

Breastfeeding In Contemporary Society: Practices, Challenges, And Perspectives

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Abstract—In most countries rates of breastfeeding fell sharply in the 20th century, especially among richer countries. This decline caused some concerns and there was a great deal of research carried out about breastfeeding and how it helps to protect the mother and child. Steps favoring breast-feeding helped launch many key world efforts: the WHO International Code of Marketing of Breast-milk Substitutes in 1981 and the Innocenti Declaration on Breastfeeding in 1990. Such programs and others contributed to the betterment of breastfeeding practices.

Meta-analyses of numerous individual studies have recently confirmed that breastfeeding significantly has many health benefits for infants and young children. These benefits vary but are greater for certain environmental, hygiene and socioeconomic circumstances. At the very least, in resource-limited areas, breastfeeding decreases the rates of diarrhea, respiratory infections, and mortality in children. It decreases the likelihood of ear infections, likely also decreases type 2 diabetes, overweight/obesity and may work to prevent type 1 diabetes in high-income areas. It is also associated with a small improvement in IQ. Breastfeeding decreases the chances of breast and ovarian cancers for mothers. The estimates in the Lives Saved Tool show that if unattainable breastfeeding rate was 30 percent more common, approximately 823,000 child deaths and 22,000 women's deaths could be prevented.

Index Terms—Breastfeeding, Exclusive breastfeeding, Initiation of breastfeeding, Barriers to breastfeeding, Benefits of breastfeeding

I. INTRODUCTION

Often called an ancient practice and a modern health miracle, the positive effects of breastfeeding for

babies, mothers and society are well documented. Therefore, it must be appreciated, stimulated and protected. But, social and economic changes in the world can affect breast feeding in various ways. Traditional practices like breastfeeding may be a measure that is at risk in the process of economic development in low-income countries. However, compared to many other high-income OECD nations, awareness of the many great benefits of breastfeeding has grown and so too have the better policies, including the more adequate maternity leave provisions and a more robust regulatory framework in these countries that controls the inappropriate marketing of infant milk products. Gradual increases in breastfeeding take place through some of these measures, but often starting with low rates.

In 2016, two papers were published in The Lancet that synthesized the latest available evidence on breastfeeding, based on two newly commissioned meta-analyses and market research. The present review is, in large part, dependent upon those important papers, as well as results more recently.

II. RECENT EVIDENCE ON THE BENEFITS OF BREASTFEEDING

Numerous concerted evaluations have focused on the benefits of breast-feeding as well as the biologic mechanisms of those benefits. These studies are broken down, defining how due to human evolution breast milk is what has evolved to help ensure offspring's survival, particularly in the kind of

environment where infants would have been extremely susceptible to infections.

While these biological considerations are amazing, scientists wonder if breast milk is always well suited to today's childhood, since kids today are exposed to fewer life-threatening infections. The low iron levels in breast milk are an example of it. Clinically, any adverse effects from low iron levels could have been controlled. From an evolutionary standpoint, low iron concentrations may have restricted the expansion of harmful pathogens. Modern medicine, however, says low iron can have an impact on brain and cognitive development, particularly in pre-term or low birth weight infants. As a result of this, some countries advise giving iron supplements to certain infants during their infancy. Although these factors have been taken into consideration, breastfeeding benefits child health all over the world.

a. Breastfeeding and Illness and Death of Child

Strong evidence that breast feeding reduces child mortality specially in low-income settings. The evidence on the effect of breastfeeding on the death of young children is consistent across different definitions of breastfeeding, including ever breastfed versus never breastfed, and longer versus shorter breastfeeding.

In high-income nations, breast-feeding also can lower baby mortality. Certain research has indicated that breastfed infants are least vulnerable to SIDS and NEC.

There is even clearer evidence that reductions in illness are due to them. Numerous studies indicate that children who consume breast milk are protected from diarrhea and respiratory infections. These protective influences are particularly pronounced in the very sick patients who need to be hospitalized, and they are strongest in younger children.

