

Chapter 1

Introduction

The best way to give a child all the nutrition they need is through breastfeeding. Due to the baby's ideal growth and development, it benefits both mother and infant.¹ It is therefore suggested for the children as God's gift to the mothers. Breast milk increases baby's development and decreases the danger of many illnesses during childhood, such as diarrhea, respiratory tract infections etc.² The risk of postpartum hemorrhage and breast cancer in lactating mothers is also reduced.³ Breastfeeding also helps to develop special bonding between mother and baby biologically.⁴ Thus, national and international organizations are supporting and promoting exclusive breastfeeding for at least six months following birth.⁵

Since the 1990s, a range of global public health interventions have continued to have a significant effect on countries to adopt Infant and Young Child Feeding (IYCF) practices. The breastfeeding is an essential part of health policies and programs to improve child health status. Such efforts proves that ensuring good breastfeeding practices is a very crucial step for improving child survival.⁶

Maternal breastfeeding self-efficacy has been emphasized as a key component in for enhancing breastfeeding results.⁷ Breastfeeding self-efficacy is basically mother's confidence in breastfeeding her baby.⁸ It is believed that if a mother is confident in breastfeeding her baby, the more longer durations of breastfeeding can be observed.⁹⁻

It is crucial to start breastfeeding during the first hour of life, practice exclusive breastfeeding for the first six months of life, and continue it for at least two years along with the proper supplemental feeds.¹⁴ Yet there is delay in initiating breastfeeding within one hour of life.¹⁵ The rate of exclusive breastfeeding is also found to be significantly low in many countries.^{16,17} Only 38% infants are being exclusively breastfed worldwide.¹⁸ The rates of continued breastfeeding for up to two years also shows a downfall.¹⁹ In order to plan and implement effective interventions, it is essential to comprehend breastfeeding practices and the variables that influence them such as maternal education, age, place of birth, mode of delivery, working status etc are associated with the varied practices of exclusive breastfeeding.²⁰⁻²³

Despite of all the advantages of breastfeeding, the practice of breastfeeding is becoming less popular globally. It is assumed that if the rate of exclusive breastfeeding is increased to 90%, then millions of infants' death can be prevented in many countries.²⁴ In 2015, Indian neonatal mortality rate was 37, out of which 25 were those who died as neonates with total of 67.8% infants death.²⁵ Despite of all initiatives taken by the government to improve the breastfeeding rates in the country, it is necessary to explore the modifiable factors that can help improve breastfeeding self-efficacy, practices and outcomes among the mothers.

Background of the study

In India, there are over 2.7 million births each year, and 1.7 million infants and 1.08 million newborns die before they turn one year old.²⁶ As per WHO, only 37% infants are breastfed exclusively in low and middle income countries.²⁷ In comparison to low and middle income countries, high income countries had shorter breastfeeding

durations.²⁸ The United States of America showed that only 24% infants were breastfed exclusively from 2008-2012.²⁹

The World Health Assembly has set a global standard target of enhancing exclusive breastfeeding rate by 50% by the year 2025.³⁰ The United Nations Decade of Action on Nutrition 2016–2025 also focuses on adequate breastfeeding and weaning.³¹ But despite of all the initiatives, the rate of breastfeeding continues to drop.³²

In India, Ghana & Tanzania, the risk of neonatal mortality increases by 41% among infants who initiated breastfeeding beyond two hours of birth.³³ Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Uttar Pradesh, Rajasthan, Odisha are the 7 states which has neonatal deaths of 64% in India and early breastfeeding initiation was only 12.5%.³⁴

It has been reported that the rate of mothers who put their babies on breast within one hour of life is still low ranging between 36 to 42%.³⁵ LANCET neonatal survival series has identified breastfeeding as the most valuable intervention that can lower the risk of neonatal deaths by 55-87%.³⁶ Despite of all the known benefits of early initiation of breastfeeding, it is found that the prevalence remains low (<50%).^{37, 38}

