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Chapter

Breastfeeding Support

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Abstract

Supporting mothers to continue breastfeeding is a public health priority. Scientific studies identify challenges to optimal breastfeeding practice. Exclusive breastfeeding is one of the core indicators of infant and young child feeding, among strategies for reducing infant morbidity and mortality. It determines future growth and development of the infants both in physical and mental health. As the principle of implementation science designing evidence-based intervention strategies and support addressing individual and community level factors associated with exclusive breastfeeding practice through policies and programs was essential to improve infant feeding practice and quality of life. Therefore, emphasis should be given to encouraging women to be educated, employed, and empowered to have ANC and PNC follow-ups, and to improve their decision-making power on themselves and their infant health care for saving lives of the infants and reduction of economic losses of a country. Breastfeeding support mainly focuses on empowering women, providing emotional, instrumental, information, flexible working time, appraisal of their performance, support at individual, community, and policy level interventions with the concept of implementation science need to be implemented. This chapter intended to provide evidence-based infant feeding intervention strategies for mothers, students, health professionals, and policymakers for better implementation.

Keywords: breastfeeding support, breastfeeding interventions, exclusive breastfeeding, under six infants, infant and young child feeding practices, optimal breastfeeding, implementation sciences in breastfeeding, implementation science

1. Introduction

This chapter is intended to address basics of breastfeeding support for designing sustainable, efficient, and effective breastfeeding interventions with the concept of implementation science for the well-being of the future generation. Improving knowledge and skills in proper infant feeding practice is not an overnight activity and needs intensive intervention and support from pregnancy till two years of postnatal period. The components of breastfeeding support in this chapter include; the importance of breastfeeding, the existing breastfeeding practice, and its factors, breastfeeding support intervention strategy from pregnancy to the first two years of life, breastfeeding support in a special situation, emotional, information, social, physical,

economic supports, advocacy and involving multisectoral stakeholders are some of the contents included in this chapter.

Breastfeeding is the best start in life and is used as a foundation for child health, development, and survival. The World Health Organization (WHO) has recommended optimal breastfeeding that; should be initiated within an hour after birth, exclusive breastfeeding till 6 months of life, and continued breastfeeding till 24 months and more with appropriate complementary feeding practice [1].

Breastfeeding is an unrivaled method of providing ideal food for infants' healthy growth and development; it is also an essential part of nutrition and the reproductive process, with significant implications for the mother's health as well. It mainly prevents breast cancer and the risk of acquiring cardiovascular disease [2].

Breastfeeding is a natural gift for mothers, but it is also a learning behavior. Almost all mothers can breastfeed if they have accurate information and support from their families, communities, and health care system. They should also have access to skills from trained health workers and peer counselors who can help to build mothers' confidence, improve feeding techniques, and prevent or resolve any breastfeeding problems [3].

Breastfeeding support is an intervention to improve early initiation of breastfeeding immediately after birth, enhancing exclusive breastfeeding practice and continuing breastfeeding with timely initiation of appropriate complementary feeding but its implementation was challenging and needs special focus for evidence-based interventions [4].

For the first six months of life, breast milk provides all of the nutrients required for survival, growth, and development, as well as immunologic, antimicrobial, and anti-inflammatory factors [5, 6].

1.1 Why breastfeeding support

Optimal breastfeeding practice is the best solution for prevention of infant and child mortality. However, exclusive breastfeeding practice substantially decreased over time. According to the "Convention on the Rights of the Child," every infant and child has the right to adequate nutrition but undernutrition is highly prevalent and responsible for 45% of all child deaths. In 2020, the global estimate of exclusive breastfeeding practice was 44%, and malnutrition on under five years children was 149 million stunted (too short for their age), 45 million were wasted (too thin for their height), and 38.9 million were overweight or obese [7].

Optimal breastfeeding saves the lives of more than 823,000 under five children, prevent mother from acquiring breast cancer, and 20,000 annual deaths from breast cancer. It also improves school attendance and Intelligent Quiescent (IQ), and it is associated with lowering the occurrence of non-communicable diseases and higher income in adult life. Breastfeeding results in economic gains for both individual families and the nation as a whole contributing as one of the poverty reduction methods [7, 8]. Hence breastfeeding support promote child survival, growth, and development and reduce the incidence of non-communicable disease in their adult life. Thus, it needs intensive action at individual, community, health care system, and policy levels.