Breastfeeding seems to have a protective effect on children under two years of age in high income countries, against ear infections. Studies that control for confounding factors, however, are less convincing, or inconclusive, about preventing allergic reactions to food, eczema, allergic rhinitis, or asthma. Other findings indicate that breastfeeding may have a protective effect on young children against dental caries. There is, however, an association of night-time breastfeeding after 12 months of age,

particularly, with an increased risk of dental caries in older children.

Health and later life can be affected by being overweight or obese.

There is little research to suggest any effect on child growth but there may be a small decrease in BMI. Studies of the preventative effect of breastfeeding on overweight and obesity in adulthood have provided mixed results, and recent observational studies indicate that breastfeeding acts to modestly prevent overweight and obesity.

The benefits of breastfeeding may also last into adulthood — when only the highest-quality studies are taken into account — and breastfeeding has been shown to lower the risk of later developing type 2 diabetes. Breastfeeding seems to have as yet no reliable effect on blood pressure or cholesterol, although some studies have suggested possible protection against type 1 diabetes. It has also been linked to a diminished risk of childhood leukemia.

b. Breastfeeding and Intelligence

The association between breastfeeding and intelligence is difficult to study because many factors related to the social and family context – such as maternal education and cognitive ability – are also associated with breastfeeding. Many studies show that despite adjustment for the quality of the home environment and the parental IQ a small improvement in IQ scores in favor of breast feeding was found and higher educational attainment was also found.

c. Benefits for Mothers

Breastfeeding can also offer health benefits for mothers. Can postpone the return of menstruation after birth to facilitate natural spacing between births. The effect is related to hormonal changes particularly prolactin and is modulated by the nutritional and energy status of the mother.

Very convincing also are the studies on breast and ovarian cancer and its reduction due to breastfeeding. Research comparing the long and short breastfeeds have shown reduced risk with longer breastfeeds of either cancer type.

d. Cardiovascular Disease

In a recent meta-analysis of eight studies involving almost 1.2 million women, those that ever breastfed showed a reduced risk of various cardiovascular outcomes relative to those who never breastfed. The reductions were approximately 11% for overall cardiovascular disease, 14% for coronary heart disease, 12% for stroke and 17% for fatal cardiovascular disease. Even after researchers controlled for socioeconomic status and other factors in some of these studies, however, the possible partial explanation due to other residual factors cannot be ruled out and hence these relationships have to be interpreted with caution. For instance, there are additional health-related behaviors among women who have breastfed that might also lessen their risk of cardiovascular disease later in life.

e. Osteoporosis

Breastfeeding causes changes in the mother's BMD as the mother contributes her calcium stores to the growth of her child's milk, which also requires calcium. But a 'meta-analysis' of the four studies available has no clear link found between breastfeeding and increased risk of osteoporosis later in life.

f. Type 2 Diabetes

According to a meta-analysis of six cohort studies, breastfeeding was found to be associated with a reduction in later life type 2 diabetes by 32%.

g. Postpartum Weight Change

Women tend to retain some fat during pregnancy which may be a biological mechanism providing the additional energy needs of breastfeeding, but individual postpartum weight loss may vary widely. Overall, there is no clear evidence that breastfeeding regularly takes place at the expense of a decrease in weights following childbirth. But a large study of 740,000 U.K. women found that for each extra six months of total breastfeeding, women's body mass indexes were 1% down.

h. Maternal Depression

It is thought that breastfeeding, in general, helps reduce maternal depression but it is unclear whether there is cause and effect. Possibly it is breastfeeding that helps to decrease depression, but there also may

be other factors influencing why women who have less depression are more likely to successfully breastfeed.

Breastfeeding suggestions for mothers who are HIV positive or experiencing COVID-19

i. HIV

For mothers with HIV, lifelong treatment (antiretroviral therapy) and/or prevention (preventative HIV treatment) is necessary. If a mother cannot determine if her baby is HIV infected or not, or if the mother is HIV infected and the baby isn't, the WHO suggests she exclusively breast feeds for the first six months. From the time they start being introduced complementary foods should be offered alongside human milk until breastfeeding is weaned. WHO recommends nursing for 12 months and possibly until 24 months or more, in the same way as for babies in the general population.

