



Research Article

Volume 3 Issue 1 – February 2017
DOI: 10.19080/AJPN.2017.03.555601

Acad J Ped Neonatol

Copyright © All rights are reserved by Manjubala Dash

Intervention Strategies for Successful Breast Feeding: Randomized Clinical Trial



Manjubala Dash*

Professor in Nursing, MTPG & RIHS, India

Submission: November 24, 2016; **Published:** February 14, 2017

***Corresponding author:** Manjubala Dash, Professor in Nursing, MTPG & RIHS, Puducherry, India, Email: manju_narayan@rediffmail.com

Abstract

Breastfeeding is one of the most natural and beneficial acts a mother can do for her child. There are many possible nipple problems that breastfeeding mothers may encounter. The 7mm nipple length might be a possible screening indicator that would signal the clinician to provide more intensive breastfeeding monitoring (puapornpong, 2013).

Objectives: Comparison of selected nursing interventions like manual technique, rubber band and syringe method on successful breastfeeding pattern among the antenatal mothers.

Methodology: Randomized clinical trial study was conducted among 90 women having nipple problem, 30 in each group i.e., group I (manual technique), group II (rubber band) and group III (syringe method) in the selected government maternity hospital, Pondicherry, India. Samples were selected by simple random sampling. The outcome of study was evaluated by Descriptive and Inferential statistics.

Results: The demographic variables shows that majority of the women 26(86.70%), 23(76.70%) and 23(76.70%) were in the age group of 19-25 in group I, II, III respectively. 13(43.3%) women in group I, 13(43.3%) in group II and 18(60%) in group III, were studied up to High School level. Result on breast feeding pattern shows that there was improvement in feeding. Mothers not faced any difficulties for feeding the baby after delivery. Each intervention strategy shows equally good in case of nipple problem.

Conclusion and recommendation: These intervention strategies are very simple and cost effective, so this can be practiced in all settings to correct the nipple problems.

Keywords: Nursing interventions; Successful breast feeding; Intervention strategies; Antenatal mothers

Introduction

Breast milk is best for the baby, and the benefits of breastfeeding will extend well beyond basic nutrition. Breastfeeding is one of the most natural and beneficial acts a mother can do for her child. There is no other single action by which a mother can so impact the present and future health of her baby [1]. Colostrums is the first milk, yellow in color secreted by breast soon after delivery. Dramatic health benefits have been proven to pass from mother to child through breast milk. Breast milk is packed with disease-fighting substances that protect the baby from illness [2]. Breastfeeding currently saves six million of lives each year preventing diarrhea and Acute Respiratory Tract Infections. A breastfed child is 14 times less likely to die from diarrhea, four times less likely to die from respiratory disorders and 2.5 times less likely to die from other infections compared to non-breastfed infants [3]. Breast feeding the newborn is a satisfying and sometimes anxiety provoking task [4]. The 7mm nipple length might be a possible screening indicator that would signal

the clinician to provide more intensive breastfeeding monitoring and support the postpartum mothers. If the nipple measure less than 7mm, it should be cared and corrective measures should be initiated [5].

The abnormalities of the nipple includes long nipple, short nipple, abnormally large nipple, inverted nipple, flat nipple, retracted nipple and cracked or damaged nipple [6-8]. The occurrence of inverted and flat nipples is not uncommon in the practice of newborn care. Although such conditions should not preclude breastfeeding if expert counseling and advice on proper positioning are available, many mothers get frustrated and quit breastfeeding. Nipple problems may lead to a delay in breastfeeding initiation and thus deprive the baby from getting the benefits of colostrums. Inability to attach at the breast causes infrequent suckling and may lead to breast engorgement, and if the mother is not shown how to maintain an adequate supply through expression of milk, the production of milk is likely to decrease. It

was estimated that about 10% of pregnant women have inverted or non-projectile nipples, which hinder breast feeding [9]. The National Family Health Survey revealed that the breastfeeding rates in different states were: Tamilnadu- 55.3%, Kerala- 55.4%, Maharashtra- 51.8%, Mizoram- 65.4%, Meghalaya- 58.6%, Orissa- 54.3%, Goa- 59.7% and Assam-50.6%. Breastfeeding rates in Punjab, Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, and Delhi were below 40%.

The breastfeeding rate in Karnataka is 45% [10]. Various methods to correct flat and inverted nipples with varying degrees of success and complications have been reported in the literature. Some of them were prenatal exercises like Hoffman’s exercise [11], nipple stimulation techniques [12-14] and postnatal use of the Nipplette (Philips Avent, Andover, MA) etc [15]. The best simple method to date had been reported by Kesaree et al. [16] the inverted syringe method to pull out the flat or retracted nipple as well as using breast shells to make the nipple prominent [17].