The National Family Health Survey (NFHS-3) stated clearly the causes for not initiating breastfeeding early. These included place of living and caesarean section delivery. On the contrary, in India, use of mass media such as radio, frequent antenatal visits, birthing facility have contributed to early initiation of breastfeeding.³⁹ However this does not provide a string base for evidence of early initiation of breastfeeding and moreover, the practices have changed from the last ten years because of the implementation of a number of maternal and child health initiatives

such as National Rural Health Mission (NRHM)⁴⁰ and Reproductive, Maternal, Newborn, Child, and Adolescent Health [RMNCH+A] Strategy in India.⁴¹

Uttar Pradesh (U.P.) is the most populous state in India. In order to meet the Sustainable Development Goal, by 2030, the Neonatal Mortality Rate (NMR) must be significantly reduced in the state.⁴² Early breastfeeding initiation and exclusivity is well-known life-saving interventions to reduce the neonatal mortality rate. A well-known life-saving intervention to lower NMR is the early start of breastfeeding and exclusive breastfeeding.⁴³ Yet U.P. reports only 25% rate of early initiation of breastfeeding⁴⁴ and the rate of exclusive breastfeeding also remains to be low 44%.⁴⁵

The low prevalence of exclusive breastfeeding may be caused by emotional stress in mothers and their perception of inadequate breast milk, family pressure to introduce other supplements, unsupportive hospital policies that delay early breastfeeding initiation, and mothers working status.⁴⁶ Because of all these factors, effective educational programs, counseling, and support programs are essential for promoting breastfeeding as well as exclusive breastfeeding. As a result, encouraging breastfeeding is a global priority with benefits for both maternal and child health.⁴⁷

When mother is malnourished, it is difficult for her to breastfeed the child for six months of age. Failure to support to mothers also contributes to premature breastfeeding termination.⁴⁸ Therefore, maternal education and emotional support forms the main framework of lactation and breastfeeding. Education regarding breastfeeding is equally important to promote exclusive breastfeeding for optimal growth of the baby.⁴⁹

Family support is also found to be effective on maternal health in establishing successful breastfeeding. Counselors and health workers forms the cornerstone of breastfeeding support such as in improvement of breastfeeding rates, and promotion of breastfeeding.⁵⁰

Breastfeeding promotion services offer guidance and information on breastfeeding to all the women in the antenatal as well as postnatal care and provide recommendations from health professionals and other staff who works for the benefits of the mothers. Programs also create strategies for breastfeeding and help in hospitals, birthing centers, and in communities. The breastfeeding promotion programs also enhance the knowledge of health professionals.⁵¹

There is clear evidence that breastfeeding promotion initiatives improve breastfeeding initiation, period and exclusivity.⁵² It has also been reported that educational interventions can improve the breastfeeding initiation rate among the mothers. One to one interaction and counseling regarding breastfeeding has a great impact on breastfeeding practices. Both antenatal and postnatal measures improves implementation and duration of breastfeeding.⁵³

If women are supported by the health care professionals in a positive manner, they are likely to have longer durations of breastfeeding.⁵⁴ It has also been emphasized that if the mother gets positive support from her workplace, that alone can improve the duration of breastfeeding of all employed mothers.⁵⁵ It has been discovered that the ten steps of Baby Friendly Hospitals Initiative (BFHI) have a favorable effect on breastfeeding rates. The main focus is on BFHI's step three that talks about breastfeeding education and support from the family. It has also been found that the

breastfeeding rates have drastically increased among the women with no or least education, thus reducing the socio-economic disparities with the help of BFHI.⁵⁶

Breastfeeding is also supported by the Special Supplemental Nutrition Program for Women and Children (WIC). A survey was carried out involving 1800 WIC agencies and it was found that almost all of them offered breastfeeding training to the mothers. As per CDC-Breastfeeding RC of 2016, around 18% births happens at Baby Friendly facilities. Five states received scores of more than 80%, 19 states scored between 70 to 79% and 27 states scored less 70% in the 2013 Prevention Status Reports from the CDC, which assess the support for breastfeeding at birth facilities.⁵⁷

