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Knowledge, Attitude and Practice Towards Breasfeeding among Lactating Mothers in Rural Areas of Thrissur District of Kerala, India: A Cross-Sectional Study

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ABSTRACT

Breastfeeding is considered as the pivotal factor between life and death for the vast majority of children in developing countries, but pattern of breast feeding and exclusive breast feeding is more important, which is ignored often by most mothers. The aim of the study was to assess the knowledge, attitude and practise towards breasfeeding among lactating women of Thrissur district of Kerala, India. A crosssectional study was conducted among 120 mothers with their first child less than 2 years of age using structured interviews and systematic random sampling method to select the study participants. The purpose of the study was explained and informed consent was obtained on voluntary basis. A total of 70.8% of lactating mothers had average knowledge, 55% displayed good attitude and 79.2% had good breastfeeding practices. A total of 57.5% of gave importance to colostrum and 85% delivered breastmilk as the first feed and 15% reported of pre-lacteal feeds as the first feed. The breastfeeding practices in the most literate state of India still can be improved, although women were aware of the exclusive breastfeeding and its importance they did not practice this to the fullest. We suggest access to nutrition information pertaining to breasfeeding can be strengthened further through various community programmes. Individual "breastfeeding counseling and health education on nutrition" to the mother by health workers should be promoted.

Keywords: Knowledge, Attitude, Practises, Breastfeeding, Kerala.

INTRODUCTION

Breastfeeding is the first fundamental right of the child[1]. 'Exclusively breastfeeding' (EBF) is used to define initiating breastfeeding immediately after birth and not giving any other solid food (including water) to the infants[2]. EBF for six months is important for health of both the mother as well as the growing infant. Infants who are not exclusively breastfed are more likely to develop gastrointestinal infections the risk of mortality due to diarrhea and other infections can increase many fold in infants who are either partially breastfed or not breastfed at all[3].

According to IYCF guidelines, early initiation of breastfeeding; immediately after birth, preferably within one hour, exclusive breastfeeding for the first six months of life i.e. 180 days, timely introduction of complementary foods (solid, semisolid after the age of six months, continued breastfeeding for 2 years or beyond, age appropriate complementary feeding for children 6-23 months, while continuing breastfeeding, active feeding for children during and after illness are recommended[2]. Infant and young child feeding practices directly affects the nutritional status of children under two years of age and ultimately influence the survival rates of

children. Worldwide, more than nine million children under the age of five die every year. The promotion of breastfeeding knowledge leads to the promotion of attitude and subsequently to the improvement of their breastfeeding practices. Adequate energy intake and diversified diet throughout the life cycle help ensure that women enter lactation without deficiencies and obtain adequate nutrients during high demand. Knowledge, ignorance, undesirable socio-cultural beliefs and misconceptions prevailing in the community are reported to influence breast-feeding behavior of lactating mothers. Very few women in India have right knowledge about breast feeding practices[4]. The main source of information to mothers is through family and friends, which is often inadequate[5]. Mother's poor knowledge and negative attitude towards breastfeeding may influence practices and constitute barriers to optimizing. Hence, it is necessary that lactating mothers should have a positive attitude, adequate knowledge and appropriate practices of breastfeeding that can help to prevent pathogens from invading child's system[6].

Indian Context

Global statistics show that only 46.4% of the mothers in India exclusively breastfed their children in first 6 months[7]. whereas the rates of breast-feeding in 0-6 months is 56.2 per cent in Kerala and 0-3 months exclusive breastfeeding is 68.5%[8]. The literacy rate among Indian women in the post-independence era was between 2–6%. It improved to 15.3% in 1961 to 28.5% in 1981. Times are changing now. In 2001 literacy for women had exceeded 50%[9] and recent population census of India (2011) revealed it to be 65.5%.Whereas the literacy rates in Kerala happen to be 94% with the female literacy rate of 91.98%[10] which is the highest in the country. Improving women's educational level has clear impacts on the health and economic future of the entire community.

As there is a paucity of data on the breastfeeding practices in this region, the present study was undertaken to assess the breastfeeding practices of lactating mothers having children under-two years of age in the most literate state of India. The findings of this study will help to better understand the breastfeeding scenario in Thrissur district of Kerala, role of nutrition education in promoting breastfeeding practices. Also this study can serve primarily as a platform for health care professionals, health workers and ANMs (auxillary nurse midwife) to prioritize their interventions.

MATERIALS AND METHODS

Study locale

This cross-sectional study was carried out in Thrissur district of Kerala .It was collected from 3 primary health care centres of Vellangallur, Chalakudy and Irinjalakuda and 2 government hospitals at Sahakarana Ashupatry, Irnjalakuda and Chalakudy Taluk Ashupatry spread across this district. Almost all the communities that seek for health care are rural populations at these centres. Services offered by these primary health centres and hospitals include maternal and child health services such as antenatal, postnatal, growth monitoring, family planning, vaccinations, immunizations and health promotion as well as preventive and curative services.

