

Review Article

Infant and Young Child Feeding Practice in Ethiopia and the Cost of Not Breastfeeding: Review

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The cornerstone of baby and young child survival, healthy growth and development, healthy future generations, and national development is infancy and young child feeding (IYCF). Inappropriate feeding practices in infants and early children, as well as their repercussions, are substantial roadblocks to long-term socioeconomic development and poverty reduction, with acute and chronic health effects for individuals. Breastfeeding exclusively for the first six months of a baby's life is the safest and healthiest method for feeding.

Articles were searched and accessed using key terms, like "Infant feeding practice", "Exclusive feeding", "Non-exclusive feeding", "Formula feeding Practice", "Cost of not breast feeding", "Economic benefit of breast feeding". 38 published articles, 7 global standards and guidelines, 4 EDHS result reports and one website were included in this review.

From 2000 to 2016, the percentage of mothers who started nursing within one hour climbed from 51% to 73 percent, while the number of mothers who exclusively breastfed increased from 2000 to 2016. Child malnutrition is caused by a lack of effective breast feeding and complementary feeding, and many nations throughout the world are seeing a dramatic increase in the prevalence of malnutrition, resulting in the triple burden of malnutrition. In Ethiopia, inadequate breastfeeding causes 14,000 unnecessary child deaths, 5 million instances of diarrhea and pneumonia, \$190 million in household costs, and \$2 million in health-care costs. Artificial feeding can cost up to \$1,200 per year for powdered formula, which is four times the expense of breastfeeding, which costs about \$300 per year for additional food for a lactating mom.

Parental literacy, delivery in the health Institutions, spontaneous vaginal delivery, higher number of ANC visits, PNC attendance, maternal counseling during pregnancy and child sex being female are some factors among positively associated with exclusive breast feeding, whereas, full-time employment of mothers, urban residency, high weight of baby, caesarean-delivery, low wealth index, younger maternal age and child sex being male are few to mention among negatively associated factors with exclusive breast feeding.

Keywords: Exclusive Breast Feeding; IYCF; Mixed feeding; Prevalence; Factors; Ethiopia

Abbreviations

ANC: Ante-Natal Care; EBF: Exclusive Breast Feeding; EDHS: Ethiopian Demographic and Health Survey; IYCF: Infant and Young Child Feeding; MDG: Millennium Development Goals; NEBF: Non-Exclusive Breast Feeding; NICU: Neonatal Intensive Care Unit; PNC: Post-Natal Care; TIBF: Timely Initiation of Breast Feeding; WHO: World Health Organization

Background

The cornerstone of baby and young child survival, healthy growth and development, healthy future generations, and national development is infancy and young child feeding (IYCF) [1]. According to the World Health Organization's (WHO) Infant and Young Child Feeding (IYCF) strategy, inappropriate feeding practices and their consequences are major roadblocks to long-term socioeconomic development and poverty reduction. As a result, governments will

be unable to accelerate economic development in any meaningful way until optimal child growth and development is ensured through appropriate feeding practices [2]. Despite widespread support for exclusive breastfeeding, only 35% of children worldwide and 58 percent of Ethiopian infants were exclusively breastfed during their first 6 months of life [3,4].

In the first six months of life, exclusive breastfeeding (EBF) is the safest and healthiest feeding option for newborns all over the world. Breast milk provides all required nutrients for survival, growth, and development, as well as immunologic, antibacterial, and anti-inflammatory properties, for the first six months of life. However, only 58% of children under the age of six months are exclusively breast fed in Ethiopia [3]. From all Ethiopian demographic and health survey reports and results of different literatures, the prevalence of exclusive breast feeding in Ethiopia is below the World Health Organization (WHO) and national recommendations (90% and 70% respectively).

Formula feeding, on the other hand, is becoming more widespread in Ethiopia today, both in urban and rural regions, for a variety of socio-cultural reasons [3,5-7].

In children under the age of five, inadequate breastfeeding, particularly non-exclusive breastfeeding in the first six months of life, results in 1.4 million fatalities and 10% of disease burden. Breastfeeding for two years is less expensive than the alternative of purchasing artificial or animal milk, which accounts for 15 percent to 20 percent of the health budget in some countries. In Ethiopia, poor breastfeeding causes 14,000 avoidable child deaths each year, 5 million instances of diarrhea and pneumonia, \$190 million in household costs, and \$2 million in health-care-system treatment costs [8].

In Ethiopia, it is currently difficult to obtain a clear picture of the prevalence of each type of newborn feeding practice, the characteristics associated with each, and the economic penalty of sub-optimal infant feeding practice. International standards, national strategy papers, published publications, and systematic reviews are among the topics covered in this seminar paper. The goal of this study is to provide holistic, integrated, and comprehensive information on Ethiopian baby feeding practices.

