Review article:

Exclusive Breasfeeding in the 21st Century: a Roadmap to success in South Asia

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Abstract

Background: Exclusive breastfeeding is a simple, cost-effective and life-saving intervention for the health of an infant. Despite its undisputable benefits, in past two decades, exclusive breastfeeding rates have not improved much globally. Among the South Asian countries, some are raising the bars and some are still struggling to meet the target for reaching sustainable development goal. So this review was planned to understand their situation and how to improve further for establishment of successful exclusive breast feeding. Main Body: On simple review of different literatures on exclusive breast feeding in South Asia, it was observed that the rate widely varies among the countries due to cultural and societal differences, women empowerment, illiteracy, maternal care practices, policy and program implementation and many other modifiable factors. Given the compelling evidence on the positive impacts of breast feeding, some integrated approaches are required involving policy makers, ensuring community participation and family centered counseling, providing health education for mothers and establishment of the Baby Friendly Hospital Initiatives. Conclusion: Experiences from successful neighboring countries can guide the other countries of South Asia to plan their roadmap. Moreover, further dissemination and scaling up of existing programs on exclusive breast feeding can help to achieve the desired target for Sustainable Development Goal.

Keywords: Baby Friendly Hospital Initiative, Exclusive breast feeding in South Asia, Sustainable Developmental Goal and breast feeding

Introduction:

Initiation of breast feeding within one hour of birth, with no other foods or liquids and its continuation for the first six months of life, is called Exclusive Breast feeding (EBF). Then it is to be continued along with complementary feeding (age-appropriate foods) until at least 24 months of age. The World Health Organization states that exclusive breast feeding is an easily affordable and sustainable interventions that can reduce preventable child deaths. Neonatal mortality remains a major contributor to overall infant and under-five mortality over the past

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years\textsuperscript{6}. South Asian countries have made tremendous progress in recent decades in reducing neonatal mortality rate from 58.7 per 1,000 live births in 2000 to 28.2 per 1,000 in 2016. But it was observed that 2.6 million newborns died worldwide in 2016; among which 1 million (39\%) of newborn deaths were from the South Asian countries. A child in South Asia has 9 times more the risk of death in first month of life than a child in high income countries and twice as likely to die as a baby in Middle East and North Africa\textsuperscript{5}. Most of these newborn deaths are preventable. To achieve sustainable development goal (SDG), neonatal mortality needs to be reduced to below 12 per 1000 live births and under-5 mortality to be reduced to below 25 per 1000 live births. Currently 79 countries have not achieved SDG targets for under-five mortality, and 24 countries have rates that are three times higher \textsuperscript{6}.

Breastfeeding is one of the best indicators to reduce neonatal as well as under 5 mortality. But the rate of EBF is not uniform among these countries, some are still off track. So, integrated cost effective interventions need to be adopted for successful implementation of exclusive breast feeding and therefore to achieve SDG 2030 targets.

**Role of Exclusive Breast Feeding in achieving SDG:**

Exclusive breast feeding plays a big role in all the Sustainable Developmental Goals (SDG). It is directly or indirectly linked with goals that aim to reduce poverty, hunger, gender discrimination, and promotes health and well-being, education and economic growth. As a core infant feeding practice, it significantly contributes to SDG 3 by improving nutrition of infants and promoting healthy life \textsuperscript{4,7}. Encouraging and supporting women in low-resource settings to breastfeed can play a vital role in achieving SDG 1 (end poverty in all forms), SDG 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture) and SDG 10 (reduce inequality within and among countries). It also contributes in SDG 6-15 by its continuous positive health outcome for mothers and babies throughout the life course and promoting sustainable economic growth\textsuperscript{7}. Thus effective measures are essential for successful EBF that can further reduce infant mortality rate and will help to achieve SDG.

**Role of Exclusive Breast Feeding in reducing child mortality and improving the economy:**

Breast feeding has a major impact on nutrition, education, maternal health and child health and survival. Worldwide, 5.6 million children died before their fifth birthday in 2016, and 2.6 million (46\%) died during their first month of life \textsuperscript{9}. More than 820,000 lives (87 percent are infants below 6 months of age) would be saved annually in 75 low and middle income countries with only breast feeding. Exclusively breastfed infants have less risk of death (around 12\%) compared to those who are not breastfed. Initiation and maintenance of EBF can reduce pneumonia and other morbidities, and by this indirectly it can reduce parental anxiety and improve quality of life of children. On average, infants younger than six months who are not breast fed are 3-4 times more likely to die than those who received any breast milk \textsuperscript{10-11}.

Breast feeding can also add hundreds of billions of dollars to the global economy each year. A 10 percentage point increase in exclusive breast feeding for first 6 months or continued breast feeding up to two years can secure at least $312 million in healthcare savings in the United States, $48 million in the United Kingdom, $30.3 million in urban China and $6 million in Brazil \textsuperscript{12}. Not breast feeding is associated with lower intelligence and economic losses of about $302 billion per year or 0.49\% of world gross national income. Rapid progress is possible, if more countries invest in the policies and programs that support women’s breast feeding decisions \textsuperscript{10,12}.

