CHAPTER 1

INTRODUCTION

Childbirth may be a life altering experience for woman and their families. It is the foremost exciting period of expectation and fulfillment and could be a unique natural gift to women. Organic process could be a powerful life event that signals variety of great physiological and psychological transformation for ladies. Birth expectations are dynamic and sophisticated. Studies suggest that pregnant women have both negative and positive expectation of childbirth and that they relate these expectations in numerous ways to birth experiences.[1]

Childbirth causes physical and mental changes to pregnant women. The woman's childbirth experience is very important and her childbirth memories remain alive for lifetime. The four major predictors of women's childbirth experience are their own expectation from birth, level of cooperation from companion and care giver, the relationship between midwife and woman, and the role of woman in taking decision.[2] Positive awareness of the childbirth experience can reduce anxiety and depression in primiparas.

Women have been always prepared for childbirth. Traditionally, mothers of all cultures have passed on knowledge of childbirth to their next generation. These cultural and family ordinances have directed women through a series of pregnancies, childbirth, and motherhood. Much of the woman's insight on birthing changed when childbirth was transferred from home to the maternity centers. Birth has been totally medicalized; cultural and family ordinances have faded into the background and eventually

disappeared.[1] The experience of childbirth links several components like psychological, physiological, spiritual, cultural and social. Several studies have categorized childbirth experience as positive and negative.[3] Results of positive birth experiences includes increase in self-esteem, increase in self-confidence, maternal- infant bonding and early maternal role acceptance.[4] On the opposite hand negative birth experiences increases the risk of cesarean also increase the gap between next pregnancy or quite possible that women may abstain from future pregnancy.[5] Positive childbirth experience has positive impact on maternal-neonatal outcomes which is highlighted by new recommendations released by WHO.[6]

Background of the study

Conception and birthing are very important events in life of a woman and most of the women have a plan or certain expectations related to their labor. Forming expectation for significant events of life help to prepare physically and mentally for the experience[7] Studies suggest that in case these expectations related to childbirth are not met it may lead to dissatisfaction and negative outcomes.[8]

Women may have expectations related to different aspects of birth like pain, control, emotions, labor events etc. Systematic review suggest that pregnant women may have expectations regarding care of newborn, financial help, support of spouse and family members, own role and role of their partner as parent. Mismatch of childbirth expectations and experiences are associated with birth dissatisfaction, and may also increase the risk of posttraumatic stress disorder.[9]

A systematic review revealed that factual experiences of women do not correlate with expectations of woman related to childbirth. Realistic expectations of self-control

during delivery are directly associated with greater birth satisfaction.[10] Realistic expectations are related to positive experiences of labor, and correlate with participation in childbirth education classes.[11] Several studies show that educated women utilize reproductive health services effectively. Education of women positively impact their as well as health of their children .[12]

Significant factor behind negative expectation and experiences is childbirth fear. A descriptive study of antenatal women in five maternity clinics of Egypt was conducted with the aim to study the factors related to childbirth fear and its relation with women's preference for caesarean section. Findings of the study showed 47.8% women preferred caesarean section and major reason for opting caesarean section was fear of vaginal birth and pain associated with delivery. The factors associated with caesarean delivery were fear of pain, lacerations and episiotomy.[13]

A cross-sectional study conducted in Ethiopia describes that a standard childbirth preparedness must include the elements: an anticipation birth place, selection of birth attendant, the distance of the nearest hospital for childbirth and identification of birth companion. Childbirth preparation package helps to plan in advance about pregnancy complications, emergency treatment, and childbirth care in terms of cost, transportation, and blood arrangement.[14]

Systematic peer reviewed journal search was conducted in quantitative and qualitative studies using Scopus database and primo search, between 2010 and 2015. The experiences of birth preparedness and complication readiness were reviewed from twenty articles. The study synthesis showed two interconnected themes that is knowledge of birth preparedness and complication readiness and barriers to

implementation of knowledge. The findings in systematic analysis revealed that knowledge among primi mothers were poor in danger signs of pregnancy and implementation of birth preparation components. Education, antenatal visits, parity, place of residence, financial issues, employment, knowledge on danger signs, distance of health facility from home and involvement of family members were significant determinants of birth preparedness.[15]