Women require treatment and continuous support starting from antenatal to postnatal period. Adequate assistance from community members or health professionals within the health care program can be given and continuous help for mothers can be given. Community service staff must have sufficient training to gain the best knowledge and expertise to provide assistance. Appropriate group therapy is required to encourage and strengthen the mother's trust in breastfeeding and provide good supplementary feeding. The Mother Support Group (MSG) is also beneficial for the mothers seeking for help and support.⁵⁸

Need of the study

Decline in the initiation and the duration of breastfeeding have been recorded globally. This leads to increase in morbidity and mortality and is a matter of great health concern. Besides all the nutritional and immunological benefits, the rate of breastfeeding is reducing declining in many countries. Inadequate milk supply remains the most common reason for the same.⁵⁹

The common reason given by mothers for not breastfeeding their infant for optimum duration is lack of knowledge and confidence. However, every mother makes a decision at some point of time whether to breastfeed or not. The factors that are found to be influencing their choice are culture, age, education, marital status etc.⁶⁰

Understanding the variables that affect breastfeeding practices will also help us reach Sustainable Development Goal 3 (SDG3), which calls for lowering newborn neonatal mortality to 12 deaths per 1000 live births by 2030.⁶¹

For the baby to grow and develop properly, the mother's breastfeeding expertise, timing of beginning, duration, exclusivity, and continuity are crucial. Thus, breastfeeding is of utmost importance for improving the nutritional status of infants.⁶²

Breastfeeding self-efficacy is another factor that helps improve maintenance of breastfeeding.⁶³ Studies indicate that if mother is confident in breastfeeding her baby, the longer she can continue to do so. On the contrary, if the mother is worried and anxious then early cessation of breastfeeding and early supplementation can be noted.⁶⁴ Other factors that may influence breastfeeding self-efficacy and breastfeeding

capability are inadequate breast milk production, sore nipples, breast deformity, and worry over becoming a parent.⁶⁵

Antenatal breastfeeding education boosts women's knowledge, confidence, and abilities to help them become ready for successful breastfeeding. Apparent gaps have been found in literatures in relation to interventional programs that only focuses on education, counseling and support to antenatal and postnatal mothers. However, no emphasis has been laid on 'learning by doing' and motivational aspect to raise the rates of breastfeeding among primigravid mothers in Uttar Pradesh.

The present study intends to develop a comprehensive breastfeeding promotion program (CBPP) especially for the primigravid mothers to boost their confidence regarding breastfeeding. If mothers are confident and motivated to breastfeed their infants, they are likely to advance the better development of the infants and help in raising the rate of breastfeeding practices and outcomes. The CBPP uses multi-component approach including various breastfeeding teaching-learning activities, demonstrations, videos and guide to the primigravid mothers, thereby, helping to improve the breastfeeding self-efficacy, practices and outcomes.

Research Statement

Effectiveness of a Comprehensive Breastfeeding Promotion Program on Breastfeeding Self-efficacy, Practices and Outcomes among Primigravid Mothers – A Randomized Controlled Trial

Objectives

The objectives of the study are to:

1. Assess the knowledge, practices and problems of postnatal mothers related to breastfeeding.
2. Develop a comprehensive breastfeeding promotion program for the primigravid mothers.
3. Evaluate the effectiveness of a comprehensive breastfeeding promotion program on breastfeeding self-efficacy among primigravid mothers.
4. Evaluate the effectiveness of a comprehensive breastfeeding promotion program on breastfeeding practices among primigravid mothers.
5. Evaluate the effectiveness of a comprehensive breastfeeding promotion program on breastfeeding outcomes among primigravid mothers.
6. Compare the breastfeeding experience of primigravid mothers in experimental and control group.

Hypothesis

The hypotheses will be tested at 0.05 level of significance ::

H₁ : Breastfeeding self-efficacy will be higher in experimental group than in control group.

H₂ : Breastfeeding practices will be better in experimental group than in control group.

H₃ : Breastfeeding outcomes will be better in experimental group than in control group.

