

Original article

Prevalence of Exclusive Breastfeeding Practices among the Irular tribes in Tamil Nadu

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ABSTRACT

Introduction: Exclusive breastfeeding is the ideal way for the healthy growth and development of the infant which also prevents future under-nutrition and recurrent infections. Globally only 35% of infants are exclusively breastfed for first six months. In India, the prevalence is not only low among the general population but also among the tribal population wherein malnutrition is highly prevalent. Hence this study aimed to assess the prevalence of exclusive breastfeeding and its determinants among the Irular tribes in Thiruvallur District of Tamil Nadu.

Methods: A community based cross-sectional study was conducted among the Irular mothers with children aged 6 to 24 months residing in the tribal villages in Thiruvallur District from August to December 2016. The sample size was 300 based on DLHS-4 2012-13. Data was collected by simple random sampling using the standardized Tamil questionnaire and analyzed using Chi Square test and multivariate analysis.

Observations and results: The prevalence of Exclusive breastfeeding among the Irular mothers was 52%. Only 60% of them gave colostrum while rest gave prelacteal feeds and discarded the colostrum. The important reasons for non-exclusive breastfeeding were the fear of inadequate milk and lack of support from family and health professional. Increasing maternal age, higher education, antenatal counseling, higher parity and support from the health workers were the significant factors favoring the exclusive breastfeeding

Conclusion: Health Education, antenatal counseling, discouraging prelacteal feeds, training the health workers to promote exclusive breastfeeding are the effective interventions for ideal infant nutrition, prevent morbidity and mortality.

Key words: Irulars, Exclusive breastfeeding, prelacteal feeds.

Introduction:

Exclusive Breastfeeding for the first six months after birth is a global public health recommendation not only to achieve optimal growth and development of infants but also to save them from diarrhoea, pneumonia and allergies¹. Globally, 35% of infants are exclusively breastfed during the first six months

of life². Improper Infant feeding practices not only results in under-nutrition but also leads to impaired cognitive development, poor school performance and reduced productivity in future³. Under-nutrition is the underlying cause of 53% of under-five deaths². In India, according to NFHS-3, the prevalence of the early initiation of breastfeeding is 25% and that of

exclusive breastfeeding is only 46.4%⁴. This low rate of exclusive breastfeeding is prevalent among both urban and rural areas. It is indeed a concern among the tribal population wherein the malnutrition is highly prevalent. Tribal population constituting 8.2% of total population are social group characterized by distinctive culture, traits, beliefs, and territorial affliction⁵. About 91% of the tribal population still lives in rural areas of our country and 47.3% are below the poverty line⁵. Kshatriya GK et al reported the widespread prevalence of under nutrition among the underserved tribal children in India⁶. Samiran Bisai et al reported the high prevalence of under-nutrition among the Kora-Mudi children in West Bengal due to poor breast feeding practices⁷. There is paucity of data on the exclusive breastfeeding practices and the infant nutrition among the tribal population particularly in Tamil Nadu. Irular tribes are one of the primitive tribes in Tamil Nadu with major public health problems like socio-economic backwardness, illiteracy, malnutrition and under-utilization of health services⁵. Irular tribes have settled in groups in rural area of Thiruvallur district of Tamil Nadu. This study was conducted to assess the exclusive breastfeeding practices and the associated factors among the Irular tribes of Thiruvallur district.

Aims and Objectives:

This study was designed to assess the prevalence of exclusive breastfeeding practices and its determinants among the Irular tribal mothers residing in Thiruvallur District in Tamil Nadu.

