

Original article:

A comparative study of exclusivity of breast feeding and subsequent growth patterns among working and nonworking mothers

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Abstract

Introduction: The present study was done to find out duration of exclusivity of breast feeding and growth patterns of infants among working and nonworking mothers in a tertiary care center of Jaipur, Rajasthan.

Methodology : In this prospective study, 100 mothers coming for vaccination at NIMS OPD were registered and divided into study(working) and control groups(non working).

Information about mothers and breast feeding practices was obtained by using pretested structured questionnaire. Questions included working status, duration of leave availed, facility of nursing breaks, availability of crèche(study group).

Results and conclusion: This study shows that with proper motivation and support, mothers should continue breast feeding which will have a positive impact on anthropometric status of babies. Longer leave, nursing breaks, broken hours of work, and strong motivation could extend the length of exclusive breast feeding

Keywords: Breast feeding

Introduction

Every mother is a working woman. At home, working is viewed as “labour of love” and not counted as real work. Society views work as only that which generates income. A woman who works outside her home and is paid for it is acknowledged as working woman¹. Promotion of breastfeeding is a global priority because of its many benefits to the

infant and the mother². Adequate provision for breastfeeding is an investment in the health of the present and future forces. Today’s babies are tomorrow’s workers. It is therefore a particular challenge to assist and practice optimal breastfeeding which is exclusive breastfeeding till 6 months and continued breastfeeding with added complementary feeding till 2 years or beyond. The challenge is to

sustain breastfeeding when woman is employed, she can offset the effect of separation from her baby if she can express her milk at the work place and carry the expressed milk home for her baby. Breastfeeding woman need time, space and support from her work place and family to be able to follow global recommendations³. One of the commonest reason that people give for the decline of breastfeeding is that more and more mothers have paid jobs. Artificial feeding is put forward as the only solution to the employed mothers³. Employed woman are important role model for females in their community, in their breastfeeding and general health behavior. They constitute a major reservoir of knowledge and skills and their participation in national development is very important. They are perceived as better educated and hence their full participation in modern section of society and their behavior greatly influences their rural counterparts². For optimal growth and development, the World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life, starting in the first half hour after delivery⁴. However, in most countries, the proportion of mothers who exclusively breastfeed their babies up to 6 months remains low⁵. The resultant child malnutrition has alarming long-term implications, particularly in low and middle-income settings where it has been associated with decreased schooling and economic productivity later in life⁶. The present work was planned to find out duration of exclusivity of breast feeding among working mothers and

nonworking mothers and to compare growth patterns of infants born to working mothers and nonworking mothers.

Material and methods

This observational prospective study was done in NIMS Hospital from April 2014 to September 2014 in 100 mothers attending Immunization clinic. Mothers and their babies in order of their appearance who come for vaccination at NIMS OPD were registered and divided equally into study(working mothers) and control group(non working mothers) and were followed at regular intervals i.e. at 6, 10, 14, 18 and 24 weeks. Anthropometric measurements at birth and at above periodic intervals were recorded and compared.

Pretested structured separate Performa were given for study and control group with specific queries regarding

- Breast feeding
- Working status
- Duration of leave availed during postnatal period
- Facility of nursing breaks at work place
- Availability of crèche etc.

Inclusion criteria- All working and nonworking mothers of term babies attending immunization clinic and mothers willing to participate.

Exclusion criteria- Preterm babies, very low birth weight babies, twin babies, babies with congenital anomaly.

Observations

TABLE-1 Distribution of working women depending on type of job

| Type of occupation | Number of cases |
|--------------------|-----------------|
| Teachers | 23 |
| Doctors | 7 |
| Staff nurses | 8 |
| Others | 12 |

In this study out of 50 mothers, 23 were teachers, 7 doctors, 8 staff nurses and 12 were from different sectors.

TABLE-2 Exclusivity of breast feeding

| Exclusivity of breast feeding | Study group | Control group | P value |
|-------------------------------|-------------|---------------|---------|
| 6 weeks | 50 | 49 | >0.75NS |
| 10 weeks | 46 | 48 | >0.37NS |
| 14 weeks | 40 | 45 | >0.88NS |
| 18 weeks | 20 | 41 | <0.01S |
| 24 weeks | 03 | 40 | <0.01S |

In this study 40% mothers in study group and 82% mothers in control group continued breast feeding upto 18 weeks but it declined to 6% at end of 24 weeks in study group which was found to be statistically significant.

