Research Article

Counseling of nursing mothers! How effective it is - For improving nutrition of neonates & infants

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Abstract

Introduction: Optimal & appropriate infant & child feeding is one of the essentials to prevent morbidity & mortality in neonates & infants**.** The knowledge, practice & skills of WHAT & HOW of feeding must be known to every nursing mother. Counseling of mothers is one of the cost-effective approaches which can bring about a positive change in attitudes & skills to improve nutrition of infants & children. **Aims & Objectives:** 1) Assess the knowledge & attitude of nursing mothers regarding breast-feeding. 2) Observe breast-feeding skills. 3) Counseling & post counseling assessment. **Material & Methods:** Knowledge was assessed by questionnaire method of pretested proforma, Skill by observation of breastfeeding according to B-R-E-A-S-T proforma. One to one & group counseling & post-counseling assessment of mothers was done. Data was subjected to statistical analysis by SPSS 12 version & McNemar test. **Results:** A total of 287 nursing mothers were studied, majority (94.4%) between 20- 30 yrs of age, 92% Hindu, 63.8% from low socio-economic status,53.7% illiterate,73.9% non-working, 63% from joint family& only 16.7% received information on feeding from health-professionals. **Knowledge:** 23% of mothers gave correct answers to all questions related to breast-feeding. The average score of knowledge before counseling was 3.06 which increased to 9.87 post-counseling (p-value<0.01). **Practice:** The practice was poorer than knowledge; only 21.4% were practicing breast-feeding appropriately. Pre-counseling score 3.85 which increased to 8.41 post-counseling (p-value<0.00 paired t-test). **Skills:** Pre-counseling score of 0.14 increased to 2.98 after counseling which was statistically highly significant (p-value<0.00). **Conclusion:** Inappropriate knowledge, practices & incorrect skills on breast-feeding is still prevalent amongst mothers in general & particularly in this area of Madhya-Pradesh. Repeated & effective counseling appears to be only answer to improve infant-feeding.

Keywords: Breast feeding, Assessment, Skills, counseling

Introduction

Child survival lies at the heart of every scheme which aims to scale a proven high impact, cost-effective health & nutrition intervention to reduce the neonatal & young child death. About 80% of health care in developing countries, including ours, occurs at home & majority of children who die, do so at home, without being seen by health worker [1]. Appropriate breastfeeding & infant feeding are still not practiced by many mothers. As many as 40% child deaths could be prevented by access only to solid knowledge & support for infant feeding without high-tech health equipments.

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Early initiation & exclusive breast feeding improves newborn care & reduces neonatal mortality which contributes to majority of infant deaths. Infant mortality can be readily reduced by about 13% with improving breast feeding practices alone & 6% with improved complimentary feeding [1]. In addition about 50-60% of under-five mortality is secondary to malnutrition, largely caused by inadequate complimentary feeding following on from poor breast feeding practices [1]. The global recommendations for optimal infant feeding include [2].

- Early initiation,
- exclusive breast feeding for the first six months,

- introducing appropriate and adequate complementary feeding from six months along with continued breastfeeding,
- Continue breastfeeding till 2 years & beyond.

The present study was undertaken to assess the pre-counseling knowledge, practices & skills & observe the change made by counseling in these recommendations.

Aims and Objectives

1. To assess the knowledge, attitude & skills of nursing mothers on breastfeeding during immediate postnatal period.
2. Observe the mothers while feeding their infants for appropriate and effective attachment & position.
3. Counseling & post counseling assessment to see the change in knowledge, practice & skills.

Material & Methods

Study was undertaken in obstetric & neonatal unit of R D GARDI medical college Ujjain Madhya-Pradesh (which caters mainly rural population), for a period of 1 year from January 2013 to December 2013. A total of 287 nursing mothers were taken up for the study, who delivered in Obstetric ward. It was an observational study of cross-sectional type. A special Proforma was designed after consultation with experts of various departments (pediatrics, obstetrics, & community medicine) which included questionnaire for assessing total socio-demographical aspects as well as the knowledge & practices of mothers regarding breastfeeding before counseling. Observing all principles of verbal & non-verbal communication, mothers were interrogated.