Materials and Methods:

A community based cross-sectional study was conducted among the Irular tribal mothers with children of age from 6 months to 24 months residing in the villages with Irular settlement in the

Thiruvallur District of Tamil Nadu in the rural field practice area of Govt. Stanley Medical College during the period September to December 2016. District Level Household Survey DLHS-4 RCH 2012-2013 reports that the prevalence of exclusive breastfeeding practices among the rural population including the tribal group in Thiruvallur District of Tamil Nadu is 60%⁸. With alpha at 5, relative precision of 10%, the sample size was calculated to be 300. The total Irular population in this district enumerated to be 44,569 with females about 21,388. The sampling frame included the 1052 mothers who had children of age 6 to 24 months as per the ICDS records in these tribal villages. The Irulars have settled in separate colonies in these villages. As per the inclusion criteria, the eligible Irular mothers were interviewed by house to house visit in the Tribal settlement in the selected villages by simple random sampling method using computer generated random numbers from the sampling frame.

A pretested, standardized structured questionnaire in Tamil was used to interview the mothers which included the socio-demographic details, antenatal period, delivery, postnatal period, details of breastfeeding. Data was analyzed using SPSS version 17, Chi Square Test and Fischer's Exact Test.

Observations and Results:

About 300 tribal mothers with children of age group 6 to 24 months had participated in this study. The age of the respondents ranged from 17 years to 40 years with mean age 29 years. Majority (45%) of the mothers belonged to 24 to 29 years with 10% below the age of 19 years. Table 1 depicts the various socio-demographic factors like educational status, type of family, religion, occupation, socio-

economic status, age of marriage and parity of the participants. Age of the mothers, type of family and parity were statistically significant for exclusive breastfeeding practices. Table 2 depicts the details of antenatal services availed by the mothers and the details of delivery. Of which the antenatal counseling, place of delivery and sex of the baby were statistically significant in successful exclusive breastfeeding. Only 60% of babies received colostrum as the first feed while others had sugar water and animal milk. Only 46.5% of mothers had practiced the early initiation of breastfeeding after delivery of which 80% had succeeded in exclusive breastfeeding till 6 months of age. Overall prevalence of exclusive breastfeeding practices among these tribal mothers was observed to be 52% (total 156 mothers). Table 3 depicts the duration of exclusive breastfeeding practiced by the tribal mothers. Table 4 shows the factors statistically significant in favoring Exclusive breastfeeding. Figure 1 shows the reasons for the failure of exclusive breastfeeding for first 6 months of age. Of which, majority 49% was due to fear on inadequate breastmilk, followed by influence of family members to start on supplementary feeding. Factors like awareness about exclusive breastfeeding, early initiation of breastfeeding and motivation from health care providers were statistically significant for successful exclusive breastfeeding by the tribal mothers.

Discussion:

The prevalence of exclusive breastfeeding practices among the Irular tribal mothers was 52% which is lower than the prevalence reported in DLHS-4 2012-13 for Thiruvallur District, Tamil Nadu. Vimala V et al reported that 55% of tribal mothers in Andhra Pradesh had exclusively

breastfed their infants till 6 months of age⁹ while Medhi et al reported the prevalence of exclusive breastfeeding among the tea garden workers in Assam to be 69.3%¹⁰. A similar study conducted by Banapurmath CR et al reported the prevalence of exclusive breastfeeding practices in Davanagere district of Karnataka to be 60% till 6 months of age¹¹. Chudasama RK et al reported that the prevalence of exclusive breastfeeding practice in Gujarat was only 37%¹². In our study, factors like maternal education, age and parity were significant factors governing exclusive breastfeeding practices. Mothers who were in adolescent age and who were primi had difficulty in exclusively breastfeeding due to lack of awareness and fear. K Madhu et al also reported that advanced maternal age, increasing parity and better educational status succeeded in early initiation and exclusive breastfeeding¹³. In our study, it was observed that antenatal education and awareness on exclusive breastfeeding helped in the tribal mothers to successfully exclusive breastfeeding as reported by Gunasekarariet al¹⁴. Feeding colostrum as the first feed for the infant is very important measure for future successful breastfeeding as reported by Sachdev HP et al¹⁵. In our study, 60% of the mothers had fed colostrum while others had the practice of discarding colostrum and giving prelacteal feeds as reported by Dakshayani et al among the Hakkipikkis tribes in Mysore¹⁶. Mothers who delivered in Primary Health centre had the support from the nursing staff in breastfeeding and it was also observed that male babies were exclusively breastfed more than the female infants. In our study, the factors like fear of inadequate breast milk, lack of support from family members played an important role in failure of