Exclusive breastfeeding, exclusive non-breast feeding, and mixed feeding practices in Ethiopia will be examined in greater depth, as well as their prevalence, trends, and associated factors. Another essential topic to be investigated in this review work is the economic consequences of not breastfeeding in Ethiopia. Conclusion and Recommendations will have their own details and concrete messages for future research. Discussion of the findings of the studied literatures will have its own details and concrete messages for future research.

Review Methods

Study design

In Ethiopia, a systematic review of newborn feeding practices was done. Ethiopia is one of Africa's most populous countries, with over 100 million people and a land area of over 1,100,000km², making it the world's 27th largest country. The country's religions and cultures are diverse. Traditional child feeding malpractices are serious concerns in the country, impacting the health of many newborns and young children. Through the creation of the IYCF and the National Nutrition Program, the country is collaborating with international partners to minimize maternal and child malnutrition (NNP). Similarly, one of the health packages that the country is working on is minimizing inappropriate child feeding and other maladaptive practices.

Search strategies

An electronic search of international databases, including Google Scholar, PubMed, and Medline, was used to find and access articles. Similarly, Google was used to find a website. By adding Ethiopia to all of the aforementioned phrases, articles were searched and accessed using the key terms "Infant feeding practice", "Exclusive feeding", "Non-exclusive feeding", "Formula feeding Practice", "Cost of not breast feeding", and "Economic benefit of breast feeding". These all-key keywords were found using a combination of "AND" and "OR" words as needed. The abstracts and full text of studies with similar outcomes of interest to the current objectives were thoroughly reviewed. For this review, articles published from 2015 to 2021 were included. But Health and Demographic Survey result reports of the

country from 2000 to 2016 and global standards as well as guidelines and protocols from 2000 up to date were included in a special case. During the search of articles, more than 15,250 articles were displayed in the search engine when each search words were used separately. When few searching words were used together only 5,630 articles were displayed. After multiple searching processes only 150 articles became having titles relevant to the topic, but only 90 were exactly similar with the title of review. Abstract of 90 articles were reviewed and 25 of them were unmatched due to time of study and the rest 28 were studied out of Ethiopia. Therefore only 38 published articles, 7 global standards and guidelines, 4 EDHS result reports and one website were included in this review. Exceptionally, one article studied about global cost of not breastfeeding has been included because of the reason that Ethiopia is one of the countries in the globe.

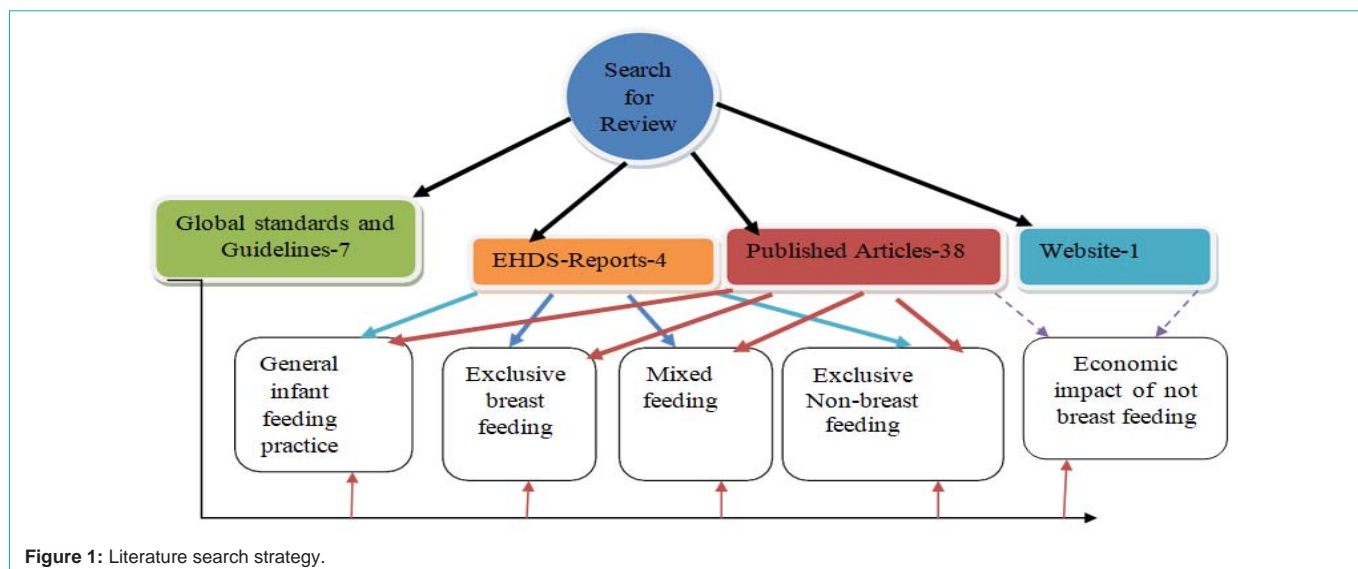
Exclusive Breastfeeding Practice of Infants up to Six Months of Age