Operational Definitions

1. **Effectiveness:** refers to the ability of a comprehensive breastfeeding promotion program to be successful in improving primigravid mother's breastfeeding self-efficacy, practices and outcomes between experimental and control groups.
2. **Comprehensive Breastfeeding Promotion Program (CBPP):** refers to a package of coordinated activities developed by the investigator based on the needs of the mothers and latest evidence to promote breastfeeding self-efficacy, enhance breastfeeding practice and to improve breastfeeding outcomes. The package consists of antenatal education on breastfeeding including demonstration of breastfeeding techniques, assessment of breast and correction of nipple problems and postnatal support.
3. **Knowledge related to breastfeeding:** refers to awareness regarding breastfeeding among the primigravid mothers as measured by semi-structured questionnaire.
4. **Practices related to breastfeeding:** refers to selected practices of the postnatal mothers like breastfeeding initiation, feeding of colostrums, breastfeeding status, feeding methods, food items that enhance breast milk production, breast milk expression and use of supplementary feeds for the baby as measured by structured questionnaire.
5. **Problems related to breastfeeding:** refers to problems experienced by the postnatal mothers during breastfeeding their infants from birth up to six months postpartum such as nipple problems, latching difficulties, feeling of

tiredness, inadequate breast milk production etc. as measured by structured questionnaire.

6. **Breastfeeding Self-Efficacy:** refers to perceived ability of primigravid mothers to breastfeed their infants as measured by breastfeeding self-efficacy scale.
7. **Breastfeeding Practices** – refers to primigravid mothers’ behavior in breastfeeding their babies including positioning, attachment, sucking and swallowing as measured by standardized Bristol Breastfeeding Assessment scale and a semi-structured questionnaire on third day, six weeks and six months postpartum.
8. **Breastfeeding Outcomes** – refers to selected outcomes of breastfeeding like time of initiation of breastfeeding, exclusivity of breastfeeding, breastfeeding problems etc as measured by a semi-structured questionnaire on third day, six weeks and six months postpartum.
9. **Breastfeeding Experience** – refers to how the primigravid mothers feel about breastfeeding their babies as measured by a structured questionnaire at six months postpartum.

Conceptual Framework

A conceptual framework is a collection of interconnected concepts, ideas, and abstractions organized logically according to their importance to a certain idea. It is a collection of themes that include mentally experienced visuals of a specific phenomenon and are interconnected to show the themes' relationship. The representational process of the themes employed in an identified topic is known as a

model. The framework clarifies the study's foundational notion, identifies and states the study's assumptions and hypotheses; and establishes a link between the concepts.⁶⁶

The current study has incorporated the Breastfeeding Self-Efficacy Theory as it is the most suitable theoretical framework that helps to promote the breastfeeding confidence of the primigravid mothers. The literature has proved that one of the most significant factors that can impact mother's breastfeeding behavior is breastfeeding self-efficacy.⁶⁷ The perceived ability of the mother to breastfeed her child is termed as breastfeeding self-efficacy, as defined by Dennis in 1999. According to Dennis' concept, mother's intention to breastfeed her child is affected by her breastfeeding self-efficacy as how much effort she puts in and how to tackle the problems of breastfeeding.⁶⁸ Exclusive breastfeeding has also been linked to high breastfeeding self-efficacy.⁶⁹

As per Dennis' framework, breastfeeding self-efficacy is an essential aspect in determining the length of time a mother breastfeeds her child because it influences (a) her breastfeeding decision (b) her effort for breastfeeding (c) her thought patterns regarding breastfeeding and (d) her feelings when faced with challenges.

