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Effect of Educational Program on Midwives' Knowledge Concerning Lamaze Method during the Labor

A Thesis submitted

By

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Supervised

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﴿ بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ ﴾

(فَحَمَلَتْهُ فَانْتَبَذَتْ بِهِ مَكَانًا قَصِيًّا ﴿٢٢﴾ فَأَجَاءَهَا الْمَخَاضُ إِلَىٰ جِذْعِ النَّخْلَةِ قَالَتْ يَا لَيْتَنِي مِتُّ قَبْلَ هَذَا وَكُنْتُ نَسْيًا مَنْسِيًّا ﴿٢٣﴾ فَنَادَاهَا مِنْ تَحْتِهَا أَلَّا تَحْزَنِي قَدْ جَعَلَ رَبُّكِ تَحْتَكِ سَرِيًّا ﴿٢٤﴾ وَهُزِّي إِلَيْكِ بِجِذْعِ النَّخْلَةِ تُسَاقِطْ عَلَيْكِ رُطَبًا جَنِيًّا ﴿٢٥﴾ فَكُلِي وَاشْرَبِي وَقَرِّي عَيْنًا ۖ فَإِمَّا تَرَيِنَّ مِنَ الْبَشَرِ أَحَدًا فَقُولِي إِنِّي نَذَرْتُ لِلرَّحْمَٰنِ صَوْمًا فَلَنْ أُكَلِّمَ الْيَوْمَ إِنْسِيًّا ﴿٢٦﴾)

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Supervisor Certification

I certify that this thesis, entitled *(***Effect of an Educational Program on Midwives' Knowledge concerning Lamaze Method during Labor)**, submitted by **Shireen Owiez Hassan**, was prepared under our supervision at the College of Nursing, the University of Kerbala in partial fulfillment of the requirements for the degree of master in Nursing Sciences.

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Dedication

I dedicate my thesis to my father who has meant and continues to mean so much to me. Although he is no longer of this world, his memories continue to regulate my life. I will never forget you. A special feeling of gratitude to my loving mother for her encouragement and support in my academic journey.

I also dedicate this thesis to my family Tawfiq , Nisreen, Montzar , Aneam , Hiba, and many friends especially my colleagues during my master's study, and my teachers who have supported me throughout my study. I will always appreciate all they have done.

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Abstract

Midwives often use non-pharmacological measures (such as Lamaze techniques) to facilitate comfort for a woman during labor. However, guidelines for the use of these measures are usually insufficient or absent. Therefore, This prompted the researcher to study the evaluation of the effect of an educational program on the knowledge of midwives regarding the Lamaze method during labor.

A quasi-experimental design used to guide this study was conducted on a group of midwives in the Holy Kerbala governorate, using the pre and post-test. Use of an objective sample of 60 midwives divided into two groups. The educational program was conducted on 30 midwives and they were compared with 30 midwives in the control group. The credibility of the questionnaire was investigated through a pilot study and then presented to experts to prove its reliability. The total number of items included in the questionnaire was 39. The data were collected using the self-report method and analyzed by applying the descriptive and inferential statistical data analysis approach.

The results of the study indicated that (83.3%) of the midwives showed a lack of knowledge and after applying for the educational program and conducting the post-test, the midwives expressed good knowledge (86.7%). There are no statistically significant differences between the study group and the control group in the pre-test for measurement ($p = 0.129$). While there is a statistically significant difference between the study group and the control group in the post-test measurement after implementing the educational program ($p = 0.000$).

The study concluded that there is an improvement in the knowledge of midwives after the post-test of the experimental group due to the educational

program of the Lamaze method. The study recommended training midwives staff by implementing such a training program that really helps to develop their knowledge.

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List of abbreviations

No.	abbreviation	Meaning
1.	ASPO	The American Society For Psych Prophylaxis In Obstetrics
2.	BSc	Bachelor Of Science
3.	CI	Confidential Informant
4.	FPS	Faces Pain Scales
5.	GA	Gestational Age
6.	GERD	Gastroesophageal Reflux Disease
7.	H0	Null Hypothesis
8.	H1	Alternative Hypothesis
9.	IV	Intravenously
10.	LMP	The Last Menstrual Period
11.	MCH	Maternal And Child Health
12.	MCQs	Multiple-Choice Questions
13.	MFCI	Mother-Friendly Childbirth Initiative
14.	NPI	Numeric Pain Intensity Scale
15.	NSAIDs	Nonsteroidal Anti-Inflammatory Medicines
16.	PRISMA	Preferred Reporting Items For Systematic Reviews And Meta-Analyses
17.	PTP	Planned Teaching Program
18.	RR	Respiratory Rate
19.	SD	Standard Deviation
20.	SDVs	Socio-Demographic Variables
21.	SPSS	Statistical Package For Social Sciences
22.	SROM	Spontaneous rupture of membranes
23.	VAS	Visual Analog Scale
24.	VIP	Virtual Internet Protocol
25.	WHO	World Health Organization

Chapter One

Introduction

Chapter One

1.1. Introduction

Natural delivery is a lovely experience with so many safe possibilities and advantages that many women fantasize about having the perfect birth. The natural transition from pregnancy to parenthood heralds a significant physical and psychological shift in every woman (O'Connell, 2019).

Labor is a natural physiological process that is accompanied by pain to some degree. Many things influence this, including a person's physical structure, emotional state, mental attitude, and associated difficulties, among others. Because there are so many elements that influence pain perception, pain can be reduced by modifying one or more of them (Medrzycka-Dabrowska *et al.*, 2018).

Labor is one of the most important aspects of a woman's life. It is accompanied by discomfort. Labor pains are nature's method of warning an expectant mother that she is about to give birth (Samadi *et al.*, 2018).

Pregnant women are frequently concerned about the pain, which they will feel during labor and delivery, and how they will react to and manage with it (Colciago *et al.*, 2022).

Despite being one of the most painful experiences in human history, delivery differs widely from woman to woman and even from conception through pregnancy (Bellhouse *et al.*, 2019).

Labor pain is experienced differently by women, some women compare it to menstrual cramps, and others are under a lot of stress, others have experienced really intense waves that resemble diarrhea cramps (Jothi, 2019). Many women equate the confidence they receive from dealing with labor discomfort with having a good birth experience (Olza *et al.*, 2018).

Despite advances in physical parts of medical research, which have resulted in a decrease in maternal mortality rates, the current difficulties in obstetrics are still a natural process, but we force the use of analgesics and pain through our medical involvement. The effects of anesthesia on the mother-child relationship's normal development (Bond *et al.*, 2021).

In the words of Blake (1954), "there is more delay in the development of feelings of motherhood when the mother endures significant suffering during labor and requires deep sedation and anesthesia" (Letsch, 2021).

Most of these women awaken uneasy, terrified, and oblivious to what has occurred to them. They didn't hear the baby's scream for help and were unable to carry the youngster (Caplan, 2016).

They typically don't feel love, but rather a deep sense of loss and emptiness that bothers them and jeopardizes their mental health. Many moms who were sleeping throughout childbirth react to their kids as if they were changing, and as a result, they experience remorse, guilt, inadequacy, and anxiety (Anderson, 2018).

It is known that stress and anxiety during labor increase adrenaline and the adrenal cortex, which both have an anti-oxytocin effect on uterine contractions and slow down labor (Sun & Sun, 2022).

These women struggle to believe that their children are theirs. They get agitated and attempts to repress such feelings are unavoidable due to the discomfort and anxiety they create (Klein, 2018). These kinds of emotional events cause insecurities in the mother-child relationship (Villalobos, 2015).

Childbirth is a difficult process that demands a lot of physical and mental work. A mother who is unprepared and tries to give birth without anesthesia is likely to be frustrated (Hutti et al., 2016). As a result, the

question arises: how can nurses assist moms in preparing for childbirth? (Navaee & Abedian, 2015)

In recent years, research has focused on the creation of a novel approach to preparing for childbirth known as the Lamaze method of partial preconditioning, which is gaining popularity across the world. During the women's training session, there was a verbal constant (Hossain *et al.*, 2019). Conditioning can change habitual or reflexive responses to sensory encounters, according to Lamaze's interpretation of Pavlovian theory (Gibson & Heap, 2021).

Access to pharmacological painkillers was one of the most compelling reasons for women to seek maternity care in a hospital. For a long time, pain after childbirth has been a cause of suffering for women (Larkin *et al.*, 2017). "Waters break" when the expecting woman doubles over in pain, and the amniotic fluid surrounding the baby gushes out in a dramatic gush. The body prepares itself even before labor begins in earnest. As tissue thins and stretches to allow for dilatation or the opening of the cervix, the cervix begins to efface (Hill, 2016).

Childbirth is a natural, and healthy process, according to the Lamaze concept, and women should be equipped to handle it confidently. Educates women on how to lessen their pain perception, such as by relaxation techniques, breathing exercises, diversion, or massage from a supportive and self-imposed individual (Presteena, 2016). The Lamaze method is a popular choice among many women because it is fully natural and does not require medical supervision or drugs (Zwier, 2020).

The method's appeal stems in part from its focus on individual personality and the connection of body, mind, and environment. It educates women to ignore their concerns and doubts about labor and to treat contractions as cues rather than agony (Sood & Sood, 2020).

1.2. Importance of Study

Labor pain can be excruciating, and bodily tension, anxiety, and fear can exacerbate it. Many women desire to give birth naturally, without the use of medicines or intrusive procedures like an epidural (Smith *et al.,* 2018). Complementary therapies are frequently used by these women to help lower the severity of pain and improve their labor experience (Bonapace *et al.,* 2018).

Acupuncture, mind-body approaches, massage, reflexology, herbal medicine or homeopathy, hypnosis, music, and aromatherapy are among the complementary therapies used by women in childbirth (Hamlin & Robertson, 2017). Relaxation and mind-body techniques can be taught in antenatal programs to make relaxation and mind-body techniques more accessible to women (Oyarzabal *et al.,* 2021).

Guided visualization, relaxation techniques, and progressive breathing are examples of relaxation techniques. Yoga and music are also included. Hypnosis in labor, manual treatments (such as massage and reflexology), aromatherapy, and acupressure/acupressure are also included in other Cochrane studies (Satija & Bhatnagar, 2017). Many of these relaxation techniques are coping mechanisms for dealing with discomfort (Solehati & Rustina, 2015).

Although remembrance fades with time, over 90% of women suffer severe/unbearable labor agony (Berger, 2007). The pain of labor is real and not imagined, and it must be managed properly. The physiological and psychological effects of labor pain are unknown (Bonapace *et al.,* 2018).

Psychologically: Acute labor pain has been linked to long-term emotional stress in mothers, with potentially harmful repercussions for their mental health and family connections (Newby *et al.,* 2021).

Although systemic pharmaceuticals and local anesthetics have gained popularity in recent years, other non-drug approaches have also

been tried in various centers with differing degrees of effectiveness (Knotkova *et al.*, 2012). In rare cases, the woman may prefer not to take drugs or topical analgesics during delivery, or pharmacological alternatives may be unavailable in certain parts of the world (Thomson *et al.*, 2019). As a result, non-pharmacological interventions are required.

Other issues linked with pharmacological therapies to pain can have harmful consequences as well. Patient non-compliance (missed doses and accidental overdose), a lack of individualized medical care, low self-efficacy (i.e. feeling out of control and unable to cope), and lastly addiction and drug abuse are all examples of these issues (Reid *et al.*, 2015).

The Lamaze Method is based on the notion of natural midwife-led care and a woman's natural ability to give birth with minimum or no regular interventions (Levett, 2015).

During pregnancy and delivery, the Lamaze method is used to teach women how to respond positively to labor pain (Cicek & Basar, 2017). During labor, mothers are taught techniques for concentrated breathing, movement, posture, massage, and relaxation (Bonapace *et al.*, 2018).

This method tries to aid in the delivery process without requiring the use of medicines. The method's appeal stems in part from its emphasis on the individual's personality and the connection of body, mind, and environment (Hartmann, 2020). It educates women to ignore their concerns and doubts about labor by treating contractions as stimuli rather than pain. Lamaze focuses on giving a happy environment and well-being during labor, therefore its effects are mostly emotional and psychological (Veringa-Skiba *et al.*, 2022).

From conception until labor, Lamaze's philosophy advocates for a natural, and more humane birth that respects the newborn, especially during labor. Women benefit from Lamaze training because it helps them feel calm during childbirth, actively work for their babies' health, have

confidence in their bodies and are in tune with their babies, experience less pain during contractions, and form a much stronger bond with their babies right after birth (Erkaya & Calik, 2021).

All healthcare systems depend heavily on nurses and midwives. They assist patients with all facets of their health and well-being, including chronic disease management, prevention, and specialized services (Perry *et al.,* 2015). They represent up half of the global professional health workforce and account for over 90% of patient-health-professional interactions (Crisp *et al.,* 2018). Furthermore, when preparing pregnant women for delivery, midwives should be conversant with the Lamaze method (Coskuner Potur *et al.*, 2017).

A positive delivery experience allows a woman to have enough information prior to labor to guarantee that she is aware of the changes that labor will bring and that she has some control over the birth of her child. In order to get the aid and support she needs during labor, a woman should be encouraged to trust her instincts, listen to her body, and share her feelings. A decreased amount of discomfort during labor has been linked to increased self-confidence (Lamaze). A woman's ability to handle and operate during labor will improve, resulting in a happy birth experience (Presteena, 2016).

The Lamaze breathing technique is widely used as a breathing exercise. Nursing techniques like positional nursing, birthing on balls, Doula nursing, massage, and psychiatric nursing are frequently employed during delivery. Lamaze breathing exercises combined with nursing care have been examined in several clinical studies to see how they affect maternal pain alleviation and results (Lonnberg *et al.*, 2021).

The Lamaze technique is taught to nurses and midwives for use during labor. Lamaze breathing instruction and nursing support enhance the birth process and outcomes by increasing the likelihood of normal

deliveries, decreasing labor tolerance, reducing pain, and minimizing postpartum hemorrhage, according to studies. It is beneficial to encourage Lamaze breathing exercises throughout pregnancy and to provide nursing while giving birth, given the high cesarean section rate. Additionally, prenatal nursing and education require specialized personnel *(Lonnberg et al.,* 2021; Wu *et al.,* 2021).

This study will add to the understanding of the Lamaze method by allowing the midwives in this study to comprehend the midwives' knowledge of the method in order to inform education and meet state standards. Furthermore, the research in the field of education by offering insight into the expertise of midwives. Practitioners and participants may find this study useful in a variety of ways. It promotes knowledge by implementing a Lamaze technique education program.

1.3. Statement of the Problem

Pain is the inevitable reality of labor, and is the most obvious factor in the labor experience. The contractions of the uterus, cervical dilation, and uterine expansion for vaginal birth all contribute to the impression of pain during labor (Tabatabaeichehr, 2020). The facilitation of the childbirth process is an issue worldwide. To manage labor pain, enhance the delivery process, and increase pregnant women's satisfaction, numerous techniques have been devised (Chang, 2022).

In Iraq, most women anticipate that labor and delivery would be painful. Lack of pain is frequently perceived as labor that is not progressing well (Reid, 2007). 78% of women worldwide give delivery with the assistance of a skilled midwife. There are numerous opportunities for healthcare practitioners to raise the standard of care for women as more women seek maternity care in areas with limited resources (McCauley, 2018).

A pivotal part in providing obstetric care to women and newborns around the world is played by midwives. To accomplish safe motherhood, midwives must be knowledgeable in numerous elements of obstetric care, such as pain management (Aziato, 2017). Having skilled midwives present during births is a critical step in lowering mother and neonatal morbidity and death (Solomon, 2021).

The intensity of pain and how it negatively affects mothers' health and well-being both during labor and after delivery (McCauley, 2018), Negative effects on labor outcomes could result from inadequate pain management during childbirth. For instance, various other researchers have summarized connections between labor outcomes, labor pain management, women's quality of life, and contentment with childbirth (Ohaeri, 2019).

Physiological and psychological problems might result from poor labor pain management (Tabatabaeichehr, 2020). The ideal labor pain management strategy should be safe, efficient, and in a setting that prioritizes women. It should also not impair the woman's movement or the course of labor (Mousa, 2018). Simple and affordable non-pharmacological interventions show promise in reducing labor pain with little to no negative effects on the woman, fetus, or the course of labor. These can decrease the need for analgesics during labor and include massage, breathing exercises, positioning, hydrotherapy, music, guided imagery, acupressure, and aromatherapy, among other things (Boateng, 2019).

All categories of nurse midwives should be taught about childbirth preparation (Shaaban, 2020). Healthcare practitioners (Midwives) recognize the significance of pain perception reduction during childbirth and work to build abilities in providing efficient practice for successful pain management during labor, as well as to improve the curriculum for non-pharmacological pain management during labor (Ramasamy, 2020).

To have a successful labor outcome, the Lamaze method and the techniques utilized in it were effective in lowering pain, anxiety, and tiredness during childbirth (Kuruvilla, 2019). These health practices that support, safeguard, and encourage normal birth are recommended by the World Health Organization (Romano, 2008) . These findings highlight the potential of the Lamaze method as a supplemental therapy for coping with labor, and they advise nurses to employ such targeted nursing interventions to enhance maternity care (Kuruvilla, 2019).

1.4.Objectives of the Study

The following objectives of the study :

1. To assess the midwives' knowledge regarding the Lamaze method.
2. To evaluate the effect of the educational program on midwives' knowledge regarding the Lamaze method.
3. To find out the relationship in midwives' knowledge between pre-post-test with regard to demographic characteristics.

1.5. Hypotheses

It is hypothesized that the result may reveal:

H1: After the post-test, there were statistically significant variations in knowledge scores between the study group and the control group.

H0: After the post-test, there were no statistically significant variations in knowledge scores between the study group and the control group.

1.6. Definitions of Terms

1.6.1. Effect

a. Theoretical

the ability of something to produce the desired outcome or leave a lasting impact (Andadari *et al.*, 2020).

b. Operational:

Achieving the optimal outcomes identified with the educational program on the information of midwives about the Lamaze method during labor.

1.6.2. Educational Program

a. Theoretical

a set of educational activities planned and structured to achieve pre-determined learning objectives (UNESCO, 2012).

b. Operational

To provide knowledge to midwives about the Lamaze method, refer to a strategically prepared teaching plan.

1.6.3. Knowledge

a. Theoretical

Midwives have the ability to provide pregnant women with standardized health care. These midwives' abilities are linked to their knowledge (Hunter *et al.*, 2008).

b. Operational

Knowing something about midwives' knowledge of the Lamaze method is a fact or condition.

Chapter Two

Literature Review

Outlines of Chapter Two (Literature Review):

2.1. Lamaze Method: An Historical Overview.

2.2. Lamaze Method: An Concepts.

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Chapter Two

Literature Review

2.1. Lamaze Method: An Historical Overview

Although French doctor Fernand Lamaze is sometimes credited with inventing the Lamaze method of childbirth, the origins of this birthing style can be traced back to Russia (Ayres *et al.,* 2019).

Lamaze was once referred to as the psych-prophylaxis approach to childbirth preparation. Psych-prophylaxis literally means "psychological sickness prevention." In the context of delivery, it involves employing psychological strategies to prevent or lessen discomfort during labor (Gilgoff, 2016).

Applying Pavlovian theory to childbirth, Russian psychologist Vel'vovskii and neurologist Polatono developed psych-prophylaxis. Knowing the Pavlovian theory from the famous Pavlov's dog experiments, in which Dr. Pavlov would ring a bell every time he fed a dog food (Castro & Wasserman, 2010). In reaction to the food dish, the dog would naturally droll. Dr. Pavlov ultimately rang the bell without giving food, and the dog continued to slobber (Shawn, 2015).

Psych-prophylaxis was designed to help women feel less or "no pain" during childbirth by practicing relaxation and distraction tactics before the delivery day, based on this conditioning idea (Presteena, 2016).

Dr. Fernand Lamaze saw the procedure in action in Russia in 1951. He brought the procedure back to France, where he began teaching it in his hospital's labor and delivery unit (Gavin-Jones & Handford, 2016). The practice had spread to other European countries, North Africa, the Middle East, and Latin America by the end of the 1950s. The procedure was dubbed painless delivery (Klasen, 2019).

Lamaze returned to France inspired by what he saw at Nikolayev's clinic, ready to preach the news of mental prophylaxis with missionary fervor (Michaels, 2014).

The colleagues first presented their case for mental prophylaxis in a late 1950 paper in the Soviet journal obstetrics and gynecology, and later in a 1954 textbook aimed at physicians (Michaels, 2014). "A set of measures intended at preventing the appearance and development of labor pain effected through influences applied on the higher divisions of the central nervous system," they defined psych prophylaxis (Macdonald & Oakman, 2015).

While keeping an eye out for any medical issues that could cause discomfort, caregivers were to keep a woman's optimistic attitude about childbirth and instill in her the belief that labor would be painless. Medical workers resisted "influences by words whose meaning may serve to condition, trigger, and intensify pain sensations in labor," just as they did with Hypno-suggestion (Simkin, 2018).

With emphasis on the active, fully conscious participation of the laboring woman, Vel'vovskii openly distinguished psych prophylaxis from hypnosis. Psych prophylaxis activated cortical function in the elimination of pain, whereas hypnosis suppressed it (Michaels, 2014).

Marjorie Karmel, an American actress, gave birth in France utilizing Dr. Fernand Lamaze's method. In 1959, she wrote a book called Thank You, Dr. Lamaze, based on her experiences. The approach was introduced to the United States through this book (Michaels, 2018).

The American Society for Psych prophylaxis in Obstetrics (ASPO)/Lamaze was formed in 1960 by physical therapists Elisabeth Bing and Marjorie Karmel. Lamaze International is the new name for the ASPO/Lamaze organization (Meltzer, 2004). Currently, Karmel and

Elisabeth Bing's Lamaze International is the world's leading childbirth education certifying organization (Simonsen, 2015).

The Lamaze taught in the 1960s, 1970s, and even the 1990s is not the same as the Lamaze taught now. They no longer refer to it as "painless childbirth," and the information provided has changed as attitudes around labor have evolved and research has discovered new ways to improve the childbirth experience for women and their families (Autor *et al*., 2016).

2.2. Lamaze Method: An Concepts

The most frequent type of childbirth preparation is the 'Lamaze' method, often known as mental prophylaxis (Lonnberg *et al.,* 2021). Lamaze training is more of a mindset than a technique when it comes to childbirth. The Lamaze philosophy encompasses a wide range of techniques, including educating and informing pregnant women prior to delivery, assisting them during labor, and giving relaxation and relief through breathing exercises (Erkaya & Calik, 2021).

Improving the mental and physical awareness of pregnant women, this ideology aspires to make normal delivery natural, healthy, fearless, and happy (Buccino, 2016). The Lamaze technique of childbirth preparation focuses on many of the characteristics that have been shown to reduce pain perception and hence should help a woman experience less pain during childbirth (Clark *et al.*, 1981).

The Pavlovian principles of conditioned reflex training are used in the Lamaze method. Strong positive conditioning is built, according to the American Society of Psych prophylaxis in Obstetrics (ASPO), so that each uterine contraction becomes the cue for the patient to commence certain breathing methods that vary with the stages of labor (Michaels, 2014).

As a result, distraction (along with relaxation) is achieved. Effleurage, or mild, rhythmic massaging of the abdomen in a circular motion, is used to distract the patient (Massage, 2015). By stimulating the big myelinated nerve fibers, this type of touch can also help to relieve pain. Lamaze International's philosophy is founded on a set of six Healthy Birth Practices, four of which were decided by WHO (World Health Organization) to support, protect, and improve normal births, and two of which were developed by Lamaze International to aid women's capacity to give birth (Al-Gailani, 2017).

The Lamaze concept recommends allowing labor to progress at its own rate, allowing women to walk, move around, and change positions while in labor, and providing them with a complete explanation of pregnancy, labor, and delivery (Erkaya & Calik, 2021). As a result, the ambiguity about future pain is eliminated, and the woman experiences less anxiety as a result. The husband learns how to actively support his wife as her coach during labor during the Lamaze classes (Basson, 2019). Lamaze-trained women have a sense of control over their pain, which reduces anxiety and pain by allowing a loved one to continuously support them, avoiding unnecessary medical interventions, using upright pushing positions and following women's urges to push, and keeping mother and baby together, which is better for mother, baby, and breastfeeding (marked practices were added by Lamaze International) (Lothian & DeVries, 2017).

Lamaze believes that delivery is a natural process, that women are born with the ability to give birth, and that unnecessary medical intervention can put the mother and baby at risk. All of their childbirth knowledge and abilities are designed to promote the natural birthing process and minimize unnecessary interference (Shanley, 2012).

At the time of birth, the Lamaze philosophy was followed. The Mother-Friendly Childbirth Initiative's normal birth guidelines are likewise based on this principle (MCFI). From pregnancy till labor, especially at the moment of labor, the Lamaze concept advocates for a normal, natural, and more compassionate delivery that is respectful of the newborn baby (Lothian & Devries, 2017).

Lamaze training benefits women by allowing them to feel calmer throughout childbirth, work actively for their babies' health, trust their bodies and be in harmony with their kids, experience less pain during contractions, and form a far stronger attachment with their newborns shortly after birth (Podgurski, 2016).

The Lamaze childbirth education philosophy is based on six important principles known as the Lamaze six healthy birth practices (Lothian & Devries, 2017). They are...

- ❖ Allow labor to start on its own (Amis, 2019).
- ❖ Throughout labor, walk, move around, and change positions.
- ❖ Bring a loved one, a friend, or a doula to provide ongoing support (Siddiqua, 2020).
- ❖ Attempt to avoid interventions that aren't medically required.
- ❖ Whenever possible, avoid giving birth on your back and listen to your body's wants to push (Mcallister, 2014).
- ❖ Keep the mother and baby together as much as possible; this is best for the mother, the baby, and breastfeeding (Crenshaw, 2010).

2.3. Labor

The term "labor" refers to the body's natural childbirth process. Karlstrom et al. (2015) describe how it begins with consistent contractions and progresses through the delivery of both the infant and the placenta. For women, labor is both a physiological and psychological

strain (Karlstrom *et al.*, 2015). As labor approaches, it can be a period of mixed feelings; anxiety and apprehension can coexist with excitement and joy (Bala *et al.*, 2017).

The uterus contracts in a sequence of continuous, progressive contractions that assist the cervix to dilate and efface (thinning out). This makes it possible for the fetus to pass through the birth canal (Powers, 2021). Labor normally begins two weeks before or after the expected delivery date. The actual cause of labor, on the other hand, remains unknown (Shah *et al.*, 2020).

Labor pain has been regarded as one of the most painful forms of agony that a person may feel (Smith, *et al.*, 2018). On the other hand, some women do not feel severe pain during labor (Brown, 2017). The physiologic process by which the fetus, placenta, and membranes are evacuated through the birth canal is known as delivery (Tribe *et al.*, 2018).

2.3.1.Factors that Affect on Labor 5 Ps

At least five elements influence the labor and delivery process. The five Ps are easy to remember: passenger (fetus and placenta), passageway (birth canal), powers (contractions), mother's position, and psychologic response (Powers, 2021). Other elements that may have played a role in the woman's labor experience may also be significant. External forces noted by VandeVusse (1999) include the place of birth, preparation, kind of provider (particularly nurses), and procedures (VandeVusse, 1999).

2.3.2. Signs of Labor

Each woman's labor is unique, but the following are some frequent indicators of labor: A little amount of mucus may be produced from the vaginal canal, slightly mixed with blood (Jackson, 2019). Contractions, or uterine muscular spasms that last less than 10 minutes,

may indicate that labor has begun. As labor continues, these may become more frequent and painful (Page *et al.*, 2017).