The cornerstone of baby and young child survival, healthy growth and development, healthy future generations, and national development is infancy and young child feeding (IYCF) [1]. Breastfeeding is a natural activity for all moms, and it has various advantages for the newborn, the mother, and society as a whole [9]. To promote best growth, development, and health, infants should be exclusively breastfed for the first six months of life, according to a global public health recommendation [10]. In both developing and developed countries, achieving optimal IYCF practices is a huge problem due to the diverse nature of barriers. The World Health Organization (WHO) established core and optional indicators to enhance, maintain, and promote IYCF practices, with the three most essential being timely introduction of breast feeding (TIBF), exclusive breast feeding (EBF), and timely initiation of supplementary feeding (TICF) [1,9,11,12].

Prevalence and trends of exclusive breast feeding

According to four Ethiopian demographic and health survey reports, the number of women who started breastfeeding within one hour went from 51 percent in 2000 to 69 percent in 2005, then decreased to 52 percent after five years in 2011 before rising to 73 percent in 2016. From 2000 to 2016, the percentages of both early breastfeeding initiation and exclusive breastfeeding increased. In Ethiopia, the average length of breastfeeding declined from 25.20 months in 2000 to 23.90 months in 2016. Similarly, from 2005 to 2011, both breastfeeding initiation and exclusive breastfeeding showed a downward trend [3,5-7]. The percentage of women who exclusively breastfeed has climbed from 34% in 2007 to 86.1 percent in 2017. The prospect of an increase is reasonable because Ethiopia's government has grown and improved various baby and early child feeding guidelines with a strong emphasis on the need of exclusive breastfeeding [9].

Exclusive breastfeeding was just 29.3 percent of the time in a cross-sectional survey in Addis Ababa, although predominant breastfeeding, partial breastfeeding, and no breastfeeding were 44.3 percent, 24.9 percent and 1.5 percent, respectively [13]. Five years later, an institutional based study for preterm newborns indicated that approximately three-quarters of the neonatal intensive care unit (NICU) premature infants were solely breast milk fed at discharge, indicating that the majority of preterm infants should be exclusively



breastfed [14].

Exclusive breastfeeding is prevalent in the southern portion of Ethiopia at 60%, somewhat higher than the EDHS-2016 estimate [8]. According to one study, the prevalence of exclusive breastfeeding (EBF) was 74.1 percent in one of the districts in the country's northwestern region [15]. According to the findings of a community-based cross-sectional study conducted in the Oromia regional state, 64.5 percent of mothers practice exclusive breastfeeding [16].

Breastfeeding exclusively was uncommon among moms working in government and non-government organizations [17]. According to the findings of a cross-sectional study conducted in the northern part of the country, exclusive breastfeeding was practiced by 20.9 percent of employed women and 48.0 percent of unemployed mothers [18]. Exclusive breastfeeding was reported to be 57.3 percent in the northwestern area of Ethiopia, which was lower than the national DHS report and the recommended amount (58 percent and 70 percent respectively) [19].

The probability of exclusively breast-feeding for 6 months in northern Ethiopia was 64.5 percent, which is slightly higher than the national EDHS result. Another study in the same region found that the prevalence rate of exclusive breastfeeding was 70.02 percent [20], with a magnitude of 21.5 percent discontinuation, indicating that a substantial proportion of newborns are subjected to mixed feeding [21].

Factors to timely initiation and exclusive breast feeding

The region of residency of women was linked to early breastfeeding initiation, according to the EDHS-2016 data. Mothers in urban regions were more likely to start breastfeeding earlier than mothers in rural areas. A male baby was 1.18 times more likely than a female to start nursing late. On the other hand, the location of delivery had an impact on starting breastfeeding early; moms who gave birth outside of a health facility had a higher chance of not starting nursing within an hour after birth. Breast-feeding beginning is more likely to be delayed after a Cesarean birth, a large-weight infant, or a newborn with a family size of seven or more. Mothers who did not get antenatal

care, had a caesarean birth, or gave birth at home had a lower rate of breastfeeding initiation during the first hour of birth. Non-exclusive breastfeeding was significantly associated with mothers who were unable to read and write, had only a primary education, had no postnatal checkup, had a larger child at birth, and delivered outside of health centers, whereas employed mothers, multiple births, and poor household economic status were significantly associated with shorter breastfeeding durations. The duration of breastfeeding was strongly associated with the mother's age, religion, wealth index, place of delivery, professional antenatal care follow-up, type of birth, baby weight at birth, mothers' employment status, and parity [3,5-7,9].

