

# The Breastfeeding Practices: The Positioning and Attachment Initiative Among the Mothers of Rural Nagpur

SUBHASH B THAKRE, SUSHAMA S THAKRE, SURESH M UGHADE, SAMIR GOLAWAR, AMOL D THAKRE, PRIYA KALE

## ABSTRACT

**Background:** The strategy of the Integrated Management of Neonatal and Childhood Illnesses (IMNCI) has recommended a systematic assessment of breastfeeding and it has emphasized on the counseling of the mother on the proper positioning and the attachment of the infant to the breast. Hence, the present, cross sectional study was undertaken to assess the correct breast positioning and attachment.

**Materials and method:** Midwives (ANM) who were trained in IMNCI assessed the breastfeeding positioning and attachment by using the IMNCI guidelines during the study period at a rural hospital in Saoner, Nagpur District.

**Results:** The assessment which pertained to the positioning and the attachment was done in 104 babies. A breast feeding problem was recognized in 43.27% babies of the subjects. Poor breast positioning (25% - 53.84%) and poor attachment (26% - 58.65%) were recognized before imparting the health education. A significant ( $P < 0.05$ ) improvement in the breast positioning and attachment was observed after the health education.

**Conclusion:** Health education and supporting the mothers while they were breastfeeding were found to be useful tools in improving the positioning and the attachment of the baby to the breast.

**Key Words:** Breast positioning, Breast attachment, Rural, IMNCI, Feeding problems

## INTRODUCTION

Effective breastfeeding is a function of the proper positioning and attachment of the child to the breast [1]. Breastfeeding is a natural act and it is also a learned behaviour.

The mother and other caregivers require active support from the health care system [2]. In India, the practice of breastfeeding is almost universal, but the initiation of breastfeeding is generally quite late and the colostrum is often discarded [3].

The Breastfeeding Promotion Network of India (BPNI) was born to protect, promote and to support breastfeeding [4]. The National Rural Health Mission (NRHM) intended to implement the Integrated Management of Neonatal and Childhood Illnesses (IMNCI) through the existing healthcare delivery system [5].

The IMNCI strategy recommended a systematic assessment of breastfeeding and it emphasized on the counseling of the mother on the proper positioning and the attachment of the infant to the breast [1].

Good positioning and attachment of the baby during breastfeeding facilitates milk production and milk release and it helps in preventing sore nipples, engorgement and mastitis [6]. The information on the skills of lactating mothers with respect to the proper positioning and attachment of the infant during breastfeeding was lacking.

Hence, the present, cross sectional study was undertaken to assess the correct breast positioning and attachment as per the IMNCI guidelines, as were practised by mothers in rural hospitals and to identify the babies with feeding problems.

## MATERIALS AND METHODS

The study area and the study subjects The present, cross-sectional study was undertaken at the Rural Health Training Centre, Saoner, which is a field practice area of the Government Medical College, Nagpur. This study was undertaken during October – December 2010. All the babies who were delivered at the health centre and their mothers were included in the study.

**Sample size estimation:** The proportion of the infants with a straight neck or a slightly bend back was 71% and 89% before the health education was imparted and after health education was imparted respectively [7]. With a power of 90% and an error of 5%, the sample size which was required was 93 i.e. approximately 100. However, a consecutive sample size of all the 105 babies who were born during the study period was included in the study. One still born baby was excluded. Hence, 104 mothers and their babies were available for the final analysis.

**Data collection Socio-demographic characteristics:** The information on the socio-demographic characteristics of the mothers like their ages, education, economic status, parity, birth order, birth weight of their babies, etc were obtained. The confidentiality of the data and the privacy of the mothers were respected at all times. An informed consent was obtained from all the study participants. The institutional ethics committee gave their approval in carrying out the study. The assessment of the breastfeeding was done by using the IMNCI assessment form 1 for young infants, after explaining the details of the study to the mothers.

The neonates were checked for feeding problems such as feeding less than eight times in the last 24 hours, giving any other food or drinks and low weight for age. The weights of the babies were

taken and they were categorized as low birth weight (if their weight was < 2.5kg).

