

Socio-cultural determinants of breast feeding practices in Dharwad district of Karnataka

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ABSTRACT

WHO recommends mothers worldwide to exclusively breastfeed infants for the child's first six months to achieve optimal growth, development and health. The infant mortality rate in India is 40/1000 live births and 31/1000 live births in Karnataka according to NFHS-4 report released in 2013. In India, breastfeeding is culturally well accepted but inadequately practiced, partly due to ignorance. Lack of knowledge, prevailing misconceptions and cultural taboos significantly contribute to undesirable breastfeeding practices such as delayed initiation and discarding of colostrum. In this context the present study was conducted to study the knowledge, attitude and breast feeding practices among the lactating mothers in Dharwad district of Northern Karnataka. A cross-sectional study was conducted in rural and urban areas of Dharwad district, Karnataka. The population of the study consisted of mother –infant dyads, where the infants were in the age group of 3months to 24 months and their mothers from rural as well as urban area of the district. The sample comprised of 300 women of whom 200 were from rural area and 100 from urban area in the age range of 17-45 years. The tools used for the study were Socio – economic status scale developed by Aggarwal *et al.* (2005) and a self structured questionnaire to document the mother and child health characters, demographic profile, feeding practices, patterns and knowledge of mothers towards breast feeding. Iowa Infant Feeding Attitude Scale (1999) was used to assess maternal attitude towards infant feeding and information regarding feeding choice. The results indicated that 56.33 per cent breastfed the baby within 1hr and 26 per cent fed after 3 days. Majority of the mothers fed colostrum (71.67%) and 28.33 per cent discarded the colostrum. 51.33 per cent mothers gave prelacteal feeds. 48.7 per cent mothers practiced exclusive breast feeding. Majority of mothers both in urban and rural area had medium level knowledge and attitude towards breast feeding. Breast feeding knowledge had significant association with feeding practices while SES had no impact.

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INTRODUCTION

Scientific evidence has acknowledged breast feeding as a gold standard for the infant's survival, health and development. It is believed to be the best start of

infant life because of its nutritional, immunological and psychological benefits (Elizebeth, 2015). WHO recommends mothers worldwide to exclusively breastfeed infants for the child's first six months to achieve optimal growth, development and health. 44 per

cent under five deaths occur in first 28 days of life. The infant mortality rate in India is 41/1000 live births and 28/1000 live births in Karnataka according to NFHS-4 report released in 2015-16.

Globally, there is consistent and substantial evidence that early, exclusive, and continued breastfeeding through 23 months significantly reduces neonatal and child mortality. A technical brief on the impact of early initiation of breastfeeding on newborn deaths (Oot *et al.*, 2015) estimated that initiation of breastfeeding within the first hour of birth could prevent 20 per cent of neonatal deaths and reduces the risk of infection related neonatal mortality by 45 per cent. The epidemiological evidence shows that, if every child was breastfed within an hour of birth, given only breast milk for their first six months of life, and continued breastfeeding upto the age of two years, about 800,000 child lives would be saved every year. The Lancet Nutrition Series, 2016 also reinforced the significance of optimal IYCF (Infant and Young Child Feeding) on child survival. Optimal IYCF, especially exclusive breastfeeding, was estimated to prevent potentially 1.4 million deaths every year among children under five (out of the approximately 10 million annual deaths). According to the Nutrition Series, over one third of under-five mortality is caused by under nutrition, in which poor breastfeeding practices and inadequate complementary feeding play a major role.

In India, breastfeeding is culturally well accepted but inadequately practiced, partly due to ignorance. Lack of knowledge, prevailing misconceptions and cultural taboos significantly contribute to undesirable breastfeeding practices such as delayed initiation and discarding of colostrum. According to the NFHS-4 report the exclusive breastfeeding rates in India is 54.9 per cent and in Karnataka is 54.2 per cent. Despite impressive gains in a number of countries over the last decade, global breastfeeding rates have seen only slow progress since 1995. Improvements in breastfeeding rates are critical to the attainment of the Millennium Development Goals and Post- 2015 Sustainable Development Goals.

Although breastfeeding is a universal phenomenon in India, it is usually started after 3-4 days and the practice of feeding prelacteal feeds like honey, sugar water, gutti (a prelacteal feed prepared by rubbing almonds and other herbs), water, etc is common. Increased use of infant formula and substitutes too early in a baby's life is also observed (Parveen *et al.*, 2012 and Ahmed *et al.*, 2014).

