (2 times for breastfed infants 6-8 months; 3 times for breastfed children 9-23 months; 4 times for non-breastfed children 6-23 months)
- f. Active feeding for children during and after illness.

IYCF and child survival

Of all proven preventive health and nutrition interventions, IYCF has the single greatest potential impact on child survival. Therefore, reduction of child mortality can be reached only when nutrition in early childhood and IYCF specifically are highly prioritized in national policies and strategies (IYCF Program Guide UNICEF, 2011).

The 2003 landmark Lancet Child Survival Series ranked the top 15 preventative child survival interventions for their effectiveness in preventing under-five mortality. Exclusive breastfeeding up to six months of age and breastfeeding up to 12 months was ranked number one, with complementary feeding starting at six months number three. These two interventions alone were estimated to prevent almost one-fifth of under-five mortality in developing countries (Jones et al. 2003).

NFHS-3 has reported the compliance to timely initiation of breast feeding at 25%, 46% for exclusive breast feeding and 53% for timely initiation of complimentary feeding for India and for Karnataka it has been reported at 36%, 58% and 73% respectively. Karnataka's compliance has improved over the years and its better as compared to National data. It ranks among top 10 for all the practices in the country.

Government of Karnataka as a pilot project started IYCF training program for the front line workers / service providers in 2009, acknowledging the need to promote the breast feeding practices at the earliest to enhance the knowledge and skills among expectant mothers and to reduce IMR and under five mortality.

Up to February 2014 totally 628 Staff Nurses (SNs) /Auxiliary Nurse Midwives (ANMs) /LadyHealth Visitors (LHVs) were trained in IYCF at 4 districts namely Mysore, Kolar, Belgaum and Gulbarga. In 2015, it is planned to train 4500 SNs, ANMs/LHVs in 150 batches. (KARNATAKA PIP, 2014-17)

Religion plays an important role in terms of compliance to these practices. In examining the barriers to breastfeeding in India, 'Save the Children' organization found that family and religious customs dictate giving newborns other liquids before breastmilk to remove their first stools. Other studies across India also show that over two-thirds of those who discard the colostrum cite religious beliefs, while others say it is thick, unclean and its removal helps children suckle more easily.

Pre lacteal feed is common among hindus and muslims due to the religious beliefs and traditions. Muslims believe in giving honey or date dipped in honey to the child after birth so that the child develops a sweet tone and voice. The Hindus, are believed to give pre lacteal feed at the time of ceremony which is done on the birth of the child. In this, a vitreous family member writes "Ohm" on the tongue of the child with honey as it is believed by doing this the good qualities of that person will be passed on to the new born.

Among Hindus, colostrum is discarded a lot of times due to the belief that first milk is dirty and is not good for the child. Men eat first and women last and poorly, in many rural families in Udupi region and this leads to maternal malnutrition, leading to high maternal and infant mortality rates. The food habits of people belonging to different religions vary widely. Majority of hindus are vegetarians. Hindus don't eat beef, thinking it is a sacred animal and Muslims don't eat pork, thinking it is a scavenging animal that feeds on human excreta and garbage. There is inadequate physical activity in people belonging to both the religions. Lack of awareness and time are the major factors contributing to this.

There have been studies done in Karnataka regarding exclusive breast feeding; initiation of complementary feeding and pre lacteal feeding but not after the strategy about infant and young child feeding was given by the WHO in 2002. Some of the studies done in the past were in rural areas of Central Karnataka (Banapurmath et al 1996), South Karnataka (Chandrashekhara et al 1995), Kengeri, rural Bangalore (Madhu et al 2009).

Therefore this study was done in Udupi, Karnataka, with the aim of assessing the compliance of key IYCF practices as recommended by WHO and UNICEF, to determine the factors influencing the same.

Subjects and methods

A community based, cross sectional study was conducted in Udupi district of Karnataka among children aged 18 months to 40 months over a period of four months. Data for 250 children was collected in which two were dropped out due to lack of proper information. Simple random sampling with house to house survey was done and all the children in this age group who were residents of the area were included in the study.

Infants who were immuno-compromised, were born pre maturely, who have any disabilities like cleft lip, nursing bottle syndrome or any other medical ailment like mental or physical retardation which would interfere with their suckling ability were not included in the study.