Sample size

The sample size was calculated using a single population proportion formula [n= [[Z [1-±/2]^2] X p X [1-p]]/d^2] with the following assumptions: 46.3% prevalence of breastfeeding [8]95% confidence level with 7% degree of desired precision thus n=161 samples. However a total of 41 forms were incompletely filled or the consent was not signed on checking for completeness hence the final sample size was considered to be n=120.

Data collection procedures

The time period for this data collection was from December 2015 to May 2016.The three primary health care centres and two government hospitals were visited during the study period on days that were scheduled for postnatal care. The lactating mothers were approached while they waited to receive their postnatal care, to introduce the objectives of the study to them and seek their consent to participate. Voluntary participation was encouraged. Those who agreed to participate were taken through the consent processes, explaining to them the benefits and risks of participating in the study. Through an interview method the data was collected using the questionnaire in their local

language which is Malayalam. The time taken by the interviewer to complete one respondent was 15 minutes.

Inclusion criteria

Mothers with infants aged 0–6 months of age who presented to the primary health centre and government hospital without any acute or chronic illness were eligible to participate in the study. Exclusion criteria: Lactating mothers with known chronic illnesses such as cancers, hepatitis C and HIV/AIDS or those on ART treatment were excluded from the study.

Data collection tools

The data was collected using two questionnaires

1. Lactating mothers profile: this questionnaire included general profile of the lactating mother wherein information pertaining to personal details of the subject such as name, age, address, contact number, occupation, family income, type of family; nuclear or joint, educational status, lactation period and parity was included.
2. Breastfeeding KAP questionnaire: this questionnaire included close ended questions to assess the knowledge, attitude and practices pertaining to breastfeeding. Items for the knowledge, attitude and practice of EBF scales of the questionnaire were adapted from the Food and Agriculture Organization of the United Nations (FAO) guidelines for assessing nutrition-related knowledge, attitudes and practices (KAP) manual[11]. This FAO questionnaire has been field tested in several countries to ensure validity, readability, ease of administration and is less burdensome on respondents. Thus the questionnaire formulated based on the FAO questionnaire was pre tested on 10 women for purpose of precision, validity and easiness of data collection. Thus the questionnaire contained 8 questions to assess knowledge. A knowledge score was generated for each mother based on the number of correctly answered questions. These included questions such as, importance of exclusive breastfeeding and colostrums, importance of consumption of galactogogues and knowledge on EBF. The second part of the questionnaire included a 3 point Likert scale to assess the attitude of the lactating mother towards breastfeeding, breastfeeding on demand and importance of breastfeeding over infant formulas. This 3 point Likert scale provided options such as agree, unsure and disagree. This scale helped in identifying the attitude of the lactating mother capturing the positives and negative attitudes towards breastfeeding. The final part of the questionnaire included a total of 5 questions on breastfeeding practices such as the duration of feeding, providing prelacteal feeds, along with nutritional practices such as consumption of traditional galactogogues by the mother for milk production which is highly practised in South India.

Statistical analysis

The data collected was checked for completeness, coded and entered into Microsoft excel and analysed using SPSS version 23.0. The data was analysed using descriptive statistics comprising of frequencies, percentages and measures of central tendencies.

Ethical considerations

Ethical clearance was obtained from the independent ethics committee of Symbiosis International University in Pune, Maharashtra. Permission was also obtained from medical officers of the Primary Health Centres and government hospitals of Thrissur district of Kerala.

RESULTS

Sociodemographic Characteristics

Out of 120 lactating women, maximum women belonged to the age group of 23 to 27 years (56.7%) maximum of them were from nuclear family (71.7%). Educational characteristics reveal that more than 50% of the population (58.3%) were graduates followed by a total of 10% and 31.7% who had either completed their 10^{th} or 12^{th} standards respectively. The census percentage of female literacy rate of Kerala is 91.98%, which signifies that even the rural population of women are graduates. A total of 58.3% of the population were professionals .These included professions such as teachers, clerks,

housemaids etc. followed by those lactating women who were housewives (41.6%). Average monthly income of lactating women was highest(58.3%) in the category of 5000-7500 with the least percent of lactating women falling in <5000 INR category .It was observed that 65% of the population visited the antenatal centres at a frequency of 1 to 3 visits per week followed by 28% those who visited 4-6times . (Table 1)

Knowledge of respondents about breastfeeding

The majority, 99 lactating mothers considered exclusive breastfeeding important (82.5%).More than half of the mothers (58.3%) believed that colostrum is nutritionally beneficial to the child. Majority of the mothers stated that exclusive breastfeeding improves the immunity of the child (85.8%), although 15% of them had no idea about the relationship between exclusive breastfeeding and immunity of the child. Concerning the initiation, majority replied that breastfeeding should be started immediately after the birth(68.3%).Only few of them believed that frequent breastfeeding reduces jaundice(34%).Most of them(65%) opined that EBF may not prevent child from diarrheal episodes.