In many developed countries, pregnant mothers attend antenatal education classes to know about available birth choices and make decisions, know about various situations like methods of pain relieving, postnatal and newborn care, techniques of breast feeding and parenting.[16,17] A quasi-experimental study was conducted among sixty antenatal mothers to evaluate the benefits of prenatal teaching regarding awareness on birth preparedness and its outcome. The study findings revealed that theprenatal education was beneficial in improving the knowledge and awareness on childbirth preparation among antenatal mothers and childbirth educationwas also positively correlated with maternal and fetal outcomes.[18]

Pregnant women experience apprehension and fear along with excitement. A woman's childbirth experience may get affected with positive and negative feelings she undergoes during birth.[19] Childbirth education plays a pivotal role in the psycho-social and physical preparation.[20,21] Childbirth education group women develop more confidence, self-control, self-efficacy in newborn care, reduced childbirth fear.[22] By creating a realistic childbirth expectation, childbirth education groups help women to be mindful and empowered during the birthing process.[23] Birth education classes improve the level of childbirth preparation and self-control during labor and also enhance self-

confidence. There are varying challenges during pregnancy, postnatal period and childbirth education have supportive benefits.[24]

Need for the study

Most of the maternal deaths are avertable. The effective strategy to avert maternal mortality are skilled antenatal care, efficient midwifery care during labor and after birth.[25] Due to lack of childbirth preparation there are various evidences that are related to delay in decision making, reaching and receiving care.[26] Every pregnant woman is entitled for quality care during pregnancy, labor and postnatal period irrespective of religion, race, belief, caste, and social condition. The BPCR strategy aims at women empowerment to facilitate pregnant women in making the right decision at the right time.[27,28] Childbirth education and preparation classes are provided for antenatal women in most of the developed countries, but in developing countries, such as India, such preparation classes are not executed properly. Major health agencies have approved that pregnant mothers were benefitted from the antenatal program. Pregnancy is a significant part of a women life which is related to childbirth fear. Anxiety related to childbirth creates a psychological threat from the prediction of undesired events in the future which is common in first time mothers. The prevalence of mild and severe anxiety is estimated to be 86.4%. Anxiety and fear during pregnancy increases risk of harmful maternal-fetal outcomes and require psychological intervention.[29]

The strong benefits of childbirth preparation program are increased childbirth self-efficacy, reduced anxiety, higher breast-feeding self-efficacy and improved interaction between antenatal mothers and the midwife, decreased medical intervention during

labor, and increased childbirth satisfaction.[30,31] Programs that have gained popularity in western countries are hypnobirthing and calm birth.[32,33] Childbirth preparation programs have shown to promote women's decision on child birth care, have enhanced antenatal mother's childbirth expectationsand information on childbirth.[34,35] Childbirth preparation program can make a symbolic difference to a women childbirth experience. These programs prepare a parturient to deal with labor pain and make them feel "cared about themselves." This feeling of "being cared for" affects their sense confidence and birth satisfaction.[35,36,37]

India, the developing country has a population of 138 crore people that strives to provide high quality health care with well organize health care system.[38] Indian nurses and midwives hold major responsibility of providing prenatal care to huge population of pregnant women through PHCs, CHCs and hospitals. Antenatal care in India is bound to routine laboratory and radiological testing and examinations which are often not known to women. There are no such childbirth or antenatal education programs that take place or are organized to assess the education demands of women. In India, only about 21% pregnant women receive ANC. Throughout caste, maternity education and settlements unfair use of ANC was found. Half of the Indian women could not receive the least recommended prenatal visit.[39]

There is no childbirth education program that could assess or cover the exigencies of antenatal women. Over eight hundred and thirty women die each day from preventive causes associated with pregnancy and labor. Majority of these deaths occur in the South Asian region. The lifetime risk of a pregnant woman dying from pregnancy or delivery is about 1 in 200 in India and about 1 in 4900 in other developed countries[40], many of

which can be stopped by skilled and timely exigent maternity care.[41] However, access to medical services is restricted. There are delays to seekcare, utilization of services, arrive at a medical facility and also lack of awareness on danger signals of pregnancy and labour.[42]