The first (at 24 hours after birth) and the second (at the time of the discharge) assessment were done at the health centre. If the baby was not fed in the previous hour, the mother was asked to put her baby to the breast. If the baby was fed during the last one hour, then the mother was asked as to when the baby would feed again and the assessment was planned accordingly. Staff nurse/public health nurse/auxiliary nurse midwives observed the breastfeeding process for four minutes and they recorded the babies' positioning and attachment to the breast as per the IMNCI guidelines. The poor positioning of the babies was recognized by signs like twisting or bending forward of the babies' necks, the babies' bodies being turned away from their mothers, the babies' bodies being not close to their mothers or only the babies' neck and head being supported. A baby was said to have a poor attachment when the chin was not touching the breast, when its mouth was not wide open, when its lower lip was not turned outward or when a little areola was visible above than below the mouth of the baby. The signs of good attachment and positioning were recorded as 'Yes' and the signs of poor attachment and positioning were recorded as 'No' in a data sheet. Irrespective of the good signs or the poor signs of the positioning or attachment, the mother was explained about the good positioning and attachment by using take action cards, which were specially designed for this study. In cases of poor attachment and positioning signs, the staff nurses/ ANMs helped the mothers to position and attach their babies better.

## STATISTICAL ANALYSIS

The data were analyzed by using the Epi\_Info (version 6.04) software package. The continuous data were presented as mean values along with their Standard Deviations (SD). McNemar's Chi-square test was applied to test the difference between two proportions. A result with a p value of less than 0.05 was considered as statistically significant.

## RESULTS

The socio-demographic profiles of the mothers (n=104) who delivered at the Rural Health Centre, Saoner, is shown in [Table/Fig-1]. The mean ( $\pm$  SD) age of the mothers was 24.26 ( $\pm$ 3.13), with an age range of 19-35 years. A majority of them were educated. Sixty (57.69%) of the mothers were from rural areas. A majority (81.73%) of the mothers were Hindus and 98.18% of them belonged to the reserved categories. (e.g. scheduled caste, scheduled tribes and other backward categories). Only 19.23% mothers were below the poverty line and 85.58% were primi or second para.

[Table/Fig-1] presents the characteristics of the 104 babies. The mean ( $\pm$  SD) birth weight of the neonates was 2.71 ( $\pm$  0.45) kg. The male: female sex ratio was 1:089. A majority (84.62%) of the newborns received breastfeeding within one hour of their birth. Forty five (43.27%) of the babies had at least one of the feeding problems like feeding < 8 times in 24 hours, taking any other food or drink and low birth weight. Colostrum was fed to a majority i.e. 96 (92.31%) of the babies and only 6.73% mothers fed other foods or drinks to their babies.

The assessment which was related to the positioning of the babies during breastfeeding before and after the health education, is shown in [Table/Fig-2]. After the health education, a significant

Characteristics	Frequency	%
<b>Age in years</b>		
≤ 19	01	0.96
20-25	74	71.15
26-30	25	24.03
>30	04	3.84
<b>Education</b>		
Illiterate	3	2.88
Primary school	4	3.84
Middle school	33	31.73
High school	41	39.42
Higher Secondary and above	23	22.11
<b>Residence</b>		
Urban	44	43.31
Rural	60	57.69
<b>Religion</b>		
Hindu	85	81.73
Buddha	17	16.34
Muslim	02	1.92
<b>Economic status</b>		
BPL	20	19.23
NON BPL	84	80.76
<b>Caste</b>		
Open	02	1.92
SC	20	19.23
ST	11	10.57
OBC	60	57.69
Others	11	10.57
<b>Parity</b>		
Primi	44	42.31
Second	45	43.27
Third	13	12.50
Fourth	02	1.92
<b>Birth weight in Kg.</b>		
< 2	04	3.85
2-2.4	03	2.88
≥2.5	97	93.27
<b>Sex</b>		
Male	55	52.88
Female	49	47.11
<b>First feed (Hours)</b>		
< 1	88	84.61
1-2	09	8.65
3-6	07	6.73
<b>Feeding problems (n=104)</b>		
< 8 times in 24 hours	45	43.27
Giving any other feeds	07	6.73
LBW	07	6.73
<b>Colostrum fed</b>		
Yes	96	92.30
No	08	7.69

**[Table/Fig-1]:** Socio-demographic characteristics of responding mothers and babies (n=104)

Observations	Pre-health education (At 24 hours)	Post health educations (At discharge)	Mc Nemar's X2 d.f.=1	P
<b>Positioning</b>				
Baby's neck and body straight (neck not bend)	53(50.96)	94(90.38)	34.30	0.01
Baby's body close to mother	49(47.12)	74(71.15)	9.61	0.001
Baby's body turned towards mother	56(53.85)	73(70.19)	19.26	0.01
Mother supporting baby by both the hands	26(25.0%)	44(42.31)	5.78	0.016
<b>Attachment</b>				
Chin of the baby touching the breast	54(51.92)	89(85.57)	25.92	0.01
Lower lip turned outward	38(36.54)	64(61.54)	13.52	0.01
Baby's mouth is widely open	61(58.65)	90(86.54)	23.68	0.01
More areola visible above than below	28(26.92)	32(30.77)	0.33	0.56

**[Table/Fig-2]:** Observations pertaining to breast positioning and attachment assessment before and after health education (n=104)

number

94(90.38%) of the mothers were found to keep their babies' necks and bodies straight ( $p=0.01$ ), 74(71.15%) mothers kept their babies close to them ( $p=0.001$ ), 73(70.19%) babies' bodies were turned towards their mothers ( $p=0.01$ ), and 44(42.31%) babies' whole bodies were found to be supported with both the hands of their mothers ( $p=0.01$ ).