The amniotic sac has ruptured (bag of water). If the amniotic fluid is flowing or leaking from the vaginal area, go to the hospital right once and contact with doctor (Simes & Stilwell, 2021). Within hours of the amniotic sac rupture, the majority of women go into labor (Cohain, 2015). If labor does not start shortly after the amniotic sac ruptures, pregnant women should be given drugs to induce labor. This is a common precaution performed to avoid infection and other difficulties during birth (Abboud, 2017).

2.3.3. Stages of Labor

Labor is divided into four stages (Purnama, 2019) :

- The first stage is classified into three phases, as shown in the figure (2-1) :

➢ The initial phase: The cervix will dilate completely when labor begins (Olufemi T Oladapo *et al.*, 2018). Early on in this stage, it's difficult to tell if contractions are moderate and irregular (J. Cohen *et al*., 2015). There are three stages of early labor.

➢ The latent phase: is characterized by severe contractions that occur every five to twenty minutes (Murphy, 2017). The cervix will dilate by 3 to 4 cm and efface during this stage (Hanley *et al*., 2016). This is the most time-consuming and least intense stage of labor. During this time, may be admitted to the hospital. The doctor will undertake pelvic exams to determine the cervix's dilatation (Saccone *et al.*, 2017).

➢ The active phase: is marked by a cervical dilation of 4 to 10 centimeters; contractions will likely lengthen, become more severe, and occur at three- to four-minute intervals (W. R. Cohen & Friedman, 2015).

The active phase is usually shorter than the latent period. Regular contractions with increasing strength and frequency, accompanied by cervical dilatation of at least 4 cm to 6 cm, characterize the active period of the first stage of labor (Hanley *et al.,* 2016). Between 7 cm and 8 cm and full dilatation, the transition may or may not be visible (Smith *et al.*, 2018).

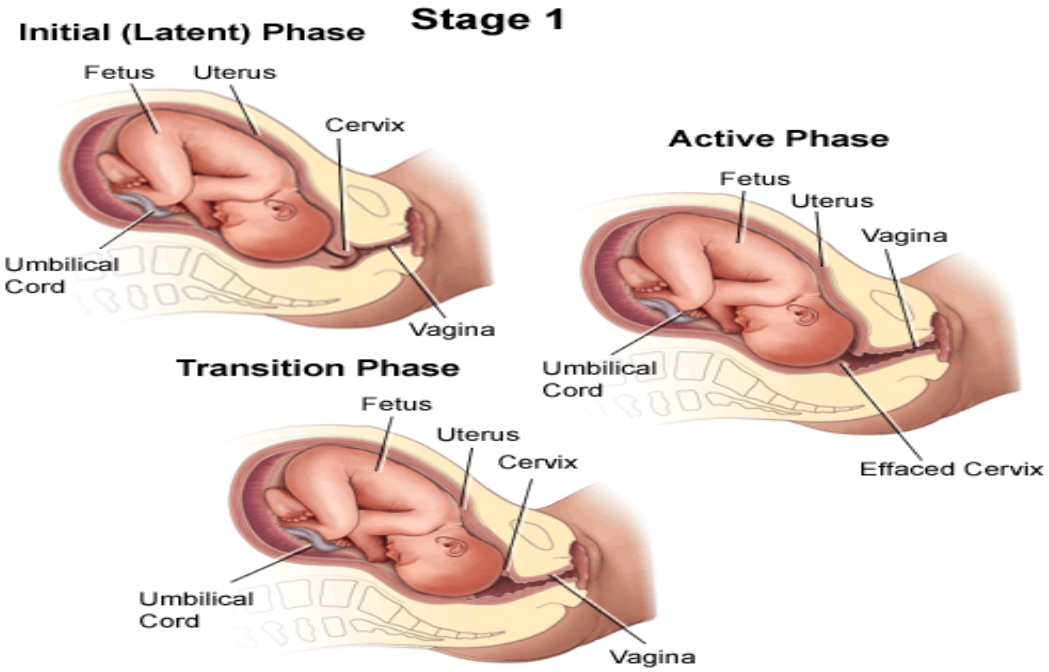

Figure 2-1:First stage of labor (Smith et al., 2018).

- The second stage This stage of labor is also known as the pushing stage since it begins when your cervix is fully opened and concludes when the baby is delivered (Berta *et al*., 2019). The mother become more involved in the second stage by pushing the baby through the birth canal. When the baby's head is seen at the vaginal entrance, this is known as crowning (Goordyal *et al*., 2021).

In first pregnancy, the second stage is usually shorter than the first, taking anything from 30 minutes to three hours (Perales *et al.*, 2016). From full cervical dilation till the arrival of the baby, the second stage of labor begins (Singh, 2019).

- The third stage: Enter the third and final stage of labor after the baby is delivered (Kc *et al*., 2016). The placenta (the organ that nourished baby inside the uterus) is removed from the uterus and passed via the vaginal canal during this stage, as shown in figure (2-2). (Burns, 2014).

The placenta can take up to 30 minutes to deliver. The placenta is expelled during the third stage of labor (Deneux-Tharaux *et al*., 2013). Uterine contractions, cervical dilation, and, in the late first and second stages, stretching of the vagina, pelvic floor, and perineum to accommodate the baby, all cause pain for women in labor (Shnol *et al*., 2014)

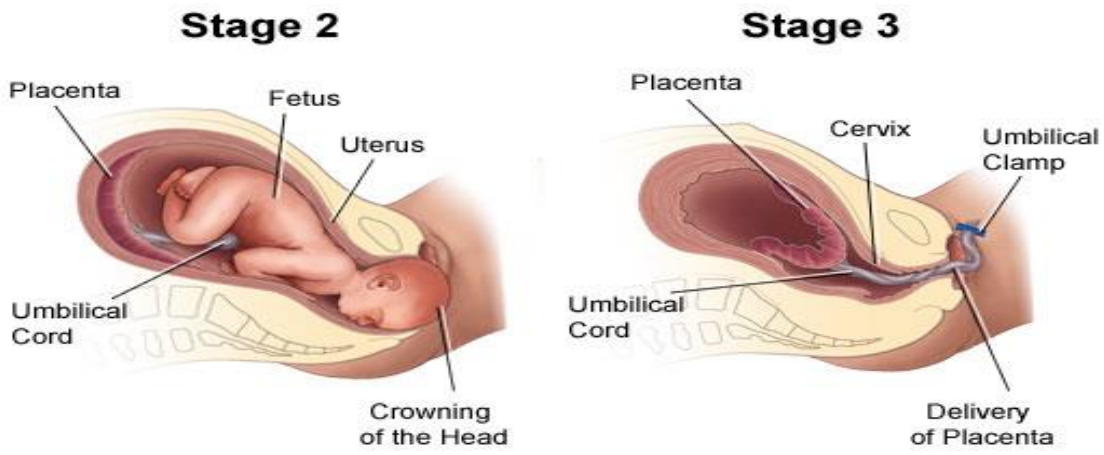

Figure 2-2:Second and third stage of labor (Shnol *et al*., 2014).

Most women will have their baby within 10 hours of being admitted to the hospital if labor induction is not required. Following pregnancies, labor is usually shorter (Spong *et al*., 2012).

- Fourth Stage**:** The fourth stage of labor occurs between 1 and 4 hours after birth when the mother's body begins to re-adjust physiologically. Hemodynamic alterations occur as a result of birth. The amount of blood lost at birth varies between 250 and 500 ml (Davidson, 2014).

2.3.4. Induction of Labor

Labor must sometimes be induced or stimulated to start, and the reasons for this vary. Unless there is a concern, as shown in table (2-1), labor induction is not started before 39 weeks of pregnancy (Bomba-Opo *et al*., 2017). The following are the most common reasons for induction:

- Complications put the mother or the fetus in danger (Palomba *et al.*, 2015).
- The pregnancy has gone on well beyond its due date.
- Pre-eclampsia, eclampsia, or chronic high blood pressure affects the mother (Churchill *et al*., 2018).
- The fetus has been diagnosed as having a slow growth rate (Sucksdorff *et al.*, 2015).
- In order to encourage contractions, vaginal suppositories containing prostaglandin might be inserted (Du *et al*., 2015).
- Oxytocin (a hormone generated by the pituitary gland that promotes contractions) or a comparable medication administered intravenously (IV) (Uvnas-Moberg *et al.*, 2019).
- Rupturing the amniotic sac artificially (Ghafarzadeh *et al.*, 2015).

Table 2-1. Braxton Hicks contractions vs. True Labour (Moscoso, 2015; Raines & Cooper, 2017)

Cervical dilation	**Braxton – Hicks Contractions**	**True Labor Contractions**
	Do not cause cervical dilation	**Cause cervical dilation**
Frequency of contractions	**The timing between contractions is not regular**	**The timing between contractions is regular and the contractions begin to occur closer together over time**
Strength of contractions	**They are not usually very strong**	**They become stronger over time**
Length of contractions	**Length is uncertain**	**The contractions last between 30 – 90 seconds and grow longer as labor progresses**
Location of pain	**Usually, the pain is in the front of the abdomen**	**The pain starts in the back and moves around to the front**
Change with movement	**Contractions may stop if the woman moves**	**Contractions will continue and/or become stronger regardless of the woman's movements**

2.3.5. The Mechanism of Labor (cardinal movements of labor)

Engagement, descent, flexion, internal rotation, extension, external rotation, and expulsion are the seven cardinal movements (Serrano & Ayres-de-Campos, 2021).

1. Engagement:

In late pregnancy or early labor, the fetal head's greatest diameter passes through the opening to the pelvis (Muhunthan, 2016). This is the commencement of the birthing process, as the baby is getting ready to give birth (Luce *et al.*, 2016).

2. Descent:

It is the downward movement of the bilateral diameter of the fetal head into the entry pelvis, sometimes known as "lightning" (Friedman & Cohen, 2011). When the fetal head emerges out of the dilated cervix and contacts the bottom of the uterine posterior vagina, it is said to have completed the descent. The fundus of the uterus exerts pressure on the fetus, causing descent (Konar, 2018). The fetus is pressing against the sacral nerves in the pelvic floor, causing the mother to feel thrust. As the lady pushes, a thorough landing may help her abdominal muscles contract (Wolf, 2012).

3. Flexion:

When the fetal head lowers and meets resistance from the tissues, it is said to be flexed. The pelvis, pelvic floor muscles, and cervix are all loose. The fetus' chin is flexed in the direction of his chest as a result of the resistance (Estrada Trejo *et al.*, 2021).

4. Internal rotation:

The fetal head is rotated until the diameter of the fetal head of the longest fetus matches the diameter of the mother's pelvis (Trevathan, 2015).

5. Extension:

The pelvic floor's resistance aids in the extension of the fetus' head during its passage beneath the pubic attachment. The occiput of the fetus's head emerges from the vaginal canal, followed by the eyebrow, face, and chin (Rankin, 2014).

6. External rotation:

It rotates the infant's head to the inclined or transverse posture immediately after birth. This causes the back shoulders to be in an anterior-posterior configuration, with the front shoulder being born first, possibly due to the infant's head being bowed down (Cymbalist, 2011).

7. Expulsion:

Because of its modest size, the front shoulder is born before the back shoulder, allowing the rest of the baby's body to be born effortlessly and smoothly (Laudicina *et al.*, 2019).

2.4. Methods for Relieving Pain during Labor

Pain in labor is a fairly common experience for women who are expecting a child, and it may be excruciating, with tension, anxiety, and dread exacerbating the situation. Mothers who are giving birth, on the other hand, have a distinct experience (Abbott *et al.*, 2020). Although the majority of women require some form of pain treatment during childbirth, the safety of the infant comes first (Dathe & Schaefer, 2019).

It is not the amount of pain a woman feels that impacts her assessment of the birth experience as "good" or "bad." It is whether she fulfills her goals for herself in coping with the pain that influences her perception of the birth experience as "good" or "poor" (Van der Gucht & Lewis, 2015). Many women would like to give birth without the use of medicines and to discover other ways to cope with the discomfort (Thomson *et al.*, 2019). Acupressure, breathing techniques, massage

treatment, music, and warm compresses are some of the techniques used (Mascarenhas *et al.*, 2019).

Childbearing mothers and their families are concerned about labor pain and ways to alleviate it. This problem affects around 4 million women and families in the United States alone each year (Sawyer *et al.*, 2011). There are various pain-control philosophies that entail employing ways to break what is known as the fear-tension-pain cycle (Smith *et al.*, 2018). Fear and worry, according to a proponent of "natural childbirth," can cause muscle tension, leading to an enhanced impression of pain (Howland, 2017).

The influence of several components, including past experience and memory, is understood by the neuromatrix theory of pain. The pain theory in labor includes parts of the gate control theory, as well as past experiences, cultural influences, emotional state, cognitive input, stress regulation, immune systems, and immediate sensory input (Stilwell & Harman, 2019).

However, eliminating pain completely does not always equate to a more happy birth experience for women (Karlstrom *et al.*, 2015). A five-year follow-up study discovered that women who had epidurals were less pleased about their birth five years later (Maimburg *et al.*, 2016). Pain management that is effective and satisfying for each woman must be tailored to her own circumstances, and might be affected by one of two paradigms: working with pain or pain alleviation (Smith *et al.*, 2018).

The working-with-pain paradigm holds that supporting normal birth has long-term advantages, and that pain plays a crucial role in this process (Van der Gucht & Lewis, 2015). Pain treatment can lead to a variety of positive outcomes, such as a reduction in symptoms and lower expenditures for the individual, community, and health care system (Kales *et al.*, 2015).

2.4.1.Non Medicated Pain Management

Psychological discomfort is more common in both women and men throughout pregnancy and the postpartum period (Glasheen *et al.*, 2015), which might impair children's attachment patterns as well as their emotional and cognitive development (Music, 2016). Dread of childbirth is linked to anxiety in women and is classified as an anxiety disorder or phobic fear in severe situations (Glasheen *et al*., 2015).

During pregnancy, fear can disrupt daily life and impair one's ability to focus on job and social activities. Women's fear of childbirth has been linked to longer labor, a higher chance of elective and emergency cesarean sections, a negative childbirth experience, and postnatal post-traumatic stress and depression (Strksen et al., 2015; Simpson *et al*., 2018).

Women who get antenatal treatment for delivery anxiety may have fewer elective cesarean sections and experience less birth-related anxiety (V. Smith *et al*., 2019). Men's dread of childbirth is associated with catastrophic perceptions of risks to the mother's and baby's lives and health, as well as a fear of being helpless and impotent during the birth (Raphael-Leff, 2018).

This sense of menace and helplessness is similar to Barlow's concept of nervous apprehension, which is defined as a state of helplessness characterized by a perceived incapacity to predict, control, and achieve desirable results or outcomes in specific forthcoming personally significant events (Fowles, 1994) Distraction, biofeedback, self-hypnosis, lowering pain perception, and cutaneous stimulation (massage, hot bath, hot or cold compress, transcutaneous electric nerve stimulation) are examples of non-pharmacological therapies (Yanti & Mardiyana, 2017). The application of pressure to the soft tissues is known as massage. Effleurage is a technique for relieving pain, improving

circulation, and relaxing muscles, tendons, and ligaments without causing movement or change of joints (Yanti & Mardiyana, 2017).

The working-with-pain method provides women with support and encouragement, and advocates for the use of interventions such as immersion in water, comfortable positions, and self-help strategies to help them cope with normal labor discomfort (Smith *et al.*, 2018).

Non-invasive, non-pharmacological treatments are included as a category by the World Health Organization. This is a categorization. "Practices that have been shown to be beneficial and should be promoted." Massage and relaxation therapies are classified as category A by the WHO (Houzé *et al.*, 2017). Despite the fact that music therapy is not specifically listed in the WHO classification of techniques in normal birth, it is a non-invasive and often calming treatment for labor (Thomson *et al.*, 2019).

Herbs, immersion in water, and nerve stimulation are examples of non-pharmacological therapies for which there is inadequate data to make a firm recommendation (Bhange, 2016). These pain management measures, which are used as part of natural delivery, provide comfort and reduce stress without the need for medication (C. A. Smith, Levett, Collins, Armour, *et al.*, 2018). Many women have found that learning natural ways to help them feel more at ease and in control throughout labor and delivery has been beneficial (Campbell & Nolan, 2019). These techniques include:

1. Relaxation:

This method can help you better detect and release stress. Learn to relax various muscle groups in order during progressive relaxation (Nasiri *et al.*, 2018).

2. Touch:

Massage or mild stroking may be used to ease tension. During labor, a jetted bath or shower can also assist ease pain and tension (Gayeski *et al.*, 2015).

3. Hot or cold therapy:

A heated towel or a cold pack might aid in the relaxation of tense or sore areas (Ganji *et al.*, 2013).

4. Imagery:

Using the mind to produce and promote relaxed feelings could be beneficial (Mann & Narula, 2017).

5. Meditation or focused thinking:

Instead than focusing on discomfort, meditation helps the mind focus on an object or action, such as breathing (Zeidan & Vago, 2016).

6. Breathing:

Different breathing patterns and types are used in these approaches to assist divert attention away from discomfort.

7. Positioning and movement:

Changing positions and moving around during labor can help ease discomfort and even speed up the process for some women (Bonapace *et al*., 2018).

8. Rocking in a rocking chair:

Walking or swaying, as well as sitting in the Tailor sit position or on a special birthing ball, may help ease discomfort (N. Wu *et al.*, 2022). A health care provider can assist in locating comfortable postures that are safe for both the mother and the baby (O T Oladapo *et al.*, 2018).

2.4.2. Medicated Pain Management

Pain can be controlled by pharmacology, which includes inhalation analgesia, opioid analgesia, and regional anesthetic, among other things (Jin *et al.*, 2022). The following five types of medications are used in pharmacological pain management: narcotics (or opioids), which

are typically used to treat short-term acute pain (Deyo *et al.,* 2015); muscle relaxants, which are used to treat contractions and muscle spasms; and non-steroidal anti-inflammatory medications (NSAIDs), which are used to treat pain and inflammation (Degray & Seth, 2021); sedatives for better sleep; and analgesics (e.g., paracetamol or acetaminophen; non-steroidal anti-inflammatory medications, and tramadol) to treat long-term discomfort and reduce pain symptoms that recur regularly (Koller et al., 2019).

2.5. Lamaze Method Techniques used During Labor

Expectant moms learn how to cooperate with the labor process to lessen discomfort and encourage a normal (physiological) birth, including the first moments after birth, in modern Lamaze birthing programs (Landolt & Milling, 2011).

Allowing labor to start on its own, moving and positioning the mother and baby, massage, aromatherapy, hot and cold packs, breathing techniques, the use of a "birth ball" (yoga or exercise ball), spontaneous pushing, upright positions for labor and birth, breastfeeding techniques, and keeping mother and baby together after childbirth are some of the techniques used (Yurtsev & Sahin, 2021).

Relaxation, looking at a fixed point, and breathing patterns were used as conditioned responses in the Lamaze method (Selby-Nelson, 2011). Repetition, or conditioning, was noted to improve secondary conditioned responses to images of contraction prompted by a coach using what Pavlov regarded to be the second signal system of language (Alhadeff, 2020).

It's worth noting that the focal point should be chosen in such a way that it already induces sensations of well-being, giving the training session sensory preconditioning. Since the advent of the Lamaze method, research (albeit limited) has validated its use (Malshe, 2017).

It was discovered that people who received Lamaze education and training experienced less dread and anxiety, as well as less discomfort. Individuals who got Lamaze method training were shown to have improved mood and pain perception (Landolt & Milling, 2011).

Education, relaxation, the focal point, the establishment of counter-conditioned reactions, or just interaction with the "coaches" in a safe secure setting could have caused the benefits (Selby-Nelson, 2011).

The Lamaze method predicted a lot of recent treatment approaches. When it comes to childbirth, these methods typically include giving instruction on the nature and process of labor and delivery (pregnancy and birth psych education), visual focusing (meditation), breathing techniques, muscle relaxation, the use of a training coach (social support), and cognitive restructuring (Al-Gailani, 2017).

Distraction has been shown to be useful in lowering pain when utilized in pain management (Kenney & Milling, 2016). The Lamaze method employs distraction to help shift a participant's attention away from the discomfort she is feeling by requiring the patient to focus on her breathing patterns and a focal point (Hunter & Hurst, 2016). It may be successful because pain perception necessitates attention, and there is a certain amount of attention that can be focused on a single scenario at any given time (Crofford, 2015).

Individuals who actively participate in a purposeful, deliberate behavior sustain attention through visual focus and active breathing. Breathing has been shown to reduce pain perception as a kind of relaxation (Vidyarthi *et al.*, 2012).

Breathing relaxation is a type of concentrated rhythmic breathing that has been demonstrated to lessen sympathetic nervous system reactions by slowing mental and physical activity (Russo *et al.*, 2017).

High levels of social support have been linked to clinical pain and disability decreases (Edwards et al., 2016). Others' support can push patients to seek therapy and recovery, as well as reduce feelings of loneliness and discouragement (Nystrom *et al*., 2015).

The Lamaze approach makes use of social support in the form of coaches who provide encouragement and collaboration in pain management. Despite the fact that the Lamaze method has stayed in use and its subcomponents have been highlighted in the study (Selby-Nelson, 2011).

Since its inception, Lamaze's current techniques have evolved as well. The Lamaze method is currently available in a variety of formats, including classic Lamaze sessions, brief training modules (one training session), and a brief review in general birth preparation classes (Hansen, 2016).

2.5.1.Relaxation

It is the relaxation of bodily components in order for the woman to not remain tight during labor, causing unnecessary muscle stress and tiredness. This is done both throughout pregnancy and during labor by relaxing a group of muscles, then another, and another until her entire body is relaxed (Nathoo, 2016).

The person who is supporting it concentrates on stress symptoms such as furrowed eyebrows, clenched fists, and tightly grasped arms. By placing their hand on a tense body part or telling the woman to relax in that place, they assist her in achieving complete relaxation. Relaxation improves blood flow in the womb, which is beneficial to both the mother and the fetus (McCauley *et al.*, 2018).

As a result, it enhances oxygen flow to the fetus, stimulates successful uterine contractions, and decreases the tension that the fetus is under. Reduces stress that can impede fetal delivery by increasing pain

perception (lowering the level of stimulation one finds uncomfortable) and decreasing pain tolerance (maximum pain willing to endure) (Bonapace *et al.*, 2018).

2.5.2.Imagery or Focusing:

Another approach of suppressing sensory input from the cerebral cortex is to use sensory concentration (Faskowitz *et al.*, 2020). A woman may carry a photograph of her boyfriend or children, a graphic design, or just something she enjoys into labor. During contractions, she concentrates on him (Abidin, 2017).

During contractions, do not stand in the way of the woman's eyesight and disrupt her focus (Faue, 2016). Other women employ the visuals by visualizing themselves relaxing on a porch swing or at the beach watching the waves flow in. If you use this strategy to ask questions or converse with ladies, you will lose their attention (deLeyer-Tiarks *et al.*, 2020).

2.5.3.Breathing Technique:

Breathing techniques are widely believed to be the most effective, well-known, and likely to be utilized in the future. These techniques can be learned during pregnancy or during the latent phase of labor (Cicek & Basar, 2017).

During labor, rhythmic breathing maximizes the amount of oxygen accessible to both the mother and the baby. Breathing practices might also aid in the relief of contraction pain. Women's respiration becomes shallow and fast when they are nervous and afraid (Lehtinen *et al.*, 2018).

Advanced breathing methods are included in the Lamaze method. Deep and slow breaths are used in this strategy to assist people to relax by boosting oxygen and decreasing tension (Selby-Nelson, 2011).

The Lamaze method also incorporates a breathing rhythm in which people take shallow, short breaths (Chapell, 1994). Breathing pyramids are patterns of shallow breaths that increase and decrease in frequency (Selby-Nelson, 2011).

Panic breathing reduces the amount of oxygen taken in by the woman and her baby. The women feel dizzy and uncontrollable (Nestor, 2020). We teach pregnant mothers a set of breathing techniques that are part of the Lamaze method of birthing (Nagvanshi & Linson, 2020).

With the help of these breathing exercises, the expectant mother is psychologically and physically prepared to give birth without the need for painkillers (Manesh *et al.*, 2015).

Lamaze classes are designed to help women identify their inherent talents to cope successfully with the rigors of labor and birth in any setting, as well as to assist them in having a stress-free and safe delivery (Van der Gucht & Lewis, 2015).

It is a non-invasive, non-pharmacologic, supportive education that is beneficial in lowering labor pain and enhancing women's behavioral reactions during labor (Yurtsev & Sahin, 2021). Lamaze breathing techniques are founded on the premise that controlled breathing can help people relax and feel less pain. Some of the main approaches for controlled breathing, according to Lothian (2011), include:

- Slow, deep breathing
- Maintaining a rhythm
- Breathing through your mouth or nose
- Keeping your eyes open or closed
- Focusing on one simple physical item, such as a photograph or your partner.

2.5.4.Muscle Relaxation (Effleurage)

Massage therapy is the manual manipulation of soft bodily tissues (muscle, connective tissue, tendons, and ligaments) in order to relieve pain and anxiety. Another measure of comfort is massage, which is an ancient technique that ladies have received for relaxation (Chimenti *et al.*, 2018). It is frequently utilized and, as a result, lowers labor time by boosting uterine contractions (Pawale & Salunkhe, 2020).

Massage (Gonenc & Terzioglu, 2020), one of the oldest nonpharmacological methods of treating labor pain, has physiological and psychological impacts on organisms through methodical manipulations that mechanically stimulate soft tissues. Massage decreases the severity of pain, relieves muscle spasms, stimulates physical activity, channels the mother's focus, and aids to overall calm during labor (Elgin *et al.*, 2021).

Prenatal depression, pre/full-term newborns, autism, skin diseases, hypertension, aging-related problems like Parkinson's disease and dementia, and sports-related injuries have all been shown to benefit from massage therapy (Pawale & Salunkhe, 2020).

Muscle relaxation and regulated breathing assist women in labor in diverting their attention away from unpleasant emotions to breathing movements, allowing them to remain calm during labor and boosting their confidence in their capacity to give birth (Hepburn & McMahon, 2017). Massage promotes uterine contractions and muscle activity, which can impact delivery time by lowering adrenaline and noradrenaline levels while raising endorphins and oxytocin levels (Bonapace *et al.*, 2018).

Massage therapy is the most commonly suggested alternative therapy during labor (Dehcheshmeh & Rafiei, 2015). Prolonged labor has numerous difficulties for both the mother and the fetus, and massage for reducing labor duration is simple, economical, safe, and more acceptable for pregnant women (Yosepha *et al.*, 2020). Another major component of the Lamaze technique is progressive muscle relaxation, which is a type of

relaxation that tries to physically and mentally eliminate body tension (Soliman *et al.,* 2017).

During Lamaze training, progressive muscle relaxation is utilized to educate people on how to relax and recognize the differences between tension and relaxation sensations (Bonapace *et al.,* 2018). Subjects learning progressive muscle relaxation are taught to isolate each muscle body area (head, face, neck, shoulders, arms, chest, stomach, buttocks, legs, and feet) by focusing their attention on each area and simultaneously tensing and relaxing the specific area (head, face, neck, shoulders, arms, chest, stomach, buttocks, legs, and feet). Progressive muscle relaxation has been demonstrated to be more effective than other therapies in relieving pain and discomfort by reducing the amount of tension experienced by individuals (Tsitsi *et al.*, 2017).