Childbirth preparedness not only covers physical and cognitive preparation but it also includes psychological preparation of the primigravida. Childbirth fear is a major factor that needs to be addressed while dealing with childbirth preparation. Fear of childbirth during antenatal period may be due to fear of injury, bad attitude and behavior of health care workers, caesarean section and sometimes there may be fear of delivering a physically or congenitally impaired baby. Evidence of childbirth fear during antenatal period is associated with depressed mood among primigravid women. A study was conducted among 368 primigravida women between 28-32 weeks of pregnancy in a tertiary referral center of southern Kerala. The study highlighted that 17.7% women expressed fear related to childbirth. The prevalence of depressed mood was 9.8% as per EPDS, and according to ICD-10, depression prevalence was 8.7%. The study concluded that childbirth fear is strongly associated with depressed mood and clinical depression.[43]

Inadequate childbirth preparation results in deteriorating mental as well as physical health leading to increased mortality and morbidity. WHO estimates that approximately 295,000 mothers died worldwide in 2017.[44] Twelve percent of these deaths were reported in India.[45] As per reports, the Maternal Mortality Ratio (MMR) is 113 and neonatal mortality rate (NMR) 23 per 100,000 live births in 2016–2018.[46,47] India has a population of approximately 1.36 billion[48] that varies between and within states, with Uttar Pradesh having the second highest MMR. The most populated state of India is

Uttar Pradesh having a population of approximately 235 million in total seventy-five districts and rank second highest in maternal mortality and morbidity. It has MMR of approximately 197 per 100,000 live births and neonatal mortality and morbidity of approximately 32 per 100,00 births livebirths.[49,42]

In 2017, a national report on the evolution of neonatal mortality in India showed a large disparity between districts in Uttar Pradesh, from 46.2 to 22.8 new-born deaths per 1,000 births.[50] Uttar Pradesh needs to focus on the Sustainable Development Goals (SDGs) that is 70 MMR per 100,000 live births and 12 NMRs per 100,000 births by the year 2030. Most maternal mortality during pregnancy and childbirth is caused by other direct causes such as excessive blood loss, hypertension, subsequent sepsis, unsafe abortion, and often preventable and easily manageable indirect causes.[52] These deaths may be averted by seeking the decision for care, arriving at equipped medical facilities and seeking appropriate urgent medical care at those facilities.[52,53] For prevention of delay and promotion of the exigent maternal neonatal care, WHO and other maternal care organizations have prepared BPCR strategies. Systematic review conducted on randomized trials of prenatal and complication-prepared interventions show that these interventions are effective in maternal and neonatal mortality risk reduction in resource-depleted situations.[54]

In Uttar Pradesh there is high rates of home birth because of which there is delay in receiving emergency obstetric care.[55] This study aims to focus on core elements of birth preparedness which would solve the three delays in emergency obstetric services, that are delay in recognizing danger signs, delay in decision making and delay in reaching health center. Evidences reveal that prenatal care, age, area of residence, sex, midwives,

blood donors, place of birth identification, money savings were important predictors of knowledge regarding childbirth preparedness.[56] According to a survey in Ethiopia, first time pregnant women who had regular prenatal visits used two elements from following finding qualified midwives, medical facilities, blood donors, and identified transportation to health care facility.[57] Prenatal education had a positive impact on number of hospitals deliveries.[58] Similarly, in Kenya, proper delivery preparation has tripled the chances of good delivery outcomes.[56] An Uttar Pradesh study conducted to assess the effectiveness of women's childbirth preparation showed that women who followed at least one element of childbirth preparation were 45% more likely to have an institutional birth.[55]

The main reasons for complications during labor are, lack of care 52.6%, delays in care 55.3%, delays in transportation 15.8%, and delays in hospital treatment 17.1%. The results of this study also suggest that women who die from complications of childbirth may not be aware of the dangerous signs of pregnancy, leading to delays in immediate care. Study suggests that educational classes on childbirth preparation like information on danger sign may help in reducing mortality related to childbirth preparation.[58]