The assessment which pertained to the attachment of the babies which was done before and after the health education revealed that in a significant ( $p=0.01$ ) number of babies 89(85.58%), the chin was touching the breast, in 64(61.54%) babies, the lower lip was turned outwards and in 90(86.54%) babies, the mouth was widely open.

## DISCUSSION

Effective breastfeeding is crucial for getting all the benefits of breastfeeding [8]. The various barriers such as the mother's poor awareness about exclusive breast feeding, fear of inadequacy of the breast milk and poor support at the family level are known; [9] however, the information on the mother's skills on the positioning and the attachment of the baby to the breast have not been well documented [10]. A study which was done in the rural areas of north India reported that significantly more numbers of mothers of the babies with feeding problems had problems in the attachment of the baby to the breast as well as in the positioning of the infant to the breast [7]. The present study attempted to assess the breast positioning and the attachment of the babies and the feeding problems in a sample of rural and urban mothers in Nagpur district. Our results indicated that about 43.26% of the babies had any of the feeding problems like feeding less than eight times in 24 hours, being given any other food or drinks or low weight for age, even though all the deliveries took place in the health unit. Only 6.7% of the infants were given food or drinks other than the mother's milk in our study as compared to 26.3% in another study [7]. In our study, the initiation of breastfeeding within one hour was 84.62%. In other parts of Maharashtra [11], the breastfeeding within one hour was reported to be 24.1%, whereas in this study it was 84.62%. The better practices which were adopted by the mothers with respect to the early initiation of feeding, the frequency of feeding and pre-lacteal feeding in the study area, may be attributed to the hospital deliveries. It may also be due to the awareness and the education of the pregnant mothers through the celebration of the village level monthly Bal Suraksha

Diwas (BSD) and the Village Health, Nutrition Day (VHND) which are under the National Rural Health Mission [12,13].

After the delivery, there is an opportunity to educate and support the mothers about the correct positioning and the attachment of the infant to the breast, which is for effective breastfeeding. No significant difference was observed in the supporting of the baby by both the hands by the mother in the urban and rural combined sample. Other authors have also reported similar findings [7,14]. In the study area, both the rural as well as the urban women customarily wore sarees and blouses. To feed the babies, the mothers had to lift their blouses to their chests and they had to hold them with one of their hands. Many of the mothers held their breasts with one hand and so they found it very difficult to support their babies with both the hands. In such situations, recommending breastfeeding as per the IMNCI guidelines became a bit difficult.

The pre-and post- comparisons showed no significant differences in the assessment visibility of the areola in the combined sample (rural+urban mothers). Law et al. demonstrated that a 4-hour workshop in a positioning and attachment health education programme by using a 'hands-off' approach, can increase the midwives' knowledge on breastfeeding support, which is relevant for the immediate post-natal period. 10 Wallace and Kosmala-Anderson reported that only 54% of the midwives in England were competent in the positioning and attachment of their babies to their breasts [15]. A hospital based study in Libya on the breast feeding practices- positioning and attachment also reported similar findings [16].

Another study [7] also confirmed our findings that the IMNCI guidelines of breastfeeding- helped mothers in bringing the babies close to them and in turning towards them.

The staff of the health care facilities should ensure the education of the mothers regarding the positioning and the attachment of their infants to their breasts before their discharge from the health care facilities.

## ABBREVIATIONS

AWW	Anganwadi Worker
ASHA	Accredited Social Health Activist.
ANM	Auxiliary Nurse and Midwifery

IMNCI	Integrated Management of Neonatal and Childhood Illness
NRHM	National Rural Health Mission
BPL	Below poverty line.
th	

## ACKNOWLEDGEMENTS

We would like to take this opportunity express our sincere gratitude to all those who have in some way contributed to bring this study in the final shape. In particular, we would like to thank all the study participant. We thank Dr. Arun Humane, Professor and Head, Department of Community Medicine, Government Medical College, Nagpur for constant encouragement and support to carry out this study.