Objectives

- a) To assess the nipple condition in group I, II & III women (mother with manual technique, Rubber band and syringe method) mothers before and after the intervention.
- b) To evaluate the effectiveness of strategies on successful breast feeding.
- c) To assess the level of satisfaction among the women on the strategies.
- d) To associate the post-test level of breastfeeding pattern

and level of satisfaction with the selected demographic and obstetrical variables.

Material and Methods

After getting ethical clearance from the concerned authority this study was conducted in the government maternity hospital, Pondicherry. All antenatal women with nipple problem who came for delivery were considered as sample for this study. The sample size was 90 women with nipple problems out of which 30 mothers were selected by simple random technique for each three group. All the women were selected based on the inclusion criteria. Reliability of the tool was checked by the inter rater reliability technique and it was found that the tool was reliable. The correlation was calculated by using the formula Cronbach’s Alpha for Internal Consistency. The obtained reliability coefficient r=0.9 was highly reliable. Data collection was done in the antenatal wards, those who admitted for safe confinement, willing to participate, had any nipple problem. Oral and written informed consent was obtained from each mother and purpose was explained. Before starting the pre-test the researcher got introduced to all the mothers. First the nipple condition (which type of nipple problem) was assessed. To each group mothers the concern technique was demonstrated (group 1-manual technique, group 2- application of rubber band and group 3-syringe method) and instructed them to repeat the techniques 3-4 times a day for 5 minutes for 7 consecutive days.

The effectiveness of the interventions assessed in the postnatal period with the help of Christi Breastfeeding assessment scale to assess the breastfeeding pattern [18,19]. Inferential and Descriptive statistic was used for analysis (Table 1).

Table 1: Interpretation of Christi Breastfeeding Assessment Scale.

	0	1	2	Score	Risk
Latch-on	No latch on achieved	Latch on after repeated attempts	Eagerly grasped breast to latch on	0-2	High risk
Length of time before latch-on and suckle	Over 10 min	4-6 min	0-3 min	3-6	Moderate risk
Suckling	Did not suckle	Suckled but needed encouragement	Suckle rhythmically with lips flanged	7-10	Low risk
Audible swallowing	None	Only if stimulated	Over 48 hours: frequent		
Mom’s evaluation	Not pleased	Some what pleased	Pleased		

Results

The demography pattern shows that, majority of the women 26(86.70%), 23(76.70%), 23(76.70%) were in the age group of 19-25 years and 13(43.3%), 13(43.3%), 18(60%) had high school level of education, 18(60%), 20(66.6%), 13(43.3%), mothers were from urban area in the group I, II & III respectively. None of the mother in each group 30(100%) had done any type of nipple erection exercise throughout the antenatal period. The obstetrical data reveals that 27(90%), 26(86.7%), 28(93.3%) mothers undergone vaginal delivery in the group I, II and III respectively. The mean level of breastfeeding pattern was 6.57+1.50 in group I

mothers. In group II & III mothers, the mean level of breastfeeding pattern was 6.03+0.76 & 6.00+1.00 respectively. All the mothers in each group were satisfied while feeding the baby. There was no association found between the feeding pattern and to their demographic variables.

Discussion

The mean level of breastfeeding pattern was 6.57+1.50 in group I mothers. In group II & III mothers, the mean level of breastfeeding pattern was 6.03+0.76 & 6.00+1.00 respectively. Dr. Kamalendru Chakarabarti, [20] conducted a study on “Managing the nipple problem” among mothers in Kolkata, who came for clinic.

She compared the two methods for nipple problem. The standard method of treating nipple problem with syringe technique has some problems. The nipple does not protrude after syringing in most cases. It has always to be done under medical supervision. In case of rubber band, the nipple stays protruded and though it is always better to done under supervision. Once the mother learns the procedure, she may not require strict supervision.

Jain S [21] "newer innovation in treatment of retracted nipple" in VCSGGMS&RI, Govt. Medical college at Srinagar from march to august 2011, in which 213 women having retracted nipple, 71 in each of the three groups was carried out. Group A (syringe method) Group B (rubber band method) and Group C (sucking by the husband). Highest success rates were seen in group C (vigorous sucking by the husband), being 52, 88 and 94% on days 3, 7 and 14 days respectively. Success rates in group B were lower, being 43.66 and 74% respectively and lowest in group A i.e., 33.47 and 64%, respectively on corresponding days.