2.5.5.Visualization

Visualization is the use of a focal point to help people relax, refocus, and picture a depiction of a relevant and meaningful item or symbol (Lauria *et al.,* 2017). According to Turk, Swanson, and Tunks (2008), guided imagery and visualization can assist people in pain gain control, relax, and divert their attention away from their agony. This visualization is claimed to help with pain management by redirecting the focus away from the pain and onto a stimulus that has previously elicited a relaxing and pleasurable sensation or feeling (Turk *et al.*, 2008).

2.6. Conceptual Framework

The impact of the nurse-patient transaction as it relates to primiparous patient satisfaction with the delivery process was investigated using the model of the nurse-patient transaction from King's Theory of Goal Attainment, as shown in figure (2-3), (Karlin, 2011). Intrapartum nurses were interviewed about their perceptions of

primiparous patients' birthing experiences in this descriptive study (Boryri *et al.*, 2016).

The interviews were analyzed to have a better understanding of how the nurse-patient interaction affects patient satisfaction with coping techniques (Evans, 2016). The findings demonstrated that, despite the fact that only half of the patients had attended official childbirth classes, effective nurse-patient interactions were beneficial in achieving the goal of satisfaction with labor and delivery coping methods (Karlin, 2011).

Pain in labor is a fairly common experience for women who are expecting a child, and it may be excruciating, with tension, anxiety, and dread exacerbating the situation (Raphael-Leff, 2018). Mothers who are giving birth, on the other hand, have a distinct experience. Although the majority of women require some form of pain treatment during childbirth, the safety of the infant comes first (Gagnon & Champagne-Poirier, 2021).

It is not the amount of pain a woman feels that impacts her assessment of the birth experience as "good" or "bad." It is whether she fulfills her goals for herself in coping with the pain that influences her perception of the birth experience as "good" or "poor" (Pascali-Bonaro & Kroeger, 2004). The perceptive nurse searches for signs to determine the women's preferred level of control in pain management and then develops a pain management strategy that provides appropriate relief for the mother while avoiding harm to the kid (Cadwell *et al.*, 2004).

Because the ideal answer has yet to be discovered, the safety of the infant must sometimes take precedence over the comfort of the mother (Darcy *et al.*, 2014). Many women would want to birth their babies without the use of medicines and find other ways to cope with the discomfort. Acupressure, breathing techniques, massage treatment, music, and warm compresses are some of the techniques used (Smith, *et al.*, 2018).

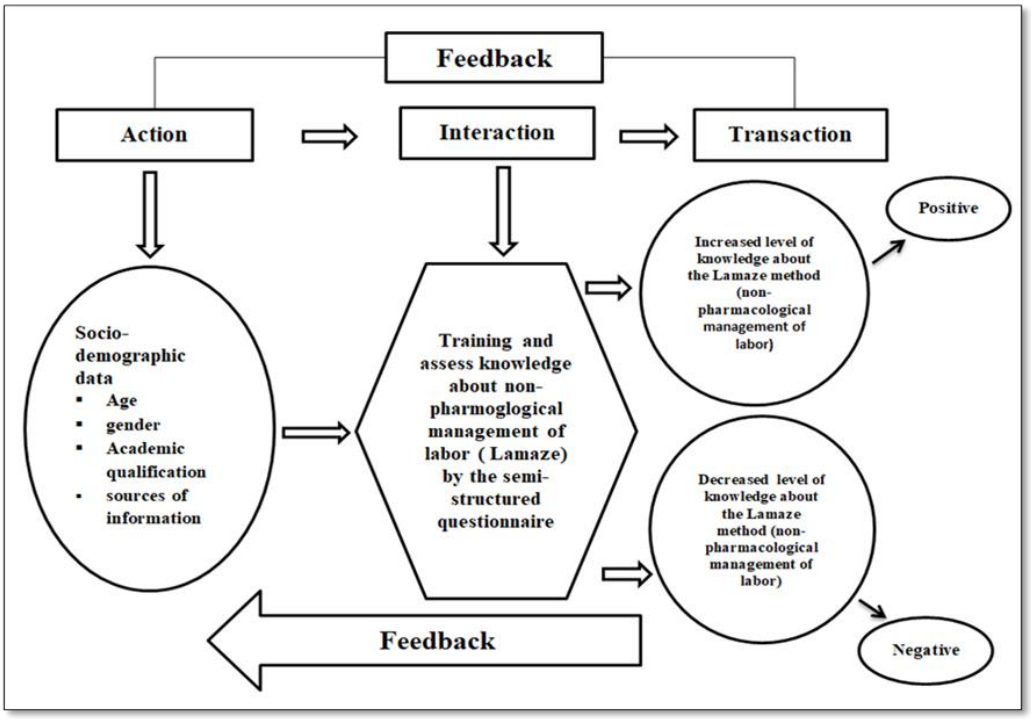

Figure 2-3:King Goal attainment theory model (1999) (King, 1999)

2.7.Midwives Knowledge with Lamaze Method

Midwives must be familiar with a variety of techniques for dealing with discomfort and agony during labor (Close *et al.*, 2016). The desire to try a variety of tactics, adapt the ones that work and eliminate the ones that don't are all crucial components of care. In most cases, there is no strategy for working a lengthy period of time in labor, therefore the main midwife of employees in the antenatal unit and the delivery room must be flexible and adaptable (Sabzevari & Rad, 2019).

During labor, nursing and midwifery professionals frequently give nursing intervention; the specifics of the intervention vary but typically include postural nursing, delivery ball, doula nursing, massage, and psychological nursing (Wu *et al.*, 2021). The efficacy of Lamaze breathing training combined with nursing care on maternal pain relief and outcome improvement has been studied in a number of clinical studies (Wei *et al.*, 2021). A good understanding of the labor and delivery

process can give you a sense of emotional well-being and confidence, which will help you have successful labor (Weare, 2015).

Nonpharmacological applications can be carried out independently by a midwife and a nurse in collaboration with the pregnant woman (Domnguez-Sols *et al.*, 2021). Because assessing labor pain and implementing appropriate nonpharmacologic therapies makes midwives and nurses responsible for managing the labor process, using nonpharmacologic pain relief techniques such as touch, massage, aromatherapy, and acupressure is vital (Gonenc & Terzioglu, 2020).

The benefits of massage treatment are not well understood by staff nurses, and parturient mothers are unaware of them. By naturally adjusting hormones, you can minimize the severity of labor pains and anxiety (Desmawati & Chatchawet, 2019). When pharmaceutical pain relievers are used, there is a 60% likelihood of increased instrumental vaginal delivery (Adams *et al.*, 2015).

It is critical to provide breathing methods instruction to midwives and nurses who work in delivery services in order to create awareness and urge them to teach these techniques to pregnant women (Cicek & Basar, 2017).

Observant midwives seek for clues to determine the women's preferred level of control in pain management and then construct a pain control approach that provides adequate comfort for the mother while avoiding injury to the kid. Because the ideal answer has yet to be discovered, the safety of the infant must sometimes take precedence over the comfort of the mother (Csikszentmihalhi, 2020).

According to the Iraqi Ministry of Health's requirements for the role of midwives in the delivery room, women should be able to give birth easily, safely, and without complications. This is due to primi

mothers' lack of experience with breathing exercises in the delivery room, as well as their suffering from pain and fear (Nattah & Abbas, 2016).

Maternal education is delivered by skilled health care practitioners (midwives or nurses). Non-pharmacological therapies are not offered to pregnant women in Iraq because they are not taught about the availability of pain management during labor and delivery in the primary health care system. Nonpharmacological therapy and pharmacological therapy are not used in Iraqi state maternity hospitals to relieve pain and discomfort during labor (Ali & Ahmed, 2018).

The majority of patients do not have access to any analgesic drugs, and those who do are given primarily pharmacological analgesia such as tramadol or meperidine. Pregnant women are unfamiliar with pain management measures during labor and delivery because there is no antenatal training or childbirth classes in Iraqi primary health care centers' Maternal and Child Health (MCH) sections. Furthermore, our women believe that pain during labor is an unavoidable part of the process (Ali & Ahmed, 2018).

2.8.Previous Studies

Fahami *et al* (2008)

"The effect of Lamaze practices on the outcome of pregnancy and labor in primipara women".

Objectives: In this study, the impact of Lamaze practices on the outcome of pregnancy and labor in primipara women referred to a Tehran university of medical sciences hospital in 2005 was examined.

Methods: A controlled semi-experimental clinical trial was used in this study. Seventy women were chosen at random from referrals to several hospitals in Tehran. The participants were split into two groups: control and study. The study group was given the Lamaze technique, which included a six-session training program. Various subjects from the

educational program were taught in each session. From 24-26 weeks of pregnancy to 24 hours after delivery, the subjects were monitored. The data was gathered using a checklist and a questionnaire. SPSS software was used to examine the data.

Results: The findings revealed that the respondents had similar demographic profiles and levels of knowledge about various labor methods and the Lamaze technique. The type of birth, the length of the first stage of delivery, the first and fifth minute APGAR scores, and the mean gestational age did not differ significantly between the two groups. However, there was a significant difference in the incidence of normal vaginal delivery and the use of forceps or vacuum between the two groups (p 0.05). The duration of the second stage of delivery was shorter in the study group, although the mean weight of the babies was higher (p 0.05). The research group was happier with their work (p 0.05).

Tabssum *et al.* (2013)

"Measuring the Effectiveness of Planned Teaching Programme on Lamaze Technique in terms of Knowledge and Skill of Staff Nurses Working in Antenatal Ward and Labour Room in a Maternity Hospital of Kashmir".

Objectives: The study's major goals were to see how successful a planned teaching program (PTP) on the Lamaze technique was at improving the knowledge and skills of staff nurses.

Methods: A pre-post experimental design was used in this study. The total enumerative sampling strategy was used to pick 30 participants. A pre-test was used to assess knowledge and skill in the areas of the Lamaze technique structured knowledge questionnaire and structured observation checklist. A PowerPoint presentation was used to give a verbal introduction to the Lamaze technique, which was followed by a demonstration of the technique. The staff nurses took an hour on average

to learn the Lamaze technique. On the seventh day after adding the treatment variable, a post-test was conducted using the same methods to measure knowledge and skill.

Results: At the 0.05 level of significance, the mean post-test knowledge (23.6) and skill (102.3) scores were greater than the mean pre-test knowledge (18.03) and skill (55.3) values. The findings of the study demonstrated that staff nurses had a low level of knowledge and skill in regards to the Lamaze technique, but that this knowledge and skill improved following the administration of PTP.

Nilima (2016)

"A study to assess the effectiveness of selected aspects of Lamaze methods on pain among primigravida mothers during the first stage of labor in selected hospital of Sangli"

Objectives: The purpose of this study was to see how helpful breathing exercises and massage were at reducing labor pain in primigravida moms in Sangli's hospitals.

Methods: With an experimental and control group, a real experimental study design was used.

Results: Breathing exercises and massage were found to help reduce pain scores in the experimental group, and the mother reported feeling less discomfort.

Conclusion: The use of breathing techniques and massage to relieve labor pain proved successful.

Wu *et al.*. (2021)

"The combined effects of Lamaze breathing training and nursing intervention on the delivery in primipara: A PRISMA systematic review meta-analysis".

Objectives: The researchers looked into the impact of Lamaze breathing training paired with nursing intervention on maternal pain

management and outcomes. However, several academics were opposed to it.

Methods: Searched PubMed, Cochrance Library, Medline, Web of Science, Embase, Chinese Academic Journals, Chinese Biomedical Literature Database, VIP Database, and Wanfang Database for randomized controlled trials published between January 2000 and November 2019. The literature was screened by two researchers independently according to the criteria. The researchers used the Cochrane approach to assess the quality of the literature after collecting the data. Comprehensive Meta-Analysis V2 software was used to conduct statistical studies.

Results: A total of 22 randomized controlled studies including 7035 primiparas were considered. The findings revealed that Lamaze breathing training combined with nursing intervention increased the rate of natural delivery ([RR] = 2.97, 95 percent confidence interval), shortened labor length (2.604, 95 percent confidence interval [3.120, 2.087], alleviated labor pain (RR = 0.194, 95 percent confidence interval [0.115, 0.325), and reduced postpartum bleeding (2.966, 95 percent confidence interval [4.056, 1.877).

Conclusions: The combination of Lamaze breathing training and nursing care improved the process and outcomes of childbirth in primiparae, and it needs to be promoted and used in clinical practice.

Hasan. (2020)

" Effectiveness of an Educational Program on Nurses- midwives' Knowledge about Pain Management during Labor in Baghdad Maternity Hospitals".

Objectives: To assess nurses-midwives' knowledge about pain management during labor before and after the implementation of an educational program and to determine the effectiveness of an educational

program on nurses-midwives' knowledge about pain management during labor in Baghdad Maternity Hospitals.

Methodology: A quasi-experimental design has been conducted during the period of (February 27th, 2019 through 2nd June 2019) on the non-probability sample (purposive) consisting of (44 Nurses/midwives) who work in a delivery room, the sample was exposed to a pretest, educational program, posttest. The study was conducted in three Directories, (Baghdad Teaching Hospital) at the medical city health directorate, (Al-Elwia Maternity Teaching Hospital, Ibn Al -Balidy for Maternity and Pediatric Hospital, Fatima Al-Zahra for Maternity and Pediatric Hospital) at AL-Russafa/Health directorate, and (Al –Karckh Maternity Hospital and AL - Yarmouk Teaching Hospital - Maternity Department) at Akarkh/Health Directorate. A questionnaire has been used as a tool for data collection. Data were analyzed through the application of descriptive and inferential statistical data analysis approach through the use of (SSPS) version 22.0 and the Excel system.

Results: The results of the study revealed that the highest percentage (25%) of the nurses-midwives' is (20-24) years old, (77.3%) of the sample were skilled midwives and there is a significant correlation between pretest and post-test periods after the implementation of education program for nurse-midwives regarding knowledge about labor pain and non-pharmacological management in reducing labor pain in pregnant women.

Nagvanshi. (2020)

"Effect of Video-assisted Teaching on Knowledge of Staff Nurses regarding Lamaze Breathing Exercises during the First Stage of Labour to Improve Maternal and Foetal Outcome among Primi Parturient Mothers".

Background: The present study was conducted to assess the impact of video-aided teaching on the knowledge gained by staff nurses regarding Lamaze breathing exercises throughout the first stage of labor.

Method: An experimental research design was chosen with pre-test and post-test of experimental and control groups. The sample size was sixty registered staff nurses divided into two groups, thirty in the experimental and thirty in the control group. The tools used for conducting the study included demographic data and a self-structured questionnaire to assess knowledge of experimental and control groups. The experimental group was given video-assisted teaching as an intervention and the control group was used for comparison without intervention.

Result: The data were analyzed with the help of descriptive and inferential statistics. The study clearly shows that there was a significant gain in knowledge of staff nurses of the experimental group with video-assisted teaching that emphasizes the Lamaze breathing exercises during the first stage of labor are safety measures to enhance maternal and fetal outcomes.

Conclusion: The staff nurses are benefited from video-assisted teaching to enhance knowledge and they can use breathing exercises during the first stage of labor to promote comfort to laboring women and also minimize the use of medication and risk of LSCS during labor.

Geranmayeh. (2011)

"Effect of education on midwives' knowledge, attitude and practice about non-pharmacologic labor pain relieving methods".

Objective: This study was designed to evaluate the role of education on midwives' knowledge, attitude, and practice toward pain-reducing approaches during labor.

Methods: This was a quasi-experimental study carried out at labor wards within the hospitals affiliated with Gilan University of Medical Sciences, Iran. Data were collected using a questionnaire confirmed by a panel of experts and a test-retest method for its validity and reliability, respectively. A total of 59 midwives were chosen by quota sampling and participated in a one-day workshop. Pretest and post-test questionnaire were completed before and four months after education. Data were analyzed by descriptive and inference statistical methods using SPSS.

Findings: Results showed that the midwives' knowledge, attitude, and practice of pain-relieving methods changed significantly following the workshop ($p < 0/005$). No significant difference between the mean knowledge, attitude, and practice scores and demographic characteristics were found .

Conclusion: Although education caused a significant effect on the knowledge, attitude, and practice of midwives in using different labor pain relieving approaches as well as a positive attitude towards these approaches nevertheless the health manager's support plays an important role in the regular practice of such approaches in labor wards.

Jira et al.,(2020).

″ Knowledge and Attitude Towards Non-Pharmacological Pain Management and Associated Factors Among Nurses Working in Benishangul Gumuz Regional State Hospitals in Western Ethiopia, 2018″.

Objective: The study aimed to assess knowledge and attitude toward non-pharmacological pain management and associated factors among nurses working in Benishangul Gumuz Regional State Hospitals, western Ethiopia, 2018.

Methods: Institution-based cross-sectional study was conducted from April 1st to May 1st, 2017. Two hundred sixteen nurses were selected by using simple random sampling. Data were collected by using a pretested self-administered structured questionnaire. Collected data were checked, coded, and entered into Epi-Info version 7 and exported to SPSS version 20 for further analysis. Bivariable and multivariable logistic regression was used.

Results: A total of 209 professional nurses participated in the study, with a 96.7% response rate. This study shows that 51.2% (95% CI: 51.1–51.3) of nurses had adequate knowledge and 47% (95% CI: 46.9–47.06) of nurses had a favorable attitude toward non-pharmacological pain management. The findings reveal that level of qualification (AOR=12.2 (3.05, 48.4), taking educational courses (AOR=7.5 (2.7, 21.24)), nurse-to-patient ratio (AOR=4.9 (1.64, 14.55) and work experience were factors significantly associated with knowledge. Findings also show that nurse-to-patient ratio (AOR=10.36 (2.8, 38.4)), training (AOR=4.6 (1.4, 15.4)) and knowledge of non-pharmacological pain management (AOR=4.3 (1.74, 10.56) were significantly associated with nurses' attitude to non-pharmacological pain management.

Conclusion: Nurses in Benishangul Gumuz regional state hospitals have unfavorable attitudes, but they have relatively adequate knowledge about non-pharmacological pain management. Work experience, level of education, nurse-to-patient ratio, and taking educational courses were associated with nurses' knowledge, and nurse-to-patient ratio, training, and knowledge of non-pharmacological pain management were associated with nurses' attitudes.

Chapter Three

Methodology

Chapter Three

Methodology

In this chapter, the study design and all other scientific steps that were followed by the researcher from the beginning of the study until its completion will be covered.

3.1.Study Design

To achieve the aims of this study, a quasi-experimental study design was used with an adopted pre and post-test approach for both study and controlled groups which were conducted for the period of December 1 st, 2021 to July 3rd, 2022.

A quasi-experiment is an empirical interventional study used to estimate the causal effect of an intervention (education program) on the target population (Midwives) without random assignment, as indicated in the figure (3-1). Quasi-experimental research shares similarities with the traditional experimental design or randomized controlled trial, but it specifically lacks the element of random assignment to treatment or control. Instead, quasi-experimental designs typically allow the researcher to control the assignment to the treatment condition but using some criterion other than random assignment (Polit, 2010)

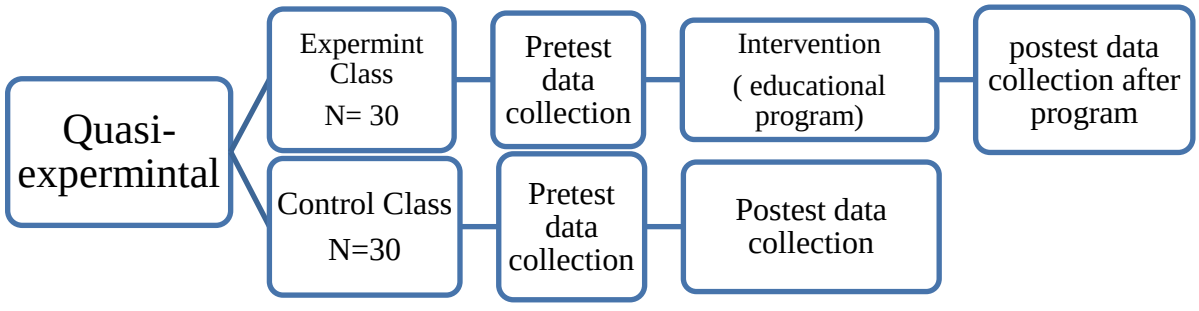

Figure 3-1:Steps of quasi-experimental study

3.2.Administrative Arrangements

The official permissions were obtained from relevant authorities before collecting the study data as follows:

1. Protocol of research and official permission was taken from the University of Kerbala/ College of Nursing to conduct the study.
2. The title, constructed educational program, and questionnaire were presented to the Ethics Committee formed within the College of Nursing, which reviewed the study tools (program and questionnaire) and therefore agreed to conduct the study (Appendix A1).
3. In the last step of the administrative arrangements, an official letter by the (Training Department and Development) Kerbala Health Directorate (Appendix A2).
4. Official permission presented at Obstetrics and Gynaecology Teaching Hospital is selected to present the study (Appendix A2).
5. In addition, the consent of the midwives to participate in the study, after explaining the objectives and usefulness of the study to them and assuring that all information provided will be confidential and for scientific and research purposes (autonomy and privacy).

3.3.Setting of the Study

In order to obtain valid and comprehensive data, the study is conducted at Obstetrics and Gynaecology Teaching Hospital in Kerbala Province was the designated site for data collection. This hospital was chosen for the following reasons:

1. There is only this teaching hospital that is related to maternity and has delivery rooms and includes large numbers of midwives.
2. Cooperative midwives for implementation of the educational program.

3. Availability of physical requirements in hospitals such as classrooms, chairs, tables, data show, computers, speakers, and lights during the implementation of the program.

3.4.Sample of study

A non-probability "purposive" sample had been consisted of (60) midwives have been selected to obtained represent and accurate data. The size of sample is (60) subjects divided into two groups reach one consists of (30) midwives as study group and (30) midwives as control group. The study group is exposed to the study program deals with Lamaze method, while the control group has not been exposed to the education program and chose only for comparison.

3.4.1. Inclusion Criteria:

1. Midwives who scored less than 60% in the assessment need (Appendix B).

3.4.2. Exclusion Criteria:

1. Midwives who are selected for the pilot study and assessment need.

3.5.Steps of the Study

The present study was conducted as targeted midwives who are work in maternity and pediatric hospital at the following steps:

3.5.1.Preliminary Assessment of Midwives' Knowledge towards Lamaze Method during Labour

The objective of this assessment was to evaluate the knowledge of midwives' needs about the Lamaze method. To accomplish this phase of the study, the researcher used a closed questionnaire format (Appendix B2). The content of the format was based on the review of related literature and subjective experiences of the knowledge questions.

A test was applied on a sample consisting of (10) midwives. Each midwife was given a time period between (10-15) minutes to answer the questions. The results of the assessment revealed that the majority (80%) of

the midwives displayed a knowledge deficit about application of the Lamaze method during labor.

3.5.2.Construction of the Instruction program

The education program design was based on the results of midwives' needs assessment; and information gained from reviewing the relative scientific literature, previous studies and through the researcher's experience.

The content of the program evaluated by experts in different field of nursing sciences (Appendix E). Revision was made on the contents of the program form based on these experts' recommendations and suggestions.

They have agreed that the program was designed efficiently to improve midwives' knowledge towards the Lamaze method during labor. The education program was designed to provide the improvement the midwives' knowledge (Appendix C).

3.6.Group Assignment

3.6.1.Control Group:

Midwives in the control group were selected from Obstetrics and Gynaecology Teaching Hospital and exposed only to the usual activities of teaching and their information according to their profession and academic study. In this study, only two tests were taken (pre-post tests).

3.6.2.Study Group:

The study group got the same information as the control group, as well as an education program aimed at improving the midwives' knowledge towards the application of the Lamaze method during labor.

The program consisted of three sessions and was implemented for one week period (between day to day) at the hospital hall, which has the educational means required by the educational program. Each session deals with the following:

Educational Program

1st Sessions:- Normal labor

- ☒ Definition of Normal labor
- ☒ Labor stages
- ☒ Theories of labor onset
- ☒ Signs of labor
- ☒ Differentiation Between True and False Labor
- ☒ Factors affecting labor process.
- ☒ The mechanism of labor (the cardinal movements of labor)

2nd Sessions:- Gate Control Theory of Pain Control

- ☒ Pain during labor
- ☒ Pain assessment
- ☒ Factors affecting pain response
- ☒ Gate Control Theory of Pain Control

3rd Sessions:- Methods of Pain Relief During Labour

- ☒ The methods of pain relief during labor
- ☒ The Lamaze method
- ☒ The principles of the Lamaze method
- ☒ The effect of the Lamaze method on the pregnant mother and fetus.

3.7.Study Instrument

The questionnaire is one of the means to help collect data that contribute to achieving the results expected by the study, so the researcher designed this questionnaire, which aims to clarify the study's objectives and significance by obtaining answers to the study's questions.

The questionnaire consists of two parts to collect data from study participants as follows:

The first part is the socio-demographic variables such as (age, education level, years of experience, experience in labor wards, and training sessions).

The second part deals with study knowledge of the Lamaze method, it was constructed by the researcher through a review of literature, which consist of 39 items MCQ measured on 2-point such as (correct and incorrect):

The researcher adhered to the rules of writing the questionnaire due to the importance of the type of information that the researcher is keen to be sufficient and comprehensive for all aspects of the problem and can be relied upon and trusted. To vague and complex answers. The type of questions was of the closed type, which required answering with reference to what was appropriate.

3.8.Validity of the Questionnaire

The validity of the questionnaire means making sure that it will measure what it was prepared to measure (Polit, 2010), as is meant by honesty (the questionnaire's inclusion of all the elements that must be included in the analysis on the one hand, and the clarity of its paragraphs and vocabulary on the other, so that it is understandable to everyone who uses it).

In order to test the validity of the questionnaire, the instrument was presented to 11 experts in different fields to make it more valid. They were experts from different specialties, two PhDs in Psychiatric and Mental Health Nursing, five PhDs in Maternal and Neonatal Health Nursing, two PhDs in Adult Nursing, and two doctors specializing in obstetrics and gynecology. Experts were requested to provide their views and suggestions on each of the items of the study questionnaire in terms of its linguistic appropriateness, its association with the dimension of study variables it was assigned, and its suitability for the study population context.

The experts' responses indicated that minor changes should be done to some items and it's were made according to their suggestions, then the final draft was completed to be ready for conducting the study.

3.9.Pilot Study

This preliminary study was conducted to determine the stability and credibility of the study tool, clarity and its efficiency which confirmed, and the standard time required to collect data for each subject which can be estimated during the interview procedures and difficulties identification that may encounter.

The pilot study aimed to achieve the following objectives.

1. Developing and testing the adequacy of research instruments.
2. Assessing the feasibility of the instrument.
3. Identifying logistical problems which might occur using proposed methods.
4. Assessing the proposed data analysis techniques to uncover potential problems.
5. Estimate the time during collected data by the researcher.

Results of the pilot study

1. The questionnaire is reliable.
2. The time required for answering the questionnaire ranged from (15-20) minutes.
3. The instrument items were clarified and understood the phenomenon underlying of the study (Table 3-1).

Before the questionnaire reached its final form, it went through the following stages:

1. Determining the data that will be collected through the questionnaire according to the study questions.
2. Determining the method and format of the questionnaire.