It is very crucial for pregnant women to understand what to report and when to seek health services. Through childbirth education program this knowledge can be provided to women. According to WHO (2015), the ideal rate of caesarean section in a given population must be 10-15%. There is no evidence to support that caesarean section rates above 10% reduces maternal and neonatal mortality or morbidities. The NFHS-4 National Family Health Surveys (2015), NFHS-5 National Family Health Survey

(2019) both presented enough data on the total number of women choosing caesarean section across India as mode of delivery. NFHS-4 reported that caesarean section rate in India is 17.2% higher than that recommended by WHO limits adding to post-natal morbidities.[59]

Childbirth preparation educational programs help to reduce medical intervention, enhances women's self confidence in making decisions during labor and also improves level of women's cooperation during delivery. A well-educated and prepared parturient will be more confident and may prefer a normal vaginal delivery which will also reduce rate of operative birth.[60] There is a momentous need of childbirth preparation in order to support and take remedial measures. Due to inconsistency and constraint in prenatal care there is inadequate knowledge about what is expected from women during labor and hence they lack in their capacity to engage in cooperative way. There is non-availability of childbirth preparation program in rural India especially Uttar Pradesh where maternal mortality rate is second highest in country after Assam.[61]

Due to lack of access to education and information, healthcare services tend to be less well known in rural areas. For the success of government program, beneficiary awareness and information literacy are important for the successful utilization of services. Antenatal preparation classes are available in some private hospitals and are accessible to high income group women but rural low-income group women are devoid of such facilities. The challenging facts like increasing maternal mortality, high rates of medical intervention like caesarean section, delay in health care seeking and lower rate of institutional deliveries in poor performing state like Uttar Pradesh accelerated the interest of the researcher in developing a cost-effective need based comprehensive

childbirth preparation package. This package will empower the underprivileged section of our society, i.e., the rural primigravida mothers, with childbirth knowledge and skills in order to enhance positive childbirth experiences and better maternal-neonatal outcomes.

Research Statement

Efficacy of comprehensive childbirth preparation package on childbirth experiences and maternal-neonatal outcomes among primigravidae in selected health center of Noida, Uttar Pradesh.

Purpose of the study

The study purpose is to evolve comprehensive childbirth preparation package after identifying the need and to implement it in order to evaluate its effectiveness on childbirth experiences and selected maternal-neonatal outcomes.

Objectives

Objectives of the study are to:

1. Explore childbirth preparedness and childbirth experiences among primigravidae in selected health center.
2. Develop and implement a need based Comprehensive Childbirth PreparationPackage for primigravidae.

3. Assess the efficacy of comprehensive childbirth preparation package on childbirth experiences among primigravidae by comparing childbirth experiences between experimental and control group.

4. Assess the efficacy of comprehensive childbirth preparation package on selected maternal-neonatal outcomes among primigravidae by comparing maternal-neonatal outcomes between experimental and control group.

Operational Definitions

1. **Efficacy** refers to an extent comprehensive childbirth preparation package is effective in promoting positive childbirth experiences and better maternal-neonatal outcomes.

2. **Comprehensive childbirth preparation package (CCBPP)** refers to need-based multicomponent education program developed by investigator for primigravidae to improve their knowledge and confidence about birth process and to reduce childbirth fear and to promote positive childbirth experiences and better maternal-neonatal outcomes.

3. **Childbirth experience** refers to experience of primigravidae while passing through the period around childbirth. It is defined in terms of:

a) *Childbirth preparedness* refers to the extent to which primigravidae are prepared in terms of childbirth plan, knowledge about labor process, medical intervention during labor, and danger signs of childbirth as measured by structured childbirth preparedness questionnaire.

b) *Childbirth expectation* refers to expectation of primigravidae related to childbirth process in terms of pain/coping, intervention, nursing support, and significant other as measured by childbirth expectation questionnaire.

c) *Childbirth fear* refers to fear related to childbirth process among primigravidae as measured by Wijma delivery expectancy/experience questionnaire.

d) *Experiences of labor and birth* refers to experience of labor and birth among primigravidae in terms of own capacity, participation, professional support, and perceived safety as measured by childbirth experience questionnaire.