The factors that affect breastfeeding self-efficacy are: (a) performance accomplishments (such as past breastfeeding experiences); (b) vicarious experiences (such as observing other women breastfeed); (c) verbal persuasion (such as encouragement from influential others, such as friends, family, and lactation consultants); and (d) physiological reactions (such as fatigue, stress, and anxiety).^{70,71} Therefore, by modifying these sources of self-efficacy knowledge, health professionals can boost in mother's breastfeeding confidence.⁷⁰

Application of Breastfeeding Self-Efficacy Theory in the Study

The breastfeeding self-efficacy theory talks about four core concepts that can help improve breastfeeding self-efficacy of mothers. These factors are discussed below:

I] Antecedents -

a) Performance accomplishments – It refers to past experience and expectation that the future will be same as in the past. Therefore, effective breastfeeding (achievements in positive performance) may boost breastfeeding self-efficacy, but persistent failures or issues (achievements in negative performance) may lower breastfeeding self-efficacy. In this study, performance accomplishment pertains to the first time breastfeeding experience of the primigravid mothers and how much they are confident in executing their roles.

b) Vicarious experience – It refers to observation of other people performing the task. In this study, the investigator has used various videos, pictures and demonstrations/re-demonstrations with a baby dummy so as to provide effective vicarious learning experiences to the primigravid mothers.

c) Verbal persuasion – It refers to encouragement in the form of ability feedback as primigravid mother practices and learns a new skill such as correct breastfeeding positioning technique. In this study, when mother is able to re-demonstrate a new breastfeeding skill, the investigator congratulates her by saying “Very good! You have done it very rightly.” The primigravid mothers should be supported with encouraging words by the investigator in order to enhance her confidence in breastfeeding.

d) Physiological and emotional states – It refers to how the emotional state of a primigravid mother can affect her ability to perform the breastfeeding task. In this study, the investigator noticed shyness on the faces of the primigravid mothers in the antenatal period when talked about breastfeeding. However, all the mothers have positively made up their minds to breastfeed their newborns after birth. The investigator also discussed their discomforts and queries related to breastfeeding and alleviated their fears and answered their concerns.

All the antecedents will improve the primigravid mothers' self-efficacy in breastfeeding.

II] Self-efficacy - The primigravid mothers gain confidence in breastfeeding the newborn after receiving the comprehensive breastfeeding promotion program.

III] Consequences – This factor is not directly measured in this study.

a) Choice of behavior – The investigator allows the primigravid mothers make decision about breastfeeding the newborn.

b) Effort and Persistence – The investigator encourages and motivates the primigravid mothers to initiate breastfeeding, improve breastfeeding behavior and outcomes.

c) Thought Patterns – positive reinforcement, breastfeeding support and envisioning success are important to start and maintain breastfeeding. Negative thoughts may decrease the breast milk production. The investigator alleviates fear and anxiety of the primigravid mothers by answering their queries.

d) Emotional reactions – The investigator finds out that there was good family support for breastfeeding among all primigravid mothers. When breastfeeding is established well, the mother may feel confident and continue to breastfeed for longer duration.

The antecedents and self-efficacy leads to the behavior.

IV] Behavior - The last step in breastfeeding self-efficacy theory is the behavior of mothers after receiving the intervention in the form of comprehensive breastfeeding promotion program. Thus, improving the breastfeeding practices and outcomes of the primigravid mothers.

a) Initiation – The investigator helps the primigravid mothers make decision to start breastfeeding the newborn within one hour of birth.

b) Performance – The investigator helps to improve the breastfeeding practices of the primigravid mothers with correct breastfeeding techniques. The mother also gains confidence in handling her baby, knows how to feed on demand and is sure about the adequacy of breast milk.

c) Maintenance – The primigravid mothers makes decision about breastfeeding the baby exclusively. Thus, improves the breastfeeding outcomes of the study.

