A Cross Sectional Study On Knowledge And Perception Of Breast-Feeding Practices Among Women In A Rural Area Of Tamil Nadu.

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ABSTRACT:
Background:Breast feeding is an essential component of maternal and child health. It has been predicted that early initiation and exclusive breast feeding are two key factors and have a protective effect against mortality and morbidity.As recommended by WHO infants, during the first six months of life, should be exclusively breastfed for optimal growth, development and good health.
Objective: To evaluate the knowledge and perception of breast-feeding practices among mothers having children in the age group of six months to three years in a selected rural area.
Methodology:A descriptive cross-sectional studywas conducted among 117 women between January to March 2019 in Mappedu,Thiruvallurdistrict, Tamil Nadu.By convenient sampling technique, 117 mothers having children between six months to three years were selected after taking informed consent.
Results:Out of the 117 women, 85.47% of them practiced exclusive breastfeeding. Out of which 83.76% were found to have awarenessabout exclusive breast feeding.87.17% of the mothers-initiated breast feeding within one hour of delivery.But around, 14.6% did not practice exclusive breast feeding and 1.7% were not having awareness about exclusive breast feeding.Exclusive breast feeding is practiced well by the mothers.The results obtained are well above the national average of 56%. It was also seen that antenatal advice on breast feeding plays an important role in sustaining appropriate breast-feeding practices.
Key words:weaning, colostrum, early initiation, malnutrition.

1. INTRODUCTION:

Breast feeding practice has many health benefits for both mother and the child.Nurturing process adopted by the family decides the health of the baby after birth.[1]As recommended by WHO, exclusive breastfeeding has to be given for all infants, as human milk contains nutrients, living cells and defence factors to achieve optimal growth, better immunity and good physical and mental development of the child. After 6 months, the child has to be complemented with adequate nutrition foods supplemented with breastfeeding as long as two years of even more.[2] Exclusive Breast Feeding (EBF) is defined as infant feeding with human milk without the addition of any other liquids or solids.[3]Human milk is the most complete food that exists for the baby until the age of 6 months and also it is easily digested and does not overhaul child's bowel or kidneys.In the first few days after giving birth,Colostrum (firstmilk)is produced containing antibodies and white blood cells. It prevents subsequent infection by forming a hard coating on intestines and stomach of the child.
Breastmilk is also economical and strengthens the bond between mother and child.As soon as the baby is born it is very active during the first half hour following birth. The infant learns sucking soon if it is paced with the mother and is made to breastfed. In case of caesarean deliveries, new-born infants can be begun with breastfeeding within 4 to 6 hours which will help in the early breast milksecretion including betterment in flow of breastmilk.[26]

Breast-feeding helps in scaling down of morbidity and mortality due to childhood infections in first two years of life.[4] Long term benefits of breastfeeding suggest a preventive effect on blood pressure related problems, substantial protection (34% reduction) from diabetes, 24% reduction in overweight and obesity, increase of intelligence score.[5]Compared to non-breastfed children, exclusively breastfed children for six months are around fourteentimes more likely to survive than children who are not breastfed. Optimal breastfeeding has the potential of preventing death of less than five-year children and reduce acute respiratory tract infection as and diarrheal diseases by 50 to 95%. It also increases the effectives of immunization, reduces the need for oral rehydration therapy, and significantly increases the intelligence and readiness to learn.[15] In spite of all these benefits India falls short to achieve any exceptional growth or progressamong practices like infant feeding, only with a slight increment in rates of EBF amonginfants in age group of 0-6 months– From 41.2% in year 1998-1999(NFHS-2) to around 46.3% in year 2005-2006 (NFHS-3) to 46% in 2015-2016 (NFHS-4).[6]
On the woman's side the act of breastfeeding is also extremely beneficial by protecting the mother from excessive blood loss after delivery by impeding menses. Thereby it prevents anaemia in postpartum period. (Ferreira, T.D.M et al, 2018).Increased maternal BMI is thought to be negatively correlated with decreased breastfeeding of babies immediately after birth.[17] Breastfeeding is clearly the mother's role but there is evidence that the baby's father and grandmothers can have a significant influence on the mother's breastfeeding decisions. Mothers who perceive the father to have more positive attitude towards breastfeeding are more likely to breastfeed.[21]Various factors affect breastfeeding practices in India which can be Health care related, socio-demographic, and psychosocial, community and policy related like insufficient milk production, higher socio-economic status, influence of paternal education, maternal employment, problems in suckling or latching of infant to mother's breasts, reduced confidence levels in the ability of mother to breastfeed, problems with the infant latching or suckling, soreness in breasts or pain in breasts, thinking that there is insufficient milk supply, and a lack of social and family support in the early period following discharge from hospital.Also, the professional workplace if it is not supportive and