## REFERENCES

- [1] Integrated management of neonatal and childhood illness: Training modules for medical officers. New Delhi: 2005. Government of India, Ministry of Health and Family Welfare.
- [2] Sudharto P. Message: WHO. MCH Community Newsletter Breast-feeding August 2008.
- [3] Khan ME. The breastfeeding and weaning practices in India. *Asia Pac Population J.* 1990; 5:71–88.
- [4] Gupta A. 10 years of its work. *J Indian Med Assoc.* 2002; 100: 512–5. [PubMed]
- [5] National Rural Health Mission (2005-2012), Mission document. New Delhi: MOHFW, Government of India, New Delhi; 2006. Ministry of Health and Family Welfare.
- [6] Johnson R, Taylor W. (2010) *Skills for midwifery practice (third edition)*. Churchill Livingstone/Elsevier: Edinburgh.
- [7] Gupta M, Aggarwal A K. A feasibility study of the IMNCI guidelines on effective breastfeeding in a rural area of north India. *Indian J Community Med.* 2008 July; 33(3): 201–203.
- [8] Advantages of breastfeeding. Available from: [internet]. [last cited on 2010 Nov 7] [http://www.breastfeeding.com/all\\_about/all\\_about\\_more2.html](http://www.breastfeeding.com/all_about/all_about_more2.html).
- [9] Dongre AR, Garg BS. A behavior change communication strategy for exclusive breast feeding initiatives: An experience from rural Wardha. Solution exchange for the MCH Community Newsletter, Breastfeeding Month Special. 2008 August.
- [10] Law SM, Dunn OM, Wallace LM, Inch SA. The Breastfeeding Best Start study: Training the midwives in the hands off positioning and attachment health education. *Mat Child Nutr.* 2007;3:194–205.
- [11] Visioning National Family Health Survey- III. 2005-06. Available from: [internet] [last cited on 2010 Dec 25]. <http://www.nfhsindia.org/pdf/MH.pdf>.
- [12] Bal Surakha Diva PDF/Adobe Acrobat - ANC services. Sub-center labor rooms / maternity . Available from: [internet]. [last cited on 2010 Dec 20] [nipccd.nic.in/mch/fr/nbc/er114.pdf](http://nipccd.nic.in/mch/fr/nbc/er114.pdf)
- [13] Monthly Village Health Nutrition Day Guidelines for ANMs, AWWs, ASHAs PRIs.jpg. Available from [internet]. [last cited on 2010 Oct 07] . <http://www.childhealth.com>.
- [14] Dongre A.R., Deshmukh P.R., Rawool A.P., Garg B.S. Where and how the breastfeeding promotion initiatives should focus their attention? A study from rural Wardha. *Indian J Community Med.* 2010 April; 35(2): 226–229.
- [15] Wallace LM, Kosmala-Anderson J. The training needs a survey of midwives, health visitors and voluntary-sector breastfeeding support staff in England. *Mat Child Nutr.* 2007;3:25–39.
- [16] Goyal R.C., Banginwar A. S., Ziyu Fatima, Toweir A.A. Breastfeeding practices: Positioning, attachment (latch-on) and effective suckling – A hospital-based study in Libya. *J Family Community Med.* 2011 May-Aug; 18(2): 74–79.

### AUTHOR(S):

1. Dr. Subhash B Thakre
2. Dr. Sushama S Thakre
3. Dr. Suresh M Ughade
4. Dr. Samir Golawar
5. Dr. Amol D Thakre
6. Dr. Priya Kale

### PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Community Medicine, Government Medical College, Nagpur, India.
2. Associate Professor, Department of Community Medicine, IGGMC, Nagpur, India.
3. Assistant Professor, Department of Community Medicine, Government Medical College, Nagpur, India.
4. Assistant Professor, Department of Community Medicine, Government Medical College, Nagpur, India.
5. Assistant Professor, Jawaharlal Neharu Medical College, Sawangi (Meghe), Wardha, India.
6. Assistant Professor, Mahatma Gandhi Institute of Medical Sciences, Sewagram, Wardha, India.

### NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Subhash B. Thakre,  
Associate Professor, Department of Community Medicine,  
Plot No. 9, Swami Swarupanand Society,  
Narendra Nagar, Nagpur-15  
Phone: 9822366532  
E-mail: drsubhasht@rediffmail.com

### FINANCIAL OR OTHER COMPETING INTERESTS:

None.

Date of Submission: **Jun 14, 2012**  
Date of Peer Review: **Jun 22, 2012**  
Date of Acceptance: **Jun 30, 2012**  
Date of Publishing: **Sep 30, 2012**