A written permission from administration & clearance from ethical committee was obtained. The skills of feeding were assessed by observation of mothers while breastfeeding the baby & signs of probable difficulty were noted. It was done according to "B-R-E-A-S-T-Feeding Observation Form" adapted from H C Armstrong, *Training Guide in Lactation Management,* New York, IBFAN and UNICEF 1992 [2]. Skills of feeding were assessed on body position & posture, response of mother, emotional bonding, attachment of baby on breast (good/bad) behaviour, satisfaction, length of one feed etc. Pre-counseling assessment on all aspects was done using the questionnaire of the proforma. Then the counseling was done every day till mother was discharged. Apart from group counseling, one to one counseling of mothers was done on need base, since each mother required reinforcement on different aspects of feeding. When mother was due for discharge her knowledge, practice & skills on breastfeeding were again reassessed by filling the same proforma. Data obtained, tabulated & subjected to statistical analysis by SPSS 12 version & subjected to Chi-square test & significant difference in mean score was tested using paired t-test while significant difference among pre & post proportions were tested using McNemar test**.**

Inclusion Criteria: The study population consists of antenatal & breastfeeding mothers having a living child whose age is between newborn and two years.

Exclusion Criteria: 1. Women of more than 45 yrs of age & less than 18 years 2. Women having children of more than 2 yrs of age.

Observations

Socio-Demographic Factors: Out of 287 mothers, 94.4% of mothers were between 20-30 yrs of age. 90.2% were Hindu 63.8% were from low socio-economic status. 53.7% of mothers were illiterate & out of educated 31% had primary class & only 1.4% of mothers were graduates.73.9% were non-working (housewives), of working mothers (26.1%) all were unskilled & daily wage earners. 63% were from joint -family. 61.3% of mothers received some facts for infant feeding from mother in –law & grandmother, 22% from Anganwadi worker & dais, while only 16.7% of mothers received information from doctors(table 5) , which clearly indicates that only a small number of mothers received appropriate & scientific knowledge while rest continue to follow the infant feeding practices which were adopted from family cultures. Family head is still influential for child feeding & nutrition.

Observation on Knowledge: Only 23% of mothers gave correct answers for breastfeeding (table 1). The average score of knowledge of mothers before counseling was 3.06 which increased to 9.87 post-counseling (p-value<0.00) (Table 2 & Fig 1), showing the statistically significant effect of counseling. The pre-counseling knowledge of mothers revealed that 46% for first feed, 16% for Colostrum, 15.7% for initiation of feeding, 12.2% frequency of feeds, 29.6%for night feeds, 23% for exclusive breastfeeding, 37.6% for post feeding behaviour gave correct answers. However, statistically highly

significant improvement (p-value<0.01) is observed after counseling for all these aspects (Table 1). Irrespective of various socio-demographic factors, a statistically highly significant improvement (p-value<0.01) is observed in knowledge of first feed as mother's milk, Colostrum, initiation of feeds, frequency of feeds, night feeds, exclusive breast feeding & post feeding behaviour. As such overall correct knowledge of mothers was very poor regarding breastfeeding, but the practice of breastfeeding was poorer than the knowledge.

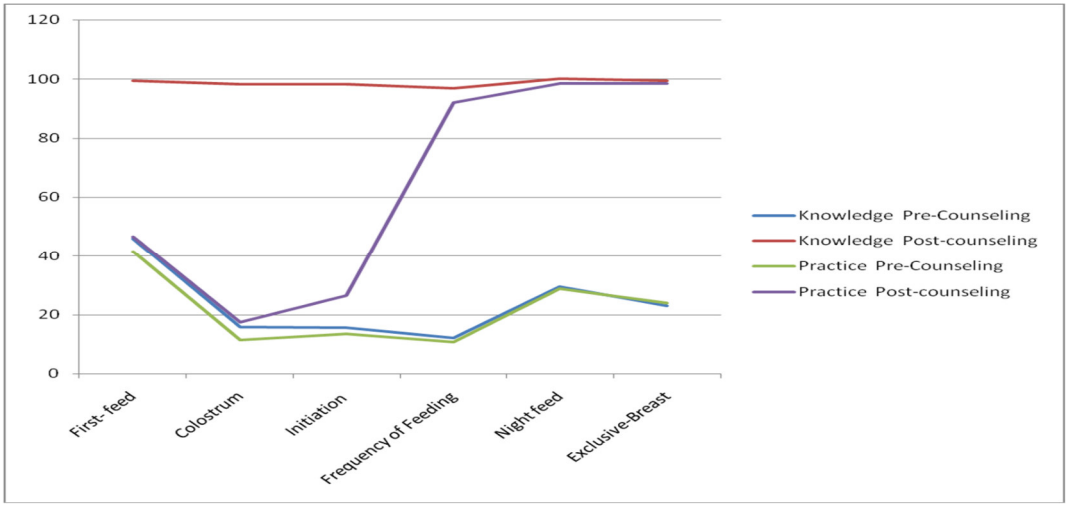
Table 1: Comparison of pre and post counseling knowledge of various aspects of feeding.