The mothers of all the infants included in the study were interviewed regarding the infant and young child feeding practices followed by them after taking an informed consent. Semi structured questionnaire was used for interviewing the mothers. A knowledge assessment questionnaire was also used which classified the mothers on the basis of their knowledge regarding various components relating to the infant feeding practices. They were asked 20 questions and then classified as having excellent, good, average and below average knowledge. SPSS (version 16.0) was used for analysis of data.

Results and discussion

Out of the 248 children studied, 54% were boys and 46% were girls. Table I gives the complete information regarding the socio demographic profile of the population studied.

Table I: Socio demographic profile of the studied population

Parameter	Categories	Frequency (N=248)	(%)
Gender	Male	134	54
	Female	114	46
Age of the kid (in months)	18-24	100	40
	25-30	63	26
	31-36	60	24
	>36	25	10
Religion	Hindu (Subject group 1)	139	56
	Muslim (Subject group 2)	95	38
	Christian (Subject group 3)	14	6
Socio Economic Status of the Family (Modified Kuppaswamy Scale, 2007)	Upper	12	5
	Upper Middle	120	48
	Lower Middle	64	26
	Upper Lower	52	21
Mother's educational qualification	Lower	0	0
	Professional, P.G. and above	22	9
	B.A. or B.Sc.	31	13
	Intermediate/High School Diploma	51	21
	High School	68	27
	Middle School	22	9
Work status of the mother	Primary School	43	17
	Illiterate	11	4
Mother's knowledge assessment status	Working	28	11
	Non-Working	220	89
Mother's knowledge assessment status	Excellent	19	7
	Good	84	34
	Average	128	52
	Below average	17	7

Table II summarizes the compliance data related to key IYCF practices.

Table II: Summary of the compliance to key IYCF practices

Component	Compliance	Frequency (N=248)	(%)
Timely Initiation of Breast Feeding (<1 hour from Birth)	Yes	83	34
	No	165	66
Exclusive Breast Feeding (for 6 months)	Yes	23	9
	No	225	91

months)				
	Timely Initiation of Complimentary Feeding (at 6 months)	Yes	107	43
		No	141	57
Continued Breast Feeding (for 2 Years)	Yes	122	49	
	No	126	51	
Compliance to the Policy	Compliance to all the 4 Practices	6	2	
	Compliance to any 3 Practices	27	11	
	Compliance to any 2 Practices	71	29	
	Compliance to any 1 Practice	88	35	
	Zero Compliance	56	23	

Pre lacteal feeding

30% of the 248 infants had received pre lacteal feed and amongst these the most commonly given pre lacteal feed was water (33%). According to NFHS-3 report, 57% and 30% of the children in India and Karnataka respectively received pre lacteal feed (Arnold et al 2009). The rate of pre lacteal feeding in the current study is less as compared to the reported data for other parts of India (Fazilli et al. 2011; Raval et al. 2011; Kulkarni et al. 2004; Hungama Survey 2011). The most common reason for giving pre lacteal feed was observed to be traditional practice and religious belief among the subject group 2. They give prelacteal feed which is mainly date dipped in water or honey because they believe the first thing that should touch the tongue of the child should be something sweet. Though the practice of giving pre lacteal feed is now decreasing because of the counseling mothers receive during ante natal check-ups and also at the time of delivery which is evident from the results. Only 29% of the mothers who had gone for antenatal checkups monthly had given pre lacteal feed as compared to 85% of the mothers who had gone only once or twice for ante natal checkup and given pre lacteal feed. This difference was found to be significant (Table III). 20% of the mothers who had normal delivery gave pre lacteal feed whereas 46% of the mothers who had C-section had given pre lacteal feed (Table III). The mothers who had C-section found it difficult to initiate breast feeding early due to pain or unconsciousness and therefore gave water or formula milk to the child. Only 1 of the 5 infants born at home were given pre lacteal feed which was against the reported data of pre lacteal feeding being more commonly practiced in case of home deliveries (Kulkarni et al. 2004). The significant association between the place of delivery and the practice of giving pre lacteal feed (Table III) was due to the practice of giving formula milk to all the children immediately after birth at one particular nursing home. All the infants who were born as twins or triplets received pre lacteal feed whereas deliveries in which some complication happened, 68% such infants received pre lacteal feed while in the absence of complication only 23% had received pre lacteal feed. The practice of giving pre lacteal feed is less common among the mothers who had better knowledge.