4. **Maternal-neonatal outcomes** refers to labor outcome, breastfeeding self-efficacy, postnatal outcome of mother and baby as measured by maternal-neonatal outcome proforma and breast feeding self-efficacy measured by breast feeding self-efficacy scale.

5. **Primigravidae** are women pregnant for the first time, and are in 28–34 weeks of pregnancy.

Assumption

1. Primigravidae may have some knowledge on childbirth process.
2. Awareness related to childbirth may influence confidence and fear related to childbirth.
3. Expectation may influence experiences.
4. Fear of unknown can influence expectation and experiences.
5. Magnitude of self-control during labor can influence childbirth experiences.
6. Childbirth experience may have an influence on physical and mental health of the mothers.

7. Mothers will be willing to learn regarding childbirth preparation.
8. Prospective mothers expect joyful and safe birthing.

Hypothesis

Hypothesis will be tested at 0.05 level of significance.

H_1: Primigravidae in experimental group will have positive childbirth experiences than the primigravidae in control group.

H_2: Primigravidae in experimental group will have better maternal-neonatal outcome than the primigravidae in control group.

Conceptual Framework

In research conceptual framework is used to delineate the future course of action and to present a selected approach into an idea. In the present study Bandura theory of self-efficacy was adopted for developing conceptual framework. The theory was introduced by Albert Bandura. He coined the word "self-efficacy". It can be defined as an individual's confidence on their ability to execute course of action while dealing with a prospective situation. Bandura believes that perceived self-efficacy influences all factors of behavior, main in acquiring of recent behaviors or even to manipulate or termination of present behavior.[62] Individuals with higher self-confidence are likely to interact with strong behavior and provide higher expositions of health-related behaviors. Also, without difficulty they are able to manage their behavior. In addition, self-efficacy performs a crucial function in coordinating the connection among man or woman know-how to behave.[63-65] Therefore, researcher applied the Bandura theory of

self-efficacy to estimate the efficacy of comprehensive childbirth preparation package on childbirth experience and selected maternal-neonatal outcomes among primigravidae. According to Bandura, individuals develop self-efficacy from four major sources:

1. Mastery experiences (Performance outcomes)

The most effective source in developing self-efficacy is one's previous performance. This suggests that one gain self-efficacy when they take a new challenge and are successful in performing it. Self-efficacy improves as much as the individual practices the skill. Acquiring and practicing new skill's improves individual's experiences of the situation because people unintentionally teach themselves during the process that they are capable of acquiring new skills. In order to promote mastery experiences among primigravidae education and preparation on childbirth process was provided.

2. Vicarious experiences (Social role models)

This source refers to vicarious reviews furnished by means of social function models. It is to get inspiration from observing other people performing a task successfully. By observing a positive role model in their life, there are chances that the person will also develop positive belief about self. Videos of successful natural delivery and virtual trip to labor room were included in intervention to develop vicarious experiences and reduce anxiety related to unfamiliar environment.

3. Social persuasion

Verbal feedback while one is taking and performing a complete task makes a person to have confidence that they have required skills and that they will succeed. Positive affirmation and counselling were the source of persuasion inculcated in the developed intervention. Self-efficacy in a person is related to discouragement and encouragement linked to his/her ability to perform.

4. Physiological and emotional states

The physical, emotional, and mental state of someone can have an impact on how they sense their non-public capabilities in a given situation. This states that any physical, emotional, or psychological illness can influence an individual's self-efficacy. Relaxation techniques, breathing exercises, and guided imaginary contributes to physical and mental preparation related to childbirth and may influence self-efficacy of primigravidae as a source of emotional and physical states.