In this context the present study was conducted to study the knowledge, attitude and breast feeding practices among the lactating mothers in Dharwad district of Northern Karnataka.

MATERIAL AND METHODS

A cross-sectional study was conducted in rural and urban areas of Dharwad district, Karnataka. The population of the study consisted of mother –infant dyads, where the infants were in the age group of 3 months to 24 months and their mothers from rural as well as urban area of the district. The sample comprised of 300 women of whom 200 were from rural area and 100 from urban area in the age range of 17-45 years. Purposive Proportionate random sampling technique was employed. The tools used for the study were socio – economic status scale developed by Aggarwal *et al.* (2005) and a self structured questionnaire to document the mother and child health characters, demographic profile, feeding practices, patterns and knowledge of mothers towards breast feeding. Iowa Infant Feeding Attitude Scale (1999) was used to assess maternal attitude towards infant feeding and information regarding feeding choice. Higher scores on attitude and knowledge indicate higher attitude and knowledge among mothers. The rationale behind the study was that the prevalence of exclusive breast feeding for six months is 16.8 per cent in Dharwad district. Data were entered in CSPro (6.3) version and analysed using SPSS 16.0 version. Differential research design was employed to compare between exclusively breast fed and non-breast babies. The data on birth weight of the baby and haemoglobin was obtained from the mother's card issued by health department. Prior to data collection verbal consent was taken from the mothers who participated in the study. A pilot study was conducted before collecting data and the tools were pretested and found highly reliable.

OBSERVATIONS AND ANALYSIS

A total of 300 mothers having children aged 0-6, 6-12, 12-24 and above 24 were interviewed. The background characteristics and maternal and child health characteristics are presented in Table 1 and 2. 200 (66.7%) mothers were from rural area and 100 (33.3%) were from urban area. The age of the mothers ranged from 18-40 yrs with a mean \pm SD of 25.63 \pm 4.08 and

majority of them belonged to Lingayat caste (higher caste) of Hindu religion which is predominant in the region. The educational background shows that 12.67 per cent were illiterates and most of them had primary/Secondary education (43.33%) and only 8 per cent were post graduates. Majority of mothers were home-makers (88%) and lived in joint family. The family size ranged from 3-20 and majority of mothers belonged to lower middle (44.33%) and upper middle category (36.33%).

Male children were more (52%) than female (48%) children. Majority of the children were in the age group of 6-12(31%) and 12-24(53) years with a mean \pm SD of

14.2 \pm 6.46 years. Among 300 children, both first and second born were 41 per cent and third and above were 18 per cent. Majority of children were singletons (97.67%) and were born in public hospital (58%) and 92 per cent were in the moderate anaemia category (92%) at the time of delivery.

Breast feeding practices and prevalence are presented in Table 3. 56.33 per cent breastfed the baby within 1hr and 26 per cent fed after 3 days. Majority of the mothers fed colostrum (71.67%) and 28.33 per cent discarded the colostrum. The common reasons given by mothers for not feeding colostrum were cultural belief,

Table 1 : Socio- demographic characteristics of the sample			(n=300)
Sr. No.	Characteristics	Category	No (%)
1.	Locality	Rural	200(66.67)
		Urban	100(33.33)
2.	Age of mother(yrs)	18-20	14(4.66)
		21-25	167(55.67)
		26-30	85(28.33)
		31-35	26(8.67)
		36-40	08(2.67)
3.	Religion	Hindu	258(86)
		Muslim	38(12.66)
		Christian	02(0.67)
		Jain	02(0.67)
4.	Caste	Lingayat /Brahmin(General)	141(47)
		Scheduled caste	41(13.67)
		Scheduled tribe	24(8)
		Other backward caste	94(31.33)
5.	Education of mother	Illiterate	38(12.67)
		Primary/Secondary	130(43.33)
		PUC/Diploma	59(19.67)
		Graduation	49(16.33)
		Post graduation	24(8.0)
6.	Status of mother	Working	36(12)
		Home-maker	264(88)
7.	Family type	Nuclear	133(43.33)
		Joint	167(55.67)
8.	Size of family	≤ 5	175(58.33)
		6-10	112(37.33)
		11-15	12(4.0)
		16-20	01(0.33)
9.	SES of the family	Upper high	11(3.67)
		High	22(7.33)
		Upper middle	108(36.0)
		Lower middle	133(44.33)
		Poor	26(8.67)

