

Topic: Exclusive breastfeeding and child survival in India: Relationship Revisited in view of WHO recommendation

Author: Arvind Pandey¹, B.N. Bhattacharya², Rehana Sultana¹, D. Sahu¹ & Ajay Pandey³

Address: 1. Institute for Research in Medical Statistics, Indian Council of Medical Research, New Delhi India
2. Indian Statistical Institute, 203 BT Road, Kolkata 700 108, India
3. National Commission on Population, Govt. of India, New Delhi

Email: arvindpandey@vsnl.net

Background:

Exclusive breastfeeding is said to have important bearing on the child survival particularly during infant ages. A number of studies has reported that exclusive breastfeeding reduces the risk of infant mortality cutting across the ethnicity and social classes of population. Accordingly WHO has recommended 4-6 months of exclusive breastfeeding to new born particularly in developing countries. Though intensive breastfeeding was practiced in India during infancy but it was supplemented by water, honey and animal milk. Following WHO recommendation efforts were made to promote exclusive breastfeeding in national health programme as a part of mother and child care.

In one of the recent studies based on the India's National Family Survey, 1992-93 (NFHS-1) data it has been pointed out that the risk of early infant mortality (during 1-4 months) under exclusive breastfeeding is more than that of non-exclusive breastfeeding. This has apparently created a controversy on the WHO recommendation on exclusive Breastfeeding. This has necessitated giving afresh look into the data and the methodology adopted to arrive at the above conclusion.

Data and methodology

The present paper intends to re-examine the findings of the study "Are the WHO guidelines on breastfeeding appropriate for India?" NFHS Subject Report # 16. It uses the same data (NFHS-1, India) that was used in the subject report above.

The study included all children born during 4 years preceding the survey assuming an insignificant recall bias in reporting of events. As we go back from the date of survey, the infant mortality particularly during early infancy keeps on declining showing the under reporting of events in the remote past. In fact, the extent of under enumeration of deaths was found to be positively correlated with the time of occurrence of events since the date of the survey. This necessitated analyzing the data using an appropriate methodology that accounts for such biases.

The multi-variate hazard model with time dependent covariates was used to analyses the data. We have estimated two models. The first model compares the effect of exclusive breastfeeding and not breastfeeding with respect to non-exclusive breastfeeding after controlling the effect of potentially confounding variables on infant mortality. The second model studies the effect of exclusive breastfeeding, breastfeeding combined with water and not breastfeeding with respect to breastfeeding with other supplements.

Results:

It is found that the risk of death during age 1-4 months for children under exclusive breastfeeding is lower than those children who are under non-exclusive breastfeeding or not breastfeeding. The findings support the need of WHO recommendation of exclusive breastfeeding during early infancy.

A breastfeeding child given plain water only (i.e. not receiving food supplements) is categorized as non-exclusively breastfeeding as in the NFHS subject report 16. The present analysis has indicated that during the age segment 1-6 months the risk of death among breastfeeding children receiving only plain water is lowest compared to those children who were under different types of breastfeeding, i.e., exclusive breastfeeding, breastfeeding with food supplements and not breastfeeding. This finding suggests that further investigation is required to see the validity of these findings.