There are differences in recommendations, though, among the countries. For instance, the US CDC and the American Academy of Pediatrics recommend that HIV infected women do not breastfeed.

j. COVID-19

WHO advises to encourage the initiation and maintenance of breastfeeding amongst mothers who have suspected or confirmed COVID-19. Mothers should be informed that the benefits of breastfeeding are much greater than the possible risk of virus transmission. However, the Center for Disease Control and Prevention (CDC) in the United States does not recommend that mothers with COVID-19 stop breastfeeding unless their hands are dirty or they have recently touched blood or body fluids. Rather, it offers advice on precautions. For women who are breastfeeding, the CDC says that the Pfizer and Moderna COVID-19 vaccines are safe and that protection can be transferred to the baby, but that remains unclear.

k. Total Estimated Number of Lives Saved by Breastfeeding

Through the Lives Saved Tool, Victora and colleagues calculated that nearly universal breastfeeding in the nation's most vulnerable to child mortality in 2015 could have saved an estimated 823,000 children's lives. They further concluded that, if improved breastfeeding rates in high-income

countries could progress from the global level, deaths from breast cancer could be prevented in the region around 20,000 per year. Furthermore, an increase in breastfeeding at one year in the high-income country and at two years in the low- and middle-income country could save an additional 22,000 lives.

III. RECENT GLOBAL TRENDS IN BREASTFEEDING

Indicators Of Breastfeeding Rates and Trends Are Available

Ideally, the specifics of measuring and defining breastfeeding would be the same for both countries and time. However, this is often not the case. There are numerous surveys with various definitions, and in some high-income countries, there is no information available on the usual breastfeeding measures. Accordingly, the researchers sometimes have to use provisional or proxy indicators to meet the criteria for international comparisons.

Breastfeeding Percentage by Birthing Year and Country.

Breastfeeding rates at 1 year of age are encouragingly high globally in many Africans, South Asians and other developing nations. Breastfeeding rates are particularly high in countries in the lower category of national income. Here over 90% of infants are breastfed at least once and continue at the age of 6 months.

In the poorest countries, exclusive breastfeeding is approximately 50% in children who were born prematurely. In the poorest countries, almost half of children were born early and exclusively breastfed for the first five months. This rate, however, will go down as the country becomes wealthier, and data for the wealthiest countries are rarely available. This is unique amongst measures of health, where other countries with less wealth tend to have a healthier time of breastfeeding than those within greater wealth.

There is usually a clear connection between exclusive breastfeeding during the first five months and breastfeeding at one year, with the exception of the Pacific Islands region. But West Africa is an exception, in that some countries have very low rates of exclusive breastfeeding, and very high rates of continued breastfeeding at 12 months.

Additionally, long-term breastfeeding survey data from LMIC countries was reviewed. Long term breastfeeding survey data from LMIC countries was also reviewed by Victora and colleagues. They discovered an overall rise from EXCLUSIVE BREASTFEEDING in 1993 (25 percent) to 2013 (36 percent). The largest relative improvement was seen in the highest income groups with within-population rates being lower to begin with. The prevalence of breastfeeding is fairly similar in low-and middle-income countries by 2013 by socioeconomic status. At 1 year, breastfeeding continued at a high level at 73% (down from 76%).

IV. FACILITATORS AND BARRIERS TO BREASTFEEDING

Cultural Attitudes and Family Supports Are Key Factors

Cultural beliefs are important factors influencing breastfeeding practices. This is evident in that ancient societies have high breastfeeding rates, while modern societies have low breastfeeding rates. In a large number of contemporary environments, the significance of breastfeeding has come to be known and recognised, and breastfeeding rates are slowly making improvements in many countries.

Today, people's attitudes towards breastfeeding are mainly influenced by their peers, via social media. The importance of family support in a mother's views and confidence is also very great. Having successful breastfeeding experiences among women relatives is associated with successful breastfeeding outcomes among women. Mothers' partners play a very significant role - mothers who have supportive partners start breastfeeding and are more likely to maintain breastfeeding for a longer time.