impure milk, affects the health of new born, insufficient milk, mother not able to feed due to illness, low birth/premature baby, etc. 51.33 per cent mothers gave prelacteal feeds and the most common prelacteal feeds fed were gripe water (58%), gutti (46%), formula (46%), sugar water (37%), glucose water (33%), honey (29%) and water (28%). The reason for feeding water was that it was necessary to quench thirst and it soothes fretfulness. The results also revealed that duration of breast feeding for 1-2 years was 48.3 per cent and 6 months to 1 year was 35 per cent. However 4.7 per cent fed for less than 3 months and 9.3 per cent for 3-6 months. The rate of exclusive breast feeding was 48.7 per cent and 64.66 mother's practised improper weaning practices like introducing weaning foods from 2-3 months or not weaning up to 9-12 months. Similar results were found by the studies conducted by Arya *et al.* (2015) where more than 50 per cent mothers had initiated breast feeding within one hour and feeding prelacteal feeds was not uncommon. Ulak *et al.* (2012) reported that 57 per cent initiated breast feeding within one hour and 91 per cent

had fed colostrum. Parveen *et al.* (2012) also found that 70.5% practised colostrum feeding and 62.3% did not practise exclusive breast feeding. However the exclusive breast feeding percentage (9%) was very low in the study. Also the study conducted by Subbiah and Jegannathan (2012) also revealed that more than 50 % of mothers fed prelacteal feeds. However the study conducted by Samdarshi *et al.* (2016), Joshi *et al.* (2014) and Arya *et al.* (2015) reported very lower rate of breast feeding initiation (< 37%) and higher rate of prelacteal feeding (>90%).

Breast feeding knowledge and attitude level of majority of mothers (Table 4) was found to be medium in both urban as well as rural area. 67 per cent of the urban mothers and 40.7 per cent of rural mothers had medium knowledge, while 74 per cent of urban mothers and 45.7 per cent of rural mothers were in the medium attitude category of breast feeding. The study also revealed statistically significant results indicating that urban mothers had high knowledge and better attitude towards breast feeding when compared with rural

Sr. No.	Characteristics	Category	No (%)
1.	Gender of the Child	Male	156(52.0)
		Female	144(48.0)
2.	Age of the child(yrs)	0-6	42(14.0)
		6-12	93(31.0)
		12-24	159(53.0)
		>24	06 (2.0)
3.	Birth Weight of the child (g)	>2500 (Normal)	266(88.67)
		<2500-1500(LBW)	23(7.67)
		<1500-1000(VLBW)	11(3.66)
		< 1000 (ELBW)	NIL
4.	Birth order of the child	First born	123(41.0)
		Second born	123(41.0)
		Third and above	54(18)
5.	Plurality	Singleton	293(97.67)
		Twins	07(2.33)
6.	Type of delivery	Normal	205(68.33)
		Caesarean Section	91(30.33)
		Instrumental	04(1.33)
7.	Place of delivery	Home	07(2.33)
		Hospital(Public)	174(58.0)
		Hospital(Private)	119(39.67)
8.	Hb level of mother(g/dl)	>11(No Anaemia)	24(8.0)
		7-11(Moderate Anaemia)	276(92.0)
		<7 (Severe Anaemia)	Nil

mothers. Breast feeding knowledge of the mothers (Table 5) was significantly associated with exclusive breast feeding practice. Higher the knowledge, higher was the prevalence of exclusive breast feeding.

The study by Ahmed *et al.* (2014) also shows that lactating mothers in Islamabad had fair knowledge about

breast feeding practices. Garg *et al.* (2016) also reported that the breastfeeding knowledge, attitude and practices about exclusive breastfeeding were poor among mothers of urban area of Meerut. Mothers having better knowledge about the benefits of breast feeding practiced exclusive breast feeding.