TABLE-3 Weight for age in males

| Time interval in weeks | Study mean | Control mean |
|------------------------|------------|--------------|
| Birth | 2.92(0.44) | 3.05(0.45) |
| 6 | 4.69(0.47) | 4.71(0.40) |
| 10 | 5.48(0.42) | 5.69(0.30) |
| 14 | 6.43(0.38) | 6.59(0.33) |
| 18 | 7.20(0.45) | 7.29(0.34) |
| 24 | 7.84(0.50) | 8.19(0.50) |

TABLE-3 Weight for age in females

| Time interval in weeks | Study mean | Control mean |
|------------------------|------------|--------------|
| Birth | 2.89(0.40) | 2.96(0.41) |
| 6 | 4.39(0.37) | 4.37(0.29) |
| 10 | 5.29(0.50) | 5.39(0.31) |
| 14 | 6.09(0.48) | 6.20(0.39) |
| 18 | 7.03(0.21) | 7.32(0.95) |
| 24 | 7.15(0.59) | 7.87(0.52) |

TABLE-4 Length for age in males

| Time interval in weeks | Study mean | Control mean |
|------------------------|------------|--------------|
| Birth | 48.93 | 50.55 |
| 6 | 54.82 | 55.15 |
| 10 | 57.63 | 58.68 |
| 14 | 60.76 | 61.77 |
| 18 | 64.00 | 64.21 |
| 24 | 65.57 | 66.12 |

TABLE-5 Length for age in females

| Time interval in weeks | Study mean | Control mean |
|------------------------|------------|--------------|
| Birth | 47.92 | 50.55 |
| 6 | 54.51 | 55.50 |
| 10 | 57.15 | 58.15 |
| 14 | 59.76 | 60.45 |
| 18 | 63.15 | 63.75 |
| 24 | 64.00 | 65.52 |

TABLE-6 Comparison of growth of infants at 6 months of age(males)

| Parameter | Study mean | Control mean | P value |
|-----------|------------|--------------|---------|
| Weight | 7.15 | 8.11 | NS |
| Length | 64.37 | 67.12 | <0.01 S |

The mean length in control group was more than study group.

TABLE-4 Comparison of growth of infants at 6 months of age(females)

| Parameter | Study mean | Control mean | P value |
|-----------|------------|--------------|---------|
| Weight | 7.45 | 7.87 | <0.01 S |
| Length | 64.17 | 64.87 | NS |

The mean weight in control group was more than study group.

Discussion

Exclusivity of breastfeeding declined to 40% at 18 weeks in study group as compared to 82% in control group and it was only 6% in study group as compared to 80% in control group. This can be explained as most mothers resume their work, because of short

duration of leave and non availability of crèche in working area, they cannot continue breastfeeding and introduction of top feeds is done which is similar to study conducted by Sinniah et al⁷ who also showed that 237 of 317 nursing professional mothers were breastfeeding at birth and this figure declined to

35.5% at 1 month, 5.4% at 6 months and only 3.5% at 9-12 months. Yimyam S and Morrow M⁸ also concluded that resumption of employment had negative impact on breastfeeding duration. Zanon et al⁹ shown that the factor that most strongly influenced breastfeeding was mothers work. At 6 months 80% of the mothers who were at home were exclusively breastfeeding, while it was around 37% in working mother who were working in public sector and 39% in women in private sector and most of the studies have shown that resumption of work has negative influence on exclusive breast feeding. Ryan and Martinez¹⁰ showed that 10% working mothers were breast feeding till 6 months as compared to 24% of those who were not working. Sadde N et al¹¹ also concluded that rapid return to work causes psychological stress which affects breast feeding and Ryan AS¹² et al also had similar results. In this study weight for age and length for age was more in control group as compared to study group which is similar to study conducted by Kathryn G et al¹³ and Behzad Shams et al¹⁴ who also concluded that growth monitoring charts of the infants with housewife mothers were better than those of infants

with working mothers. According to the results, it seems that in the first 6 months of the child's life, breast milk has nutritional variety and an appropriate and proportional food balance to fulfill the child's needs, and due to low attention of the infant to the environmental stimuli and dependency on the breast milk in providing his nutritional needs and higher rate of sleeping of the infant in this stage, nutritional needs of the infant can be provided. If the mother, after 4 months of maternity leave (i.e. onset of the attachment stage), is forced to leave the infant for a few hours in a day, these nutritional needs will not be met fully. And since this period is the most essential stage of the nutritional evolution stages, establishing a close relationship between the child and mother is of high importance, so that physical, mental, and social growth of the child in the subsequent months would depend upon this relationship¹⁴.

Conclusion

Mothers can combine working and exclusive breast feeding for 6 months if they are adequately motivated and supported. Most working mothers could not continue breast feeding because of less maternity leaves and nonavailability of crèches.

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