**Exclusive Breast Feeding-Global and South Asia perspective:**

Initiation of breast feeding immediately after birth and exclusive breast feeding for 6 months reduces newborn deaths by 20\% and under-five mortality by 13\% \textsuperscript{9}. It has substantial benefits for children and women both in high as well as low-income countries and the evidence is now stronger than ever \textsuperscript{13}. The global rate of EBF for infants under six months of age is 40\%. This rate varies among countries and even among regions of same country. In India, about 45\% of newborns receive breast feeding within 1 hour of birth and 65\% of infants are exclusively breastfed for the first 6 months. EBF rate in first 6 months of life is 50.8\% in Sri Lanka, 53\% in Nepal and 55\% in Bangladesh. These South Asian countries have already reached the set goals but sustainability is the current challenge \textsuperscript{14-16}.

Among the developed Asian countries, for example Singapore where the rate of any breast feeding
at 4 months improved from 6.3% to 29.8% by the National Breastfeeding survey between 2001 and 2011, however exclusive breastfeeding rates remain very low at <1% 17. Another Singaporean prospective birth cohort from 2009 to 2011 reported that the prevalence of exclusive and predominant breastfeeding was only 11%, 2% and 5% among the Chinese, Malay and Indian mothers respectively which is low and needs targeted actions to improve the situation18. In the United States of America, less than 50% of infants are exclusively breastfed through 3 months and about 25% are exclusively breastfed through 6 months19. Generally, infants in low- and middle-income countries are more likely to be breastfed than infants in high-income countries. Just 4 percent of babies in low- and middle-income countries are never breastfed, while 21 percent of babies in high-income countries never receive breast milk20. The practice of exclusive breast feeding is not uniform in all countries due to lack of clear policy about duration of EBF, different socio-demographic and other modifiable factors.

**A roadmap for successful EBF in South Asia:**

For breast feeding promotion, some of the South Asian countries have existing programs, while others need to be incorporated based on countries individual socio-economic condition and infrastructure. Evidence shows that communication and mass media campaigns in targeted areas, facility based Baby Friendly Hospital Initiative (BFHI) and Community based EBF promotion are indispensable for successful EBF practice (Figure -1).

- **Communication and mass media coverage:**

In this era of modern civilization, people have access to health care information via mass media and the internet (Whatsapp/ Facebook/ Instagram). National campaigns to increase breast feeding rates have proven to be beneficial. For example, in March 1981, Brazil launched its National BF program through a mass media campaign in order to sensitize public and Government. This campaign reached out to 13.5 million households via television, radio and press advertisement, messages on lottery tickets, telephone bills, electricity bills, water bills and bank statements. The campaign was very successful and built the foundation for BF implementation21. Five years after the first evaluation, it was seen that the median duration of breast feeding increased in Greater São Paulo, from 2.9 to 4.2 months, and in Greater Recife, from 2.2 for 3.5 months and the median duration of predominant breast feeding increased from 15 days to 32 days22.

Similarly a mass media campaign was launched in 2010 in Bangladesh, using television channels and home counseling to promote breast feeding and young child feeding practice. Knowledge on initiation of breast feeding improved by 8.5% and breast feeding practice was also increased to 23.7% from baseline. After additional home counseling, breast feeding initiation was further increased to 17.9%. It was evident that such interventions effectively motivate women towards breast feeding their child23.

Although mass media has been successful as an interventional tool in breast feeding promotion, other interventions have also been beneficial. In a large scale cluster randomized intervention in Bangladesh and Vietnam, the impact of combined intensive inter personnel counseling (IPC) with mass media (MM), community mobilization (CM) and policy advocacy (PA) was compared with standard counselling with less intensive MM, CM and PA.

The study revealed that improvements were significantly greater in the intensive compared to the non-intensive group in Bangladesh. The prevalence of EBF in intensive group rose from 48.5% to 87.6% (95% CI 21.0–51.5, p < 0.001) and early initiation of breast feeding (EIBF) from 63.7% to 94.2%. In Vietnam, the increase in EBF was greater in the intensive group (95% CI 17.7–38.1, p < 0.001; 18.9% to 57.8%)24.

So creating awareness is critical along with the policy for all countries in any health program. National
campaigning, television and radio live programs based on EBF by professionals, problem solving programs for mothers who face difficulties in EBF, using internet tools for breast feeding awareness and involving young generation in these programs can be some advanced steps we can take.

- Facility based Baby friendly hospital initiatives (BFHI):

  In 1991, WHO and UNICEF launched the Baby-friendly Hospital Initiative, with the goal of improving maternity facilities’ environments to support and promote breast feeding. In order - for a maternity facility to be designated as “Baby friendly,” the facility needs to implement “Ten Steps to Successful Breast feeding” and adhere to the International Code of Marketing of Breast Milk Substitute.