exclusive breastfeeding till 6 months. Parmar et al reported that factors like insufficient breastmilk and work stress were important reasons for initiation of bottle feeding before six months of age¹⁷. In our study it was observed that the motivation from the health care providers played a significant role in alleviation of fear of insufficient breastmilk and stress among the mothers thereby help in successful exclusive breastfeeding. Rasheed S et al also emphasized that intensive training programs for nurses on lactation management is needed for successful breastfeeding practices by the mothers attending the health facility¹⁸. The other public health issues like early marriage, gender bias in feeding and lack of support from family members need to be addressed to prevent faulty infant

feeding practices and to prevent malnutrition in the future generation of this vulnerable population.

Conclusion:

Exclusive breastfeeding is indeed an important public health measure for optimal growth and development of infants and preventive measure for under-nutrition and recurrent infections. Under-nutrition is highly prevalent among the tribal population. Qualitative research like Focus Group Discussion will throw more light on the socio-cultural beliefs in infant feeding of this underserved population. Health education and motivation of the tribal mothers by family members and health care professional remains the cornerstone in successful lactation management in order to prevent future under-nutrition and morbidity.

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Table1: Socio-demographic details of the participants

S.No	Characteristics	Frequency(n=300)	Percent %
1	Educational status		
	- Illiterate	216	72
	- Primary (I- V std)	63	21
	- Middle school(VI-VIII std)	21	7
2	Type of family		
	- Nuclear	186	62
	- Joint	114	38
3	Religion		
	- Hindu	267	89
	- Christian	33	11
	- Muslim	-	-
	- Others	-	-
4	Occupation		

	<ul style="list-style-type: none"> - coolie - Agricultural work - Unemployed - others 	<p>237</p> <p>33</p> <p>30</p>	<p>79</p> <p>11</p> <p>10</p>
5	Socio-economic status (Modified BG Prasad) <ul style="list-style-type: none"> - Class III - Class IV - Class V 	<p>207</p> <p>66</p> <p>27</p>	<p>69</p> <p>22</p> <p>9</p>
6	Age of first conception <ul style="list-style-type: none"> - <19 years - 20-24 yrs - 25- 30yrs - > 30 years 	<p>30</p> <p>135</p> <p>80</p> <p>55</p>	<p>10</p> <p>45</p> <p>26.7</p> <p>18.3</p>
7	Parity <ul style="list-style-type: none"> - Primi - 1 child - 2 and > 	<p>126</p> <p>102</p> <p>72</p>	<p>42</p> <p>34</p> <p>24</p>

Table 2: Details of Antenatal services availed by the participants

S.No	Characteristics	Frequency (n=300)	Percent%
1	Place of Antenatal visits <ul style="list-style-type: none"> - Health Subcentre (HSC) - Primary Health centre(PHC) - Govt. Hospital - Private clinic 	<p>72</p> <p>153</p> <p>75</p> <p>-</p>	<p>24</p> <p>51</p> <p>25</p> <p>-</p>
2	Place of Delivery <ul style="list-style-type: none"> - Home - HSC - PHC - Govt. Hospital - Private sector 	<p>12</p> <p>33</p> <p>171</p> <p>84</p> <p>-</p>	<p>4</p> <p>11</p> <p>57</p> <p>28</p>
3	Mode of Delivery <ul style="list-style-type: none"> - Normal vaginal delivery - LSCS 	<p>81</p> <p>219</p>	<p>27</p> <p>73</p>

4	Sex of the Baby		
	- Male	158	52.7
	- Female	142	47.3

Table 3: Duration of Exclusive Breastfeeding among the tribal mothers

Duration in months	Frequency (n=300)	Percent %
< 2	18	6
2 – 3	27	9
3 - 4	36	12
4 - 5	63	21
6 months and >	156	52