3. Determining the type of criterion that determines the type of answer in the questionnaire.
4. Presenting the questionnaire to the supervising to express his opinion and observations in developing the questionnaire and modifying it based on his observations.
5. Presenting the questionnaire to a number of panel of experts to express their opinion and observations in developing the questionnaire and modifying it based on what they submitted.
6. Conducting a reliability test on it by distributing the questionnaire to a sample of 5 midwives.
7. Writing the questionnaire in its final form, then printing, reviewing, and distributing it in the same formula before and after the education program.

Reliability of the Questionnaire:

The reliability of the study instruments means making sure that the answer will be almost the same, if it is repeatedly applied to the same people, at different times.

The same people the second time, after confirming the apparent validity of the study tool, the researcher applied it to a random exploratory sample of 5 midwives, using the test-retest method, where each midwives from the sample was given a number from 1 to 5 and the questionnaire was distributed to them without prior known of them that they are a sample to measure the stability of the tool, and after an interval of about two weeks, 5 questionnaires were redistributed to the same exploratory sample, where the members of this sample were later excluded from the original sample on which the final study was conducted. Reliability coefficient using the sample coefficient of Alpha Cronbach as shown below.

Table 3-1:Reliability of the Studied Questionnaire (*n=5*)

Reliability		
Knowledge 39 – items	***Test***	***Re-test***
	0.71	***0.78***

3.10.Ethical Considerations

Ethical obligations are one of the most important things that the researcher must follow and abide it when doing the study. Before starting of collect the data from the community that has been identified for the study, the researcher should clarify the main purpose and desired goal of conducting this study for the sample to be included in the study, as well as adhere to the strict confidentiality of the data taken from the study sample and pledge to use it for scientific purposes related to the study only.

Before starting of gathering the data from the sample who are participating in the study, the researcher gives a brief explanation about the scientific background of the research and the purpose of conducting it, and what is the role of the midwives in antenatal and labor wards who participate in this study, to give them a complete and clear picture about the study to be carried out.

On the other hand, the researcher emphasized that all midwives who are participating in the study had the right to not complete their participation and withdraw from this study in the event that they felt uncomfortable or annoyed with some of the items in the questionnaire that was prepared as a research tool or the researcher's method of collecting data or anything else.

3.11.Methods of Data Collection

The implementation was carried out throughout the period from December 5^{th}, 2021 to February 27^{th}, 2022.

The implementation of the program which was introduced to the study group included the following:

1. Each midwives in the experimental and control groups completed a demographic data form.
2. All midwives were given a pre-test to measure their knowledge on an individual basis; the pre-test lasted 15-20 minutes.
3. They were summoned to the same classroom sessions to participate in a program of intervention.
4. There were thirty questions about the knowledge of the midwives. Various options were presented to the experimental group. The test was created to assess the knowledge of midwives concerning the Lamaze method.
5. Each class will last between 60 and 90 minutes.
6. All respondents in the experimental and control groups were given a post-test after two weeks of the end education program.
7. The experimental group and after one month was exposed to post-test II to see the effect of the tutorial.
8. With the exception of the education program and post-test II, the control group followed the same procedures as the experimental group.
9. The following teaching resources were used in these sessions: (classroom, lectures, whiteboard, computer, data show, and notebook).

3.12.Statistical Analysis Approach

In order to statistically analyze the data collected from the study sample to arrive at the results, the researcher used the *SPSS-20* and Microsoft Excel (2010) package to analyze this data and deal with it statistically, to find the relationships between the variables, and obtain the final results of the research based on a set of statistical tests.

3.12.1.Descriptive approach

Descriptive statistics includes a set of mathematical and statistical methods that are adopted to describe the main features of data quantitatively by using tables and charts. Descriptive statistics always aim to present and describe the data which is required to be processed, organized, summarized, and categorized, as well as presenting them in a simple and clear manner that makes it easier for the recipient to recognize and understand its content. The analysis was performed through the use:

A. Statistical tables "Frequencies and percent" .

B. Statistical Mean (*M*).

The overall responses of knowledge according to the total mean of the score which follows:

M=39-52 refers to Poor Knowledge

M=52.1-65 refers to Fair Knowledge

M=65.1-78 refers to Good Knowledge

C. Standard Deviation (±*SD*).

D. It uses a correlational coefficient "Cronbach alpha" used in estimating the internal consistency of the study tool, which can be calculated by using the following:

3.12.2.Inferential approach

1. **Paired Sample t-test**

To determine the significance of a difference between pre-test and post-test scores in a single group, such as a pre-post study group.

2. **Independent Sample t-test**

The unrelated sample The *t-test* examines the means of two independent groups to see if statistical evidence exists that the related population means are significantly different.

3. **Analysis of Variance**

For equality of means, is used (ANOVA test when the mean parameter varies).

Source of variance	Sum of square	d.f	Mean square	F
Between Groups	$SS_B = \sum \frac{(\sum xP1)^2}{n} - \frac{(\sum xP)^2}{n}$	$df_B = K\text{-}1$	$\frac{MS\beta}{MS\beta}$	
Within Groups	$SS_w = \sum (\sum xP1)^2 - \frac{(\sum xP)^2}{N}$	$df_w = N\text{-}k$	$\frac{SSw}{DFw}$	$\frac{MSB}{MSW}$
Total	$SS_T = \sum (\sum xP1)^2 - \frac{(\sum xP)^2}{N}$	$df_t = N\text{-}1$		

P-value (≤0.05)

Shortcuts for measuring importance compared to the level, are used as follows:

1. NS:*>0.05 Non-significantly*-differences.

2. S:*<0.05 Significantly* differences.

Chapter Four
Results of the Study

Chapter Four

Under the objectives of the current study findings, the descriptive and inferential statistic approach is organized in tables and figures that include the followings:

Table 4.1.Distribution of Study Sample according to their Socio-Demographic Variables (SDVs)

SDVs	Classification	Study		Control		*p-value*
		Freq.	%	Freq.	%	
Age	21-29 years old	14	46.7	16	53.3	*.062*
	30-39 years old	9	30.0	8	26.7	
	40 and older	7	23.3	6	20.0	
	Total	30	100.0	30	100.0	
	M± SD	*29.7±8.21*		*30.4±9.94*		
Education Level	Midwifery secondary school	17	46.7	15	50.0	*.167*
	Diploma midwifery	13	43.3	15	50.0	
	Total	30	100.0	30	100.0	
Years of Experience	<5 years	2	6.7	2	6.7	*.274*
	5-10 years	27	90.0	25	83.3	
	>10 years	1	3.3	3	10.0	
	Total	30	100.0	30	100.0	
Experience in antenatal/ labor ward	<1 year	5	16.7	9	30.0	*.109*
	1-3 years	10	33.3	10	33.3	
	>3 years	15	50.0	11	36.7	
	Total	30	100.0	30	100.0	
Training courses in pain management during labor	No	22	73.3	28	93.3	*.741*
	Yes	8	26.7	2	6.7	
	Total	30	100.0	30	100.0	

The average age of midwives in the study group is 29.21 years old, whereas the average age in the control group is 30.94 years old. The age group 21-29 years old had the highest percentage in both groups (46.7 percent and 53.3 percent, respectively). There were no statistically significant variations in age between the two groups (p=0.062).

In terms of education, midwives in the study group had a midwifery secondary school (46.7 percent), whereas those in the control group had a midwifery secondary school (50 percent) and a diploma in midwifery (50 percent). In terms of education level, there were no significant differences between the two groups (p=0.167).

In terms of experience, the majority of midwives in both the research and control groups (90.0 percent and 83.3 percent, respectively) had 5-10 years of experience in the field of maternity nursing. In terms of experience, there were no significant differences between the two groups (p=0.274).

Years of experience in labor wards were linked to findings, with half of the respondents in the study group having more than three years. In the control group, one-third of the respondents had a response time of more than three years. When it came to experience in labor wards, there were no significant differences between the two groups (p=0.109).

In terms of training courses, the findings show that the majority of midwives in the study (73.3%) and control (93.3%) groups did not attend any training sessions. In terms of training courses, there were no significant differences between the two groups (p=0.741).

4-2: Midwives' Knowledge of the Lamaze Method during Labour (*Study Group*)

Table 4-2-1: Midwives' Knowledge Responses at Pre and Post Test

	Study Group Knowledge	**Pre-test**		**Post-test**		*p-value*
		Ms	Ass.	Ms	Ass.	
1	Which of the following paragraphs is correct regarding the normal duration of pregnancy?	1.36	Fair	1.80	Pass	*.051*

Table 4-2-1: Midwives' Knowledge Responses at Pre and Post Test

2	Normal labor is known as	1.33	Fail	1.83	Pass	*.008*
3	How many stages are there in normal labor?	1.50	Fair	1.73	Pass	*.005*
4	The first stage of labor starts with the onset of	1.40	Fair	1.76	Pass	*.003*
5	Which of the following paragraphs is correct in terms of the true characteristics of labor pain?	1.33	Fail	1.70	Pass	*.000*
6	Which of the following is a major contributor to pain in the first stage of labor?	1.20	Fail	1.63	Fair	*.000*
7	Which of the following is not a technique of the Lamaze method?	1.26	Fail	1.73	Pass	*.000*
8	The most important aspect of nursing care during the first stage of labor is:	1.40	Fair	1.56	Fair	*.010*
9	What the midwife should do first when a woman complains of labor pain is:	1.26	Fail	1.70	Pass	*.000*
10	Which of the following factors can make labor pain worse:	1.30	Fail	1.66	Fair	*.000*
11	Which of the following parts contains special neurons that make up the neural gateway through which pain stimuli pass to the brain	1.40	Fair	1.73	Pass	*.000*
12	The Lamaze method means	1.36	Fair	1.63	Fair	*.001*
13	How does Lamaze method during labor help in minimizing labor pain?	1.20	Fail	1.70	Pass	*.000*
14	The Lamaze method involves	1.23	Fail	1.70	Pass	*.000*
15	Which of the following paragraphs is one of the basic principles of the Lamaze method?	1.30	Fail	1.76	Pass	*.000*
16	Among the advantages of the Lamaze method during labor are	1.26	Fail	1.86	Pass	*.000*
17	Relaxation techniques in any way that help the pregnant woman to	1.40	Fair	1.60	Fair	*.007*
18	One of the most effective pre-labor relaxation techniques is	1.16	Fail	1.90	Pass	*.000*
19	Which of the following types of breathing patterns are used in the Lamaze method during labor?	1.36	Fair	1.63	Fair	*.004*
20	How many levels of breathing are used in the Lamaze method	1.10	Fail	1.80	Pass	*.003*
21	All levels of the Lamaze Breathing Technique begin and end with:	1.16	Fail	1.76	Pass	*.022*
22	How can breathing exercises during labor be beneficial for a mother:	1.23	Fail	1.83	Pass	*.000*
23	How are breathing exercises beneficial to the fetus?	1.23	Fail	1.86	Pass	*.000*
24	What is the ideal time to do breathing exercises at all levels during labor?	1.10	Fail	1.83	Pass	*.000*
25	How much does a woman's respiration rate in the first level of the Lamaze method respiration patterns	1.20	Fail	1.83	Pass	*.000*
26	What is the respiratory rate of a woman in the fifth level of the Lamaze method of breathing patterns	1.16	Fail	1.73	Pass	*.000*
27	What is the sequence of breathing patterns when contractions begin?	1.13	Fail	1.86	Pass	*.000*
28	What is the sequence of breathing patterns when contraction is lessening?	1.23	Fail	1.83	Pass	*.001*
29	When should a pregnant woman use level 4 of breathing levels during labor?	1.26	Fail	1.90	Pass	*.000*
30	Which of the following paragraphs is one of the benefits of walking or sitting upright:	1.23	Fail	1.70	Pass	*.016*
31	Which of the following paragraphs is considered one of the benefits of changing the position and movement of the mother during labor:	1.30	Fail	1.73	Pass	*.000*
32	Effleurage is defined as:	1.06	Fail	1.56	Fair	*.000*
33	Effleurage is considered one of the techniques:	1.40	Fair	1.70	Pass	*.002*
34	Effleurage helps in minimizing labor pain by :	1.23	Fail	1.76	Pass	*.000*
35	Focusing or Imagery is mean:	1.23	Fail	1.70	Pass	*.001*
36	What is the main principle of Focusing or Imagery?	1.10	Fail	1.66	Fair	*.000*
37	The best type of breathing during the second stage of labor is:	1.13	Fail	1.60	Fair	*.000*
38	Reasons why a woman is not encouraged or allowed to push during labor:	1.16	Fail	1.86	Pass	*.000*

39	Which of the following is a good position for the mother when pushing during labor:	1.26	Fail	1.70	Pass	*.000*

"Level of Assessment (Fail=1-1.33, Fair=1.34-1.67, Pass ≥ 1.68"

The findings revealed a pre-post test assessment of the study sample responses with relation to an understanding of the Lamaze method during labor in the study group. The results show that the midwives failed all of the pre-test questions, as evidenced by low mean scores, with the exception of items 1, 3, 4, 8, 11, 12, 17, 19, and 33, where replies were fair, as seen by moderate mean scores. While midwives reported a substantial gain in knowledge in post-test scores compared to pre-test scores (p 0.05) after implementing the education program.

Table4-2-2.Overall Midwives' Knowledge towards Lamaze Method during Labour in Study Group

Knowledge	*Pre-scores*			*Post-scores*		
	f	%	*M ±SD*	F	%	*M ±SD*
Poor	25	83.3	*49.03 ± 5.91*	1	3.3	*67.93± 4.60*
Fair	4	13.3		3	10.0	
Good	1	3.3		26	86.7	
Total	30	100.0		30	100.0	

"M: Mean of total Scores, SD: Standard Deviation for total scores (Poor=39-52; Fair= 52.1-65, Good=65.1-78)"

The results showed that 83.3 percent of midwives had poor knowledge of the Lamaze method during labor during the pre-test. Following the implementation of the education program, findings revealed that 86.7 percent of midwives had good knowledge at the post-test.

Table 4-2-3: The Difference between Pre and Post-Test by Overall Responses to the Knowledge Scores in Study Group

	Periods	Mean	SD	t	Df	*P*
Experimental Group Knowledge	Pre	1.25	.151	13.286	29	*.000*
	Post	1.74	.118			

Findings demonstrated that there were significant difference in knowledge scores in two periods of measurements as pre-test (*1.25*) before the education program and post-test (*M=1.74*) after the education program (*t=13.286; p=0.000*).

Table 4-2-4: Midwives' Knowledge Responses at Post-test I and Post-test II (*After One Month has been Passed*)

	***Study Group Knowledge** (Post-I and II)*	**Post I**		**Post II**		*p-value*
		Ms	Ass.	Ms	Ass.	
1	Which of the following paragraphs is correct regarding the normal duration of pregnancy?	1.80	Pass	1.73	Pass	*.122*
2	Normal labor is known as	1.83	Pass	1.76	Pass	*.512*
3	How many stages are there in normal labor?	1.73	Pass	1.70	Pass	*.420*
4	The first stage of labor starts with the onset of	1.76	Pass	1.70	Pass	*.089*
5	Which of the following paragraphs is correct in terms of the true characteristics of labor pain?	1.70	Pass	1.66	Fair	*.211*
6	Which of the following is a major contributor to pain in the first stage of labor?	1.63	Fair	1.60	Fair	*.270*
7	Which of the following is not a technique of the Lamaze method?	1.73	Pass	1.70	Pass	*.110*
8	The most important aspect of nursing care during the first stage of labor is:	1.56	Fair	1.50	Fair	*.161*
9	What the midwife should do first when a woman complains of labor pain is:	1.70	Pass	1.66	Fair	*.161*
10	Which of the following factors can make labor pain worse:	1.66	Fair	1.63	Fair	*.083*
11	Which of the following parts contains special neurons that make up the neural gateway through which pain stimuli pass to the brain	1.73	Pass	1.70	Pass	*.161*
12	The Lamaze method means	1.63	Fair	1.60	Fair	*.161*
13	How does Lamaze method during labor help in minimizing labor pain?	1.70	Pass	1.66	Fair	*.327*
14	The Lamaze method involves	1.70	Pass	1.66	Fair	*.327*
15	Which of the following paragraphs is one of the basic principles of the Lamaze method?	1.76	Pass	1.73	Pass	*.161*
16	Among the advantages of the Lamaze method during labor are	1.86	Pass	1.83	Pass	*.161*
17	Relaxation techniques in any way that help the pregnant woman to	1.60	Fair	1.60	Fair	*.161*
18	One of the most effective pre-labor relaxation techniques is	1.90	Pass	1.86	Pass	*.327*
19	Which of the following types of breathing patterns are used in the Lamaze method during labor?	1.63	Fair	1.60	Fair	*.327*
20	How many levels of breathing are used in the Lamaze method	1.80	Pass	1.80	Pass	*.327*
21	All levels of the Lamaze Breathing Technique begin and end with:	1.76	Pass	1.73	Pass	*.161*
22	How can breathing exercises during labor be beneficial for a mother:	1.83	Pass	1.80	Pass	*.327*
23	How are breathing exercises beneficial to the fetus?	1.86	Pass	1.86	Pass	*.327*
24	What is the ideal time to do breathing exercises at all levels during labor?	1.83	Pass	1.80	Pass	*.043*
25	How much does a woman's respiration rate in the first level of the Lamaze method respiration patterns	1.83	Pass	1.80	Pass	*.161*
26	What is the respiratory rate of a woman in the fifth level of the Lamaze method of breathing patterns	1.73	Pass	1.73	Pass	*.083*
27	What is the sequence of breathing patterns when contractions begin?	1.86	Pass	1.83	Pass	*.327*

Table 4-2-4: Midwives' Knowledge Responses at Post-test I and Post-test II (*After One Month has been Passed*)

28	What is the sequence of breathing patterns when contraction is lessening?	1.83	Pass	1.83	Pass	*.161*
29	When should a pregnant woman use level 4 of breathing levels during labor?	1.90	Pass	1.86	Pass	*.327*
30	Which of the following paragraphs is one of the benefits of walking or sitting upright:	1.70	Pass	1.66	Fair	*.327*
31	Which of the following paragraphs is considered one of the benefits of changing the position and movement of the mother during labor:	1.73	Pass	1.70	Pass	*.327*
32	Effleurage is defined as:	1.56	Fair	1.53	Fair	*.327*
33	Effleurage is considered one of the techniques:	1.70	Pass	1.63	Fair	*.161*
34	Effleurage helps in minimizing labor pain by :	1.76	Pass	1.70	Pass	*.083*
35	Focusing or Imagery is mean:	1.70	Pass	1.63	Fair	*.327*
36	What is the main principle of Focusing or Imagery?	1.66	Fair	1.56	Fair	*.161*
37	The best type of breathing during the second stage of labor is:	1.60	Fair	1.50	Fair	*.327*
38	Reasons why a woman is not encouraged or allowed to push during labor:	1.86	Pass	1.80	Pass	*.161*
39	Which of the following is a good position for the mother when pushing during labor:	1.70	Pass	1.60	Fair	*.161*

"Level of Assessment (Fail=1-1.33, Fair=1.34-1.67, Pass ≥ 1.68"

The findings revealed an assessment of the study sample's responses in the first and second subsequent tests in terms of understanding of the Lamaze method during labor in the study group. According to the findings, there are statistically significant differences in knowledge scores between the first post-test and the second post-test after one month ($p > 0.05$).

Table4-2-5.Overall Midwives' Knowledge towards Lamaze Method during Labour in Study Group at Post I and II

Knowledge	*Post-scores I*			*Post-scores II*		
	Freq.	%	*M ± SD*	Freq.	%	*M ± SD*
Poor	1	3.3	*67.93± 4.60*	2	6.7	*66.33 ± 7.21*
Fair	3	10.0		5	16.7	
Good	26	86.7		23	76.7	
Total	30	100.0		30	100.0	

M: Mean of total Scores, SD: Standard Deviation for total scores"
(Poor=39-52; Fair= 52.1-65, Good=65.1-78)"

The results showed that the majority of midwives (86.7 percent) had a solid understanding of the Lamaze method during labor at the post-

test I. After a month, statistics revealed that the majority of midwives (76.7 percent) had an excellent understanding of the post-test II.

Table 4-2-6: The Difference between Post-test I and II Test by Overall Responses to the Knowledge Scores in Study Group

Experimental	Periods	Mean	SD	t	df	*P*
Group	Post- I	1.74	.118	1.427	29	*.164*
Knowledge	Post- II	1.70	.158			

Findings demonstrated that there were no significant difference in knowledge scores in two periods of measurements as post-test I (*1.74*) after application of an education program and post-test II (*M=1.70*) after one month has been passed (*t=1.427; p=0.164*).

4-3.Midwives' Knowledge of the Lamaze Method during Labour (*Control Group*)

Table 4-3-1:Midwives' Knowledge Responses at Pre and Post Test

	Control Group Knowledge	**Pre-test**		**Post-test**		*p-value*
		Ms	Ass.	Ms	Ass.	
1	Which of the following paragraphs is correct regarding the normal duration of pregnancy?	1.56	Fair	1.56	Fair	*.103*
2	Normal labor is known as	1.50	Fair	1.53	Fair	*.327*
3	How many stages are there in normal labor?	1.40	Fair	1.43	Fair	*.024*
4	The first stage of labor starts with the onset of	1.53	Fair	1.53	Fair	*.327*
5	Which of the following paragraphs is correct in terms of the true characteristics of labor pain?	1.53	Fair	1.53	Fair	*.327*
6	Which of the following is a major contributor to pain in the first stage of labor?	1.26	Fail	1.26	Fail	*.327*
7	Which of the following is not a technique of the Lamaze method?	1.46	Fair	1.46	Fair	*.538*
8	The most important aspect of nursing care during the first stage of labor is:	1.30	Fail	1.30	Fail	*.185*
9	What the midwife should do first when a woman complains of labor pain is:	1.50	Fair	1.50	Fair	*.321*
10	Which of the following factors can make labor pain worse:	1.30	Fail	1.30	Fail	*.322*
11	Which of the following parts contains special neurons that make up the neural gateway through which pain stimuli pass to the brain	1.33	Fail	1.33	Fail	*.333*
12	The Lamaze method means	1.16	Fail	1.16	Fail	*.321*
13	How does Lamaze method during labor help in minimizing labor pain?	1.33	Fail	1.33	Fail	*.324*
14	The Lamaze method involves	1.30	Fail	1.30	Fail	*.337*
15	Which of the following paragraphs is one of the basic principles of the Lamaze method?	1.16	Fail	1.16	Fail	*.327*
16	Among the advantages of the Lamaze method during labor are	1.20	Fail	1.20	Fail	*.327*
17	Relaxation techniques in any way that help the pregnant woman to	1.13	Fail	1.13	Fail	*.127*
18	One of the most effective pre-labor relaxation techniques is	1.36	Fair	1.40	Fair	*.126*

Table 4-3-1:Midwives' Knowledge Responses at Pre and Post Test

19	Which of the following types of breathing patterns are used in the Lamaze method during labor?	1.33	Fail	1.36	Fair	*.327*
20	How many levels of breathing are used in the Lamaze method	1.33	Fail	1.36	Fair	*.227*
21	All levels of the Lamaze Breathing Technique begin and end with:	1.30	Fail	1.33	Fail	*.317*
22	How can breathing exercises during labor be beneficial for a mother:	1.20	Fail	1.23	Fail	*.311*
23	How are breathing exercises beneficial to the fetus?	1.33	Fail	1.33	Fail	*.326*
24	What is the ideal time to do breathing exercises at all levels during labor?	1.10	Fail	1.13	Fail	*.326*
25	How much does a woman's respiration rate in the first level of the Lamaze method respiration patterns	1.36	Fair	1.36	Fair	*.323*
26	What is the respiratory rate of a woman in the fifth level of the Lamaze method of breathing patterns	1.40	Fair	1.40	Fair	*.322*
27	What is the sequence of breathing patterns when contractions begin?	1.30	Fail	1.33	Fail	*.327*
28	What is the sequence of breathing patterns when contraction is lessening?	1.33	Fail	1.36	Fair	*.321*
29	When should a pregnant woman use level 4 of breathing levels during labor?	1.23	Fail	1.26	Fail	*.324*
30	Which of the following paragraphs is one of the benefits of walking or sitting upright:	1.16	Fail	1.20	Fail	*.328*
31	Which of the following paragraphs is considered one of the benefits of changing the position and movement of the mother during labor:	1.50	Fair	1.53	Fair	*.321*
32	Effleurage is defined as:	1.20	Fail	1.23	Fail	*.327*
33	Effleurage is considered one of the techniques:	1.16	Fail	1.20	Fail	*.337*
34	Effleurage helps in minimizing labor pain by :	1.23	Fail	1.26	Fail	*.327*
35	Focusing or Imagery is mean:	1.33	Fail	1.36	Fair	*.127*
36	What is the main principle of Focusing or Imagery?	1.30	Fail	1.33	Fail	*.185*
37	The best type of breathing during the second stage of labor is:	1.20	Fail	1.20	Fail	*.321*
38	Reasons why a woman is not encouraged or allowed to push during labor:	1.33	Fail	1.20	Fail	*.322*
39	Which of the following is a good position for the mother when pushing during labor:	1.36	Fair	1.43	Fair	*.333*

"Level of Assessment (Fail=1-1.33, Fair=1.34-1.67, Pass ≥ 1.68"

The results showed that the study sample responses at the pre-post test with relation to knowledge of the Lamaze method during labor in the control group were assessed. The results show that the midwives failed all of the pre-test questions, as evidenced by low mean scores, with the exception of items 1, 2, 3, 4, 5, 7, 9, 18, 25, 26, 31, and 39, where replies were fair, as seen by moderate mean scores. While there were no significant differences in knowledge scores in the post-test compared to the pre-test scores ($p > 0.05$), midwives revealed no significant differences in knowledge scores in the pre-test.

Table4-3-2.Overall Midwives' Knowledge towards Lamaze Method during Labour in Control group

Knowledge	*Pre-scores*			*Post-scores*		
	F	%	*M ±SD*	f	%	*M ±SD*
Poor	19	63.3	*51.26 ± 5.27*	18	60.0	*51.9 ± 5.93*
Fair	10	33.3		10	33.3	
Good	1	3.3		2	6.7	
Total	30	100.0		30	100.0	

Mean of total Scores, SD: Standard Deviation for total scores : (Poor=39-52; Fair= 52.1-65, Good=65.1-78)"

The results showed that 63.3 percent of midwives had poor knowledge of the Lamaze method during labor during the pre-test. After a length of time had passed, studies revealed that 60% of midwives had insufficient knowledge at the post-test.

Table 4-3-3: The Difference between Pre and Post-Test by Overall Responses to the Knowledge Scores in Control Group

	Periods	Mean	SD	T	df	*P*
Control Knowledge	Pre-test	1.31	.135	1.049	29	*.303*
	Post-test	1.33	.152			

Findings demonstrated that there were no significant difference in knowledge scores in two periods of measurements as pre-test (*M=1.31*) and post-test (*M=1.33*) after time has been passes (*t=1.049; p=0.303*).

Table 4-4: Differences in pre-post test responses between the Two Groups Knowledge of the Lamaze Method

Periods	Groups	Mean	SD	t-value	d.f	*p-value*
Pre-test	Study	1.25	.151	1.540	58	*0.129*
	Control	1.31	.135			
Post-test	Study	1.74	.118	11.696	58	*0.000*
	Control	1.33	.152			

In the pre-test period of assessment, there were no statistically significant differences between the study-control (p=0.789). While there are statistically significant differences between the study-control groups at the post-test measurement time (p=0.000).