One quarter of the lactating women (25%) believed that foods like almonds and fenugreek can help in improving the milk production. When asked about the EBF duration one quarter felt that it should be less than 6months, 44.4% of lactating mothers felt it should be 6months and 30.8% did not give importance to weaning to be initiated (Table 2)

Attitude of respondents towards breastfeeding

Attitude of lactating mothers showed that 84.1% (n=101) agreed that breastfeeding should be continued up to 2 years of age whereas 60.9% (n=73) agreed to breastfeed on demand. 77.5% (n=93) lactating mothers disagreed on giving pre lacteal feeds however 17.5% (n=21) were still unsure. 97.5% (n=118) lactating mothers believed in following the vaccination schedule. More than half 53.4 (n= 64) mothers felt that breastfeeding need not

Table 1: Sociodemographic Characteristics

Parameter	Categories	Frequency (n)	Percentage (%)
Age Group	18-22	26	21.7
	23-27	68	56.7
	28-35	26	21.6
Type of family	Nuclear	86	71.7
	Joint	34	28.3
Education	Secondary	12	10
	Higher Secondary	38	31.7
	Graduation	70	58.3
Occupation	Housewife	50	41.6
	Professional	70	58.3
Family Income	<5000INR	28	23.3
	5000-7500INR	70	58.3
	e”7500INR	22	18.3
Number of Gravidity	d”2 pregnancy	101	84.1
	>2 Pregnancy	19	15.8
Type of Delivery	Normal	90	75
	Caesarean	30	25
Number of ANC visit	1-3times	78	65
	4-6times	42	28
Maternal Lactation Period	0-6months	54	45
	6-12months	49	40.8
	12-18months	8	6.5
	18-24	9	7.5

be stopped in case the child suffers from diarrheal episodes. 65.8% (n=79) mothers felt breastfeeding to be better than formula feeding. 98.3 %(n=118) agreed on the health and hygiene aspect during breastfeeding the child. 37.5% (n=45) agreed to changes in body shape due to breastfeeding and 61.6% (n=74) felt breastfeeding adds the emotional

Table 2: Knowledge of respondents towards breastfeeding

Variable	Freq.	Perc.
Is exclusive breastfeeding important?		
Yes	99	82.5
No	21	17.5
Is colostrum nutritionally beneficial to the child?		
Yes	70	58.3
No	50	41.7
Does exclusive breastfeeding improve immunity?		
Yes	103	85.8
No	17	14.1
Is it important to initiate breastfeeding within 1 hr. after birth?		
Yes	82	68.3
No	38	31.6
Can exclusive breastfeeding prevent child from diarrhea?		
Yes	42	35
No	78	65
Growth patterns of breastfed infants differ from formula fed?		
Yes	92	76.6
No	2 8	
23.3		
Consuming galactogogues like almonds and fenugreek can improve the milk production?		
Yes	30	25
No	90	75
How long exclusive breast feeding should be continued?		
<6months	30	25
6months	53	44.1
>6months	37	30.8

Table 3: Attitude of respondents towards breastfeeding

Variables	Freq.	Perc.
Breastfeeding should be continued up to 2 years?		
Agree	101	84.1
Unsure	12	10
Disagree	5	5.9
Do you think breastfeeding should be on demand?		
Agree	73	60.9
Unsure	35	29.2
Disagree	12	9.8
Do you believe in giving pre lacteal feeds to babies?		
Agree	6	5
Unsure	21	17.5
Disagree	93	77.5
Do you believe in following vaccination schedule?		
Agree	118	97.5
Unsure	0	0
Disagree	2	1.6
Should breastfeeding be stopped when child has diarrhoeal episodes?		
Agree	17	14.1
Unsure	39	32.5
Disagree	64	53.4
Is formula feeding better than breastfeeding?		
Agree	5	4.2
Unsure	36	30
Disagree	79	65.8
Do you think health and hygiene are more important for breastfeeding?		
Agree	118	98.3
Unsure	2	1.6
Somewhat Disagree	0	0
Do you believe that breastfeeding causes changes in body shape?		
Agree	45	37.5
Unsure	40	33.3
Disargee	35	29.1
Does breastfeeding increases mother child bonding?		
Strongly Agree	74	61.6
Unsure	38	31.7
Disagree	8	6.7

quotient and increases the mother and child bonding. (Table 3)