Initiation of breast feeding

Timely initiation of breast feeding within 30 minutes of birth was done for 13% of infants and for another 21% it was done within an hour. 14% of the infants were given breast milk after 24 hours of birth. 93% of the infants were given colostrum however it was

discarded by 19% of the mothers at least once. 51% of the mothers who had discarded colostrum did so because they believe it to be dirty and not to be given to the child. Advice from health professional was the most common source of information about the awareness of colostrum. 23% of the infants were given liquids other than breast milk after the initiation of breast feeding in the first 7 days. Rate of initiation of breast feeding within 30 minutes was found to be low as compared to NFHS-3 data for Karnataka as well as for the country however the rate of initiation within an hour was observed to be the same in the current study as for Karnataka data given by NFHS-3 (MCH Community 2008)(Figure I).

Religion showed significant association with the timely initiation of breast feeding (Table 4). It was found to be highest among the subject group 3 (71%) whereas it was almost the same for subject group 1 and subject group 2 at 39% and 34% respectively. It could be high in subject group 3 as the number of participants belonging to this group were less so higher percentage and most of them were educated mothers belonging to higher income group. This result would have been different in case there would have been more subjects belonging to group 3.

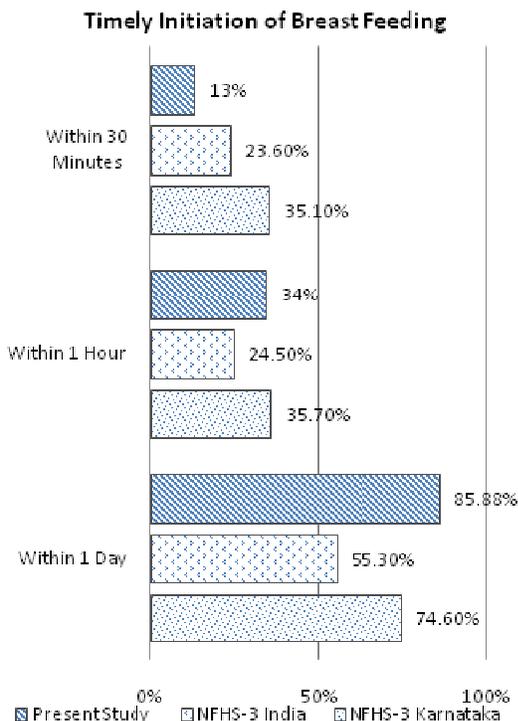


Figure I: Comparison of timely initiation of breast feeding within an hour with NFHS-3 Data.

In Hindu communities, breastfeeding is nearly universal and continues for most children beyond infancy. Hindu Vedic literature and ancient ayurvedic texts underscore the importance of breastfeeding and the Vedas mention that breast milk is symbolic of longevity and nectarine sweetness. Although almost every Hindu child gets some breastfeeding, exclusive breastfeeding for the recommended duration and early initiation of breastfeeding are not that common. Babies are not usually feed at the breast for 24-72 hours afterbirth, until 'true milk' comes in. They are given 'pre-lacteal' feeds, not colostrum. These might be honey, ghee or jaggery- it will be sweet. As birth of a baby is a celebration for family and society, breastfeeding is strongly influenced by cultural and religious ceremonies. In today's

context, although women may receive guidance from health care professionals, relatives—especially grandmothers—have an important influence on breastfeeding practices (NirupamaLaroya and Deeksha Sharma, 2006).

Timely initiation was more common among the mothers who were in joint families or extended families as compared to the ones in nuclear families which could have been due to encouragement and help of mothers or other family members which was lacking amongst the nuclear families. Type of delivery has been reported to be a major factor affecting the timely initiation of breast feeding (Patel et al. 2011). Mothers who undergo C-sections find it difficult to initiate breast feeding within an hour. This was observed in the present study also with only 21% of the mothers with C-sections were able to initiate breast feeding within an hour and 74% of the mothers with normal deliveries were able to do so (table IV).