In Ethiopia, moms who attended antenatal checkups were 2.1 times more likely than their counterparts to practice exclusive breastfeeding, and mothers who gave birth in a health facility were 2.2 times more likely to practice exclusive breastfeeding than mothers who gave birth at home [22].

According to a community-based study conducted in northwestern Ethiopia, the majority of moms exclusively nursed their children for the first six months and continued breastfeeding until they were two years old. The mother's educational status, attendance at postnatal care, delivery location, and media exposure were all found to be predictors of exclusive breast-feeding practice in the same study [23]. Both maternal autonomy and father engagement in newborn and early child care were found to be drivers of proper infant feeding practice in Ethiopia's southern region [24].

Age of the infants, sex of the infants, baby comorbidities, family wealth index, and antenatal care visit were individual level characteristics substantially linked with exclusive breastfeeding, according to a multi-level study. Exclusive breastfeeding was positively linked with female sex, the richest household wealth index, and the frequency of ANC visits, whereas exclusive breastfeeding was negatively associated with newborn age and infant comorbidities [25]. Exclusive breastfeeding had a statistically significant relationship with community-level post-natal care (PNC) utilization and community-level employment status. As a result, infants from a greater degree of community, higher PNC consumption, and better work position

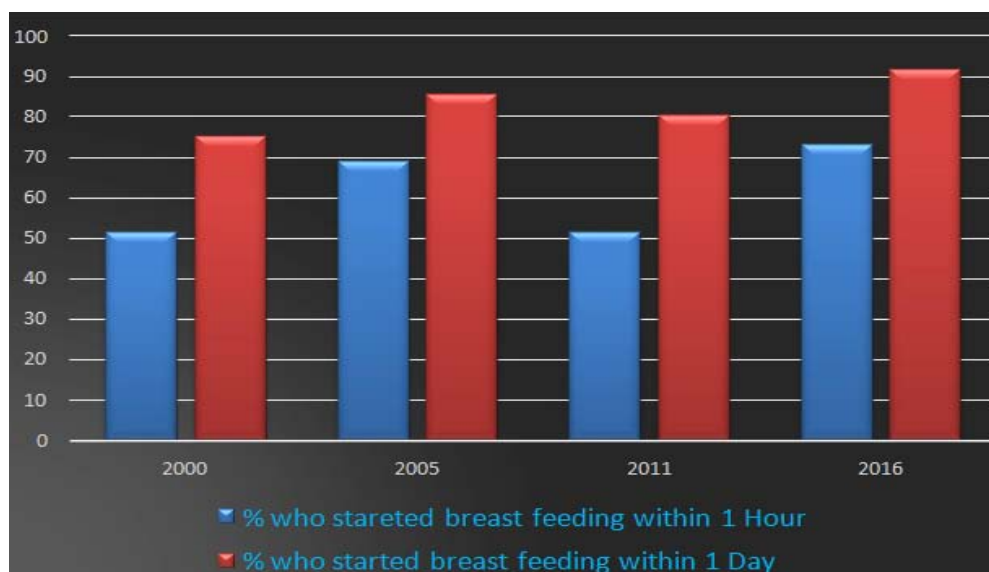


Figure 2: Trend of breast-feeding initiation from 2000-2016 (EDHS).
Source: EDHS [3,5-7].

were more likely to exclusively breastfeed, whereas newborns from pastoralist districts were less likely [13,25].

According to the findings of a study done in Addis Ababa, hospital care and early commencement of breast milk expression are important to a mother's ability to produce breast milk for her preterm infant at discharge. Exclusive breastfeeding was linked with ANC follow-up, PNC attendance, counseling, and pregnancy intention [14,26,27]. In Gondar, maternal age was less than 19 years, mothers were civil servants, husbands were illiterate, it was the first pregnancy, there was no postnatal follow up, and women had little awareness of the benefits of nursing and the composition of breastmilk [21].

Infants born to a married woman who was a housewife, a spontaneous vaginal birth in a health institution, and a healthy mother's breast were all determinants for exclusive breastfeeding. Mothers who were not married, who had their husbands' support, who had no breast difficulties, and who had four or more antenatal care visits were more likely to practice exclusive breastfeeding [8,19].