4.5. The Differences in Midwives' Knowledge towards the Lamaze Method with regards to their Socio-Demographic Characteristics

Table 4-5-1: The Differences in Midwives' Knowledge with regard to Age (*n=30*)

Age	Variance Source	Squares Sum	df	Square Mean	*F. statistic*	*p-value*
Pre-test knowledge	Between Groups	.038	2	.019	.820	.451
	Within Groups	.628	27	.023		
	Total	.666	29			
Post-test I	Between Groups	.002	2	.001	.063	.939
	Within Groups	.403	27	.015		
	Total	.405	29			
Post-test II	Between Groups	.025	2	.012	.344	.712
	Within Groups	.969	27	.036		
	Total	.993	29			

Findings illustrated there were no significant differences in midwives' knowledge towards the Lamaze method with regard age groups at pre-test, post-test I, and II ($p > 0.05$).

Table4-5-2: The Differences in Midwives' Knowledge with regard to Education Level (*n=30*)

Education level	Variance Source	Squares Sum	Df	Square Mean	*F. statistic*	*p-value*
Pre-test knowledge	Between Groups	.019	2	.009	.390	.681
	Within Groups	.647	27	.024		
	Total	.666	29			
Post-test I	Between Groups	.018	2	.009	.626	.542
	Within Groups	.387	27	.014		
	Total	.405	29			
Post-test II	Between Groups	.032	2	.016	.444	.646
	Within Groups	.962	27	.036		
	Total	.993	29			

Findings illustrated there were no significant differences in midwives' knowledge towards the Lamaze method with regard to education level at pre-test, post-test I, and II ($p > 0.05$).

Table 4-5-3: The Differences in Midwives' Knowledge with regard to Years of Experience (*n=30*)

Years of Experience	Variance Source	Squares Sum	Df	Square Mean	*F. statistic*	*p-value*
Pre-test knowledge	Between Groups	.000	1	.000	.017	.898
	Within Groups	.666	28	.024		
	Total	.666	29			
Post-test I	Between Groups	.006	1	.006	.422	.521

	Within Groups	.399	28	.014		
	Total	.405	29			
Post-test II	Between Groups	.019	1	.019	.544	.467
	Within Groups	.974	28	.035		
	Total	.993	29			

Findings illustrated there were no significant differences in midwives' knowledge towards the Lamaze method with regard to years of experience at pre-test, post-test I, and II ($p > 0.05$).

Table 4-5-4: The Differences in Midwives' Knowledge with regard to Years of Experience in Labour Wards (*n=30*)

Experience in Labour	Variance Source	Squares Sum	df	Square Mean	*F. statistic*	*p-value*
Pre-test knowledge	Between Groups	.076	3	.025	1.117	.360
	Within Groups	.590	26	.023		
	Total	.666	29			
Post-test I	Between Groups	.014	3	.005	.299	.826
	Within Groups	.391	26	.015		
	Total	.405	29			
Post-test II	Between Groups	.047	3	.016	.435	.730
	Within Groups	.946	26	.036		
	Total	.993	29			

Findings illustrated there were no significant differences in midwives' knowledge towards the Lamaze method with regard to years of experience in antenatal and labor wards at pre-test, post-test I, and II ($p > 0.05$).

Table 4-5-5: The Differences in Midwives' Knowledge with regard to Training Courses (*n=30*)

Training Courses	Variance Source	Sum of Squares	df	Mean Square	*F. statistic*	*p-value*
Pre-test knowledge	Between Groups	.048	1	.048	2.183	.151
	Within Groups	.618	28	.022		
	Total	.666	29			
Post-test I	Between Groups	.000	1	.000	.018	.894
	Within Groups	.405	28	.014		
	Total	.405	29			
Post-test II	Between Groups	.000	1	.000	.009	.926
	Within Groups	.993	28	.035		
	Total	.993	29			

Findings illustrated there were no significant differences in midwives' knowledge towards the Lamaze method with regard to training courses in pre, the post I and II ($p > 0.05$).

Chapter Five

Discussion of Study Results

Chapter Five

Discussion of the Study Results

Healthcare providers (midwives) have a key role in pain management. Midwives often use non-pharmacological measures (Lamaze techniques) to facilitate comfort for women during labor (Aziato, 2017). However, guidelines for use of these measures are commonly inadequate or absent. The medical education implication of knowledge is important in addressing the consequence of how the mother's labor pain is going to be managed. If the training is not comprehensive enough, there is a likelihood of a discrepancy in labor pain management. Knowledge and barriers can affect the quality of care provided to a pregnant mother in labor, especially when pain during labor has to be addressed (Ramasamy, 2020).

Midwives knowledge questionnaire items towards Lamaze method, using MCQ questionnaire's items technique for knowledge which were classified into two categories responses, such as "Correct and Incorrect" along studied (Pre and Post) periods due to application an educational program for study group, as well as controlled group, are chosen for comparisons significant.

Results of testing significantly with reference of the questionnaire's items are reported mostly highly significant differences at *p-value <0.05*, which assigned effectiveness of the studied educational program through raising knowledge in the study group, and that enables to confirms importance or successfulness of applying for the suggested program. And vice versa when there are no significant differences at *p-value >0.05* and it is not possible applying for the suggested program. This chapter extensively introduces the outcomes of the research in tables and these refer to the objectives of this report, which are as follows:

5.1.Socio-Demographic Characteristics

5.1.1.Midwives Age

Findings show participants' age, the mean age for midwives in the study group is 29 (*±8.21*) and the mean age in the control group is 30 (*±9.94*), the ages 21-29 years old were recorded as the highest percentage in both groups (46.7% and 53.3%) respectively. There were no significant differences in age for both groups (*p=0.062*) which indicated the homogeneity of the studied sample. Agnes et al. (2020), these findings revealed that 36.7% of the study sample were aged (30 – 40) years old, (and 53.3% of) the study sample their experience (of 10 years). Most midwives show up at a young age due to, the delivery rooms needing to be the workload. Moreover, The results of the study conducted in Baghdad maternity hospitals revealed that the highest percentage (25%) of the nurses midwives is (20-24) years old, (77.3%) (Hasan & Hussein, 2020).

5.1.2.Midwives Education Level

Respected to the education level, midwives in the study group exhibited midwifery secondary school (50%), and in the control group exhibited Diploma midwifery (50%). There were no significant differences in both groups with regard to education level (*p=0.167*). The majority of nurses midwives were diploma in Ethiopia (Getu et al., 2020). The differences may be due to the difference in the size of the sample, as well as the institutions that graduate with such an educational degree, as there are no educational institutions in Ethiopia that graduate nursing schools.

5.1.3.Midwives Experience

In terms of experience, most of the midwives in the study and control groups expressed 5-10 years of experience in the maternity nursing field (90% and 83.3%) respectively. Half of the respondent in the study group exhibited >3 years. While one-third of the respondent in the control group exhibited >3 years. There were no-significant differences in both

groups with regard to experience in labor wards (*p=0.109*). These findings is supported by Zeleke et al. (2021), who demonstrated in their findings that the nurses who are working in the antenatal hospital had 5-10 years of experience and insufficient experience in deliveries room due to rotation within the hospitals' units. The years of experience are significantly associated with participants' age (midwives who are young were accompanied by a few in their years of experience).

5.1.4.Midwives Training Courses

In terms of training courses, it is obvious from the findings that the majority of midwives were no attend training sessions in the study (73.3%) and control (93.3%) respectively. There were no significant differences in both groups with regard to training courses (*p=0.741*). These findings are supported by finding from Debre Tabor Comprehensive Specialized Hospital, Ethiopia. Depicted findings that (85.8%) were not attended training courses related to non-pharmacological pain management due to such topics are not included in the curriculum (Zeleke et al., 2021).

5.2.Midwives Knowledge towards Lamaze Method during Labor

5.2.1.Midwives Knowledge towards Lamaze Method at Pre-Test for both Groups (Study and Control)

A total of 39 multiple choice questions were used to measure the knowledge of respondents regarding the Lamaze method and the mean score was *65.1-78* as a greater level, *52.1-65* as a moderate level, and *39-52* as a lower level. In the current study findings, midwives expressed a poor level of knowledge with regard Lamaze method at the pre-test period of measurement for both the study group ($M \pm SD=49.03 \pm 5.91$) (table 4-2-2) and control group ($M \pm SD=51.26 \pm 5.27$) (table 4-3-2). These are worrisome outcomes in healthy labor management.

There was no statistically significant difference between study (*M ± SD= 1.25±0.151*) and control (*M ± SD= 1.31±0.135*) groups in the pre-test period of measurement (*t=1.540; p=0.129*) with regards to knowledge towards Lamaze method (table 4-4). With respect to the statistical mean, the study results indicate that the midwives in the study group have poor knowledge to the same degree as the midwives in the control group, which means an evaluation of 60 midwives who had unsatisfactory knowledge associated Lamaze method.

The deficit of knowledge regarding the Lamaze method among midwives might be due to several reasons; the midwives do not develop and update their knowledge continuously, most midwives who work in health institutions (deliveries rooms) quit book reading so they do not follow up and only indulge in practices, consequently, they became unable to remember some information. Also, lack of training related to Lamaze and the absence of such subjects in the academic curricula that graduate midwives and nurses.

In agreement with current findings, Healy et al. (2020), demonstrated in their findings that midwives with limited practices and perspective reduce pain during the second stage of labor. The increase in cesarean sections in India is because midwives are not well-qualified to deal with labor stages (Choudhary et al., 2018).

Also, the findings were consistent with the findings of the study done by SK Dnazigar (1979), which showed that nurses were found to offer arbitrary and often inappropriate responses to birthing women that may inhibit well-being, due to knowledge deficit.

The importance of movement to facilitate labor progress as well as the lack of knowledge among nurses on the subject have contributed to immobility. Amniotomy, oxytocin induction, and epidural anesthesia and these interventions can interfere with movement and position changes,

necessitating immobility during labor which can increase the length of labor followed by a complication. Knowledge plays a major role in managing labor, and working to improve nurses' knowledge is one of the most important factors that maintaining reproductive health (Andrews & Chrzanowski, 1990).

The findings of Begley et al. (2019), deals with how to preserve the perineum intact during spontaneous birth. Midwives had an average ability to keep the perineum intact because of their many training sessions.

The inadequate knowledge towards the Lamaze method or non-pharmacological pain relieves during labor. The findings of Winslow & Bhattacharjee (2017), confirmed the necessity of conducting training programs to improve the knowledge and practices of midwives in labor management.

Moreover, the poor knowledge associated with Lamaze (non-pharmacological) pain management. Ramasamy (2020) and Zeleke et al. (2021), confirmed that the training aspects should focus more on the healthcare providers about various complementary and alternative therapies for pain management in labor; healthcare providers understand the importance of reduction of pain perception during labor and develop skills in providing efficient practice for effective pain management during labor; collaborate with governing bodies to formulate standard policies and protocol to emphasize care during labor. Finally, to improve the curriculum for non-pharmacological pain management during labor.

Midwives have a vital role in providing safe and effective care to enhance the reduction of labor pain perception. This can be done by motivating the midwives through continuous education training to understand the importance of reduction of pain and develop skills in providing efficient care for effective pain management during labor. Educate the students about various complementary and alternative

therapies for pain management during labor and Encourage the students to effectively utilize research-based studies.

5.2.2.Midwives Knowledge towards Lamaze Method at Post-Test for both Groups (Study and Control)

In the current study findings, midwives expressed a good level of knowledge with regard Lamaze method at the post-test period of measurement (*M ± SD=67.93± 4.60*) after the application of the education program (table 4-2-2). While midwives in the control group expressed a poor level of knowledge (*M ± SD=51.9 ± 5.93*) with regard Lamaze method during the post-test period of measurement (table 4-3-2). These findings mean effective with an education program, midwives in the study group expressed a benefit.

There is a highly statistically significant difference between the intervention (*M ± SD= 1.74±0.118*) and control (*M ± SD= 1.33±0.152*) groups at the post-test period of measurement (*t-test= 11.696; p=0.000*) with regards knowledge towards Lamaze method (table 4-4). With respect to the statistical mean, the study results indicate that there is an improvement in the knowledge scores among the studied sample in the study group after the application of the education program compared with the control group.

The findings of the present study come consisting with the findings Tabssum (2016), from Conference room of Sher-I-Kashmir Institute of Medical Sciences SKIMS, Kashmir. The average time taken by the staff nurses to learn Lamaze technique was 1 hour. On the 7^{th} day of introducing the treatment variable, a post –test to assess knowledge and skill using same tools was conducted. The mean post-test knowledge (23.6) and skill (102.3) scores were higher than the mean pre-test knowledge (18.03) and skill (55.3) score at 0.05 level of significance. The study findings revealed that staff nurses had low level of knowledge and skill regarding Lamaze

technique and that there was improvement in the knowledge and skill of staff nurses regarding Lamaze after the administration of PTP.

Also, the findings come in line with findings from Bhopal district in Madhya Pradesh. The experimental group was given video-assisted teaching as an intervention and the control group was used for comparison only. The data were analyzed with the help of descriptive and inferential statistics. The study clearly shows that there was a significant gain in knowledge of staff nurses in the experimental group with video-assisted teaching which emphasizes that nonpharmacological interventions during the first stage of labor are safe and improve maternal and fetal outcomes. Therefore the staff nurses can be benefited from video-assisted teaching to improve their knowledge and practice of non-pharmacological interventions during the first stage of labor and they can practice these interventions in the clinical areas in the future (Nagvanshi & Linson, 2020).

Moreover, findings from Baghdad Maternity Hospitals revealed that the skilled midwives and there is a significant correlation between pretest and posttest periods after the implementation of an education program for nurse-midwives regarding knowledge about labor pain and non-pharmacological management in reducing labor pain in pregnant women (Hasan & Hussein, 2020).

The study showed that there was a significant improvement in the knowledge scores after the administration of a structured teaching program. Hence it can be concluded that the structured teaching program was effective in improving the knowledge of staff nurses on alternative and contemporary modalities of pain relief during the first stage of labor (Amul, 2020).

There is an accepted hypothesis that states (There were significant differences in midwives' knowledge between the study group and control group), midwives in the study group achieved considerable benefit from the

education program concerning the Lamaze method. The education program caused a significant effect on the knowledge of midwives in using Lamaze approaches. Health directorate and Decision-makers need to be adopted those findings underlying the study phenomenon. Likewise, Indra (2016), accepted his hypothesis, which was the mean post-test knowledge scores of the midwives regarding the modified Lamaze method were significantly higher than the mean pre-test knowledge.

Based on this regard, the rate of midwives who were willing to give support during labor by the Lamaze techniques was 86.7%, also, those knowledge levels were not influenced by the passage of time (*t=1.427*; *p=0.164*) (table 4-2-6). Therefore, it demonstrated that an important ratio of midwives will attend and benefit from training programs designed for them. However, studies have also achieved high rates of improving knowledge, and it is recommended that such programs be conducted on a large scale for reproductive health (Tabssum et al., 2013; Nagvanshi & Linson, 2020; Amul, 2020; Hasan & Hussein, 2020).

From the other side, according to the outcome of the evidence-based study: antenatal education towards Lamaze techniques has important clinical benefits for women both during pregnancy and in the postpartum period and all pregnant women should receive this education (Çankaya & Şimşek, 2021).

By the effectiveness of education program regarding pain management (Lamaze). It is recommended in-service education for the nurses- midwives' regarding knowledge of the current evidence, and provides experience in the skills necessary to fulfill their responsibility to support pain management during labor training primary health care nurses in improved pain management is an important part of multi-faced approach towards improving and helping women's to reduce pain during labor (Hasan & Hussein, 2020).

Lamaze breathing training combined with the nursing intervention was effective for ameliorating the process and outcomes of childbirth in primiparae and deserves to be promoted and applied in clinical practice indeed showed a positive influence on the process and outcomes of delivery by increasing the natural delivery rate, shortening labor endurance, relieving pain, and reducing postpartum hemorrhage (Wu et al., 2021).

The importance of improvement of knowledge and skill of staff nurses regarding the Lamaze technique is supported by the study done by Hardin and Buckner (2004), that showed that patients found the help of an experienced staff nurse with knowledge of the Lamaze technique important. Many were willing to change care providers to gain support for their desire for an un-medicated birth.

The findings were found similar to the findings of the study done by Tabssum Irshad et al (2013) that reveals, "when labor birth nurses are asked to support an un-medicated birth, some are unprepared to assist and express concern about a woman's choice implying woman would be 'better off with aesthesia or medication". Further, education may give healthcare providers further knowledge in assisting a woman who chooses un-medicated labor and birth.

One of the study evaluated the effectiveness of the Lamaze method, a method of natural childbirth that implies having one's baby the natural way, that is, in a relaxed attitude, without anesthesia or analgesics and without any mechanical aid to birth and reported that majority (45%) of women who were taught Lamaze method were prepared and managed well during their childbirth (Iyengar & Iyengar, 2004).

In our study by the importance of the Lamaze method, Nurse and midwives educators should pay more attention towards teaching the Lamaze technique to student nurses at their graduate and postgraduate levels. The lamaze technique should be included in the curriculum along

with other antenatal exercises. Awareness needs to be generated among the student nurses regarding the importance of the Lamaze technique in reducing maternal and fetal complications during the labor process. Nurse educators need to organize short-term training programme or workshops on the Lamaze technique for the staff nurses working in the antenatal ward and labor room.

Research has a vital and significant role in nursing in terms of quality and cost-effective service. The Lamaze technique of childbirth preparation can be considered one of the quality and cost-effective services. Emphasis should be given to the publication of research findings on the Lamaze technique in professional journals, periodicals, and books to disseminate the research-based evidence for introducing the practice of the Lamaze technique.

Moreover, Staff nurses and midwives working in the antenatal ward and labor room should be able to demonstrate their ability in providing need-based care including Lamaze techniques. Quality nursing care depends on the skill and knowledge of the staff. Staff midwives must keep updated with the latest development and trends in field so that provides quality-nursing care related to labor.

5.3.Socio-Demographic Variables influencing Midwives' Knowledge towards Lamaze Methods before and After Education Program

5.3.1.Midwives Knowledge and Age

The analysis of variance illustrated there were no significant differences in midwives' knowledge towards the Lamaze method with regard to age groups ($p > 0.05$) (table 4-5-1). These results mean that there is no difference in knowledge for the young or old midwives, meaning that working on the age variable in improving knowledge is not feasible.

These findings are supported by Geranmayeh et al. (2011), the age of respondents has not influenced their knowledge towards pain management through the use of non-pharmacological management during labor. If we replace the large ages of midwives with younger ages or vice versa in the maternity wards, it does not improve their knowledge of managing the mother during labor.

5.3.2.Midwives Knowledge and Education Level

Findings illustrated there were no significant differences in midwives' knowledge towards the Lamaze method with regard to education level ($p > 0.05$) (table 4-5-2). With this result, all educational levels can be included in the educational program, and midwives cannot be taken into consideration for school nursing, diploma, and BSc.

Knowledge does not differ at different educational levels because the Lamaze method is not covered in the academic curriculum. Therefore, relying on the educational level does not improve their knowledge. It needs to be cooperating with the Ministry of Education to include pain management using the Lamaze method in all academic levels at the diploma and bachelor levels. There was no significant correlation between nurses' knowledge and their education level with regard to non-pharmacological pain management during labor because the different education levels (BSc and Diploma) had the same level of knowledge, which means the education level did not affect the pain management (Jira et al., 2020).

5.3.3.Midwives Knowledge and Years of Experience

Findings illustrated there were no significant differences in midwives' knowledge towards the Lamaze method with regard to years of experience ($p > 0.05$). also, no significant differences in midwives' knowledge towards the Lamaze method with regard to years of experience in antenatal and labor wards ($p > 0.05$). These findings consisting with the

findings of Yadav and Dhanawade (2020), showed that the midwives knowledge is no associated with their years of experience. The years of experience not influenced knowledge towards Lamaze methods because this topic is not applied in hospitals and midwives do not work on it.

5.3.5.Midwives Knowledge and Training Courses

Findings illustrated there were no significant differences in midwives' knowledge towards the Lamaze method with regard to training courses ($p > 0.05$). Also, training courses on such technologies (Lamaz) were not conducted due to the lack of training trainers. The majority of the respondent in the study of Zeleke et al. (2021), were not trained and those make insignificant associated with pain management-related labor. Also, in the study of Rabea'a (2010), there was no significant association between knowledge regarding labor management and midwives' number of training, as the knowledge depends on intensive courses of training and also needs to follow up in their application in the field of work.

Chapter Six

Conclusions and Recommendations

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6.1. Conclusions

In view of the findings and their discussion, this quantitative study adopts a pre-post-tests approach to midwives' knowledge towards the Lamaze method and concludes that:

6.1.1. Before the implementation of the educational program, the results of the present study reveal that the midwives‘ knowledge about the Lamaze method has become clear that the majority had poor knowledge.

6.1.2. The study concludes There are no differences in knowledge scores between the study and control groups in the pre-test.

6.1.3. There were improving in midwives' knowledge after the post-test for the study group due to the educational program concerning the Lamaze method. While the control group did not present any improvement in their knowledge at post-test.

6.1.4. Training the midwives staff by the implementation such education program which indeed helps to develop their knowledge.

6.1.5. Thus accepting the research hypothesis, and demonstrating that the midwives in the study group achieved considerable benefit from the education program regarding the Lamaze method during labor.

6.2. Recommendations

According to the findings and stated conclusions, the following could be recommended for future work:

6.2.1. Provide opportunities for the health care providers to attend training programs on complementary and alternative therapies for pain management during labor and improve the curriculum for non-pharmacological pain management during labor.

6.2.2. Collaborate with governing bodies to formulate standard policies and protocols to emphasize the Lamaze method in pain management during labor.

6.2.3. Arrange and conduct workshops, conferences, and seminars on Lamaze methods to reduce labor pain perception.

6.2.4. More research and effective utilization of study findings on labor pain management.

6.2.5. Further studies need to be conducted to involve a large sample to teaching pregnant women on how to apply Lamaze techniques during labor.

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Appendices

Appendix A1

Ethical Consideration

Ministry of Higher Education and Scientific Research
University of Karbala / College of Nursing
Scientific Research Ethics Committee

وزارة التعليم العالي والبحث العلمي
جامعة كربلاء / كلية التمريض
لجنة اخلاقيات البحث العلمي

استمارة اخلاقيات البحث العلمي

عنوان مشروع البحث	
English	**باللغة العربية**
Effect of Educational Program on Midwives' Knowledge Concerning Lamaze Method during the Labor	أثر البرنامج التعليمي على معرفة القابلات فيما يتعلق بطريقه لاماز اثناء المخاض

بيانات عن الباحث الرئيسي			
الاسم الثلاثي	اللقب العلمي او العنوان الوظيفي	رقم الهاتف/ الموبايل	الايميل
شيرين عويز حسن	ممرض جامعي	07803118853	shireen.o@s.uokerbala.edu.iq
بيانات الباحث او الباحثين المشتركين			
الاسم الثلاثي	اللقب العلمي او العنوان الوظيفي	رقم الهاتف/ الموبايل	الايميل
د. ساجده سعدون عليوي	مدرس	07724542768	sajidah.s@uokerbala.edu.iq

(Importance of the research and its objectives) اهمية موضوع البحث واهدافه

Important of the study: This descriptive study examined the effect of educational program on midwives' knowledge concerning the Lamaze method during labor. Lack of knowledge of midwives working in the antenatal and labor room about the Lamaze method and its aspects, for example, breathing and relaxation exercises, imagery, and effleurage techniques lead to prolonged labor, and pregnant women are less in control of labor pain during labor. Education and training of the staff indeed help develop their knowledge and management of labor relative to the standard.

Objectives of the study:

- To assess the midwives' knowledge regarding the Lamaze method.
- To determine the effectiveness of the educational program on midwives' knowledge regarding the Lamaze method.
- To find out the association in midwives' knowledge between pre-post-test with regard to demographic characteristics.

Time and Setting of the Research_ (وقت ومكان اجراء البحث (الاماكن المقترحة لأجراء البحث فيها

Time: start 1/ Dec /2021 to End 3 /July /2022
محافظه كربلاء/ مستشفى النسائيه والتوليد التعليمي

(Methodology) منهجية البحث

The research design: A quasi-experimental research design conducted on midwives working in Obstetrics and Gynecology Teaching Hospital at Holy Kerbala.**Sampling Design:** The sample will be selected by using non-probability (Purposive). **Data was collected** through the use of the structured knowledge questionnaire.

Sample of the study عينة الدراسة

the study sample is midwives working in the obstetrics and gynecology teaching hospital at Holy Kerbala.

(Ethical consideration during research) الاعتبارات الاخلاقية خلال اجراء البحث

1-Protect the sample from any harm, Maintain the privacy and confidentiality of sample information, and The right of the sample to withdraw from the research.

التعهد

- اني الموقع ادناه شيرين عويز حسن اتعهد بان اقوم باجراء البحث وفقا لما ذكر في البروتوكول اعلاه وان التزم باتباع القوانين والتعليمات فيما يخص اجراء البحوث والالتزام بأخلاقياتها ، كما واتعهد باخذ الموافقة من افراد العينة للمشاركة في الدراسة واخذ موافقة من ولي أمر المشارك الشرعي في حال كون عمر الشخص المشارك اقل من 18 سنة، او كونه غير قادر على الفهم ، وان اقدم الإيضاحات و المعلومات الخاصة بالدراسة لافراد العينة للمشاركين في حال طلبها. وان اتعامل بسرية تامة مع بيانات افراد العينة.

اسم وتوقيع الباحث
شيرين عويز حسن

توصية لجنة اخلاقيات البحوث في الكلية

نحن اعضاء اللجنة الاخلاقية نوصي بان موضوع الباحث : ذو قيمة علمية ومهم للمجتمع والمريض

رئيس اللجنة | عضو | عضو | عضو | عضو

Appendix A2

Adminstrative Agreements

محافظة كربلاء المقدسة
دائرة صحة كربلاء المقدسة
مركز التدريب والتنمية البشرية
شعبة ادارة المعرفة
وحدة البحوث
العدد: ٢٨٩٢
التاريخ / / ٢٠٢١

جمهورية العراق

Holy Karbala governorate
Karbala Health Department
General manager's office
Training and Human Development Center

إلى/ جامعة كربلاء / كلية التمريض
الموضوع /تسهيل مهمة

تحيه طيبه....

كتابكم المرقم ١١٠ في ٢٠٢١/١١/١٦
نود إعلامكم بأنه لا مانع لدينا من تسهيل مهمة الطالبة (شيرين عويز حسن) دراسات عليا لإنجاز بحثها الموسوم حول: (اثر البرنامج التعليمي على معرفة القابلات فيما يتعلق بطريقة لاماز اثناء المخاض) في مؤسستنا الصحية/ مستشفى النسائية والتوليد التعليمي وبإشراف/ الدكتورة (حميدة هادي عبد الواحد) على ان لا تتحمل دائرتنا اي نفقات مادية مع الاحترام .

الطبيب الاستشاري
د. حيدر محمد حسن العطار

الدكتورة
تقوى خضر عبد الكريم
مدير مركز التدريب والتنمية البشرية
٢٠٢١/ ١١/ ٨

نسخة منه الى
مركز التدريب والتنمية البشرية مع الأولويات/ شعبة ادارة المعرفة/ وحدة البحوث مع الاولويات
مهدي /

Appendix B1

Preliminary Study

The objective of this assessment is to assess the need for midwives for the program. The data have been collected from (10) midwives who are working in delivery rooms at Obstetrics and Gynaecology Teaching Hospital. Each midwife has been given (10-15) minutes to respond to the instrument. The answers to questionnaire items were (true and false) for each item and the results as shown below:

Level of knowledge	*Frequencies*	*Percentage %*
Fail (≤59)	*8*	*80.0*
Moderate (60-69)	*2*	*20.0*
Good (≥70)	*0*	*0.0*

Appendix B2

Preliminary Assessment Tool

Assessment Needs of Midwives toward Lamaze method during labor.