Figure1: Reasons for failure of Exclusive breastfeeding up to first six months

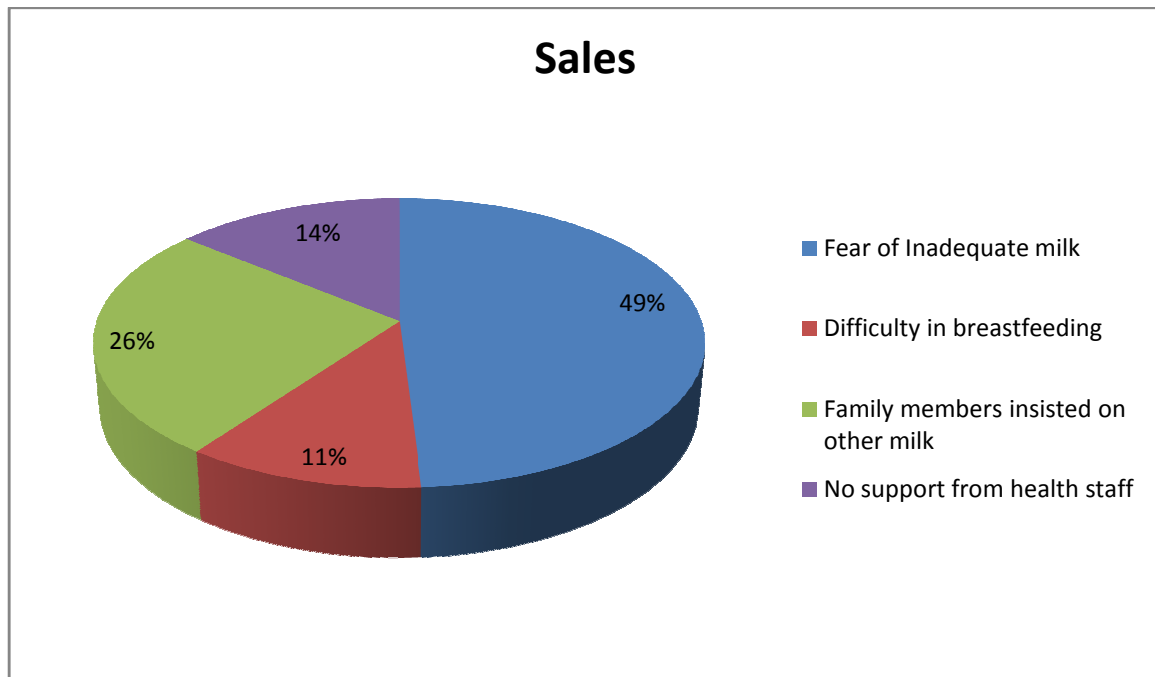


Table 4: Multiple logistic regression for the factors influencing exclusive breastfeeding practices

Factors	Odds ratio	95% CI	p value
Age of mothers	3.21	1.11 – 5.21	0.031
Educational status	3.91	1.99 – 5.89	0.046
Religion	2.21	0.98 – 3.12	0.146
Occupation	1.27	0.85 – 2.98	0.378
Socio-economic class	2.98	0.88 – 4.11	0.280
Age at conception (<19 and >19)	6.13	1.48 – 9.22	0.021
Type of family(Nuclear/Non-Nuclear)	3.18	1.39 – 6.23	0.048
Parity(<2, 2/>)	5.12	2.24 – 8.23	0.002
Place of antenatal visits	3.12	1.28 – 5.44	0.021
Antenatal counseling	4.33	2.28 – 5.13	0.003
Place of delivery	2.88	1.78 – 4.77	0.024
Sex of baby	3.16	1.65- 4.39	0.048
Awareness on breastfeeding practices	5.97	3.33- 8.33	0.001
Motivation by health professional	3.87	1.22 – 6.23	0.01

P < 0.05 indicates statistically significant association

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