Appointing a national breastfeeding coordinator and guaranteeing that every maternity hospital follows all of the "Ten Steps to Successful Breastfeeding", Giving effect to the Code of Effective Exclusive Breastfeeding, enacting legislation to protect working women's breastfeeding rights, developing, implementing, monitoring, and evaluating a comprehensive policy on infant and young child feeding, ensuring that health and other relevant sectors protect, promote, and support exclusive breastfeeding for six months and continued breastfeeding up to two years of age or beyond, promoting timely, adequate, safe, and appropriate breastfeeding, and promoting timely, adequate, safe and appropriate breastfeeding [28-30].

Exclusive non-breast-feeding practice of infants up to six months of age

Infants develop and mature at a quick rate, with the fastest growth occurring during the first 4 to 6 months of life. According to a few

studies, the prevalence and length of breastfeeding is decreasing in developing nations, including Ethiopia, and is being replaced with formula milk. Exclusive breastfeeding throughout the first six months of infancy is a significant risk factor for morbidity and mortality in children. In today's world, only about 40% of infants under the age of six months are exclusively breastfed. Because of globalization, increased availability of formula milk in supermarkets, and promotion of formula milk through advertising in various media, the proportion and length of breastfeeding is decreasing, and formula feeding is taking its place [30-32].

Practices of infant and young child feeding (IYCF) have an impact on the nutritional status of children under the age of two and, as a result, on child survival. The use of fake teats or pacifiers should be avoided if universal breastfeeding is to be achieved. Because of nipple confusion when newborns are exposed to two different feeding methods, bottle and breast, resulting in the infant rejecting to nurse, exposure of infants to artificial nipples (bottle feeding) has been closely linked to breastfeeding problems. Child malnutrition is caused by a lack of appropriate breast feeding and complementary feeding. Malnutrition is on the rise in many countries around the world, resulting in the triple burden of malnutrition [29,33,34].

Bottle-feeding is not recommended for children under the age of one. Because it's difficult to sterilize the nipples effectively, it's frequently linked to an increased risk of infection, particularly diarrheal disease. Bottle-feeding also reduces postpartum amenorrhea and increases the likelihood of conception [3,5-7].

Prevalence and trends of exclusive non-breast feeding up to six months of age

Bottle-feeding with a nipple is not a prevalent practice in Ethiopia. However, the percentage of children who are bottle fed jumps from 13% among infants under 4 months to 21% among infants aged 4-5 months. Despite the fact that the percentage of children not breastfed under the age of two months fell from 5.9% in 2000 to 3.7 percent in

Table 1: Trends of child feeding practice in Ethiopia from 2000 to 2016 (EDHS).

Year of EDHS	Age of child	% Not breast feeding	% EBF	% Breast feeding				% using bottle with nipple
				Water only	Water based liquids	Other milk	Complementary foods	
2000	<2	1.2	78.4	10.4	1.6	8.3	0.1	5.9
	2-3	0.5	48.5	16.7	10.3	20.4	3.7	19
	4-5	1.7	38.1	17.9	11.3	20.9	10.5	20.9
2005	<2	1.6	67.3	9.9	5	10.6	5.6	7.6

Sources: EDHS report of [3,5-7].

2016, the percentage of children not breastfed under the age of two months rose from 1.2 percent in 2000 to 6.1 percent in 2016 [3,5-7].

The frequency of sub-optimal breast feeding was 56.9% in Southern Ethiopia [35]. Formula feeding was practiced by 46.2 percent of women, whereas 34.4 percent fed their newborn pre-lacteal fluid [32]. Formula-feeding was done by 47.2 percent of mothers in the same region of Ethiopia, with 65.5 and 34.5 percent of mothers living in rural and urban regions, respectively [31]. According to a study conducted in Ethiopia's central region, 19.6% of moms were bottle-feeding their newborns and 27.6% planned to do so in the future [33].

Factors to exclusive non-breast-feeding practice up to six months of age

Breastfeeding advice during ANC visits was substantially connected with the type of newborn feeding practice, according to a study conducted in Ethiopia's southern region. During ANC visits, moms who were not instructed about breastfeeding were more likely to feed non-breast exclusively than mothers who were. Mothers with a lower birth order (firstborn) were two times more likely than mothers with a higher birth order to feed their babies non-exclusively at the breast. Exclusive breastfeeding knowledge is strongly linked to non-exclusive breastfeeding practice among mothers. Mothers who did not know about exclusive breastfeeding were five times more likely than their counterparts to not breastfeed exclusively [35].