return-to-work in early phase following childbirth, working mothers around the world are less likely to breastfeed or to stop breastfeeding prematurely.[19]
One of the practices that increases the problems like neonatal problems related to feeding and mortality is pre-lacteal feeding and it is considered as an important barrier for practices of optimal breastfeeding and is still practiced in many developing countries.[20]Nutritional counselling, avoidance of pre lacteal feeds, place of birth,antenatal counselling on postnatal lactation support and breastfeeding are likely to improve prevalence rates of exclusive breast feeding. Awareness related to breast feeding among mothers in the group which received counselling was better in group which did not receive counselling.[7]Based on above background, the present study was conducted for assessment of knowledge and perception of practices of breastfeeding among nursing mothers in a rural area in Tamil Nadu.

2. METHODOLOGY:

Across-sectional descriptive study was conducted in Mappedu,a rural area in Tiruvallur district of Tamil Nadu.In this study 117 mothers who had children between the age group of 6 months to 3 years were randomly selected from the registers maintained at the rural health centre attached to a private medical college in Mappedu. Data was collected using a semi-structured questionnaire which contained details regarding their socio-demographic details, knowledge and perception of mothers about breast feeding practices. Data analysed using Excel analysed using SPSSsoftware. Ethical approval was obtained from the Institutional Review Board (IRB) and Institutional Ethical committee. Written informed consent was obtained from the study participants and information sheet regarding the study was given to all the participants.

3. RESULTS:

Most of the mothers belonged to the age group of 22 to 24years (33%) followed by 19-21years (26%). Among the 117 mothers, 18.8% are illiterate, 58.11% had high school education,and 17% had a bachelor degree while nearly 6% had a professional degree.Majority of mothershad 2 children (66%). Only 10.2% gave birth to more than 2 children. Majority of the mothers belonged to a Joint family (58.11%). About 60.68% of mothers had a normal delivery.Also, most of the mothers delivered in a hospital (98.2%). This played a major role in the mothers receiving antenatal counselling from the hospital in which they delivered. 12.7% of the mothers received antenatal counselling from the hospital in which they delivered[Table - 1].

Table1
Socio-demographic characteristic of study participants

VARIABLE	FREQUENCY	PERCENTAGE %
AGE OF RESPONDENTS		
16-18	3	2.5%
19-21	31	26%
22-24	39	33%
25-27	25	21%
28-30	19	16%
EDUCATIONAL STATUS		
Illiterate	22	18.8%
Highschool	68	58.11%
Bachelor’s degree	20	17.09%

Professional degree	7	5.98%
NUMBER OF CHILDREN		
1	27	23%
2	78	66.6%
>2	12	10.2%
TYPE OF FAMILY		
Joint	68	58.11%
Nuclear	49	41.88%
MODE OF DELIVERY		
Normal delivery	71	60.68%
Caesarean section	46	39.31%
PLACE OF DELIVERY		
Institutional	115	98.2%
Home	2	1.8%

The awareness about exclusive breast feeding was 83.76%. 52.1%received information about breast feeding from TV advertisements while 8.54% received information from an elderly female in the family. Around 85.47% ofmothers breast fed their children and believed it is important for their child's growth and also received support from family members.About 87.17% of mothers-initiated breast feeding within one hour of delivery. Only 4.2%mothers-initiated breast feeding more than 2 hours[Table - 2].