Conclusion

Breastfeeding has been important since the beginning of mankind. In approximately 1800 BC Hammurabi's code regulated the behavior and the health of wet nurses. In Sparta, Greece, Spartan women were required to nurse their eldest son. This was the child who was expected to inherit the family name. At other times during history breastfeeding has been seen as something that only lower class or poor people did [21]. Encouraging women to breastfeed presents a major challenge to health care professionals. Despite attempts to increase the number of women choosing to breastfeed, rates of initiation and continuation in many countries remain less than optimal. A focus both on initiating and continuing breastfeeding is important, since many women fail to maintain breastfeeding for recommended period [22]. The study result showed that all the three methods (i.e.) manual technique, rubber band and disposable syringe technique were effective in improving breastfeeding pattern. Although Disposable syringe has improved the breastfeeding pattern for postnatal mothers with nipple problem, Rubber band and manual technique was found to be more effective when compared to Disposable syringe method for successful breastfeeding pattern among postnatal mothers with nipple problem. So this selected technique can be applied as an adjunct intervention by nurses in their day to day caring the postnatal mothers in hospital and community setting.

References

1. Gandhimathi M, Kalavathi S (2006) Strategy to promote exclusive breastfeeding. *Nightingale Nursing Times* 1(67): 12-15.
2. Da Costa D (2007) Common and unusual diseases of the nipple-areolar complex. *Radio graphics* 27(1): 65-77.
3. Guha KD (2001) Principles and practice (3rd edn), Jaypee Brothers Medical Publisher, New Delhi, India, pp. 302.
4. Arlene Burroughs (1997) An introductory text book of maternity nursing. (7th edn), WB Saunders company, Chicago, London, pp. 297.
5. Puapornpong P (2013) Nipple length and its relation to success in breastfeeding. *J Med Assoc Thai* 96(Suppl 1): S1-S4.
6. Myles Margaret (2003) Text book of midwives (14th edn), Churchill Livingstone publishers, Toronto, Canada, pp. 762.
7. Sujeeva A (2006) Incidence of breast and nipple abnormalities among primigravid women in Sri Lanka. *Sri Lanka Journal of Child Health* 35: 51-54.
8. Vazirinejad R, Darakhshan S, Esmaeili A (2009) The effect of maternal breast variations on neonatal weight gain in the first seven days of life. *Int Breastfeed J* 4: 13.
9. Dewey KG, Nommsen Rivers LA, Heinig MJ (2003) Risk factors for suboptimal infant breastfeeding behavior, delayed onset of lactation, and excess neonatal weight loss. *Pediatrics* 112: 607-619.
10. Alexander JM, Grant AM, Cambell MJ (1992) Randomised controlled trial of breast shells and Hoffman's exercises for inverted and non-proctacile nipples. *BMJ* 304(6833): 1030-1032.
11. Hoffman JB (1953) A suggested treatment for inverted nipples. *Am J Obstet Gynecol* 66(2): 346-348.
12. Neifert MR, Seacat JM (1986) A guide to successful breastfeeding. *Contemp Pediatr* 2: 6-20.
13. McKechnie AC, Eglash A (2010) Nipple Shields: A review of the literature. *Breastfeed Med* 5(6): 309-314.
14. Mc George DD (1994) The Niplette: An instrument for the non surgical correction of inverted nipples. *Br J Plast Surg* 47(1): 46-49.
15. Lawrence RA (1994) Breastfeeding: A Guide for the Medical Profession. (4th edn), Mosby, St. Louis, USA.
16. Kesaree N, Banapurmath CR, Banapurmath S, Shamanur K (1993) Treatment of inverted nipples using a disposable syringe. *J Hum Lact* 9(1): 27-29.
17. Min KH, Park SS, Heo CY, Min KW (2010) Scar-free technique for inverted-nipple correction. *Aesthetic Plast Surg* 34(1): 116-119.
18. Taha R (2009) A Case Study on Using the Via Christi Breastfeeding Assessment Tool in a Clinical Setting. *Honors Scholar Theses* 1-26.
19. Han S, Hong YG (1999) The inverted nipple: Its grading and surgical correction. *Plast Reconstr Surg* 104(2): 396-397.
20. Chakrabathi K, Basu S (2011) Management of flat or inverted nipples with simple rubber bands. *Breastfeed Med* 6(4): 215-219.
21. Ruth A Lawrence, Robert M Lawrence (1999) Breast feeding A guide for the medical profession. (5thedn), Mosby, Toronto, Canada, pp. 242-244.
22. Swanson V, Power KG (2005) Initiation and continuation of breastfeeding: theory of planned behavior. *J Adv Nurs* 50(3): 272-282.



This work is licensed under Creative Commons Attribution 4.0 License
DOI: [10.19080/AJPN.2017.03.555601](https://doi.org/10.19080/AJPN.2017.03.555601)

Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
(Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission

<https://juniperpublishers.com/online-submission.php>