Exclusive breast feeding

Exclusive breast feeding for 6 months was done only for 9% of the studied infants and 52% were exclusively breast fed for at least a month (Table V), which was in comparison with the NFHS-3 data which reported to be 58% and 46% for Karnataka and India respectively (MCH Community 2008). Amongst the exclusively breast fed infants, 70% were exclusively breast fed for less than 3 months. The main factors affecting the practice of exclusive breast feeding are starting complimentary feeding at 4 months and giving water or formula milk to the child before 6 months due to the traditional culture, hot weather and inadequate breast milk. On comparing the child's first intake of water it was observed that 85% of the infants received water in the first five months of life in the current study which was high as compared to the 58% reported by the HUNGAMA Report 2011 (figure II). 63% of the infants were partially breast fed whereas the other 28% were pre dominantly breast fed. The month wise rate of exclusively breast feeding was observed to be lower in the present study when compared to a study done in Karnataka (Banapurmath et al. 1996).

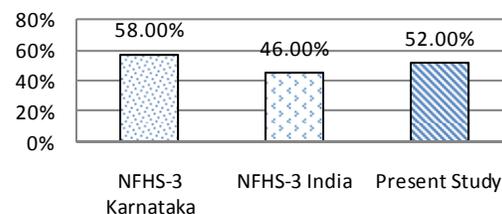


Figure II: Exclusive Breast Feeding (0-6 months) comparison with NFHS-3

Timely Initiation of complimentary feeding

43% of the infants were given semi solids at 6 months followed by 40% who were given between 4-6 months due to the older belief that complimentary feeding should be started by 4 months. 11% were given before 4 months and 6% were given after 6 months. The mean age of initiation of complimentary feeding was observed to be 5.64 months. The infants weaned after 6 months was mainly due to ignorance among the mothers about the appropriate time and initiation before 4 months was due to elders' advise in the family, insufficient breast milk and advice from health professional (Table VI). Kulkarni et al. (2004) had reported that up to 82.5% of 6 months old children in their study had received complimentary food which was more than the reported value of 47.5% from the present study (Figure III).

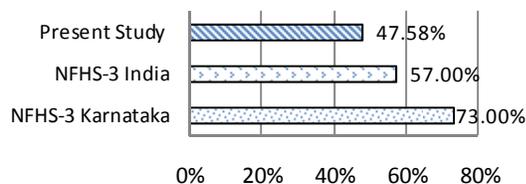


Figure III: Initiation of Complementary Feeding (6-9 months) comparison with NFHS-3

In the present study timely initiation was done for more children, but the ratio of children for whom initiation was done before 6 months was much higher as compared to the reported data (Fazilli et al. 2011) and initiation was done for 57.3% of infants in the age of 6-10 months, whereas in the present study this was observed to be 49.5%(Banapurmath et al. 1996). 29% of the infants received a form of rice as the first food followed by 26% who received Cerelac.

Table III: Factors affecting Pre lacteal feeds practice

Association of Pre Lacteal Feed Given with					
No. of Siblings	Yes	No	Total	χ^2 Value	p-value
<1	34	75	109	9.482 [*]	<0.05
1-2	32	94	126		
3-4	8	4	12		
>4	0	1	1		
Total	74	174	248		
Frequency of Antenatal checkup	Yes	No	Total	χ^2 Value	p-value
Monthly	67	164	231	16.695 ^{**}	<0.01
2-3 times	6	1	7		
Fortnightly	1	0	1		
Not applicable	0	4	4		
Doctor's advice: Every 40-45 days initially & then monthly	0	2	2		
Total	74	174	248		
Delivery Type	Yes	No	Total	χ^2 Value	p-value
Normal	32	125	157	18.277 ^{**}	<0.01
Caesarean Section	42	49	91		
Total	74	174	248		
Delivery Place	Yes	No	Total	χ^2 Value	p-value
Government Hospital	13	31	44	15.414 [*]	<0.05
RMCW Home	2	2	4		
Private Hospital	48	132	180		
Nursing Clinic	10	5	15		
Home	1	4	5		
Total	74	174	248		
Type of Birth Outcome	Yes	No	Total	χ^2 Value	p-value
Singleton	69	172	241	9.591 [*]	<0.05
Twins	3	1	4		
Triplets	3	0	3		
Total	74	174	248		
Complications	Yes	No	Total	χ^2 Value	p-value
Yes	25	12	37	29.569 ^{**}	<0.01
No	49	162	211		
Total	74	174	248		
Mother's knowledge score	Yes	No	Total	χ^2 Value	p-value
Excellent	2	17	19	9.613 [*]	<0.05
Good	19	65	84		
Average	45	83	128		
Below average	8	9	17		
Total	74	174	248		