Table2:
Knowledge and practice of exclusive breastfeeding among the study participants

VARIABLE	FREQUENCY	PERCENTAGE %
AWARENESS OF EXCLUSIVE BREAST FEEDING		
Yes	98	83.76%
No	2	1.7%
SOURCE KNOWLEDGE ABOUT EXCLUSIVE BREAST FEEDING		
Nurse	25	21.3%
Relatives	15	12.8%
Friends	4	3.4%
Doctors	12	10.2%
Mass media	61	52.1%
PRACTICE OF EXCLUSIVE BREAST FEEDING		
Practiced	99	85.4%
Not practiced	18	14.6%
TIME OF INITIATION OF BREAST FEEDING		
Within one hour	15	87.17%
Within two hours	7	5.9%
Greater than two hours	5	4.2%

Chi-square test analysis shows significant association between education level and duration of exclusive breast feeding. The rest of the variables did not have a significant statistical association[Table - 3].

Table 3:
Relationship between education level and duration of exclusive breastfeeding

	DURATION OF EXCLUSIVE BREASTFEEDING		
EDUCATIONAL STATUS	4MONTHS	6 MONTHS	12 MONTHS

Illiterate	2	7	1
High school	2	63	5
Bachelor's degree	2	9	2
Professional degree	3	1	1

The p value is **0.000575** and the result is significant at $p<0.05$.

4. DISCUSSION:

Most of the mothers in our study were aware of exclusive breast feeding about 83.76%. In a similar study conducted byMohite, R.V et al,2018 and Ekambaram, M et al, 2010 it was 57% and 38% respectively.

Also,most of the mothers knew that breast feeding must be started within one hour and also put it into practice. In our study 87.17% mothers-initiated breast feeding within an hour of delivery. In the remaining mothers who initiated breast feeding a little later the common reason was attributed to Caesarean section.In a study done in JIPMER by Ekambaram, M et al, 2010 ,92% of mothers-initiated breast feeding within one hour. This is also much higher than a study conducted by Umadevi, R et al,2017 (33%) in Kancheepuram district Tamil Nadu.

In our study 12.7% of mothers received antenatal advice from the hospital while 62.3% of mothers were aware because of TV advertisements.In a study conducted by Kaufman, L et al, 2010, 86% 0f mothers received some form of antenatal counselling regarding breast feeding.

Also, in the present study, we found that educational status of the mother does have significant influence on the knowledge about recommended duration of breastfeeding. The study done by

Vijayalakshmi, P et al 2015,found that illiterate mothers had positive attitude towards breast feeding as compared to educated mothers.

Most of the mothers in our study are aware and are also practicing exclusive breast feeding.The result is much higher than the NFHS 2015-16 reports where exclusive breast-feeding rates in India was 54.9% and in Tamil Nadu it was 48.3%. Further improvement in results can be achieved by improving the coverage of antenatal counselling services. Hence with safe and healthy breast-feeding practices and a positive attitude of the mothers towards breast feeding we can reduce the infant mortality rates and under 5 mortality rates.

Breast feeding practice among rural mothers was satisfactory. Practice of breastfeeding is higher in the study area than the national data. On the other hand, the practice of Bottle feeding is becoming prevalent in many rural villages as evidenced in study done by Banapurnath C.R et al. (Banapurmath, C.R et al, 1996). Most mothers practice the methods of pumps and bottles to provide their milk in spite of not having an evidence-based guideline for pumping milk or providing pumped milk to the infants. These practices may impact their perceived or actual milk production (Yamada, R et al, 2019). Providing pre-lacteal feeding as per their self-decision like plain water, raw butter, honey was the major reason for sub optimal level of breastfeeding. (Amele, E.A et al, 2019)

The government of India included specific goals to improve the infant feeding practices for reducing the Infant Mortality Rate (IMR), malnutrition and promoting integrated early child development (Radhakrishnan, S et al, 2012).Antenatal advice on breast feeding also plays an important role in sustaining appropriate breast-feeding practices. The work of health education falls on the midwife, the family doctor, the gynaecologist, the paediatrician and the nursing professionals in hospitals and in primary care who are supposed to address the traditional and cultural belief relating to discarding colostrum, delayed initiation of breastfeeding and non-exclusive breastfeeding and create benefits of optimal breastfeeding.