If mothers start to nurse for the first time in areas where breastfeeding is less popular, choosing and getting breastfeeding right may be challenging. Encouraging support from family is particularly important as there are lots of online and in-person resources to help support.

Interventions that Foster and Support Breastfeeding. Several components of the Baby Friendly Hospital Initiative can make a difference in breastfeeding outcomes, Rollins and colleagues said. These include one-on-one counselling, group education, postpartum

breastfeeding support and lactation management support. These interventions had a pooled result of 49% to promote exclusive breastfeeding and 66% to promote any breastfeeding, based on four studies that were analyzed.

Family and Community Based Interventions

Meta-analyses reflect the fact that breastfeeding interventions focused on families can positively influence breastfeeding. The median intervention rates for exclusive, continued, and any breastfeeding are 48%, 26%, and 16%, respectively, and are correlated. But targeted interventions for fathers have been less successful. Programs at the community level (group counseling, group education, social mobilization and sometimes mass media) are also effective. All of these involve increasing early initiation of breastfeeding, at rates of up to 86%, and exclusive breastfeeding, at rates of up to 20%

Workplace Interventions

The rest of the nations in the world take care of less than 75% of the ILO minimum recommendation of 14 weeks paid maternity leave. Women, particularly those who are self-employed or work in the informal job market, do not get any maternity protection. While there isn't much formal research available, longer maternity leave has been found to be related to increased rate of breastfeeding, as has supportive workplace practices such as breastfeeding breaks and private nursing rooms.

Barriers to Breastfeeding

In certain communities, the notions of breastfeeding have been diminished over time and mothers have encountered certain challenges that hindered their confidence and dedication. Some problems, including poor positioning, improper latching, pain at the nipple, engorgement and mastitis make breastfeeding difficult. Sometimes, mothers think their milk supply is insufficient, especially when the baby cries and/or appears unsettled, which is not necessarily the case. However, it is sometimes difficult for a baby to breastfeed, particularly premature babies or low birth weight babies and with appropriate assistance it is possible to breastfeed successfully, which is particularly beneficial for these babies.

Experiences of the negative story of breastfeeding on public transport can also discourage mothers. The

experiences the mother is exposed to don't always have to be her own experiences, but can happen to a relative, friend or through social media. Other factors such as smoking, overweight/obesity and depression are associated with decreased breastfeeding rates as well. Breastfeeding has long been on the decline in some areas, with the HIV epidemic contributing an additional blow of low confidence in breastfeeding.

Marketing of Breastmilk Substitutes

The study on infant formula discussed by Rollins and colleagues underscores how significant the infant formula market is. The retail value of infant formula globally has increased by approximately 5% per year for several years and was estimated to be around USD 45 billion in 2014. There is dominance by large multinational companies but growing number of smaller local producers and possibly more difficult marketing practices to control.

By 2018 the WHO estimated that 136/194 countries had implemented at least part of the International Code of Marketing of Breast-milk Substitutes in their legislation and/or practices. But only 35 countries had enshrined the Code into legislation, with a majority of countries implementing partial or no legal measures.

A mother needs to have the choice about how her baby is fed and a large number of breastfeeding mothers may use commercially prepared feeds following exclusive breastfeeding. The primary concern is inappropriate marketing that dissuades breast-feeding, particularly among especially vulnerable mothers. The International Code has had some effects, especially when adopted, in the manner in which formula is marketed and the actions taken by the bigger companies. However, more needs must be done, especially with less responsible producers and in other countries that have not fully codified the Code.

V. CONCLUSION

Breastfeeding yields a number of health benefits for both babies and mothers and the scientific evidence is robust, with increased knowledge of the biological processes involved. Many international, national and community-based initiatives have evolved and now protect and promote breastfeeding as a result of this evidence. Breastfeeding rates fell precipitously across

many locations in the 20th century, but have begun to improve in some areas over time. Large gains (estimated at approximately USD 300 billion per year) could be realized by expanding the application of proven interventions to enhance the current breastfeeding landscape to prevent financial losses, and could save lives (some 823,000 children and 22,000 mothers annually).

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