1.2 Factors for exclusive breastfeeding practice

The global nutrition targets for 2025 recommend improving the rate of exclusive breastfeeding practice at least by 50% [9] but the rate of exclusive breastfeeding

was low many infants and children do not receive optimal breastfeeding. Over the 2015–2020 period, only about 44% of infants aged 0–6 months worldwide were exclusively breastfed [7]. The contributing factors for this low rate of exclusive breastfeeding include individual, interpersonal, social, cultural, commercial, media, community, health service-related factors and poor knowledge of breastfeeding [9].

A systematic review of mothers' knowledge, attitude, and practice in East Africa identified that exclusive breastfeeding practice in the first 6 months was 55.9%, only 49.2% knew the duration of exclusive breastfeeding, 66.1% of them disagree with giving breastfeeding immediately after birth and only 47.9% of them disagreed that discarding colostrum is important [10].

In Ethiopia, the rate of exclusive breastfeeding practice was 58% for this the individual level determinants were infant age and gender, the presence of co-morbidities, antenatal care, and wealth index, whereas contextual region, community level of postnatal visit, and community level of maternal employment were community level factors [11]. A similarly systematic review of exclusive breastfeeding practice identified that full-time employed mothers in the first 6 months were 57% less likely to practice exclusive breastfeeding [12].

A systematic review of implementation science in maternity care identified factors enabling the implementation of evidence-based intervention includes; knowledge, service providers' motivations, training, effective multilevel coordination, effective communication, leadership and limited knowledge, practice and experience of researchers, and implementers to use theory, model or framework to guide implementation [13].

In addition, Equitable access to breastfeeding programs guided by evidence-based policies and programs delivered via infrastructures that promotes, protects, and supports breastfeeding should be considered a human right and social justice. Any social, economic, legal, political, or biomedical barrier that prevents women from exercising their right to breastfeed should be seen as a social injustice, a threat to their health, and ultimately a violation of their human rights. To address all factors designing evidence-based interventions to support breastfeeding with the concepts of implementation and behavioral science needs to be integrated and implemented with the existing policies and programs [14].

2. The concepts of implementation science on breastfeeding

Implementation science is an emerging science in nutrition focusing on the implementation of evidence-based intervention strategies to alleviate malnutrition and nutrition-related health problems. It is the young science to fill the gaps between what we know and what we practice [15].

Implementation science in nutrition (ISN) is defined as “*an interdisciplinary body of theory, knowledge, frameworks, tools, and approaches whose purpose is to strengthen implementation quality and impact. It includes a wide range of methods and approaches to identify and address implementation bottlenecks; means to identify, evaluate, and scale up implementation innovations; and strategies to enhance the utilization of existing knowledge, tools, and frameworks based on the evolving science of implementation*” [16].

Designing a breastfeeding intervention strategy supported by the concepts of implementation science is constructive step to achieve an effective outcome. Since

theories, models, and concepts can educate researchers and practitioners about contextually relevant factors and processes suitable for the successful implementation of breastfeeding interventions [17].

In this regard, the breastfeeding support intervention written here is using the concepts of implementation sciences in nutrition, previous research findings, and standard international guidelines on breastfeeding recommendations. The five domains of implementation science were used as a framework for designing the intervention (**Figure 1**).

3. Breastfeeding support

It is much recommended that evidence-based breastfeeding support using the five domains of implementation science integrated with the World Health Organization's (WHO) ten steps for successful breastfeeding recommendations at each level and stage of life. Breastfeeding support aims to promote nutrition-sensitive interventions on optimal breastfeeding practice for sustainable improvement in childhood nutrition status and development for further productivity later in life.

The implementing organization for breastfeeding supports are almost all ministries of a given country, nongovernmental organizations, public and private sectors need to take full responsibility to organize, implement monitoring, and evaluation of each intervention strategy. The implementation process started with the initiation of the intervention starting from need assessment, identification of the existing problem on optimal breastfeeding practice, and implementer and beneficiaries. Then planning the intervention should consider multisectoral collaborations and all possible factors at all stages. There are countless enabling factors starting from individual to policy level which need to design sustainable evidence-based implementation. Finally, the effectiveness of implementation should be monitored and evaluated using its indicators to measure optimal breastfeeding practice as an outcome and nutritional status as an impact indicator. These all processes should be guided by the triple A's cycle; Assessment, Analysis, and Action in order to measure the effectiveness and revise implementation strategies [16].