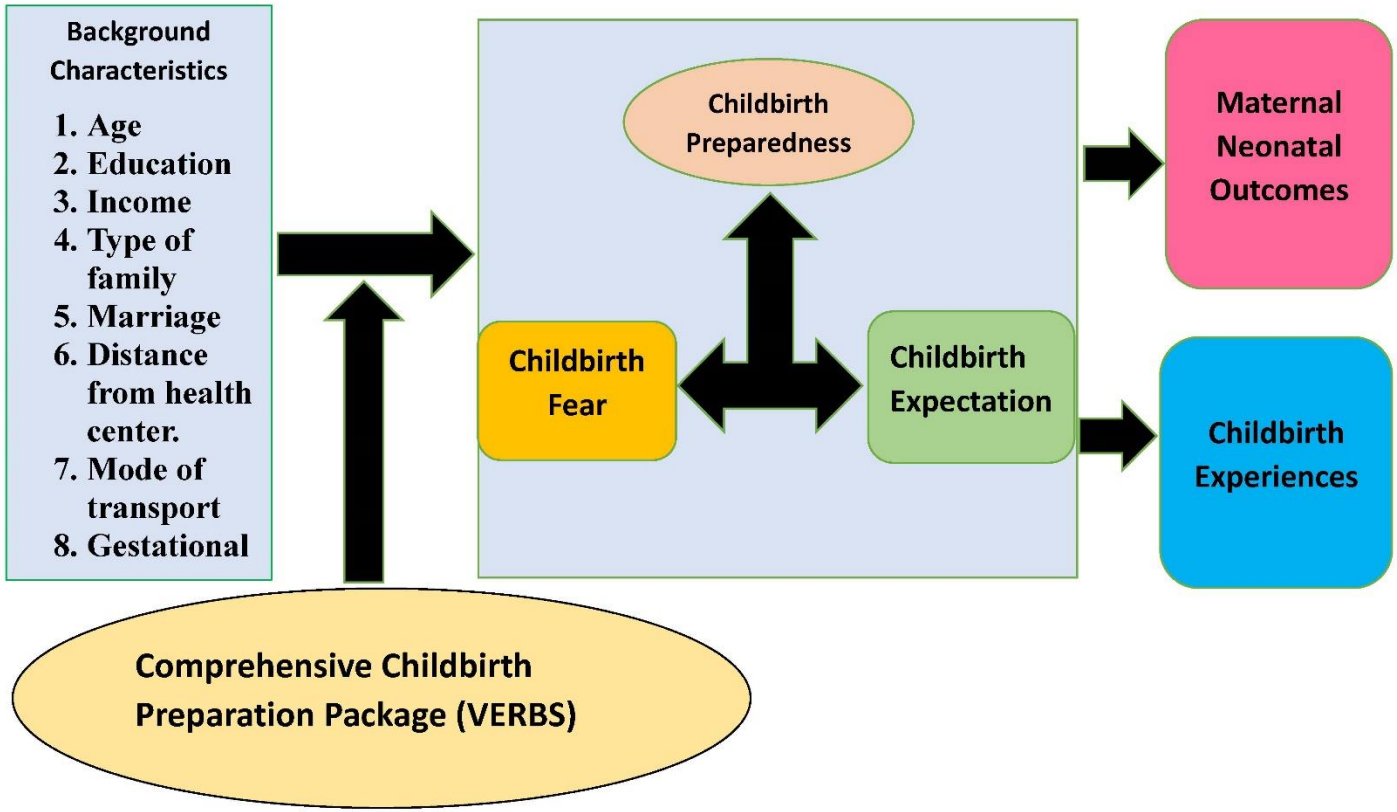

Figure 1: Conceptual Framework of the study based on Bandura's Theory of Self-Efficacy

Delimitation

Study is delimited to:

1. Primigravidae visiting selected community health center of Noida.
2. Primigravidae in 28–34 weeks of gestation.
3. Labor outcomes are delimited to labor records obtained from selected health center.

Summary

The investigator in this chapter has introduced about the concepts of the study. The variables discussed under the heading of introduction were primarily childbirth expectation, childbirth self-efficacy, childbirth fear, childbirth preparation, and childbirth experiences. The chapter dealt with background of the study, in which available studies related to childbirth experiences and preparation were discussed. The chapter comprises of purpose, objectives, need for the study, hypothesis, and assumptions. The theoretical framework of the study was explained under conceptual framework.