In a study conducted in Addis Ababa, the degree of education of mothers, the style of birth, and the prompt beginning of breast milk were all important factors related with formula feeding. Mothers with a college diploma or higher were more likely to use formula feeding for their children than those with only a primary degree. When compared to mothers who gave birth naturally, those who gave birth by cesarean section were more likely to feed formula. Those who started breastfeeding after 1 hour to 1 day following delivery were three times more likely to use formula than those who started within 1 hour. When compared to mothers who started breastfeeding within 1h, mothers who started breastfeeding after 1 day up to 3 days and after 3 days were roughly four and five times more likely to use formula feeding [32].

In a separate study conducted in the southern part of the country, mothers' awareness of the health effects of formula-feeding as well as societal pressures were found to be significantly linked to the practice of formula-feeding. Mothers who are less aware of the negative health effects of formula feeding on their children are more likely to practice formula feeding. Religious leaders, mothers-in-law or grandmothers, spouses, and other close relatives, on the other hand, have a considerable influence on mothers' decisions to formula-feed their children. According to a study conducted in the southern part

of the country, full-time employment of mothers and early return to work were the most important factors in starting breast feeding [31].

In general, social and cultural pressure, mothers' awareness of the dangers of formula feeding, time of breast-feeding initiation, mode of delivery, number of ANC visits, PNC attendance and depth of nutrition counseling, maternal education level, as well as maternal employment and early return to work, are the most important factors influencing formula feeding practice in Ethiopia

Mixed feeding practice of infants up to six months of age

Within the first six months of life, non-exclusive breastfeeding (NEBF) refers to providing infants other foods or fluids in addition to breast milk. Other liquids, such as water, juice, and formula, are introduced earlier than the suggested age of roughly 6 months in Ethiopia. 2 percent of infants less than 2 months old who were breastfed drank other liquids, and 9% drank milk other than breast milk [3,5-7,11].

The administration of any solid, semisolid, or liquid food other than breast milk to an infant during the first three days after birth is known as prelacteal feeding. Butter, plain water, cow milk, sugar with water, and formula milk are the most common foods given by Ethiopian women. It is one of the most dangerous newborns feeding practices and it is at the top of the global public health priority list. This technique deprives neonates of essential nutrients and colostrum protection, as well as exposing them to avoidable morbidity and mortality. Only about 35% of children worldwide are exclusively breastfed. Non-exclusive breast feeding can reduce the full absorption of nutrients from breast milk while also increasing the risk of diarrhea and acute respiratory infections [4,11,12].

Prelacteal feeding is one of the most common forms of inadvertent child feeding that can result in malnutrition, infection, and neonatal mortality. Prelacteal feeding may result in insufficient breast milk, lactation failure, diarrhea, nursing duration reduction, poor weight gain, and increased infection susceptibility [3-7].

Prevalence and trends of mixed feeding up to six months of age

Sixteen percent of newborns under the age of six months are fed with a bottle with a nipple, a practice that is discouraged since it increases the child's risk of sickness and decreases the child's desire to breastfeed, potentially reducing milk production. In Ethiopia, 10% of newborns under six months are given complementary foods in addition to breast milk, while 3% of children under 0-1 months are given additional food [3]. Ten percent of infants under the age of two months drink other liquids, and 12 percent drink milk other than breast milk [5].

According to the findings of a comprehensive review, the highest incidence of prelacteal feeding (75.8%) was found in a study conducted in the Oromia area in 2011, while the lowest prevalence (6.1%) was found in the southern portions of the country in 2015 [11]. In Ethiopia, one-fourth of children (25.29 percent) were fed prelacteal meals, according to another systematic review and meta-analysis [36]. According to the findings of a study done in Ethiopia's northern region, 47.5 percent of moms employed NEBF on their infants during the first six months of life [4].

Factors to mixed-feeding practice up to six months of age

There is a link between prelacteal feeding habits and home birth, commencement of breast feeding within an hour, kind of occupation, and educational status of women. Mothers who could read and write were 54 percent less likely than their counterparts to practice prelacteal feeding. Farmer mothers were up to four times more likely than housewives to practice prelacteal feedings. Prelacteal feeding was more common in moms who did not start breastfeeding within an hour [12].

In Ethiopia, mothers who received antenatal care, lived in a city, and were counseled on child feeding practices during pregnancy were less likely to practice prelacteal feeding. In Ethiopia, mothers who gave birth at home gave their babies more prelacteal nutrition than those who gave birth in hospitals. Prenatal treatment and birth location were found to have a statistically significant relationship with prelacteal feeding. In Ethiopia, timely commencement of breastfeeding, counseling regarding baby feeding practices, and living in a city had a favorable impact on reducing prelacteal feeding [36].