Figure 1.
The five domains of implementation science in nutrition: Adapted from reference [16].

3.1 The 10 steps, for successful breastfeeding support

These steps should be addressed and implemented in all health care institutions with the aim to protect, promote and support breastfeeding for the well-being of future generations. The first two steps are critical management procedures and the remaining 8 steps are key clinical practices [17, 18].

3.2 Designing breastfeeding policy and routinely communicating to all healthcare staff

Policies to enhance exclusive breastfeeding in the first six months are the cornerstone interventions for the promotion of child survival and development. These include 6 months of paid maternity leave allowing women to continue breastfeeding for longer periods of time, designing strong legislation to control marketing on breast-milk substitutions, and prohibition of bottle feeding [7, 9]. All regulatory legislation must be shared with the respective health institutions and healthcare workers for its effective implementation and follow-up.

Findings from research show that longer maternity leave is associated with a longer duration of exclusive breastfeeding practice [18]. Countries with effective control on the marketing of breast milk substitutes and bottle feeding had a high rate of exclusive breastfeeding practice [9, 18]. Countries need to design strong policies and implementation plan with comprehensive programs, guidelines, and strategies that dramatically increase the rate of exclusive breastfeeding and the overall optimal breastfeeding practice.

The driving force for optimal breastfeeding practice at the policy level was multi-sectoral participation with political commitment, effective coordination of programs and strategies, designing contextualized intervention strategies, effective communication, advocacy and media coverage, adequate resource mainly finance, manpower, and time for implementation [18].

1. Ensure that health care providers at each level should have sufficient knowledge, competence and skills to support breastfeeding. Invest in exclusive breastfeeding protection, promotion, and support through training and capacity-building for health care providers [9].
2. Discuss the importance and management of breastfeeding with pregnant women and their families.

Breastfeeding counseling should be provided during antenatal follow-up for pregnant women and their families at the institution and community level using community health workers/ health extension workers like Ethiopia to enhance optimal breastfeeding practice for better nutrition [7, 9].

3. Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth.
4. Support mothers to initiate and maintain breastfeeding and manage common difficulties.
5. Give infants no food or drink other than breast milk in the first six months of life, unless medically indicated.

6. Practice rooming in – enable mothers and infants to remain together 24 hours a day in the first two years of life.
7. Support mothers to recognize and respond to their infant’s cues for feeding.
8. Counsel mothers on the use and risks of feeding bottles, teats, and pacifiers.
9. Coordinate discharge so that parents and their infants have timely access to on-going support and care at home and community level [7, 18].

3.3 Breastfeeding support during pregnancy

Breastfeeding counseling during pregnancy has been linked to an increase in the likelihood of meeting breastfeeding intentions and practices during the postnatal period. Women who experienced supportive antenatal care practices were more likely to fulfill their prenatal breastfeeding intentions mainly initiation of breastfeeding within one hour and giving only breast milk in the first six months [19].

Counseling on breastfeeding during pregnancy improves maternal self-efficacy and knowledge and also helps in motivating the mother on early initiation and exclusive breastfeeding and timely initiation of complementary feeding. Such a knowledge change played a significant role in women’s breastfeeding decisions and significantly improve optimal breastfeeding practices [20, 21].

The principles of implementation science need to be applied to learn how to scale up and sustain effective breastfeeding interventions while taking into account the needs and desires of women mainly focusing on the minority. Improvements in breastfeeding outcomes for women are likely to come from policy and community-level interventions provided through women’s infant and child (WIC), healthcare facilities, and community agencies starting from pregnancy [22].

Comprehensive prenatal professional breastfeeding education for the mother and family plays a significant role in helping mothers’ proficiency in breastfeeding attachment, proper positioning, and preventing nipple damage [23].