Healthcare workers should also counsel women about breast milk expression and promoting kangaroo mother care during ANC visits, delivery and postnatal care services. (Giannì, M.L et al ,2016, Hoche, S et al ,2018, Gancedo-García, A et al , 2019). A well drafted IEC(Information, Education and Communication) activity specifically targeting adolescent girls and antenatal mothers can be implemented.(Radhakrishnan, S et al , 2012) . Inadequate IEC activities, advertisements of breast milk substitutes, lack of support for the act, employment were identified as barrier to breastfeeding. The Baby Friendly Hospital Initiative (BFHI), launched in 1991, is an effort by UNICEF and World Health Organisation to ensure that all maternities, whether free standing or in a hospital, become centres for breastfeeding support. Therefore, it is important to assess the functionality of these Baby Friendly Hospital Initiative.

Implementing breastfeeding-friendly policies in the workplace could significantly influence women's abilities to successfully sustain breastfeeding(Altamimi, E et al 2016).Employers should be encouraged to have day care centres for nursing mothers so that mothers who go back to the paid employment do not have to stop breastfeeding (Khan, M.A et al, 2016) Support from baby's father in form of acquiring knowledge about breast feeding, making mother comfortable , ensuring appropriate rest ,nutrition and respecting breastfeeding decisions of the mother gives perseverance on breastfeeding attitude.(Rempel, L.A et al , 2016)

5. CONCLUSION:

Research and public health efforts like one-to-one "breastfeeding counselling and health education on nutrition" to the mother by health workers should be promoted. Optimal infant and young child feeding (ICYF) practices, especially early initiation of breastfeeding and exclusive breastfeeding for the first six months of life as recommended by World Health Organisation ensures that young children get the best possible to start lifePublic health education programs can be strengthened to improve furthermore the breast-feeding practices in these areas.

6. LIMITATIONS:

This was a cross sectional study conducted on participants residing in that particular rural village. Hence, this may limit the generalizability of the results to an entire population.Therefore, in accordance with national level data of 54.9% of breastfeeding practices (as of August4, 2017), ante natal counselling is must to ensure exclusive breastfeeding practices.

CONFLICT OF INTEREST: Nil
SOURCE OF FUNDING: Nil

7. REFERENCES:

[1] [Internet]. Who.int. 2020 [cited 29 September 2020]. Available from: https://www.who.int/nutrition/publications/optimal_duration_of_exc_bfeeding_review_eng.pdf
[2] WHO | Exclusive breastfeeding for six months best for babies everywhere [Internet]. Who.int. 2020 [cited 29 September 2020]. Available from:

https://www.who.int/mediacentre/news/statements/2011/breastfeeding_20110115/en[Accessed: 26 Jul 2019].

[3] WHO | WHO Global Data Bank on Infant and Young Child Feeding [Internet]. Who.int. 2020 [cited 29 September 2020]. Available from: https://www.who.int/nutrition/databases/infantfeeding/en/ [Accessed 24 August 2020].

[4] Dennis CL. Breastfeeding initiation and duration: A 1990- 2000 literature review. Journal of Obstetric, Gynecologic, & Neonatal Nursing. 2002 Jan;31(1):12-32.

[5] Horta BL, Victora CG. Long-term effects of breastfeeding. Geneva: World Health Organization. 2013;74.

[6] [Internet]. Rchiips.org. 2020 [cited 29 September 2020]. Available from: http://rchiips.org/NFHS/pdf/NFHS4/TN_FactSheet.pdf [Accessed 24 August 2020].

[7] Dhandapany G, Bethou A, Arunagirinathan A, Ananthakrishnan S. Antenatal counseling on breastfeeding–is it adequate? A descriptive study from Pondicherry, India. International Breastfeeding Journal. 2008 Dec;3(1):1-4.

[8] Mohite RV, Kshirsagar VY, Mohite VR. Prevalence and determinants of cessation of exclusive breastfeeding among primi-Para rural Indian mothers. International Journal of Community Medicine and Public Health. 2018;6(1):314-9.

[9] Ekambaram M, Bhat B, Ahamed MA. Knowledge, attitude and practice of breastfeeding among postnatal mothers. Current Pediatric Research. 2010 Jan;14(2):119-24.