Non-exclusive breast feeding is associated with maternal educational status, type of maternal occupation, and maternal awareness of breast feeding. Non-exclusive breast feeding was more common among women with a primary education level than among moms with a secondary or higher education level. Compared to housewives, government employee mothers and farmers are more likely to practice non-exclusive breast feeding [4].

Non-exclusive breastfeeding was 2.6 times more prevalent in mothers who had no prenatal consultations during their pregnancy. Mothers who did not receive postnatal care were also 1.9 times more likely to practice non-exclusive breastfeeding. Nursing mothers who started after 1 hour of delivery were nearly twice as likely to practice non-exclusive breastfeeding. Non-exclusive breast-feeding behaviors, on the other hand, were nearly four times higher among currently unmarried mothers [37]. Predictors for prelacteal and non-exclusive breast-feeding habits in Ethiopia are listed below in general. Place of delivery, time of breast-feeding initiation, maternal education status, types of maternal jobs, number of ANC and PNC visits, breast-feeding counseling during pregnancy, place of residency, and maternal marital status are all factors to consider.

Economic impact of not breast feeding in Ethiopia

The annual economic losses attributable to child mortality owing to not nursing are \$53.7 billion in 125 countries with data available. In Sub-Saharan Africa, about \$23.6 billion, or 43 percent of the total losses predicted, would be lost. While mortality is the most significant economic loss, data from 136 nations was used to quantify cognitive losses, which resulted in annual economic costs of \$285.39 billion for

people who were not exclusively breastfed. A total of \$18.3 billion is spent in Sub-Saharan Africa. Based on the tool design, the entire global health system cost for the treatment of childhood diarrhea and pneumonia, as well as women's type II diabetes that might be avoided through breastfeeding, is predicted to be US\$1.1 billion per year [38].

Annually, inadequate breastfeeding in Ethiopia results in 14,000 preventable child deaths, 5 million cases of diarrhea and pneumonia, \$190 million household costs and \$2 million in health care system treatment costs. When a child is not breastfed, that child is less likely to survive. He or she will be more susceptible to life-threatening infections and will be less able to fend them off. Breastfed children are more prone to consume filthy water in formula and have underdeveloped immune systems. This makes them more susceptible to germs that cause diarrhea and pneumonia. When a kid is not nursed, parents must purchase breastmilk replacements such as formula, which can be expensive, particularly for families in low- and middle-income nations. When children are not nursed, both they and their moms are more likely to become ill and require medical attention. As a result, health-care systems face considerable treatment expenditures (<http://www.aliveandthrive.nourish.nurture.grow>) [39].

Artificial feeding can cost up to \$1,200 per year for powdered formula, which is four times the expense of breastfeeding, which costs about \$300 per year for additional food for a lactating mom. Even more expensive than powdered formulas are concentrated and ready-to-feed formulas. Over the last ten years, the expense of artificial feeding has significantly climbed. The manufacture of infant formula necessitates the use of electricity or fuel. Breastfeeding does not require packaging, and its manufacture is environmentally friendly [40].

Ethiopia is currently losing money since just 58 percent of children are nursed exclusively. Higher health-care costs (children and mothers develop illnesses that could have been avoided if breastfeeding practices had been followed), lost productivity (children who are not breastfed are less likely to fully develop and contribute to the economy), and higher household expenditures all contribute to these economic losses (families need to purchase breastmilk substitutes like formula when they do not breastfeed their children).

Discussion of Findings

The percentage of mothers who start nursing within one hour has increased from 51% in 2000 to 73% in 2016, while the percentage of mothers who exclusively breastfeed has increased from 38% in 2000 to 58 percent in 2016. Despite a downward trend in both breastfeeding initiations and exclusive breastfeeding from 2005 to 2011, the overall percentages of both early initiations and exclusive breastfeeding grew from 2000 to 2016 [3,5-7]. This could be due to a variety of factors, including government programs for effective breast feeding and public information dissemination.

In Ethiopia, maternal employment and location of residence were the most frequent characteristics related with both early onset of breastfeeding and EBF during the MDG period (2000-2015). Poor awareness and negative sociocultural behaviors such as prelacteal feeding, which is widespread among mothers employed in agricultural or physical labor, could explain the link between informal employment and early breastfeeding beginning [13].

Women with little or no education are more likely than mothers with more education to breastfeed their newborns within the first hour after birth, and mothers with more education milk their children for a shorter period [3,5-7]. This implies that education has a good impact on one side and a negative impact on the other.

The likelihood of a kid being nursed in the first hour after birth rises in direct proportion to the mother's educational level and wealth. Rural children are more likely than urban children to begin nursing within one hour and one day after birth, and more educated moms breastfeed for a shorter period than mothers with little or no education [3,5-7]. This could be linked to a mother's awareness of when to introduce breast-milk and the type of mother's employment, such as whether to continue breastfeeding or not.