Breastfeeding Practices of respondents

In this study, all mothers reported breastfeeding their child. Majority of participants did not consult a lactation counsellor a facility available at the primary health centres (n=85, 93.5%). 15.8% (n=19)of mothers gave pre lacteal feeds of which honey was given by 12.5%(n=15) and sugar water given by 3.3% (n=4)of lactating mothers. Exclusive breastfeeding was reported by only 84.1% (n=101) lactating mothers. Almost 82.5% (n=99) lactating mothers started breastfeeding within an hour after delivery. Half of the lactating mothers 54.1% (n=65) reported of breastfeeding on demand and 29.1% (n=35) breastfeed at random. Galactogogues were consumed by a total of 58.1% (n=70) of lactating mothers either on daily or weekly basis. (Table 4)

Table 4: Breastfeeding Practices of the respondents

Variables	Freq.	Perc.
Did you take advice from lactation counsellor before breastfeeding?		
Yes	17	6.5
No	85	93.5
Did you give pre lacteal feeds to the infant?		
Yes	19	15.8
No	101	84.1
What was the type of the first feed given to your last child?		
Breast milk	101	84.1
Honey	15	12.5
Sugar Water	4	3.3
When did you start breastfeeding after delivering your last child?		
In an interval of one hour	99	82.5
In an interval of two –six hours	3	2.5
After 24 hours	7	5.8
How frequently do you breastfeed?		
On demand	65	54.1
At specifc intervals	20	16.6
At random	35	29.1
How frequently do you consume galactogogues for improving milk production?		
Daily	41	34.1
Weekly	29	24.1
Never	50	41.6

DISCUSSION

Global movements towards protecting, encouraging and supporting breast milk as a part of optimal feeding practices among infants has been emphasized since many years however there is incongruence between what is recommended and what is practiced in reality. Therefore, the present study aimed at identifying the KAP of breastfeeding among lactating mothers with children less than 2years of age. EBF is estimated to prevent approximately one-tenth of child deaths and could play an important role in meeting India's Millennium Development Goal 4 of reducing child mortality[12]. WHO recommends exclusive breastfeeding upto 6 months, in the current study the importance to exclusive breastfeeding was given by 82.5% of lactating women; however only 44.1% were knowledgeable about practising EBF upto 6months whereas one quarter 25% felt it should be practised for less than 6 months. However a study undertaken in Kerala reports 60% rate of EBF [13] whereas findings from another study are similar which report exclusive breastfeeding for the recommended duration and early initiation of breastfeeding to be poor in Indian scenario. [14]In the present study 30% of lactating mothers felt the need to continue breastfeeding even after 6months which highlights the unawareness related to initiation of supplementary feeds through weaning at age 6, months.

The benefits of breastfeeding were largely accepted by majority of lactating mothers, wherein 85.8% felt it improved immunity, 58.3% had knowledge about colostrums being beneficial for the child and 76.6% agreed on the changes in growth patterns of child fed with breastmilk and formula feeds.

In the present study a total of 84.1% lactating mothers provided breastmilk as the first feed for the child. 95% showed a negative attitude towards giving pre-lacteal feeds to their infants yet 15.8% gave pre lacteal feeds, this finding is close to the finding reported as 19% use of pre lacteal feed

in one of the studies[15] and a study reported almost double i.e. 32% prelacteal feeds given to infants in Kerala[13,] Providing the infant with pre-lacteal feeds is a custom practised in most of the rural sections of India. Pre lacteal feeds mostly as honey or sugar water happen to be the most common feeds seen in the present study as well as reported in the study conducted by Mandal et al. 2007 [16] .It is believed that pre lacteal feeds act as laxatives in clearing the meconium. Sadly, the mothers are not aware that the pre-lacteal feeds that could be a source of contamination[17]. Studies show that the earlier breastfeeding begins the earlier and more effective the consolidation of the process, and therefore, a better impact on the after-birth period, which helps in the earlier initiation of the secretion of breast milk[18]. It was observed that the initiation of breastfeeding within one hour was undertaken by 82.5% of lactating women which is almost three fold as compared to the national average of 23.4%. (NFHS-3).

Strengths & Limitations

The questions in the questionnaire of this study have been validated in the past furthermore a pilot study was also conducted for its implementation in an Indian scenario. This study was conducted in the state with highest literacy levels in India in Kerala which helped us understand the scenario in a state where education is predominant yet lapses in EBF practices are prevalent. However the limitation of the study is that it was conducted in government hospitals and primary health centre involving lactating mothers that went for postnatal care hence, the findings of this study may not be representative, of the situation of exclusive breastfeeding in the entire community.

CONCLUSIONS

Maternal knowledge, maternal level of education and age of the child may also be important in promoting the practice of EBF. Healthcare professionals should go beyond the mere dissemination of information to encouraging and helping mothers to overcome barriers of practicing EBF. Informing all pregnant women about the breastfeeding can be considered as a priority during antenatal visits. Strengthening of prenatal and postnatal interventions to improve breastfeeding practices is recommended.

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