- تقييم أحتياج معرفة القابلات بما يتعلق بطريقة لاماز أثناء المخاض.

No	Yes	العبارات	ت
		الولادة : هي العملية الفسيولوجية التي يتم بها إخراج الجنين والمشيمة والأغشية عبر قناة الولادة.	.1
		تكون مراحل المخاض على مرحلتين المرحلة الاولى والمرحلة الثانية	.2
		يبدأ المخاض عادة بين الأسبوع الثامن والثلاثين والأسبوع الثاني والأربعين من الحمل	.3
		من النظريات المحتملة لبدء المخاض هي: التغيير في نسبة الإستروجين إلى البروجسترون (زيادة نسبة الإستروجين بالنسبة إلى البروجسترون)، وأفراز الأوكسيتوسين ، والذي يعمل مع البروستاكلاندين لبدء التقلصات	.4
		من علامات المخاض الوشيكة : تقلصات براكستون هيكس ، زيادة في مستوى النشاط فقط	.5
		الحركات الأساسية للمخاض هي : الانثناء ، والدوران الداخلي ، والتمدد ، والدوران الخارجي.	.6
		ألم المخاض خلال المرحله الأولى يكون ناتجًا عن نقص وصول الأوكسجين بصورة كافية الى عضلات الرحم ، وتراكم حمض اللاكتيك في العضلات ، وتوسع أو شد في عنق الرحم.	.7
		يعتبرالتركيز أو التخيل من ضمن طرق تسكين الألم خلال المخاض.	.8
		من العوامل التي تؤثر على أدراك المرأة أثناء المخاض لألم : معدل أتساع عنق الرحم وقوة التقلصات الرحمية. قلة النوم والإرهاق من المخاض الطويل يزيد من إدراك الألم.	.9
		التنفس لا يوفر الأكسجين للأم والجنين أثناء المخاض .	.10

.11	نظرية التحكم في الألم تنص : (أن الحبل الشوكي يحتوي على بوابة عصبية تتحكم في نقل إشارات الألم إلى الدماغ ، أما تمنع إشارات الألم أو تسمح لها بالاستمرار في الوصول إلى الدماغ)		
.12	طريقة لاماز هي طريقة تركز على منع الألم أثناء المخاض.		
.13	في طريقة لاماز ، تم التأكيد على مفاهيم رئيسية منها: 1. أن يبدأ المخاض من تلقاء نفسه ، لا أن يتم تحريضه بشكل مصطنع 2. أن تكون المرأة قادرة على التحرك بحرية أثناء المخاض ، وألا تكون مقيدة بالسرير.		
.14	تقنيات طريقه لاماز المستخدمه خلال المخاض : التنفس ، الاسترخاء، التركيز أو التخيل والتدليك		
.15	هناك نوعين من التنفس تمارسه المرأة أثناء المخاض : التنفس العميق والتنفس البطيئ		
.16	الهدف من طريقة لاماز هو تقليل الألم أثناء المخاض و بناء ثقة الأم في قدرتها على الولادة.		

Appendix C

Lectures of the Educational program

جامعة كربلاء

كلية التمريض

Effect of Educational Program on Midwives' Knowledge Concerning Lamaze Method during the Labor

أثر البرنامج التعليمي على معارف القابلات المتعلقة بطريقه لاماز أثناء المخاض

البرنامج المقدم من قبل:

شـــيرين عـــويز حســـن

بأشراف:

م . د . ســاجدة ســعدون عـليوي

Effect of Educational Program on Midwives' Knowledge Concerning Lamaze Method during the Labor

اثر البرنامج التعليمي على معارف القابلات المتعلقة بطريقة لاماز أثناء المخاض

البرنامج المقدم من قبل: شيرين عويز حسن

باشراف: م . د . ساجدة سعدون عليوي

اهداف البرنامج:

Figure [1] https://www.bing.com/images/blob?bcid

الهدف العام من البرنامج التثقيفي:

الهدف من البرنامج التعليمي المقدم هو تطوير معارف القابلات حول طريقه لاماز اثناء المخاض العاملات في مستشفى النسائيه والتوليد التعليمي في محافظه كربلاء المقدسه.

اهداف الخاصه البرنامج التثقيفي:

في نهايه البرنامج تكون القابلات قادرات على معرفه الامور التاليه :

1. **معرفة الولاده الطبيعيه.**
2. **معرفة نظرية التحكم في بوابة إدراك الألم**
3. **معرفة طرق تسكين الآلام أثناء المخاض.**
4. **معرفة طريقه لاماز.**
5. **معرفة مبادئ طريقة لاماز.**

6. معرفة تاثير طريقة لامازعلى الأم الحامل والجنين

الطريقة التعليمية والوسائل التوضيحية المساعدة:

1. طريقة المحاضرة القصيرة
2. استخدام العرض التقديمي **power point** لإعداد وعرض المحاضرة
3. استخدام البوستر والصور التوضيحية
4. استخدام السبورة
5. استخدام المناقشة الجماعية

مكان ووقت المحاضرة:

قاعة المحاضرات في مستشفى النسائيه والتوليد التعليمي ولمدة **45** دقيقة لكل محاضرة.

المحتويات

محاور البرنامج التعليمي	الرقم
المحور الأول	
الولاده الطبيعيه: 1. **تعريف الولاده الطبيعيه** 2. **مراحل المخاض** 3. **النظريات المحتمله لبدء المخاض** 4. **علامات المخاض** 5. **المقارنه بين المخاض الحقيقي والمخاض الكاذب** 6. **العوامل التي تؤثر على المخاض** 7. **آلية المخاض (الحركات الأساسية للمخاض)**	
المحور الثاني	
نظرية التحكم في بوابة إدراك الألم: **1. الألم أثناء المخاض** **2. العوامل التي تؤثر على استجابة الألم** 3. **نظرية التحكم في البوابة (نظرية التحكم في الألم)**	
المحور الثالث	
1. طرق تسكين الآلام أثناء المخاض	
2. طريقه لاماز	
3. مبادئ طريقة لاماز	
4. تاثير طريقة لامازعلى الأم الحامل والجنين.	

اولا: الولاده الطبيعيه

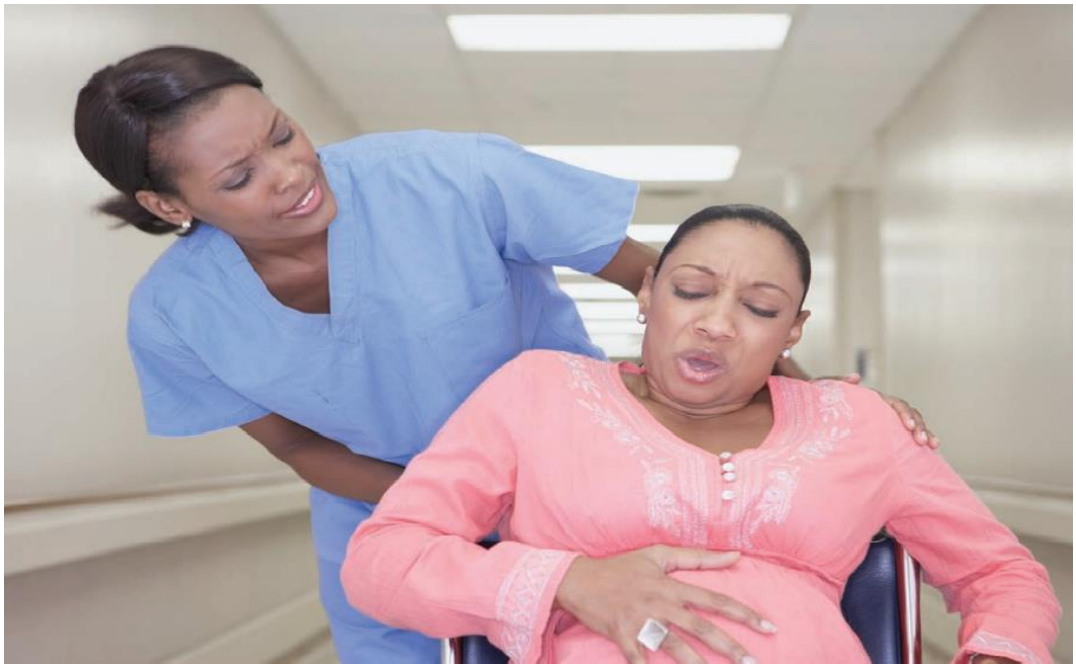


Figure 2 from [7].

الولادة (LABOR): هي العملية الفسيولوجية التي يتم بها إخراج الجنين والمشيمة والأغشية عبر قناة الولادة.

الممرضات في الوحدة ما قبل الولادة وغرفه الولاده لهن دور رئيسي في توفير رعاية شاملة للحوامل على وشك الولاده. لتوفير هذه الرعاية ، يجب أن تفهم الممرضات عملية المخاض والولادة والنفاس. من خلال فهم مراحل المخاض ، يمكن للممرضة تسهيل ومساعدة وتقديم الرعاية للمرأة والجنين .لذلك، **ينقسم المخاض إلى أربع مراحل:**

1. **المرحلة الأولى (first stage)** : تبدأ ببدء التقلصات الرحميه الحقيقية وتنتهي بأتساع عنق الرحم الكامل.
2. **المرحلة الثانية (second stage)** : تبدأ بتوسيع كامل لعنق الرحم وتنتهي بولادة الطفل.
3. **المرحلة الثالثة (third stage)** : تبدأ بعد ولادة الطفل وتنتهي مع ولادة المشيمة .
4. **المرحلة الرابعة (fourth stage)** : تبدأ بعد ولادة المشيمة ، أحيانًا تكون أول ساعة إلى أربع ساعات بعد ولادة المشيمة.

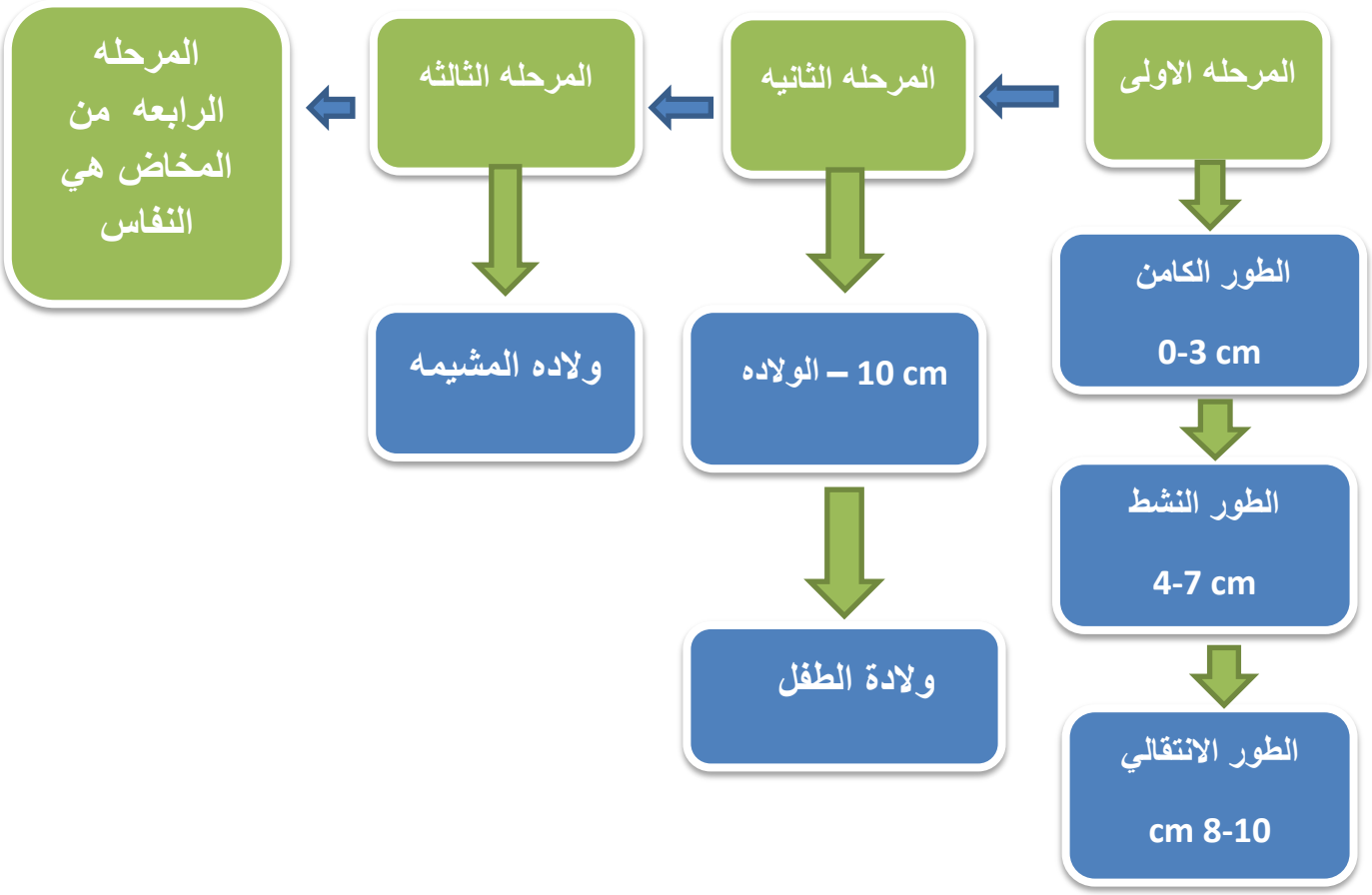


Figure (3) مراحل المخاض.

النظريات المحتمله لبدء المخاض:

يبدأ المخاض عادة بين الأسبوع الثامن والثلاثين والأسبوع الثاني والأربعين من الحمل ، عندما ينضج الجنين ويكون جاهزا للولادة. على الرغم من التقدم الطبي ، لا يوجد حتى الآن فهم كامل للمواد الكيميائية الحيوية والتفاعلات التي تحفز المخاض والولادة. لذلك ، على الرغم من وجود العديد من النظريات. بشكل عام يقترح أن المخاض ناتج عن عوامل تتعلق بالأم والجنين.

1. العوامل المتعلقة بالأم (MATERNAL FACTORS):

أ. نتيجة تمتد عضلات الرحم ، مما يؤدي إلى إفراز البروستاجلاندين الذي يحفز على تقلصات الرحميه.

ب. الضغط على عنق الرحم ، مما يحفز إطلاق الأوكسيتوسين من الغدة النخامية الخلفية

ج . أفراز الأوكسيتوسين ، والذي يعمل مع البروستاكلاندين لبدء التقلصات

د. التغيير في نسبة الإستروجين إلى البروجسترون (زيادة نسبة الإستروجين بالنسبة إلى البروجسترون).

2. العوامل المتعلقه بالجنين (Fetal factors):

أ. تقدم عمر المشيمة يؤدي ألى بدء التقلصات الرحمية.

ب. أفراز البروستاجلاندين بواسطة أغشية الجنين يحفز على بدء التقلصات الرحمية .

ج. الكورتيزول الجنيني ، الذي تنتجه الغدد الكظرية الجنينية ، يرتفع ويعمل على تقليل هرمون البروجسترون الذي يرخي عضلة الرحم ، ويزيد البروستاجلاندين الذي يحفزالرحم على التقلص.

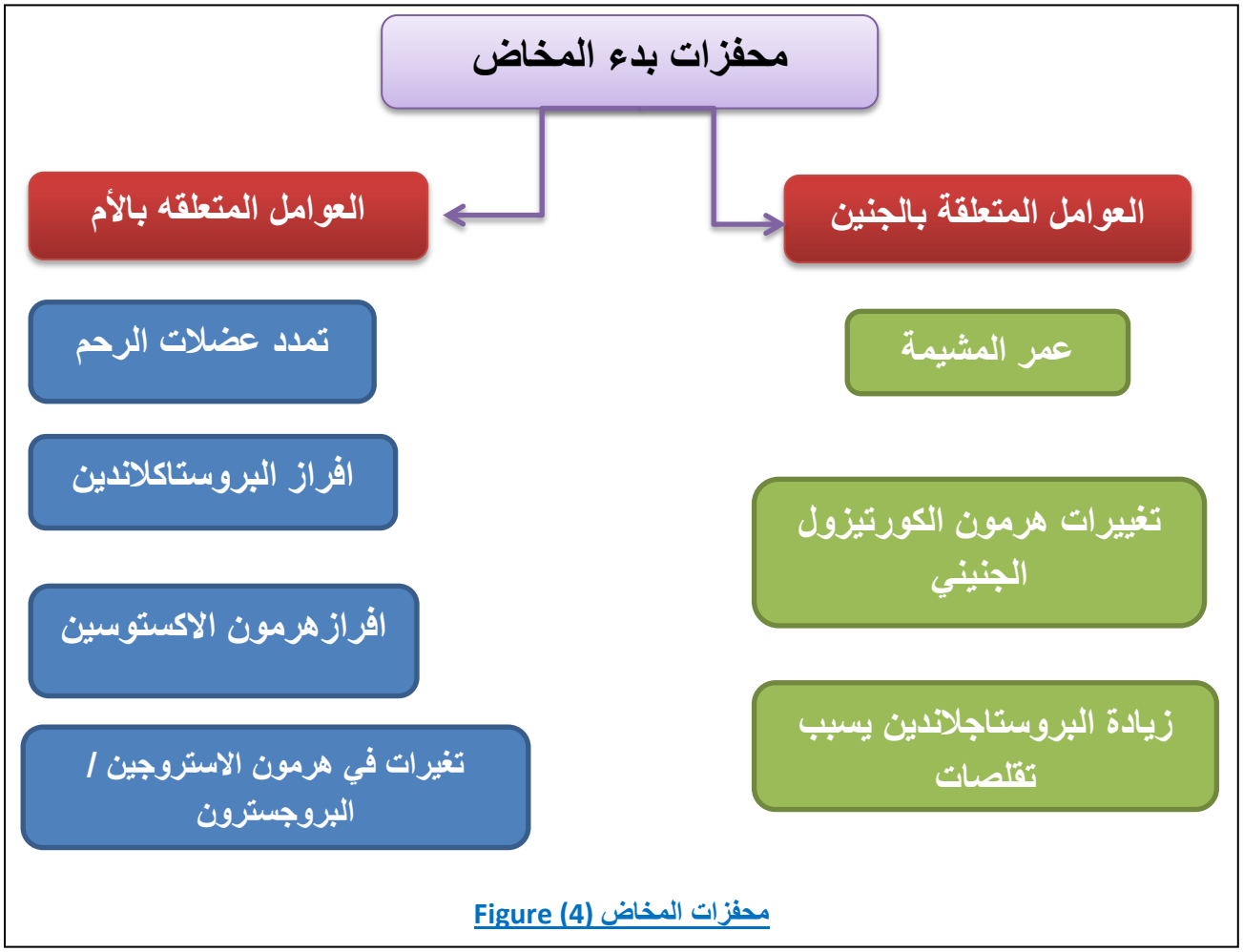


Figure (4) محفزات المخاض

علامات المخاض الوشيكة (Signs of impending labor) :

قبل أسابيع قليلة من المخاض ، تحدث تغييرات تشير إلى أن جسد المرأة يستعد لبدء المخاض. يشار إلى هذه التغييرات أيضًا باسم **علامات الولادة الأولية**. هذه العلامات هي:

1. انخفاض في مستوى الرحم خلال الأسابيع الأخيرة من الحمل حيث ينزل رأس الجنين في الحوض و الذي يحدث قبل أسبوعين تقريبا من المخاض. قد تشعر المرأة أنها تستطيع أن تتنفس بسهولة أكبر ولكن مع زيادة الضغط للجزء الجيئة الجنين ، قد تعاني المرأة ما يلي :

- آلام في الساق بسبب الضغط على الأعصاب في الحوض
- وذمة في الأطراف السفلية
- زيادة عدد مرات التبول
- زيادة الإفرازات المهبلية

2. تقلصات براكستون هيكس (Braxton Hicks contractions) :

قبل بدء المخاض، تبدأ تقلصات رحمية غير منتظمة ومتقطعة التي لا تؤدي إلى تغييرفي عنق الرحم و تحدث طوال فترة الحمل . عندما تكون هذه التقلصات قوية بما يكفي للاعتقاد بأنها في حالة مخاض ، يقال إنها في حالة مخاض كاذب.

3. تغيرات في عنق الرحم (Changes in the cervix) :

يحدث تغير كبير في عنق الرحم خلال فترة ما قبل الولادة وأثناء الولادة. يكون عنق الرحم في بداية الحمل صلبًا ، ويجب أن يلين حتى يتمدد ويتسع ليسمح بمرور الجنين. هذا التلين في عنق الرحم ، المسمى بالنضوج ، يخضع لتأثير العوامل الهرمونية .

4. زيادة في مستوى النشاط (Increase in activity level)

قد تستيقظ المرأة في صباح يوم المخاض أو قبل المخاض ب 24-48 ساعه مليئة بالطاقة أو الشعور بالحاجة إلى ترتيب كل شيء ؛ يشار إليها أحيانًا بأسم **التعشيش (Nesting)** ، على عكس الشعور بالإرهاق المزمن الذي شعرت به خلال الشهر السابق من الحمل. ترتبط هذه الزيادة في النشاط بزيادة في إفراز الإبينفرين نتيجة لانخفاض في البروجسترون الذي تنتجه المشيمة. يهيئ هذا الإبينفرين الإضافي جسد المرأة لبدء المخاض.

5. تغيرات في الجهاز الهضمي: (Digestive system changes)

أقل شيوعًا عند بعض النساء ، تعاني من الإسهال والغثيان وعسر الهضم الذي يسبق المخاض.

6. خسارة طفيفة في الوزن (slight weight loss) :

مع انخفاض مستوى البروجسترون ، يتم إفراز سوائل الجسم بسهولة أكبر من الجسد. يمكن أن تؤدي هذه الزيادة في إنتاج البول إلى فقدان الوزن **ما بين 1 و 3 أرطال (من 2.2 إلى 6.6 كجم).**

7. آلام الظهر (back pain): قد تعاني المرأة من آلام أسفل الظهر والانزعاج العجزي الحرقفي الناجم عن استرخاء مفاصل الحوض بسبب تأثير هرمون الريلاكسين على مفاصل الحوض.

8. العرض الدموي (البشارة) Bloody Show

أثناء الحمل ، تتراكم إفرازات عنق الرحم في قناة عنق الرحم لتشكل حاجزًا يسمى السدادة المخاطية. مع تليين عنق الرحم وتوسعه ، يتم خروج السدادة المخاطية تقريبا ضمن 24-48 ساعه قبل المخاض ، مما يؤدي إلى فقدان كمية صغيرة من الدم من الشعيرات الدموية في عنق الرحم . لذلك تسمى الإفرازات الناتجة ذات اللون البني اومختلطه بالدم بالعرض الدموي.

9. تمزق الأغشية الأمنيوسية (Rupture Membranes)

في بداية المخاض ، تنتفخ الأغشية الأمنيوسية التي تحيط بالجنين عبر عنق الرحم وتكون على شكل مخروط تتحسسه الممرضة عند الفحص المهبلي. عندما تتمزق الأغشية ، قد يتم تدفق السائل الأمنيوسي بكميات كبيرة. يحدث التمزق التلقائي للأغشية الأمنيوسية (SROM) بشكل عام في ذروة التقلصات الرحمية القوية فيتدفق السائل الأمنيوسي خارج المهبل.

Figure 5 from [1] : محو عنق الرحم والتوسع الكامل

مقارنة بين المخاض الحقيقي والمخاض الكاذب

مقارنة بين المخاض الحقيقي والمخاض الكاذب		
ت	المخاض الحقيقي	المخاض الكاذب
.1	تكون التقلصات الرحمية على فترات منتظمة.	تكون التقلصات الرحمية غير منتظمة
.2	الفترات الفاصلة بين التقلصات تقل تدريجيًا. .	عادة لا يوجد تغيير
.3	تزداد التقلصات في مدتها وشدتها.	عادة لا يوجد تغيير
.4	يبدأ الألم في الظهر ويمتد حول البطن	يكون الألم في البطن فقط
.5	تزداد شدة التقلصات الرحمية مع المشي عادة.	لا يوجد تغيير
.6	هناك تغيير في توسع عنق الرحم تدريجيا	لا يوجد تغيير
.7	لا تقل التقلصات مع الراحة أو الاستحمام في ماء دافئ	الراحة و الاستحمام في مياه دافئة تقلل من التقلصات

العوامل التي تؤثر على المخاض

تتفاعل أربعة عوامل رئيسية **(5 Ps)** أثناء الولادة الطبيعية ؛ العناصر الأربعة مترابطة وتعتمد على بعضها البعض من أجل ولادة آمنة وهي :

1. الممر **(Passage)** (حوض المرأة وقناة الولادة).
2. الراكب **(Passenger)** (الجنين).
3. القوى **(power)** (التقلصات الرحمية).
4. الحفاظ على النظرة النفسية للمرأة حول الولاده **(Psyche)** ، بحيث يمكن النظر إلى المخاض بعد ذلك على أنه أمر إيجابي.
5. وضعيه الأم **(position)** : وضعيات جسم الأم في المخاض واثناء الدفع لتسهيل عملية الولادة.

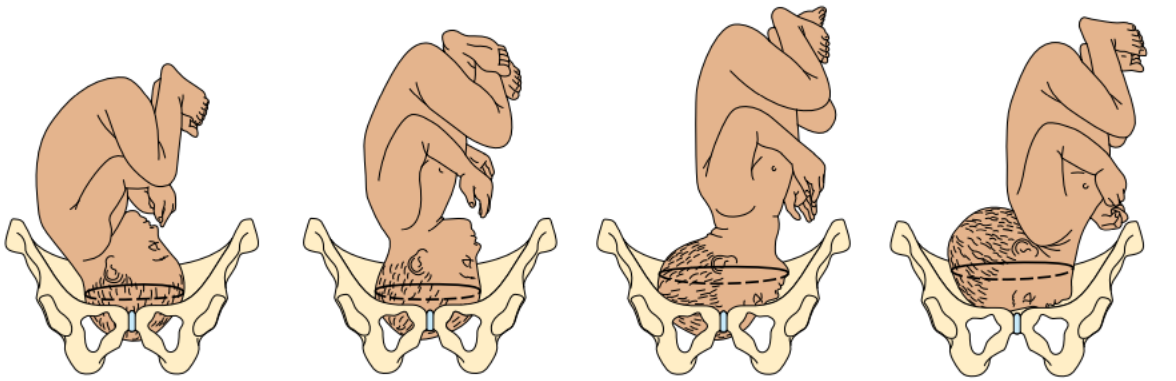


Figure 6 from [1]

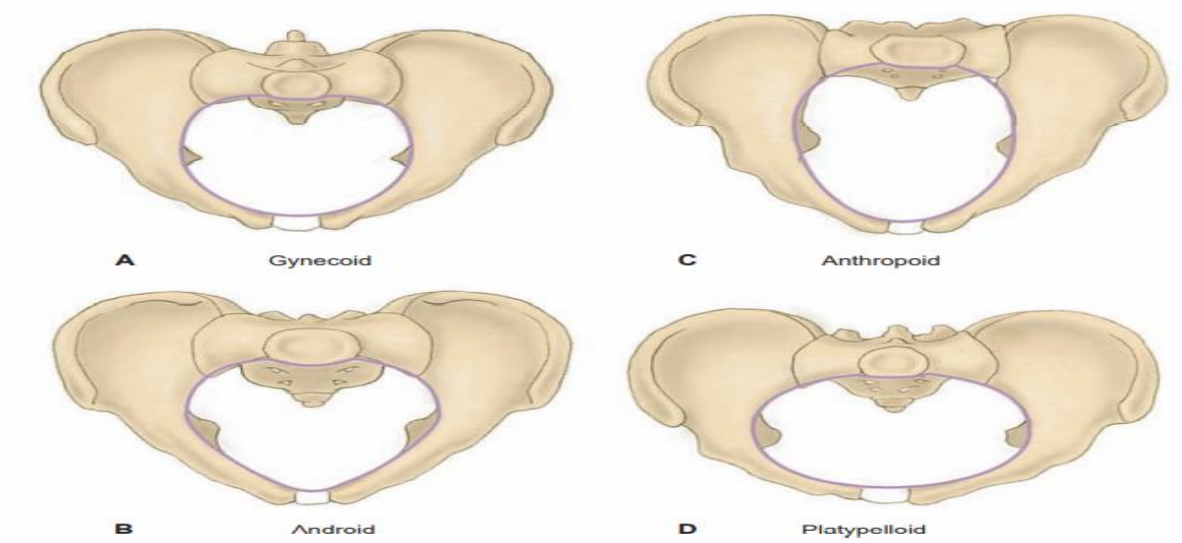


Figure 7 from [7].