Aspects		Pre-counseling		Post-counseling		p-value (Mc-Nemar test)
		No. of mothers	Percent	No. of mothers	Percent	
First- feed	True	132	46.0	285	99.3	<0.01 or 0.00
	False	155	54.0	2	0.7	
Colostrum	True	46	16.0	282	98.3	<0.01 or 0.00
	False	241	84.0	5	1.7	
Initiation	True	45	15.7	282	98.3	<0.01 or 0.00
	False	242	84.3	5	1.7	
Frequency of Feeding	True	35	12.2	278	96.9	<0.01 or 0.00
	False	252	87.8	9	3.1	
Night feed	True	85	29.6	287	100.0	<0.01 or 0.00
	False	202	70.4	0	0.3	
Exclusive-Breast Feeding	True	66	23.0	285	99.3	<0.01 or 0.00
	False	221	77.0	2	0.7	

Table 2: Comparison of pre and post counseling knowledge scores of mothers.

	Knowledge Score				
	Minimum	Maximum	Mean Score	Std. Deviation	p-value of paired- t test
Pre-Counseling	0.00	9.00	3.0697	2.11604	0.000
Post- Counseling	3.00	10.00	9.8746	0.54028	

Figure-1: Comparison of knowledge and practice of mothers regarding breast feeding---pre and post counseling.



Observation of Practices of Feeding: Only 21.4% of mothers applied the knowledge of breastfeeding to practice it correctly (table 3). However, statistically highly significant improvement (p-value<0.01) was observed in practice of breastfeeding after counseling (Table 3 & Fig 1). Overall score on practice of breastfeeding before counseling was 3.85 which increased to 8.41 after counseling with p-value of 0.00 (Table 4). On comparing the various aspects of practices amongst demographic variants a statistically highly significant improvement is seen post counseling (p-value<0.01).

Table 3: Comparison of pre and post counseling practices of mothers regarding various aspects of breast-feeding

Aspects		Pre-counseling		Post-counseling		p-value (Mc-Nemar test)
		No. of Mothers following practices	Percent	No. of Mothers following practices	Percent	
First- feed	True	119	41.5	134	46.7	<0.01 or 0.00
	False	168	58.5	153	53.3	
Colostrum	True	33	11.5	50	17.4	<0.01 or 0.00
	False	254	88.5	237	82.6	
Initiation of feed	True	39	13.6	76	26.5	<0.01 or 0.00
	False	248	86.4	211	73.5	
Frequency of Feeding	True	31	10.8	264	92.0	<0.01 or 0.00
	False	256	89.2	23	8.0	
Night feed	True	83	28.9	283	98.6	<0.01 or 0.00
	False	204	70.7	4	1.4	
Exclusive-Breast Feeding	True	69	24.0	283	98.6	<0.01 or 0.00
	False	218	76.0	4	1.4	

Table-4: Scoring of practices of mothers & difference between pre & post counseling.

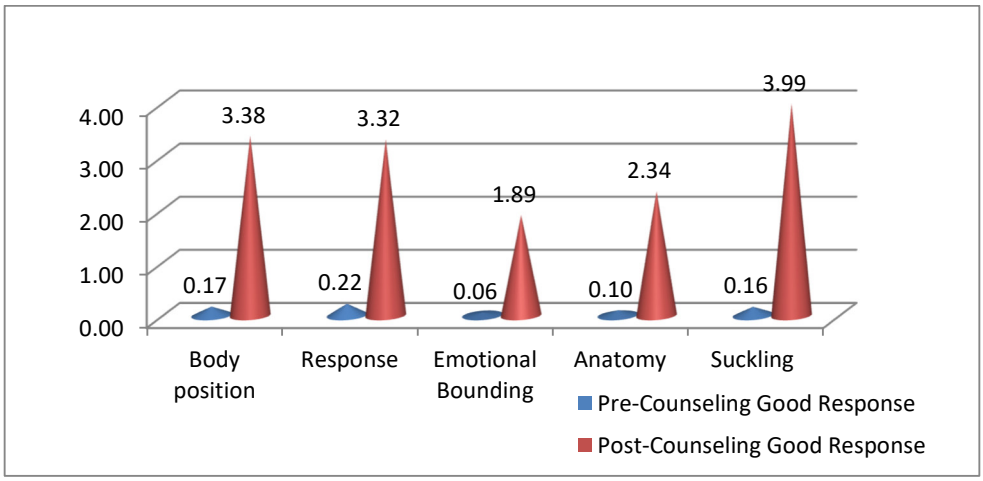
	Minimum	Maximum	Mean Score	Std. Deviation	p-value of paired-t test
Pre Counseling Practice score	1.00	9.00	3.85	1.89	0.00
Post Counseling Practice score	4.00	10.00	8.41	0.80	