In general breastfeeding counseling and education during pregnancy have a significant role in improving knowledge, skill, and self-efficacy on optimal breastfeeding practice in the postnatal period as emotional, social, and cognitive domains play a substantial role in women’s breastfeeding decisions and solve most breastfeeding problems later on. Such education should be provided using social behavior change models like the Health Belief Model, social cognitive theory, and theory of planned behavior by skilled professionals with compassionate and respectful care [20, 23, 24].

3.4 Breastfeeding support during labor and delivery

The place of delivery was the integral component for the promotion and actual implementation of optimal breastfeeding practices. Effective breastfeeding support during labor and delivery hospitalization is crucial for mothers to be able to achieve their breastfeeding goals [19].

For improving early initiation of breastfeeding encouraging women to give birth at public health institutes have a significant contribution. A study done on Cambodian women identified that the odds of timely initiation of breastfeeding were 57% times lower among women who gave birth at home compared to those who gave birth in public health facilities [25].

The global survey on early initiation of breastfeeding (EIBF) and its factors reported that only 57.6% of newborn starts breastfeeding immediately after birth. Complications during pregnancy, Cesarean delivery, and absence of postnatal/neonatal care guidelines at hospitals were factors affecting EIBF. Risk identification during pregnancy, minimizing elective cesarean delivery, and adhering to postnatal care guideline is the best intervention to support breastfeeding during labor and delivery [26].

Care immediately after birth in the health institution needs to make the hospital mother and baby friendly, encourage to start breastfeeding as soon as possible within an hour, encourage skin-to-skin contact for providing heat to the newborn, and to start effective breastfeeding [9, 18].

3.5 Breastfeeding support during post-natal period

Breastfeeding counseling is an effective public health intervention for optimal breastfeeding practice. Face-to-face repeated counseling starting from the prenatal period was mandatory. Breastfeeding counseling delivered at least four times in postnatal period was more effective than counseling delivered antenatally only and/or fewer than four times [27].

Breastfeeding support and education provided to mothers by health professionals and peers were associated with an increase in the duration of any and exclusive breastfeeding practices [28].

Breastfeeding counseling in postnatal period should include encouraging the mother to give breastmilk only day and night as often as the child wants or on average 8–12 times in every 24 hours, providing practical breastfeeding support, checking position, attachment and suckling, helping the mother with breastfeeding problems and allowing mothers and infants to remain together 24 hours a day [7]. Empowering women through training and education to make them decision-makers on their life and get adequate and nutritious food for them and their child health.

Encouraging to empower community support, including mother support groups and community-based health promotion and education activities [7, 9]. Advise the mother to continue frequent, on-demand breastfeeding until 2 years of age or beyond [7].

3.6 Breastfeeding in exceptionally difficult circumstance

Children and families facing difficulty in breastfeeding require extra care and practical assistance. In such cases, mothers and infants should stay together and receive the assistance they require to use the best feeding technique. In almost all challenging circumstances, breastfeeding is still the preferred method of infant feeding option [7].

3.6.1 Breastfeeding support in HIV-infected women

One of the most important ways to increase infant survival is through breastfeeding, especially early and exclusive breastfeeding. WHO now advises that all HIV-positive individuals, including pregnant and nursing women, begin taking antiretroviral therapy (ART) as soon as they know they are infected with HIV [7].

Recommendations have been improved to take infants born to mothers who are HIV-positive into account. These infants can now breastfeed exclusively for at least six months and up to 12 months with a significantly lower risk of HIV transmission [7, 9].

3.6.2 Breastfeeding support in low-birth-weight or premature infants

Most low birth weight and preterm infants were admitted to Neonatal Intensive Care Unit (NICU) for further life and breastfeeding support. Despite the fact that breastfeeding is a top priority for low birth weight and preterm infants admitted to NICU, the hospitalized neonates' exclusive breastfeeding rates at 6 months were quite low and fell short of World Health Organization (WHO) recommendations. Families and mothers of hospitalized newborns should receive integrated counseling and support for breastfeeding on both a practical and psychological level [29].

Having baby friendly hospital to enhance breastfeeding adoption among mothers of low birth weight or preterm infants by interventions to improve early postpartum lactation and breastfeeding techniques like early initiation of milk expression significantly improves breastfeeding practice and the survival of infants. Support at the community and policy levels also have a significant role to improve breastfeeding, and the well-being of infants and their mothers [30, 31].