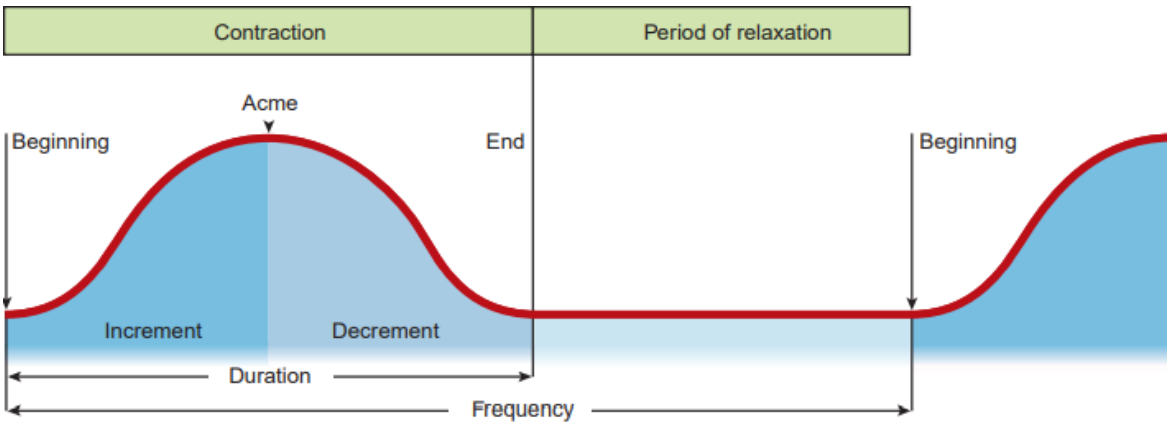


Figure 8 from [7] .

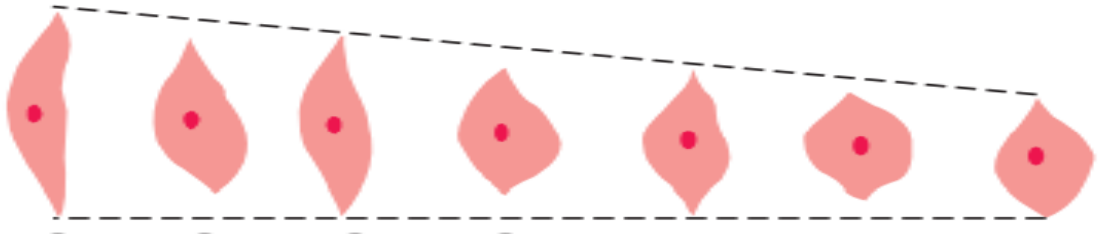
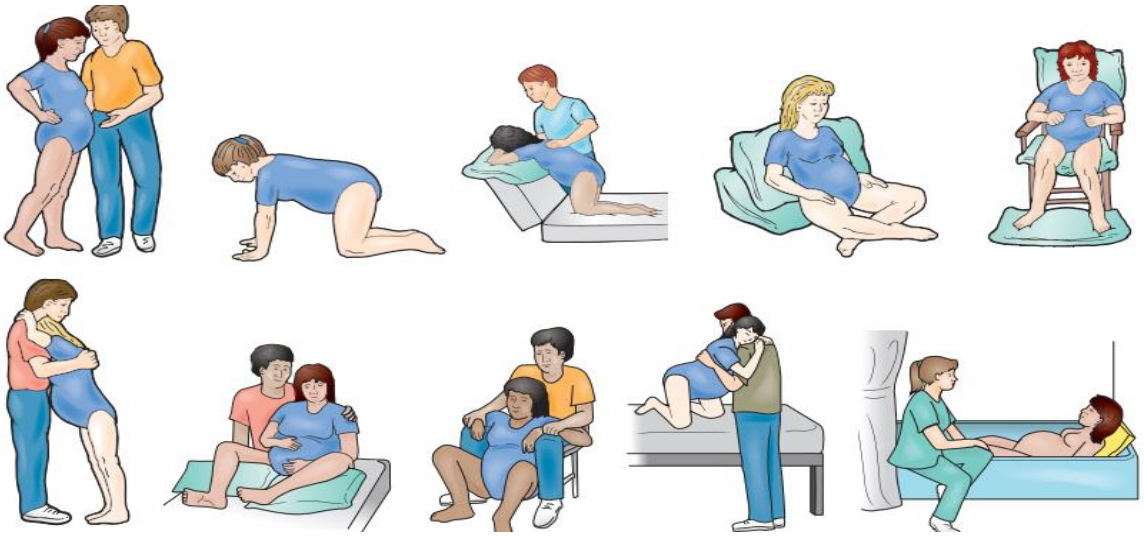


Figure 9 from [6].



Figure(10) From [2]: وضعيات الولاده

Figure (11) from [2]: وضعيات الأم اثناء الدفع

آلية المخاض (الحركات الأساسية للمخاض cardinal movements)

يتضمن مرور الجنين عبر قناة الولادة عدة تغييرات مختلفة في وضعية الجنين للحفاظ على أصغر قطر لرأس الجنين (الوضع الرأسي للجنين) دائمًا في أصغر قطر للحوض. تسمى هذه التغييرات في الوضع بالحركات الأساسية للمخاض : التعشيق ، **النزول** ، **والانثناء** ، **والدوران الداخلي** ، **والتمدد** ، **والدوران الخارجي** ، **خروج الجنين**.

1. التعشيق (Engagement) : عندما يمر أكبر قطر لرأس الجنين عبر مدخل الحوض. يمكن أن يحدث في أواخر الحمل أو في وقت مبكر من المخاض.

2. النزول (Descent) : هو الحركة الهابطة للقطر الثنائي لرأس الجنين إلى داخل مدخل الحوض. يحدث النزول الكامل عندما ينبثق رأس الجنين إلى خارج عنق الرحم المتوسّع ويلامس قاع المهبل الخلفي. يحدث النزول بسبب الضغط على الجنين بواسطة قاع الرحم. يؤدي ضغط رأس الجنين على الأعصاب العجزية في قاع الحوض إلى شعور الأم بالدفع. قد يساعد الهبوط الكامل على تقلص عضلات البطن مع دفع المرأة.

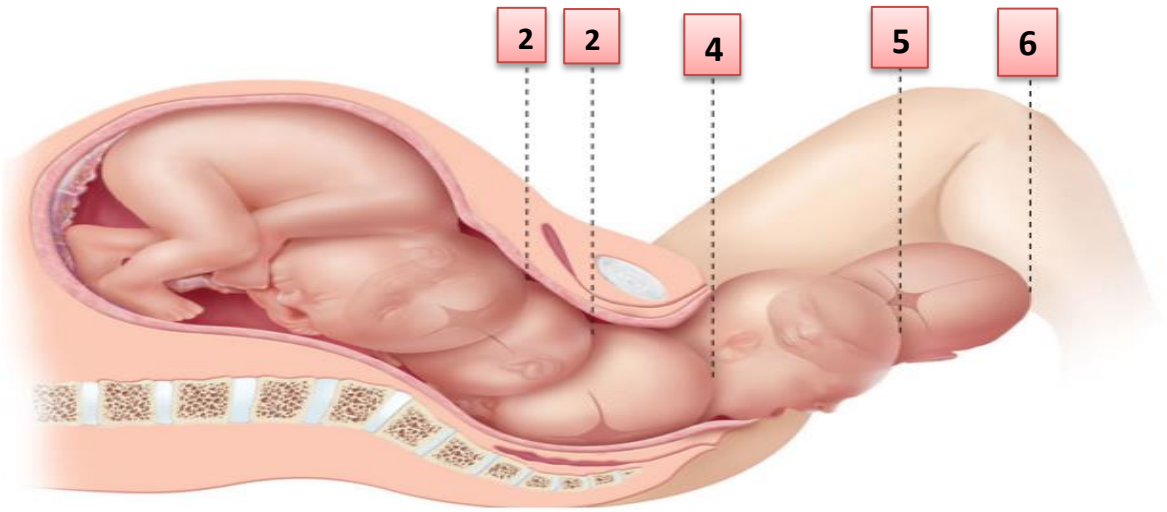
3. الانثناء (Flexion) : يحدث الانحناء عندما ينزل رأس الجنين ويواجه مقاومة من الأنسجة الرخوة في الحوض وعضلات قاع الحوض وعنق الرحم. نتيجة للمقاومة ، ينثني ذقن الجنين باتجاه صدره.

4. الدوران الداخلي (Internal rotation): دوران رأس الجنين حتى يتطابق قطر رأس الجنين الأطول مع القطر الأطول لحوض الأم.

5. التمدد (Extension) : تساعد مقاومة قاع الحوض على تمديد رأس الجنين أثناء مروره تحت مرفق العانة. مع هذا التغيير الموضعي ، يخرج قفا رأس الجنين ، ثم الحاجب والوجه والذقن من المهبل.

6. الدوران الخارجي (External rotation) : بعد ولادة رأس الرضيع مباشرة ، يدور الرأس إلى الموضع المائل أو العرضي . يؤدي هذا إلى وضع الكتفين الخلفيين في وضع أمامي خلفي . يولد الكتف الأمامي أولاً ، ربما يساعده في ذلك ثني رأس الرضيع إلى الأسفل.

7. خروج الجنين (Expulsion) : بمجرد أن تتم ولادة الكتفين ، فإن باقي جسم الطفل يولد بسهولة وسلاسة بسبب صغر حجمه ، فالكتف الأمامي يولد قبل الكتف الخلفي.



آلية المخاض (الحركات الأساسية) .[1] from (12) figure

الألم أثناء المخاض : (Pain During Labor)

تنتهي الأشهر التسعة من الحمل بالولادة ، وهو حدث تخشاه الكثير من النساء الحوامل لأن العملية قد تكون مؤلمة. تشعر بعض النساء بالقلق بشأن قدرتهن على التعامل مع الألم وقد يؤثر ذلك على تصوراتهن عن السيطرة أثناء المخاض ورضاهن العام عن الولادة. يتمثل التحدي الذي تواجهه القابلات في تمكين النساء من فهم التأثيرات المختلفة على تفسيرات النساء وتجاربهن من الاضطرابات المصاحبة للولادة. يمكن للقابلات مساعدة النساء على الاستعداد وتسهيل الخيارات المثلى لتخفيف الآلام بما يتناسب مع الاحتياجات الفردية للمرأة ويضمن أفضل النتائج لكل من الأم والجنين.

- يعتبر الألم أثناء الولادة تجربة عالمية ويعتبر أمرًا طبيعيًا. تنتج معظم الآلام أثناء المخاض عن أحداث فسيولوجية طبيعية . الألم المصاحب للولادة تم وصفها بأنها واحدة من أكثر التجارب إيلامًا على الإطلاق. يختلف ألم المخاض عن الحالات الأخرى التي يُعاني فيها الألم من عدة نواحٍ.

- يساعد فهم سبب وخصائص الألم في المخاض والولادة وذلك يكون من خلال تقييم الشامل لألم الممرضة على وضع خطة رعاية للمرأة في كل مرحلة من مراحل عملية المخاض. ألم المخاض هو ألم حاد ويظهر بعدة طرق كما موضح في الشكل **Figure (13)**.

- **أسباب ألم المخاض حسب مرحلة المخاض التي فيها الأم :**

خلال المرحله الأولى من المخاض ، يكون الألم ناتجًا عن نقص وصول الأوكسجين بصورة كافية الى عضلات الرحم ، وتراكم حمض اللاكتيك في العضلات ، وتمدد أسفل الرحم وعنق الرحم ، والضغط على أعضاء الحوض ، والضغط على الحوض العظمي. المصدر الأساسي لـ الألم هو توسع أو شد في عنق الرحم.

- **خلال المرحلة الثانية من المخاض** ، يكون الألم ناتجًا عن تمدد عضلات الحوض والضغط على منطقة العجان وعنق الرحم والإحليل والمستقيم. يُعتقد أن آلام الظهر أثناء المخاض ناتجة عن ضغط مؤخرة الجنين على العمود الفقري وحوض الأم.

- ينتج الألم **خلال المرحلة الثالثة :** من تقلصات الرحم وتوسع عنق الرحم حيث يتم ولادة المشيمة. تشعر الأم بألم فوق عظم مرفق العانة و في منطقة العجان وأسفل الظهر.

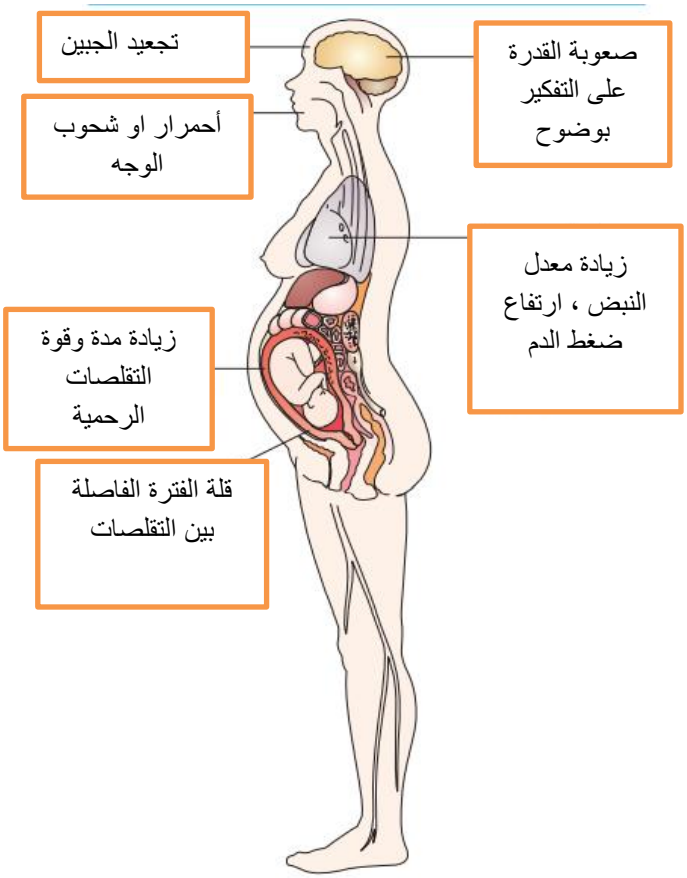


Figure (13) from [6] .

تقييم الألم (Pain Assessment):

يثير الألم استجابة في جسم الإنسان تؤدي إلى تحفيز الجهاز العصبي الودي ، مما يؤدي إلى استجابات فسيولوجية (علامات واعراض الألم) مثل ما يلي:

- القلق والخوف واليأس والأرق

- التركيز على الألم ، والبكاء ، والأنين ، والعبوس وتجهم الوجه
- انخفاض في الوظيفة المعرفية ، والتشوش الذهني ، وتغير المزاج
- زيادة معدل ضربات القلب ، أرتفاع ضغط الدم
- زيادة معدل التنفس
- قلة حركية المعدة والأمعاء
- قلة النتاج البولي ، مما يؤدي إلى احتباس البول ، وزيادة السوائل ، وتثبيط جميع الاستجابات المناعية
- التعرق
- تشنج العضلات ، مما يؤدي إلى ضعف وظيفة العضلات وعدم الحركة .

يتضمن التقييم الشامل للألم أسئلة حول الموقع ، والشدة ، والنمط ، والعوامل المسببة للألم ، بالإضافة إلى تأثير الألم على الأنشطة اليومية ، وما هي استراتيجيات التأقلم التي تم استخدامها ، والاستجابات العاطفية للألم. و التجربة السابقة مع الألم ، بالإضافة إلى العلاجات السابقة والحالية. لاحظ أن تقييم الألم يفسح المجال جيدًا للذاكرة بأستخدام مصطلح COLDSPA.

التقييم الشامل لألم		
	الوصف	السؤال
.1	خصائص الألم **charchter**	صف الألم بكلماتك الخاصة.
.2	البداية ، التوقيت **onest**	متى بدأ الألم؟
.3	الموقع **location**	اين هو مكان الألم ؟ هل يحدث في مكان آخر؟
.4	المدة الزمنية **duration**	كم من الوقت يدوم الألم ؟ هل يتكرر الألم؟
.5	شدة الألم **Severity**	ما مقدار الألم الذي تشعر به الآن؟ ما مدى سوء ذلك؟ إلى أي مدى يزعجك ذلك؟
.6	نمط الألم **pattern**	هل الألم مستمر أم متقطع؟ إذا كان الألم متقطعًا ، فكم مرة تحدث النوبات ، وإلى متى تستمر؟
.7	العوامل المرتبطة**Associated factors**	هل هناك أي أعراض أخرى متزامنة مصاحبة الألم؟
.8	العوامل المشددة والمخففة لألم	ما العوامل التي تخفف آلامك؟ ما هي العوامل التي تزيد من ألمك؟

أدوات تقييم الألم (Pain Assessment Tools) :

هناك العديد من أدوات التقييم ، بعضها خاص بأنواع معينة من الألم. يجب أن تكون الأداة واضحة وبالتالي يسهل على المرأة فهمها. يجب أن يتطلب القليل من الجهد من المرأة والممرضة. اختر واحدة أو أكثر من أدوات تقييم الألم المناسبة للمرأة. هناك العديد من مقاييس تقييم الألم ، مثل:

- مقياس البصري التناظري Visual Analog Scale (VAS)
- مقياس شدة الألم الرقمي Numeric Pain Intensity Scale (NPI)
- مقياس ألم الوجوه Faces Pain Scales (FPS)

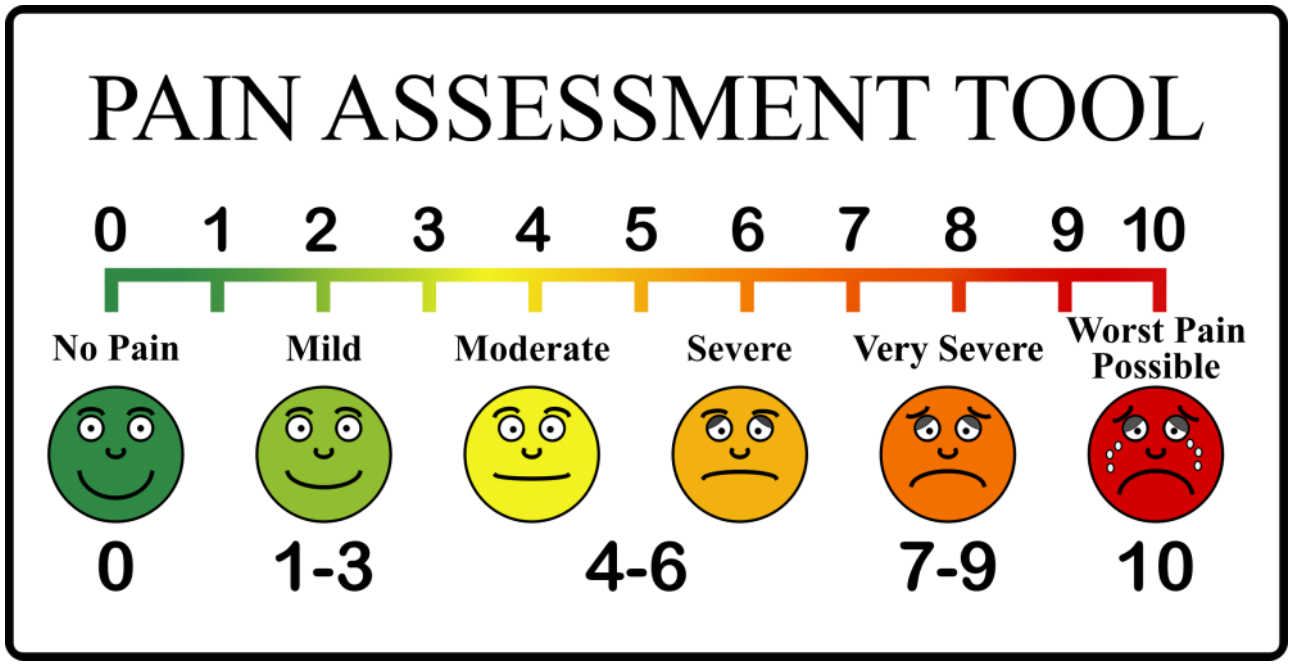


Figure [14] : https://www.idealmedicalcare.org/blog/wp

العوامل التى تؤثر على استجابة الألم

هناك العديد من العوامل التي تؤثر على أدراك الفرد لنبضات الألم. تتم هنا مناقشة بعض التأثيرات الجسدية والنفسية والأجتماعية لأم أثناء المخاض بشكل خاص :

- معدل أتساع عنق الرحم وقوة التقلصات الرحمية.
- يؤثر حجم وموقع الجنين على طول فترة المخاض.
- قلة النوم والإرهاق من المخاض الطويل يزيد من إدراك الألم.
- ثقافة المرأة تؤثر على استجابتها للمخاض والألم.
- تؤدي تجارب الولادة السابقة إلى زيادة القلق أو تقليله.
- يؤدي التحضير للولادة إلى تقليل القلق والألم.

❖ من المرجح أن يفسر أخصائي الرعاية الصحية الألم وفقًا لمعايير ثقافة الرعاية الصحية ، على الرغم من أن الثقافات الأخرى المختلفة لديها طرق مختلفة للاستجابة للألم. إن عدم وجود البكاء والأنين لا يعني بالضرورة أن الألم غير موجود ، ولا يعني وجود البكاء والأنين بالضرورة أن تخفيف الآلام مرغوب فيه في تلك اللحظة. من المهم جدًا أن تقبل الممرضة وتحترم حقيقة أن الألم هو كل ما تقوله المرأة وأن تساعدها في التعامل معه.

نظرية التحكم في البوابة (نظرية التحكم في الألم)

(Gate Control Theory Of Pain Control)

وصف كل من ميلزاك وباتريك وول **(Melzack & Wall 1965)** نظرية التحكم في البوابة ، وتنص هذه النظرية على :

(أن الحبل الشوكي يحتوي على بوابة عصبية تتحكم في نقل إشارات الألم إلى الدماغ ، أما تمنع إشارات الألم أو تسمح لها بالاستمرار في الوصول إلى الدماغ.).حيث يمكن **تطبيق نظرية التحكم في الألم في عملية المخاض والولادة** . لذلك ، ينتقل الألم من الرحم المتقلص عبر الألياف العصبيه الى الحبل الشوكي حيث توجد فيه بوابه التحكم بنقل النبضات العصبيه ومن ثم إلى الدماغ على طول ألياف عصبية ذات قطر صغير. تنتقل النبضات العصبية التي يتم نقلها على طول الألياف العصبية ذات القطر الصغير إلى الدماغ بشكل أبطأ من النبضات المنقولة على طول الألياف العصبية ذات القطر الكبير. لقد ثبت أن الألياف العصبية ذات القطر الكبير يتم تحفيزها عن طريق اللمس والتدليك والفرك. ولذلك، يمكن أن يحل نشاط بديل محل انتقال الإحساس بالألم ، **وبالتالي إغلاق بوابة التحكم في الحبل الشوكي وتقليل نبضات الألم التي تنتقل إلى الدماغ**. بناءً على هذه الفرضية ، يمكن أن يكون لتطبيق الضغط على مناطق معينة من الجسم ، أو التحفيز الجلدي مثل التدليك اللطيف للبطن ، أو استخدام الحرارة أو البرودة تأثير مباشر على إغلاق البوابة ، مما يحد بعد ذلك انتقال الألم.

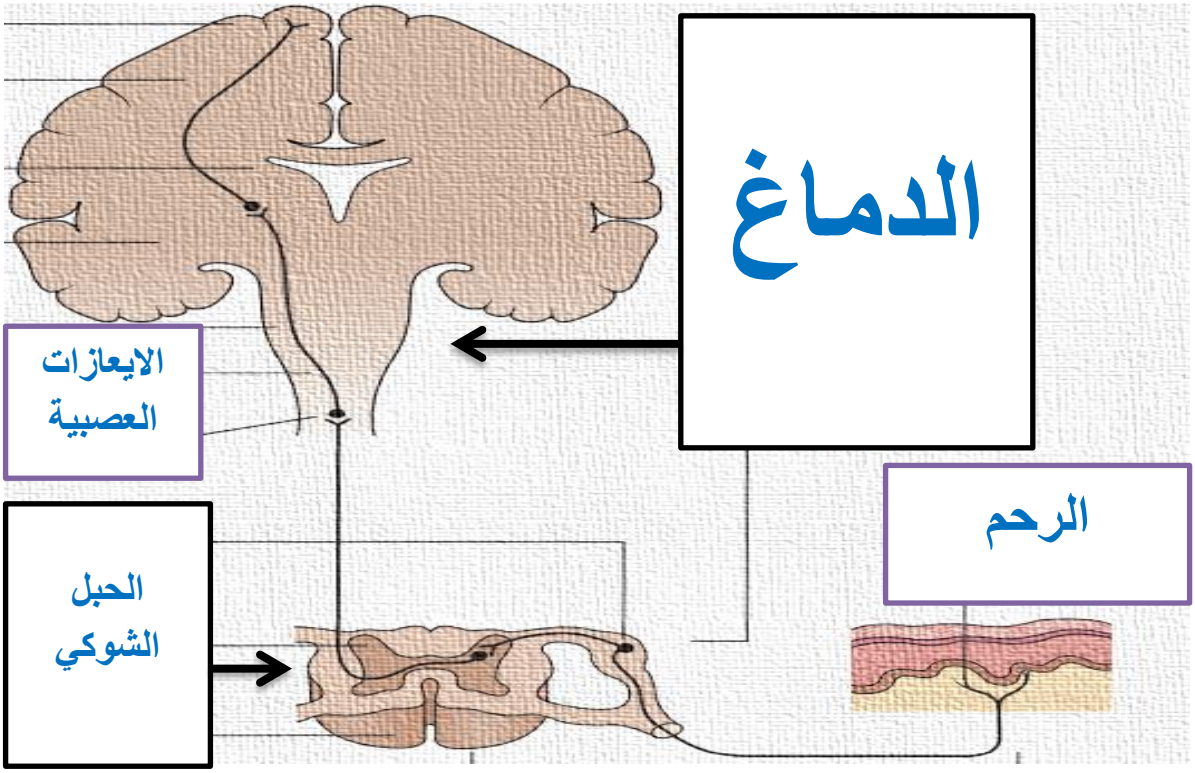


Figure (15) from [4]: المسار الحسي للتراكيب التي تدخل في ادراك الألم

طرق تسكين ألألم أثناء المخاض

بدءًا من أواخر الخمسينيات من القرن الماضي ، تم تطوير العديد من الطرق المحددة الغير دوائية لتقليل الألم أثناء المخاض. وشملت هذه الأساليب طريقة لاماز **(Lamaze)** و طريقة ديك ريد **(Dick-Read)** وطريقة برادلي **(Bradley)** ، وكلها سميت على اسم العلماء الذين طوروها. لذلك، من الضروري أن يكون لدى القابلات معرفة عن مجموعة من الاستراتيجيات لإدارة الانزعاج والألم أثناء المخاض . إن الرغبة في تجربة مجموعة متنوعة من الاستراتيجيات ، وتكييف تلك الفعالة ، وتعديل تلك غير الفعالة والتخلي عنها هي جوانب مهمة من الرعاية. عادة ، لا توجد استراتيجية واحدة تعمل لفترة طويلة جدًا في المخاض ، مما يجعل المرونة والقدرة على التكيف من الصفات الرئيسية لقابلات العاملات في وحده ماقبل الولاده وغرفة الولادة .