Table-5: Various Sources of knowledge.

Source of Knowledge	Number of Mothers	Percent
Mother and others	176	61.3
Anganwadi Workers/Dai	63	22.0
Health Professionals	48	16.7
Total	**287**	**100.0**

Observation on Skills of Breastfeeding: Skills assessment on breastfeeding was done depending upon B-R-E-A-S-T proforma & observations were made depending upon the good and bad signs of various components of breastfeeding. The overall score for skills pre-counseling was 0.14 which increased to 2.98 after counseling which was found to be Statistically highly significant(p-value<0.01) (Fig 2).

Figure-2: Pre & post counseling comparisons of Breast feeding Skills scores



Discussion

Of 287 mothers studied our observations revealed that majority (94.4%), of mothers were in the age group between 20- 30. Similar were the observations of N Das, D Chattopadhyay et al [9,10 ,12,14] . A large majority of mothers were from low & medium socio-economic status, (63.8% & 35.9% respectively). Similar observation was made by Dr. Sarmila Malik [11] that 75% mothers were of the socio-economic class III and IV. Observations of Divyarani et al [4] & N Das, D Chattopadhyay et al [9] were different. Divya rani found that 18.7% of mothers were below poverty line while Das et al [4, 10] observed only 38.6% (132/342) belonged to lowest economic class. This could be because only mothers from low socio-economic status prefer to deliver in medical colleges probably to take benefit of the government scheme 'JANNANI SURAKSHA YOJNA' (JSY). 53.7% of mothers were illiterate & 31.4% had primary class education in our study. Contrary to our observations the education status of Sarmila et al [11] & other [2] study were much better probably these observations were from urban areas compared to the observations of ours study which was from rural population.

61.3% mothers from our study received information regarding infant feeding & child care from mother-in-law, grand-mother & other family members & only 16.7% from health professionals indicating still mother-in-law & other ladies of the family influence the feeding of infants (Table 5). Rindae et al [10] observed that only 5% subjects gained information from nurses. While Sushma Sriram [12] & Brajesh kumar et al [13] revealed 58.67% & 58.3% respectively received counseling from health professionals.

Knowledge & Practice

Overall only 23% of mothers had correct knowledge on total breast feeding, while only 21.4% practiced it correctly. Only 41.5% of mothers gave breast milk while 57 % gave some pr-lacteal feeds as first feed to the baby. 16% for colostrum, 15.7% for initiation of breast feeding within one hour, 12.2% for frequency of breastfeeding, 29.6% for night feeds, 23% for exclusive breast feeding had correct knowledge on these aspects (Table 1,2 & Fig 1), indicating poor knowledge regarding breastfeeding & a great influence of elderly lady of the family. No difference in knowledge & practice is observed among various socio-demographic variables. Similar observations made by various workers [4,5,6,7,8,9,11,12]. However, these studies were done 5 to 10 yrs ago, indicating not much improvement in knowledge & practice of mothers on infant feeding has occurred despite Herculean efforts to improve nutrition of infants & children in last decade.

Skills

Assessment was based on B-R-E-A-S-T proforma. Overall pre-counseling score of 0.14 increased to 2.98 after counseling, which was statistically highly significant (p-value<0.00) (Fig 2). No study of this type on skill scoring is presently available for comparison.

Conclusion

Inappropriate knowledge, practices & incorrect skills on breast-feeding is still prevalent amongst mothers in general & particularly in this area of Madhya-Pradesh. Repeated & effective counseling appears to be only

answer to improve infant feeding and in-turn to reduce morbidity & mortality due to malnutrition

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