3.6.3 Breastfeeding support during illness

Optimal breastfeeding in general and exclusive breastfeeding for infants up to six months of age is recommended in preventing diarrhea and Acute Respiratory Infections (ARI)-specific morbidity and mortality. Infant with any illness should frequently breastfeed [32]. Exclusive breastfeeding with special protection is recommended during any illness of mother or infants including COVID-19 and HIV infection. Continued breastfeeding may offer passive immunity against any infection including COVID 19 and protect the infant, and vaccination against COVID-19 is safe and effective for pregnant and nursing women [33]. Breast milk sample from COVID-19 infected mothers finds negative result and most of the infant from infected mother has a negative result from COVID-19 infection. In this case, breastfeeding with general prevention precautions is recommended [34].

A systematic review on breastfeeding during infectious disease identified that breastfeeding in all infectious diseases is safe even in the case of HIV infection with adequate antiretroviral therapy (ART). Finally, it is recommended that initiating and continuing breastfeeding should continue to protect both mothers' and babies' health [35].

In general, breastfeeding practice can be affected by individual and community-level factors [11] and also policy-level factors [7]. Supporting breastfeeding in a sustainable way needs to implement with multisectoral participation in future research, policies, and practices in increasing breastfeeding rates in women and children [36]. Mothers who practiced exclusive breastfeeding should have higher information support from health facilities and the community [37].

Health care interventions that can be used to encourage and support breastfeeding includes two major areas; individual-level and system/ policy-level interventions. Individual-level interventions given to women and their supporters as well as system-level policies or maternity care practices aimed at fostering an environment supportive of breastfeeding are examples of interventions that can take place during pregnancy (prenatal), during labor and delivery (peripartum), or even after giving birth (postpartum) [28].

Individual-level interventions may consist of structured education, and professional or peer support. Breastfeeding support is typically provided in addition to general education and can take the form of direct support during breastfeeding

observations as well as psychological and social support (encouraging the mother, assuring her, and discussing her questions and problems) [28]. Emotional, practical skill transfer and information support also have great contributions [37].

System-level interventions include policies or maternity care practices like the implementation of baby-friendly hospital initiatives or all or some of the 10 Steps to Successful Breastfeeding are examples of system-level interventions.

A written breastfeeding policy for the facility, provider or staff training in breastfeeding support, policies for implementing breastfeeding support groups, providing adequate maternity leave of at least for 6 months, encouragement of rooming-in, restrictions on using breastfeeding substitute, maintenance of skin-to-skin contact between the mother and child after birth, and encouragement of early breastfeeding initiation are some examples of these interventions [28].

4. Conclusion

Breastfeeding promotion and support are core indicators of infant and young child feeding practices for reducing infant morbidity and mortality. It can determine both the physical and mental growth and development of infants. Breastfeeding is highly recommended during illness and in any difficult situations to save the lives of the infant and promote maternal health. Breastfeeding support needs to be implemented at individual, community, and policy levels to improve the overall optimal breastfeeding practice for the well-being of the coming generation. It should be provided starting from pregnancy, during labor and delivery, and after birth.

Individual level intervention provided through counseling and education of the mother by professional or peer education and support. Structured education can include psychological, social, and direct support.

Community-level intervention includes improving knowledge of the importance and duration of breastfeeding, and promoting community-level antenatal and postnatal care service utilization. These all are demanded improving the lives of the infants and reduction of economic loss of the country.

Policy or system-level breastfeeding interventions should be focused on designing policies and strategies to improve breastfeeding practices such as maternity care practices, and implementation of all or some of the 10 steps to successful breastfeeding. Policies for six months of maternity leave, empowering women through education and employment, restriction in breast milk substitutes and bottle feeding, community breastfeeding support and promotion, worksite and child care policies and family leave policies.

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Acronyms and abbreviations

AAU	Addis Ababa University
ARI	Acute Respiratory Infections
ART	Antiretroviral Therapy
COVID-19	Coronavirus Disease 2019
EBF	Exclusive Breastfeeding
EIBF	Early Initiation of Breastfeeding
EPHA	Ethiopian Public Health Association
HIV	Human Immunodeficiency Virus
IQ	Intelligent Quiescent
NICU	Neonatal Intensive Care Unit
WHO	World Health, Organization
WIC	Women Infant Child

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