Table 3: Distribution of mothers by breast feeding prevalence and practices (n=300)

Sr. No.	Characteristics	Category	No (%)
1.	Breast feeding initiation	Immediately	148(49.33)
		< 1hr	21(7.00)
		1hr-6hrs	27(9.0)
		7hrs-24hrs	10(3.33)
		>24hrs-3 days	16(5.33)
		>3 days	78(26.0)
2.	Colostrum feeding	Fed	215(71.67)
		Not Fed	85(28.33)
3.	Reasons for not feeding colostrum	Cultural belief	25(8.33)
		Impure milk	09(3)
		Affects the health of newborn	05(1.7)
		No/Sufficient milk secretion	32(10.67)
		Mother not able to feed due to illness	06(2.0)
		Low birth weight baby	08(2.7)
		Premature baby	15(5.0)
4.	Prelacteal feeds given	Illness of the baby	05(1.7)
		Water	28(9.3)
		Sugar water	37(12.33)
		Jaggery	05(1.7)
		Honey	29(9.67)
		Gutti	46(15.33)
		Cow's milk	13(4.33)
		Formula	46(15.33)
		Glucose water	33(1.1)
		Gripe water	58(19.33)
5.	Reasons for giving water	Necessary for life	26(8.7)
		Quenches thirst	37(12.33)
		Releases from pain	21(7.0)
		Soothes fretfulness	29(9.67)
6.	Total duration of breast feeding (months)	< 3	14(4.7%)
		3-6	28(9.3)
		6-1	105(35.0)
		1-2	145(48.3)
		>2	08(2.7)
7.	Category of breast feeding (WHO Classification)	Exclusively breast fed	146(48.7)
		Predominantly breast fed	80(28)
		Complementarily breast fed	64(20)
		Bottle fed/not fed with breast milk	10(3.3)
8.	Weaning	Proper weaning	106(35.33)
		Improper weaning	194(64.66)

Table 4 : Breast feeding knowledge and attitude of mothers			(n=300)
	Urban (n=100)		Rural(n=200)
Knowledge			
High	14(14)		64(21.3)
Medium	67(67)		122(40.7)
Low	19(19)		14(4.7)
Mean(\pm SD)	55.77 \pm 10.72		51.9 \pm 10.26
t Value		2.99**	
Attitude			
High	8(8)		53(17.7)
Medium	74(74)		137(45.7)
Low	18(18)		10(3.3)
Mean(\pm SD)	55.44 \pm 10.17		49.08 \pm 9.70
t Value		5.27**	

** indicates significance of value at P=0.01

-Figures in parenthesis indicate percentage

Table 5 : Association between knowledge and breast feeding					(n=300)
Breast feeding practices	Knowledge-n (%)			Total-n (%)	Chi-square
	Low	Medium	High		
Exclusive breast feeding	30(10.0)	96 (32)	20(6.7)	146(48.7)	16.72**
Predominant	30(10.0)	52(17.3)	2(0.7)	84(28)	
Complementary	14(4.70)	35(11.7)	11(3.7)	60(20)	
Bottle fed/Not fed with breast milk	4(1.30)	6(2.0)	0(0)	10(3.3)	
Total	78(26.0)	189(63)	33(11)	300	

** indicates significance of value at P=0.01

Table 6 : Association between SES and breast feeding					(n=300)
Breast feeding practices	SES-n (%)			Total-n (%)	Chi-square
	Low	Medium	High		
Exclusive breast feeding	09(3.0)	119 (39.7)	20(6.7)	146(48.7)	10.516 ^{NS}
Predominant	09(3.0)	70(23.3)	2(0.7)	84(28)	
Complementary	05(1.7)	46(15.3)	11(3.7)	60(20)	
Bottle fed	03(1.0)	6(2.0)	1(0.3)	10(3.3)	
Total	26(8.7)	241(80.3)	33(11)	300	

NS=Non-significant

No association was found between socio-economic status of mothers (Table 6) and breastfeeding practises. The study conducted by Rahalkar *et al.* (2104) in rural area of Maharashtra also reported similar results indicating SES had no impact on breast feeding practices.

It is evident from the results that mothers have poor knowledge about appropriate breast feeding practices exhibit poor feeding practices. The cultural practice of feeding prelacteal feeds, late initiation of breast feeding and discarding colostrum is highly prevalent. Hence, there is a need for promotion and protection of optimal feeding practices for improving nutritional status and survival of children. Hence there is a need to sensitize

women about the benefits of early initiation, colostrum feeding, exclusive breast feeding up to six months.

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