* significant at 5% level; ** significant at 1% level

69% of the infants were currently being fed from a separate plate while the rest shared it either with an elder family member or with siblings. 48% of the infants were bottle fed in the present study which was very high as compared to 15% as reported by NFHS-3² but not much of a difference was observed as compared to the data reported for studies done in Karnataka(Banapurmath et al. 1996; Mallikarjuna et al. 2002). The high percentage of bottle feed could have been because of the marketing of these products by companies and promotion by doctors and health care representatives and commercialization

Continued breast feeding upto two years

95% of the mothers continued to breast feed after starting complimentary feeding. 49% of the infants were breast fed up to 2 years of age. Unwillingness/ ignorance was the most common reason for early cessation of breast feeding (36%) followed by insufficient breast milk production (29%). The percentage of infants who were breast fed for 20-23 months was almost half of that reported by Sinhababu et al. (2010) and also in comparison to the study done in Karnataka (Banapurmath et al. 1996). Continued breast feeding showed significance only with the religion (p<.01; table VII) and it was observed to be the lowest among the subject group 2 owing to close interval between pregnancies.

According to a community based cross-sectional study among lactating mothers on breast feeding practices and associated factors in Bhaktapur District of Nepal, mothers who were from Hindu religious background were 1.95 times more likely to have good breast feeding practice than the mothers from other religions (Islam, Buddhism) (Paudel DP, Giri S. 2014)

Tables III to VII summarize the factors affecting compliance to IYCF practices

Table IV: Factors affecting Compliance to Early Initiation of Breast Feeding

Association of Initiation of Breast Feeding(<1hr of birth)					
Religion	Yes	No	Total	χ^2 Value	p-value
Subject group 1	41	98	139	10.047 ^{**}	<0.01
Subject group 2	32	63	95		
Subject group 3	10	4	14		
Total	83	165	248		
Type of Family	Yes	No	Total	χ^2 Value	p-value
Joint	49	83	132	7.592 [*]	<0.05
Nuclear	33	64	97		
Extended	1	18	19		
Total	83	165	248		
Type of Delivery	Yes	No	Total	χ^2 Value	p-value
Normal	67	90	157	16.290 ^{**}	<0.01
Caesarean Section	16	75	91		
Total	83	165	248		
Complications	Yes	No	Total	χ^2 Value	p-value
Yes	7	30	37	4.134 [*]	<0.05
No	76	135	211		
Total	83	165	248		

* Significant at 5% level; ** significant at 1% level

Table V: Factors affecting Compliance to Exclusive Breast Feeding

Association of Exclusive Breast Feeding (6 months) with					
Antenatal Check Up	Yes	No	Total	χ^2 Value	p-value
Yes	21	223	244	8.014 ^{**}	<0.01
No	2	2	4		
Total	23	225	248		
Mother's	Yes	No	Total	χ^2 Value	p-value

Knowledge Score					
Excellent	6	13	19	15.358**	<0.01
Good	10	74	84		
Average	6	122	128		
Below Average	1	16	17		
Total	23	225	248		

** Significant at 1% level

Table VI: Factors affecting compliance to timely initiation of complementary feeding

Association of timely initiation of complimentary feeding with					
Working Status of the Mother	Yes	No	Total	χ^2 Value	p-value
Non working	100	120	220	4.237*	<0.05
Working/ student	7	21	28		
Total	107	141	248		
Mother's Knowledge Assessment Status	Yes	No	Total	χ^2 Value	p-value
Excellent	10	9	19	20.038**	<0.01
Good	50	34	84		
Average	45	83	128		
Below Average	2	15	17		
Total	107	141	248		