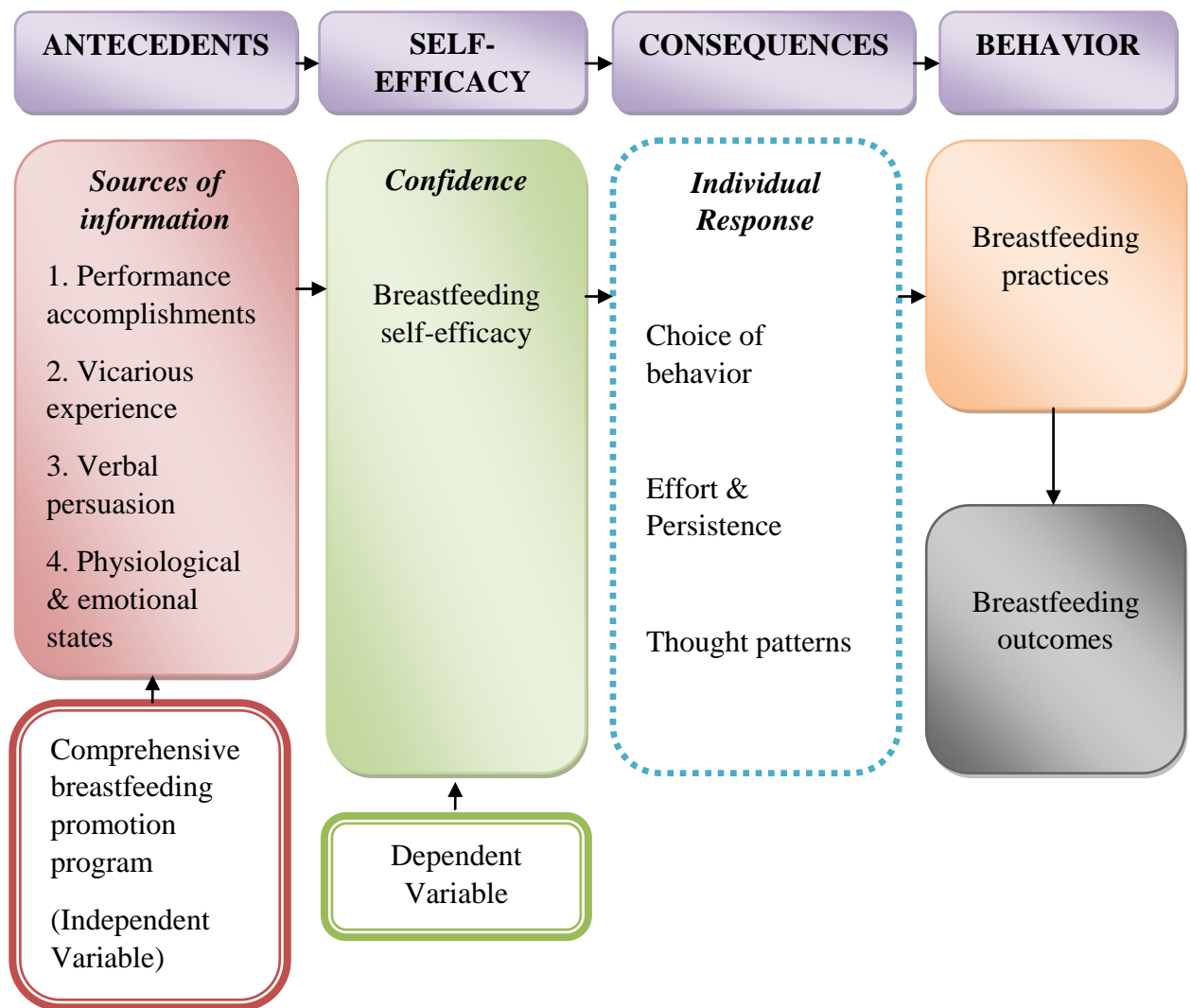


Figure 1: Conceptual Framework based on Breastfeeding Self-Efficacy Theory

Delimitations

1. The study was delimited to postnatal mothers attending private maternity hospitals of Allahabad.
2. Effectiveness of comprehensive breastfeeding promotion program was delimited to primigravid mothers to promote breastfeeding self-efficacy, enhance breastfeeding practice and to improve breastfeeding outcomes.

Summary

The present chapter highlights the background and need of the study focusing on the declining rates of breastfeeding globally. The Government of India is working hard to bring the rates up but a lot of work needs to be done in sensitizing people regarding breastfeeding. Still many parts of the country are not aware about breastfeeding benefits and the rate of discontinuation is going higher. Therefore, there is a need to make people aware about breastfeeding with the help of a comprehensive breastfeeding promotion program.