[10] Umadevi R, Rashmi GP. Prevalence of exclusive breastfeeding among rural women in Kancheepuram District, Tamil Nadu. Indian J Forensic Community Med. 2017 Oct;4:277-9.

[11] Kaufman L, Deenadayalan S, Karpati A. Breastfeeding ambivalence among low-income African American and Puerto Rican women in north and central Brooklyn. Maternal and child health journal. 2010 Sep 1;14(5):696-704.

[12] Vijayalakshmi P, Susheela T, Mythili D. Knowledge, attitudes, and breast feeding practices of postnatal mothers: A cross sectional survey. International journal of health sciences. 2015 Oct;9(4):364.

[13] Grummer-Strawn LM. Surgeon general's call to action to support breastfeeding: significant actions in the first year. Breastfeeding Medicine. 2012 Oct 1;7(5):332-3.

[14] Ferreira TD, Piccioni LD, Queiroz PH, Silva EM, Vale IN. Influence of grandmothers on exclusive breastfeeding: cross-sectional study. Einstein (São Paulo). 2018;16(4).

[15] Giannì ML, Bezze E, Sannino P, Stori E, Plevani L, Roggero P, Agosti M, Mosca F. Facilitators and barriers of breastfeeding late preterm infants according to mothers' experiences. BMC pediatrics. 2016 Dec 1;16(1):179.

[16] Hoche S, Meshesha B, Wakgari N. Sub-optimal breastfeeding and its associated factors in rural communities of Hula District, southern Ethiopia: a cross-sectional study. Ethiopian journal of health sciences. 2018;28(1):49-62.

[17] Ozenoglu A, Sokulmez Kaya P, AsalUlus C, Alakus K. The Relationship of Knowledge and Breastfeeding Practice to Maternal BMI. Ecology of Food and Nutrition. 2017 Mar 4;56(2):152-70.

[18] Gancedo-García A, Fuente-González P, Chudáčik M, Fernández-Fernández A, Suárez-Gil P, Suárez VM. Factors associated with the anxiety level and knowledge about childcare and lactation in first-time pregnant women. Atencionprimaria. 2019 May;51(5):285-93.

[19] Altamimi E, Al Nsour R, Al dalaen D, Almajali N. Knowledge, attitude, and practice of breastfeeding among working mothers in South Jordan. Workplace Health & Safety. 2017 May;65(5):210-8.

[20] Amele EA, wondimenehDemissie B, Desta KW, Woldemariam EB. Prelacteal feeding practice and its associated factors among mothers of children age less than 24 months old in Southern Ethiopia. Italian Journal of Pediatrics. 2019 Dec;45(1):1-8.
[21] Rempel LA, Rempel JK, Moore KC. Relationships between types of father breastfeeding support and breastfeeding outcomes. Maternal & child nutrition. 2017 Jul;13(3):e12337.
[22] Yamada R, Rasmussen KM, Felice JP. "What Is 'Enough,'and How Do I Make It?": A Qualitative Examination of Questions Mothers Ask on Social Media About Pumping and Providing an Adequate Amount of Milk for Their Infants. Breastfeeding Medicine. 2019 Feb 1;14(1):17-21.
[23] Khan MA, Qureshi Z, Khan KA, Gill FN. Patterns and determinants of breast feeding among mother infant pairs in Dera ghazi khan, Pakistan. Journal of Ayub Medical College Abbottabad. 2016 Nov 27;28(4):750-4.
[24] Radhakrishnan S, Balamuruga SS. Prevalence of exclusive breastfeeding practices among rural women in Tamil Nadu. International Journal of Health & Allied Sciences. 2012 Apr 1;1(2):64.
[25] Banapurmath CR, Nagaraj MC, Banapurmath S, Kesaree N. Breastfeeding practices in villages of central Karnataka. Indian pediatrics. 1996 Jun 1;33:477-80.
[26] Dandekar RH, Shafee M, Kumar R. Breastfeeding and weaning practices among literate mothers A community based study in rural area of Perambalurtaluk, Tamil Nadu. The Health Agenda. 2014 Jan;2(1).