* Significant at 5% level; ** significant at 1% level

Table VII: Factors affecting compliance to continued breast feeding

Association of continued breast feeding (2 Years) with					
Religion	Yes	No	Total	χ^2 Value	p-value
Subject group 1 Hindu	90	49	139	33.353**	<0.01
Subject group 2	25	70	95		
Subject group 3	7	7	14		
Total	122	126	248		

** Significant at 1% level

Conclusion

The study shows that the compliance to IYCF practices is low in this area particularly the rate of exclusive breast feeding for 6 months. It was found that mother's educational qualification has no significant impact on compliance; however mother's knowledge assessment status showed significant association with the compliance to WHO IYCF practices. A significant association was found between the knowledge status and the exclusive breast feeding for 6 months ($p=.002$) and timely initiation of complimentary feeding at 6 months ($p<.001$). The extent of compliance to IYCF policy also showed statistically significant association with the knowledge assessment status of the mother ($p = .008$). Socio economic status of the family and child's gender did not show any association with the compliance to key IYCF practices. Some of the common reasons which were found to be responsible for the poor compliance in this study group included religion ($p=0.007$), place of delivery ($p<.05$), regular ante-natal visits ($p=.005$) and knowledge assessment status of the mother. Timely initiation of breast feeding within an hour of birth was found to more in normal delivery ($p<.001$). Presence of complication during delivery was found to have statistically significant association with the timely initiation of breast feeding ($p=.042$) and the practice of continued breast feeding up to 2 years (p value= .003). Mother's work status was found to have statistically significant association with the timely initiation of complimentary feeding at 6 months ($p= .040$).

Lack of knowledge among the mothers is an important factor responsible for low compliance as the mother's with better knowledge assessment status showed better compliance.

Under nutrition, stunting and wasting have been shown to be reduced with optimal feeding practices. Also a lot of advantages of breast feeding, exclusive breast feeding and timely complimentary feeding have been shown which are beneficial both for the infant, the mother and also the family, like reduced neonatal & infant mortality, decreased risk of common childhood infections and allergies, increased immunity, etc.

Understanding the differences in beliefs and practices regarding infant feeding and rearing practices is important for the successful delivery of health messages and services to diverse populations especially in a country like India with many religion and diverse cultural beliefs and customs, which are followed to the core.

Since the time of intervention a lot of policies and strategies have been chosen by the WHO and the governments of different countries to have an effective infant and young child feeding program and as a result the state of health has also been shown to have improved. When we look at different WHO and NFHS reports we find that in India there has been an improvement since the time of intervention and over the years although it has not reached a satisfactory level of even 50%, in Karnataka specifically, we find that all the 3 key IYCF practices are being followed better than the average of India on the whole (NFHS-3, 2005-2006)

Recommendation

The IYCF practices are strongly influenced by what people know, think and believe and also affected by social circumstances and economic factors. Effective communication for behavioral change is necessary for ensuring optimal infant feeding.

Awareness regarding IYCF practices and their benefits in Maternal and Child Health (MCH) is poor leading to poor compliance. It is important to educate mothers during the ante-natal visits. The situation can be improved by training of grass root health workers on IYCF policies of WHO and MoHFW, Govt. of India, stressing on the benefits of appropriate feeding practices by the hospitals, Rural Maternity & Child Welfare (RMCW) homes and Anganwadi centres and making these services universally available along with intensive IEC (Information, Education & Communication) efforts to generate demand for these services.

Most of the world's religions place particular emphasis on the total care of the child. In the context of the overwhelming evidence, the involvement of religious teachings in the promotion of breastfeeding is quite debatable. It is well established that religious ideologies influence the human mind and a person's way of living. The United Nations Children's Fund (UNICEF) also acknowledges the role of religious teachings in health programs (UNICEF, 2003).

Health professionals traditionally encourage mothers to breast-feed by giving information on benefits of breastfeeding for the infant and the mother herself. The behavior of women can be easily modified through religious teachings in a positive way. Breastfeeding may be affected by religious ideologies using the doctrine in religious texts. Counseling the mothers by reinforcing the cultural and religious practices supporting breastfeeding can help enormously. Use of local religious teachings can bring positive changes in the implementation of health programs (Ifikhar Alam and Safia Begum, 2014). In addition, public nutrition education that promotes infant and young child feeding

as defined by WHO, taking into account social-cultural factors is needed and recommended.

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