  As a global initiative, BFHI has had widespread reach to 86% of countries worldwide. However, in 2016 only 10% of births occurred in designated Baby Friendly Facilities even after 25 years of implementation. The percentage varies widely all over the world, from less than 5% in Africa and South East Asia and over 35% in Europe.25

  South Asian countries faced many challenges during implementation of BFHI. India initiated BFHI in 1999 but stopped within a year, due to policy and health facility level challenges. The reasons include overall weak management and co-ordination, lack of involvement of private hospitals, heavy workload of existing staff and weak monitoring system in hospital. Only in 2016, India revived the BFHI program nationwide. By this time, India had strictly enforced the International Code of Marketing of Breast milk Substitutes as an integral part of BFHI.

  Nepal had started working on BFHI since 1997; but to date, has not been able to implement the ten steps of BFHI. At the national level, there was lack of will, clear policy and funding whereas at the health facility level, staff were not aware of BFHI and lacked motivation, lack of internal monitoring and poor follow up after discharge from hospital. Currently Nepal has been implementing Multi sector Nutrition plan with an emphasis on exclusive breast feeding practices and monitoring of BFHI ten steps in government as well as private sectors.26

  The Bangladesh BFHI model based on strong political will, concrete planning and budgeting, coordinated action to build capacity and regular monitoring can be learning points for other developing countries. The main driving force for this success was the message from the Prime Minister during the World breast feeding week in 2009 and 2010 which led to the development of a clear action plan. Ministry of Health and Family Welfare became motivated and BFHI was revitalized. Breast feeding corners were established in all government and private hospitals. Government supported all breast feeding related activities in the country.

  Even though Bangladesh made rapid progress in implementing BFHI over the past decade, gaps in implementation include ensuring reading materials for parents, skill training of every staff in maternity units and creation of breast feeding support group in the communities.26

  Among all these challenges, the most important steps will be strong enforcement of the International Code of Marketing of Breast Milk Substitute and strict monitoring system for BFHI centers which are not well maintained in these countries till now. And if these two are not addressed timely, EBF program will not sustain.

- Community based Breast feeding education and support intervention (BFHI):

  Community based educational and support interventions provided prenatally and postnatally can increase breast feeding initiation by 86% and EBF rate by 20%.9 Family centered counseling during this period not only increase EBF acceptance but can also increase adherence to antenatal and postnatal follow up visits, increase family bonding and decrease postpartum depression of mothers.27 In a systematic review, Community based peer support (peer nutrition counseling, shared decision making, grandmothers /elders-to-mother breast feeding counseling) in low- and middle-income countries, compared to usual care, increased exclusive breast feeding at 6 months (RR: 3.53, 95% CI: 2.49–5.00).28

  A successful country example of BF friendly community can be drawn from Brazil where Baby Friendly Primary Health Care Unit was innovated based on BFHI steps. Other measures included BF training of all primary health care unit staff including community health agents and formation of BF support groups for counseling as well as home visits for assessing EBF practice in the community.29 Evidence from large community practice can also elicit political will and long term commitment from policymakers. In Pembo, Philippines, in a BF promotion scale up project, they found that peer counseling was effective to improve EBF. The program was scaled up in <
Community based breast feeding programs are not optimum in most of the South Asian countries or even if present, are not supervised properly. Counseling session on breast feeding with the health care provider, community follow up for EBF status, arranging breast feeding programs in community and awarding the successful EBF implementers can be some guiding points for achieving success.

- **Breast feeding friendly working environment:**

For successful breast feeding a friendly and supportive environment is essential at home as well as in the work place. The International Labor Organization (ILO) established 100 years age, in their Maternity Protection Convention, stated that a woman should have the right to have paid maternity leave as well as breaks during the work day for nursing her baby. The Convention was subsequently updated in 2000 (C183) and recommended (R191) that countries should endeavor to extend the duration of leave to 18 weeks and provide 100% of salary from public funds. Unfortunately, just over 10% of countries currently provide at least 18 weeks of maternity leave, ranging from 12-16 weeks in India, 12-16 weeks in Singapore and 6 months in Bangladesh. It is essential to adhere to the ILO recommendations for maternity leave by 2030 to achieve targets worldwide.

**Conclusion:**

Exclusive breast feeding is one of the most effective investments a country can make both in health and non-health sector to ensure a healthier population with more economic sustainability. Most of the developed as well as developing countries of South Asia are giving effort for successful EBF practice which can be an example for many other countries worldwide who are still in off track. Contrarily, though maintaining average EBF rate, South Asian countries have to focus more on further dissemination and scaling up of exclusive breast feeding promotion programs that can save hundreds of thousands of lives and can lead to SDG.

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