The low use of EBF among those with the lowest wealth index could be due to a lack of understanding of the practice as well as a difficult living environment. Testing and promoting a variety of evidence-based mother support systems is critical in Africa's fast increasing cities to compensate for the decreasing traditional social support systems that are traditionally relied upon in childcare and feeding.

It is suggested that institutional deliveries be encouraged, that optimal breastfeeding practices be followed, and that methods to better support employed moms be devised. Exclusive breastfeeding practices may be hampered by maternal employment. As a result, a breastfeeding-friendly workplace should be created, and Information, Education, and Communication programs should be made available, particularly for working women, to encourage exclusive breastfeeding.

Exclusive breastfeeding was found to be negatively connected with infant comorbidity. This could be due to a variety of reasons, such as when the newborn fell ill, mothers may believe that an additional diet is required to enhance the infant's vitality and immunity. The presence of a mother prenatal care visit, on the other hand, was linked to EBF. As a result, antenatal visits are an ideal time for breastfeeding education and information that can help boost EBF when the baby is born.

The use of postnatal care in the community was favorably linked with EBF practice. It's probable that postnatal care use provides the best opportunity to boost mothers' knowledge and attitudes toward exclusive breastfeeding through counseling and health education because it's the optimum time to advise and educate mothers about key feeding practices like EBF.

When compared to rural areas, mothers in most metropolitan cities had a higher likelihood of starting nursing early, but a lower likelihood of exclusively breastfeeding. They also had the lowest rate of EBF. One possible explanation for the increased prevalence of early breastfeeding initiation in urban women is that urban mothers may have higher educational levels and hence better access to breastfeeding knowledge.

With higher exclusive breastfeeding rates, health-care costs might be translated into savings in the health-care budget, which could then be allocated as funding for breastfeeding promotion programs. Formula feeding is neither good to a child's health or cognitive development, nor is it inexpensive for most families around

the world, particularly in LMICs. Because the human and economic consequences of under-nutrition, over-nutrition, and hidden hunger are considerable, the world's large emerging economies must pay more attention to the growing triple-burden of malnutrition. Most governments across the world may be able to fund breastfeeding promotion activities entirely from domestic resources. International donor money should be better spent in nations where the expense of not nursing is as high as it is in the United States.

Conclusion and Recommendation

Although the overall prevalence of EBF practice in Ethiopia is significantly lower than the global recommendation level of breastfeeding, percentages of both early initiations of breastfeeding and exclusive breastfeeding increased from 2000 to 2016, though the overall prevalence of EBF practice in Ethiopia is significantly lower than the global recommendation level of breastfeeding [3,5-7,11]. A variety of factors influence the timing of breast feeding, the rate of exclusive breastfeeding, and the duration of exclusive breastfeeding. Some of these characteristics include a woman's perception of breastfeeding self-efficacy, societal socio-demographic parameters, mothers' educational and work levels, and religious, cultural, and traditional views [9].

In Ethiopia, suboptimal nursing practices still prevail. Prolactal foods were given to one out of every four moms' children. Prolactal foods are more likely to be given by mothers who gave birth at home. In Ethiopia, prenatal care, proper breastfeeding beginning, baby feeding education, and residing in a city reduced prolactal feeding practices.

In Ethiopia, poor breastfeeding causes 14,000 avoidable child deaths each year, 5 million instances of diarrhea and pneumonia, \$190 million in household costs, and \$2 million in health-care-system treatment costs. Artificial feeding, on the other hand, is expected to cost up to \$1,200 per year for powdered formula, which is four times the expense of nursing, which costs about \$300 per year for additional food for a lactating woman.

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The government and health institutions should focus on raising awareness about the dangers of inadequate breastfeeding, expanding antenatal care services, promoting institutional delivery, recommending timely breastfeeding initiation, and expanding infant feeding counseling services during pregnancies.

Healthcare personnel should place a strong emphasis on encouraging moms to attend antenatal and postnatal care in order to increase EBF practice and inform mothers about the advantages of exclusive breastfeeding. Health extension workers and other recognized entities should work hard to raise breastfeeding awareness among women and minimize misunderstandings regarding EBF practices based on society's conventional ideas. To encourage mothers

to birth at health facilities and receive professional advice on early initiation and exclusive breastfeeding, it is critical to provide health education and counseling to mothers during and after pregnancy.

There should be a clear policy on extended breastfeeding for at least six months, and the government and other recognized bodies should participate and play a role in exclusive breastfeeding to reduce the negative effects of not breastfeeding and to benefit the child, mother, community, and country as a whole.

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