تعتمد معظم أساليب تسكين الألم على ثلاث مقدمات:

1. يمكن تقليل الشعور بعدم الراحة أثناء المخاض إذا دخلت المرأة في المخاض وهي على علم بما يحدث واستعدت بتمارين التنفس لاستخدامها أثناء التقلصات .

2. يمكن تقليل الشعور بعدم الراحة والألم أثناء المخاض إذا تم استرخاء بطن المرأة والسماح للرحم بالارتفاع بحرية مع حدوث تقلصات.

3. يمكن تغيير إدراك الألم من خلال تقنيات الإلهاء التي تنقل تركيز المرأة بشكل فعال إلى أشياء أخرى غير الألم أو من خلال نظرية السيطرة على البوابات لإدراك الألم.

1. طريقة برادلي Bradley method (مدرب الشريك) :

تعتمد طريقة برادلي للولادة ، التي ابتكرها **روبرت برادلي** ، على فرضية أن الحمل والولادة عمليات طبيعية بهيجة وأن شريك المرأة يجب أن يلعب دورًا مهمًا أثناء الحمل والولادة وفترة مابعد الولادة . أثناء الحمل ، تمارس المرأة تمارين شد العضلات وتحد أو تحذف الأطعمة التي تحتوي على مواد حافظة أو دهون حيوانية أو نسبة عالية من الملح. تخفيف ألم المخاض عن طريق التنفس البطني. بالإضافة إلى ذلك ، يتم تشجيعها على المشي أثناء المخاض (برادلي ، 1996) .

2. طريقة ديك ريد (Dick-Read method):

تعتمد طريقة ديك ريد على نهج اقترحه **جرانتلي ديك ريد** ، وهو طبيب إنجليزي. الفرضية أن الخوف يؤدي إلى التوتر الذي يؤدي إلى الألم. إذا استطاعت المرأة منع الخوف من الحدوث ، أو كسر السلسلة بين الخوف والتوتر أو التوتر والألم ، فيمكنها حينئذٍ تخفيف ألم تقلصات المخاض. تحقق المرأة عدم الخوف من خلال التثقيف حول الولادة والاسترخاء وتخفيف الألم من خلال التركيز على التنفس البطني أثناء الانقباضات (ديك ريد ، 1987).

3. طريقة لاماز (Lamaze method):

- قام دكتور **فيرناند لاماز** ، طبيب التوليد الفرنسي ، بترويج طريقة التحضير للولادة هذه في الستينيات. طريقة لاماز هي طريقة للوقاية النفسية ("منع العقل")، لأنها تركز على منع الألم أثناء المخاض (الوقاية) عن طريق استخدام العقل (النفس). التي تشجع على استخدام تقنيات محددة للتنفس والاسترخاء. يعتقد لاماز أن قهر الخوف من خلال المعرفة والدعم أمر مهم. وبذلك تستند طريقة لاماز على نظرية التحكم في البوابات العصبية لتسكين الآلام .

- تم تطوير هذه الطريقة في روسيا بناءً على دراسات تكييف بافلوف (عملية تدريب أو تعويد شخص على التصرف بطريقة معينة أو قبول ظروف معينة). ولكن تم تعميمها من قبل الطبيب الفرنسي فرديناند لاماز. يتم تنظيم الفصول الرسمية من قبل لاماز الدولية أو الرابطة الدولية لتعليم الولادة.

- إن طريقة لاماز ليست طريقة لمساعدة المرأة على التعامل مع المخاض فقط ، بل هي فلسفة شاملة لكيفية الاستمتاع بتجربة ولادة آمنة ومرضية. لذلك، تتم مناقشة المعلومات اللازمة لإرشاد المرأة ومرافقها خلال فترة الحمل مثل التغذية قبل الولادة ، والتمارين ، بالإضافة إلى معلومات لإعداد الزوجين لظروف الولادة غير المتوقعة (على سبيل المثال ، سوء تمثيل الجنين أو الولادة القيصرية أو الحاجة إلى التخدير). وكذلك يتم عرض الاقتراحات الخاصة باللوازم التي قد ترغب امرأة أو زوجان في حزمها مقدمًا وإحضارها إلى المستشفى من أجل الولادة.

المستلزمات التي يجب استخدامها أثناء المخاض
 **مرطب الشفاه لمنع جفاف الشفاه**
رولة صغيرة مغطاة بقطعة قماش ناعمة لتدليك الظهر
 **الجوارب الدافئة لراحة**
كتاب ، صور معينه جهاز محمول لأستماع الموسيقى المحببه لأم لتمضية الوقت وتشتيت الانتباه عن الألم
ساعة اليد لتوقيت التقلصات الرحمية
وسادة إضافية لوضعيه مريحة لأم في المخاض و لزيادة الاسترخاء
بودرة أطفال لتقليل الاحتكاك الناتج عن التدليك
وجبات خفيفة (على سبيل المثال ، التفاح أو رقائق البطاطس) من أجل الطاقة

في طريقة لاماز ، تم التأكيد على ستة مفاهيم رئيسية:

1. يجب أن يبدأ المخاض من تلقاء نفسه ، لا أن يتم تحريضه بشكل مصطنع
2. يجب أن تكون المرأة قادرة على التحرك بحرية أثناء المخاض ، وألا تكون مقيدة بالسرير.
3. أن تتلقى المرأة دعماً مستمراً أثناء المخاض.
4. ليست هناك حاجة إلى تدخلات روتينية مثل السوائل الوريدية.
5. يجب السماح للمرأة بتولي وضع غير مستلق (على سبيل المثال ، وضع قائم أو جانبي) عند الولادة.
6. يجب أن يكونا الأم والطفل معًا بعد الولادة ، مع إتاحة فرصة غير محدودة للرضاعة الطبيعية.

تقنيات طريقه لاماز المستخدمه خلال المخاض

تتضمن طريقة لاماز عدة تقنيات التي تستخدمها الأم أثناء المخاض:

1. الاسترخاء (الاسترخاء الواعي) Relaxation :

هو إرخاء أجزاء الجسم حتى لا تظل المرأة متوترة وتسبب إجهاد عضلي وإرهاق غير ضروري أثناء المخاض. تمارس هذا أثناء الحمل وكذلك أثناء المخاض عن طريق إرخاء مجموعة من العضلات ، ثم مجموعة أخرى ، وأخرى حتى يرتاح جسدها تمامًا. يركز الشخص الداعم لها على ملاحظة أعراض التوتر مثل تجعد الحاجب ، أو قبضة اليد ، أو ذراع ممسوكة بشدة. من خلال وضع اليد على منطقة الجسم المتوترة أو إخبار المرأة بالاسترخاء في تلك المنطقة ، يساعدها الشخص الداعم على تحقيق الاسترخاء التام. ومن فوائد الاسترخاء على الأم والجنين يعزز تدفق الدم في الرحم ، وبالتالي يحسن من وصول الأوكسجين للجنين ،ويعزز تقلصات الرحم الفعالة ويقلل من التوتر الذي يزيد من إدراك الألم (انخفاض مستوى التحفيز الذي يعتبره المرء مؤلمًا) ويقلل من تحمل الألم (أقصى قدر من الألم على استعداد لتحمله) يقلل من التوتر الذي يمكن أن يمنع نزول الجنين.

من الجوانب المهمة في تقنية الاسترخاء :

1. **البيئة المحيطة** المريحة تدعم الاسترخاء. يمكن للممرضة تقليل المهيجات ، مثل الأضواء الساطعة ، ويمكنها ضبط درجة حرارة الغرفة. تقوم الموسيقى أيضا بإخفاء الضوضاء خارج الغرفة ويكون الاسترخاء هو الاساس في بدء ممارسة التنفس والتركيز. وإنه تشتيت يصرف انتباه المرأة عن الأحاسيس الجسدية. قد يكون للتلفزيون نفس التأثير على بعض النساء

2. **الراحة العامة :** إن تعزيز الراحة الشخصية للمرأة يساعدها على التركيز على إدارة الألم أثناء المخاض . يتضمن ذلك إجراءات لزيادة الراحة وتقليل تأثير المهيجات ، مثل البيئة الحارة أو الفراش المبلل. يؤدي تغيير الوضعيات حسب رغبة الأم ، والمشي في كثير من الأحيان إلى تحسين قدرة المرأة على تحمل مشقة المخاض.

Figure (16) from [6].

Figure (17) from [6].

Figure (18) from [6].

2. التدليك (effleurage): إحدى التقنيات الإضافية لتشجيع الاسترخاء وتخفيف الألم وتحسين تدفق الدم والأكسجين في الأنسجة في طريقة لاماز ، وهي كلمة فرنسية تعني "تدليك البطن الخفيف" ويقصد به:

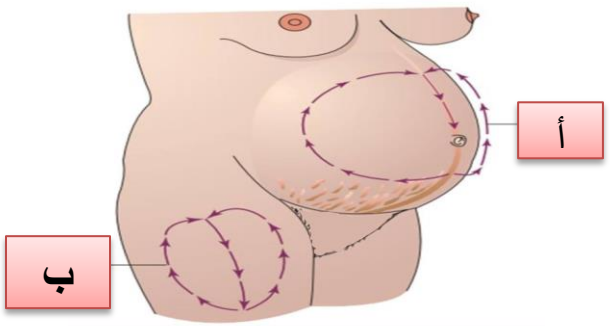
هوتحفيز جلدي أذا يعتبر شكل من أشكال التدليك بحركة دائرية ، ويتم ذلك بضغط كافٍ فقط لتجنب الدغدغة. للقيام بذلك ، ترسم المرأة نمطًا على بطنها بأطراف أصابعها وتدلك بحركة دائرية خفيفة (الشكل). يجب أن يظل معدل التدليك ثابتًا على الرغم من تغير معدلات التنفس. يُعد التدليك بمثابة تقنية إلهاء ويقلل من انتقال المحفزات الحسية من جدار البطن الى الدماغ . يعمل التدليك كشكل من أشكال تخفيف الآلام عن طريق زيادة إنتاج الإندورفين في الجسم. يقلل الإندورفين من انتقال الإشارات بين الخلايا العصبية وبالتالي يقلل من إدراك الألم. نظرًا لأن مستقبلات اللمس تذهب إلى الدماغ أسرع من مستقبلات الألم ، فإن التدليك - في أي مكان في الجسم - يمكن أن يمنع وصول رسالة الألم إلى الدماغ. إذا كانت هناك جهاز موضوع على البطن ، فيمكن أن يتم التدليك بشكل أفضل أو أدنى منه أو حتى على الفخذين. يمكن أيضًا أن يقوم الشخص المرافق لأم بإجرائه. شكل آخر من أشكال التحفيز الجلدي هو تدليك الظهر أو الضغط على المنطقة العجزية.

أنماط التدليك :

(أ) أثناء تقلصات الرحم ، تتبع المرأة نمطًا معين من حركات الدائرية على بطنها العاري بأصابعها.

(ب) في حالة استخدام المراقبة الإلكترونية للجنين ، يمكن إجراء التدليك على الفخذ.

Figure (19) from [6] : أنماط التدليك.



A  B 

Figure (20) : A from [6], B from [1]

3. التركيز أو التخيل (focusing or imagery): التركيز باهتمام على شيء ما (يسمى أحيانًا "التركيز الحسي") هو طريقة أخرى لمنع المدخلات الحسية من الوصول إلى قشرة الدماغ. تجلب المرأة إلى المخاض صورة لشريكها أو أطفالها ، أو تصميم رسومي ، أو مجرد شيء يروق لها (**الشكل Figure 10**) . إنها تركز عليه أثناء الانقباضات. احرصي على عدم الوقوف في خط رؤية المرأة أثناء التقلصات وكسر هذا التركيز . تستخدم نساء أخريات الصور من خلال تخيل أنهن في مكان هادئ مثل الشاطئ يشاهدن الأمواج تتدحرج إليهن أو يسترخين على أرجوحة الشرفة . حاول ألا تطرح أسئلة أو تتحدث إلى النساء باستخدام هذه التقنية وإلا ستفقد تركيزهن.

Figure (21) from [6].

4. تقنية التنفس:

تقنية التنفس فعالة في تحقيق الاسترخاء وتسكين الآلام ، ويوفر التنفس المزيد من الأكسجين للأم والجنين. إذا كانت المرأة تركز على التنفس ، فمن غير المرجح أن تركز بشكل كامل على ألم التقلصات. غالبًا ما يتم تدريس تقنيات التنفس في فصول تعليم الولادة.

- **أنماط التنفس المتبعة في طريقة لاماز:**

- التنفس المطهر (cleansing breathing) : لبدء جميع تمارين التنفس ، تتنفس المرأة بعمق ثم تزفر بعمق **(نفسًا نقيا).** وكذلك لإنهاء كل تمرين تنفس ، تكرر هذه الخطوة. إنها خطوة مهمة يجب اتخاذها لأنها تحد من إمكانية فرط التنفس (نفث الكثير من ثاني أكسيد الكربون) أو نقص التهوية (عدم استنشاق كمية كافية من ثاني أكسيد الكربون) ، وكلاهما يمكن أن يحدث مع أنماط التنفس السريع ، وبالتالي فهو يساعد على ضمان إمدادات الأكسجين الجنين. إذا أصيبت المرأة بالدوخة أثناء المخاض من فرط التنفس (تُصاب بقلاء تنفسي) ، فيمكن أن يساعد التنفس في كيس ورقي ، حيث يتسبب في إعادة تنفس ثاني أكسيد الكربون الزفير.
- المستوى الأول: التنفس البطيء (slow-paced breathing)

تستنشق المرأة ببطء من خلال أنفها وتزفر من خلال شفتيها .معدل التنفس عادة مايكون **من 6 إلى 9 نبضة في الدقيقة**. يتم استخدام هذا المستوى في التقلصات الرحم المبكرة.

- المستوى الثاني: التنفس السطحي أو مايسمى بالتنفس المعدل (modified-paced breathing):

تستنشق المرأة وتزفر من خلال فمها بمعدل **أربعة أنفاس كل 5 ثوانٍ**. يمكن تسريع هذا المعدل إلى نفسين في الثانية لمساعدتها على الاسترخاء. حيث يكون التنفس أخف وأسرع من المستوى 1. يجب أن يتمدد القفص الصدري ولكن يجب أن يكون خفيفًا جدًا بحيث لا يتحرك الحجاب الحاجز. ومعدل التنفس يصل إلى 40 في الدقيقة. يعتبر هذا مستوى جيداً من التنفس للتقلصات عندما يكون اتساع عنق الرحم بين 4 و 6 سم.

- المستوى الثالث : التنفس المنتظم (patterned-paced breathing)

يكون التنفس أكثر سطحية وسرعة. معدل التنفس هو من 50 إلى 70 نفسًا في الدقيقة. مع زيادة سرعة التنفس ، يجب أن يكون الزفير أقوى قليلاً من الاستنشاق للسماح بتبادل جيد للهواء ومنع نقص التهوية . يساعد إبقاء طرف لسانها على سقف فمها في منع جفاف الغشاء المخاطي للفم أثناء التنفس السريع.

- المستوى الرابع: pant-blow" breathing pattern "نمط "النفخ

أخذ ثلاثة أو أربعة أنفاس سريعة ، ثم زفير قوي. نظرًا لأن هذا النوع من التنفس يبدو وكأنه قطار (نفس - نفس – نفس - زفير) .

- المستوى الخامس: Second stage breathing

تكون طريقة التنفس في هذا المستوى بصورة هادئة ومستمرة وسطحية للغاية ، ويكون معدل التنفس حوالي 60 نفسًا في الدقيقة. يمكن استخدام هذا المستوى أثناء تقلصات الرحم القوية أو أثناء المرحلة الثانية من المخاض لمنع المرأة من الدفع قبل التوسيع الكامل لعنق الرحم. يمكنهم ممارسة هذا المستوى من انماط التنفس مع وضعية جيدة ومريحة للدفع اثناء المخاض (القرفصاء، الجلوس في وضع مستقيم ، الاتكاء على الشريك) . هناك عدة أسباب تجعل المرأة لا يجوز تشجيعها أو السماح لها بممارسة الدفع خلال المخاض . الأسباب الأكثر شيوعا لمقاومة الرغبة في الدفع تشمل عندما لا يتم توسيع عنق الرحم بالكامل .

Figure (22) from [6].

كيفية استخدام مستويات التنفس أثناء المخاض:

- يوضح الشكل(Figure 13) استخدام مستويات التنفس. . عندما تبدأ التقلصات الرحمية ، تبدأ المرأة تأخذ نفسا نقيا(cleansing breathing) ، ثم تتنفس نمط المستوى الاول ؛ عند بداية التقلصات الرحم تكون خفيفه وتكون الأم لا تشعر بألم شديد ، وبالتالي لا تحتاج إلى تغيير نمط التنفس .

- مع تقدم المخاض ، تصبح تقلصات الرحمية أقوى وأطول . لذلك يكون نمط التنفس كالتالي: تأخذ المرأة نفسا نقيا (cleansing breathing) ، ثم تبدأ في التنفس المستوى الأول (slow-paced breathing) (3 أنفاس) ؛ ثم تنتقل إلى المستوى الثاني (Modified-paced breathing) (4 إلى 6 أنفاس)؛ وبعدها تنتقل إلى المستوى الثالث (patterned-paced breathing) (10 أنفاس).
- عندما تقل شدة التقلصات الرحمية. تنتقل المرأة إلى المستوى 2 (4 إلى 6 أنفاس) ، ثم إلى المستوى 1 (3 أو 4 أنفاس) . وبعدها تأخذ نفسًا نقيا أخيرًا.
- أثناء المخاض الفعلي ، يمكن للقابلة معرفة مدى قوة التقلصات عن طريق وضع يدها على بطنها أو مراقبة جهاز مراقبة تقلص الرحم.
- يمكن للقابلة إخبار المرأة بموعد تغيير مستويات التنفس اعتمادًا على تقدير القابلة لقوة تقلصات الرحم بكلمات مثل ، "بداية التقلصات ، أصبحت أقوى ، الآن تصبح أضعف ، تختفي". في الوقت الذي يسبق الانتقال إلى المرحلة الثانية من المخاض ، عندما تكون التقلصات أطول وأقوى ، قد تحتاج المرأة إلى استخدام تنفسها من المستوى 4 breathing pattern pant-blow نمط "النفخ"
- يمكن للمرأة التي يمكنها أداء مستويات مختلفة من التنفس والحفاظ على الاسترخاء أن تطمئن إلى أنها مستعدة للتعامل مع جميع تقلصات المخاض حتى المرحلة الثانية من المخاض.

1. مع تقدم المخاض ، تصبح تقلصات الرحمية أقوى وأطول . لذلك يكون نمط التنفس كالتالي:

تأخذ المرأة نفسا عميقا نقيا (cleansing breathing)

ثم تبدأ في

التنفس المستوى الأول (Slow-paced breathing) (6 أنفاس 31)

ثم تنتقل إلى

المستوى الثاني (Modified-paced breathing) (4 إلى 6 أنفاس)

وبعدها تنتقل إلى

المستوى الثالث (Patterned-paced breathing) (10 أنفاس)

2. عندما تقل شدة التقلصات الرحمية :

المستوى الثاني (4 إلى 6 أنفاس) ← المستوى الاول (3 أو 4 أنفاس) ← نفسًا نقيا أخيرًا

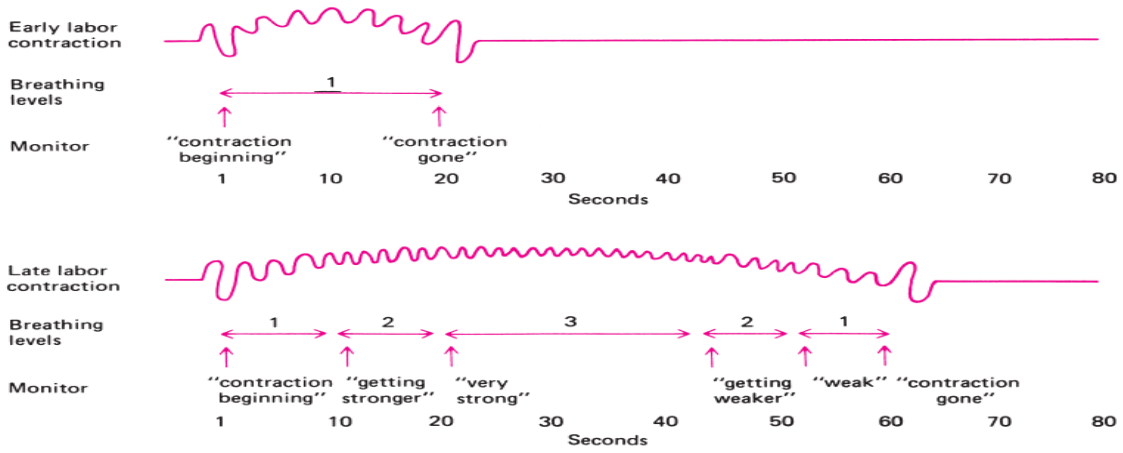


Figure (23) from [6].

فوائد طريقة لامازعلى الأم الحامل والجنين:

- الهدف من طريقة لاماز هو بناء ثقة الأم في قدرتها على الولادة ، وفهم كيفية التعامل مع الألم بطرق تسهل المخاض وتعزز الراحة ، بما في ذلك تقنيات الاسترخاء والحركة والتدليك.
- تقليل النزيف ما بعد الولادة.
- يصبح التنفس استجابة تلقائية للألم.
- التنفس يزيد من الاسترخاء ويمكن استخدامه للتعامل مع ضغوط الحياة اليومية.
- إن إيقاع التنفس الثابت يهدئ الأم أثناء المخاض.
- يمنح التنفس الأم إحساسًا بالعافية وقدرًا من السيطرة و التمكين خلال المخاض.
- التنفس يحقق الهدف من التقلصات الرحم ، مما يجعلها أكثر إنتاجية.
- التنفس يوفر المزيد من الأكسجين للأم والجنين.
- التدليك يعزز الاسترخاء وتسكين الآلام.

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طريقة لامازا أثناء المخاض
The Lamaze method
during labor

Appendix D1

Questionnaire of the Study- Arabic

إستبيان

أضع بين ايديكم الكريمة هذه الأستبانة لبحث الماجستير بعنوان:
(اثر البرنامج التعليمي على معارف القابلات فيما يتعلق بطريقة لاماز أثناء المخاض)

- **هل توافقين على الأشتراك في هذه الدراسة العلمية كعينة .وستبقى المعلومات التي تم الحصول عليها سرية .سيتم استخدام المعلومات التي تم جمعها لغرض البحث العلمي فقط .**
- **نعم** ☐ **كلا** ☐

الجزء الاول:

العبارات التالية تتعلق بالمتغيرات الديموغرافية والوظيفية للمشاركين .

رقم الأستمارة : ☐ التاريخ: ☐

١. العمر (بالسنوات): ☐

٢ . المستوى التعليمي :

- أعدادية تمريض ☐
- معهد تمريض ☐

٣. عدد سنوات العمل في المستشفى: ☐

٤. عدد سنوات العمل في جناح ما قبل الولادة / صاله الولادة : ☐

٥. هل أشتركت في دورة تدريبيه تخص العناية التمريضية بالألم أثناء فترة المخاض؟

- **نعم** ☐ **لا** ☐
- أذا كانت الأجابة (نعم) : عدد الدورات ☐
- مكان الدورات : داخل العراق ☐ خارج العراق ☐

الجزء الثاني : معارف القابلات حول طريقة لاماز أثناء المخاض.

- اقرأ الأسئلة بعناية ، ويرجى وضع علامة صح (√) في الفراغ للحصول على إلاجابة المناسبة.

	اختاري الجواب الصحيح لكل فقرة و ضرورة عدم ترك سؤال لطفا	
ت	السؤال	الجواب
.1	أي من الفقرات التالية يعد صحيحا فيما يتعلق بمدة الحمل الطبيعية؟	أ. ٢٨ أسبوع (.....) ب. ٣٢ أسبوع (.....) ج. ٣٦ أسبوع (.....) د. ٤٠ أسبوع (.....)
.2	تعرف الولاده الطبيعية بأنها :	أ. أخراج نواتج الحمل القابلة للحياة من خلال المهبل. (.....) ب. إخراج نواتج الحمل القابلة للحياة من خلال الرحم. (.....) ج. إخراج نواتج الحمل القابلة للحياة من خلال البطن. (.....) د. إخراج نواتج الحمل قبل 28 أسبوعًا. (.....)
.3	كم عدد مراحل المخاض الطبيعي؟	أ. خمسة مراحل (.....) ب. أربعة مراحل (.....) ج. ثلاثة مراحل (.....) د. ستة مراحل (.....)

.4	تبدأ المرحلة الأولى من المخاض مع بداية :	أ. محو عنق الرحم (.....) ب. تقلصات الرحم الحقيقية (.....) ج. تمزق الأغشية (.....) د. العرض الدموي (السدادة المخاطية) (.....)
.5	أي من الفقرات التالية يعد صحيحا بأتجاه الخصائص الحقيقية لألم الولادة ؟	أ. الألم من البطن والظهر ثم الفخذ (.....) ب. الألم من الظهر والبطن ثم الفخذ (.....) ج. يشعر بالألم أسفل البطن ثم الفخذ (.....) د. يشعر بالألم من أسفل الظهر إلى الفخذ(.....)
.6	أي مما يلي يساهم بشكل رئيسي في حدوث الألم في المرحلة الأولى من المخاض؟	أ. شد الأنسجة العجانية (.....) ب. انقباض الأوعية الدموية (.....) ج. نقص وصول الأوكسجين بصورة كافية الى عضلة الرحم (.....) د. ضغط جزء من الجنين على الأنسجة الحوض(.....)
.7	أي مما يلي لا يعد من تقنيات طريقة لاماز؟	أ. تقنيات التنفس (.....) ب. التركيز والتخيل (.....) ج . الاسترخاء (.....) د. التحفيز الكهربائي للعصب (.....)
.8	أهم جانب من جوانب الرعايه التمريضيه خلال المرحلة الأولى من الولاده هو:	أ. الرعايه المعقمة (.....) ب. الدعم النفسي (.....) ج. التقليل من ألم المخاض (.....) د. الحفاظ على درجة حرارة جسم الام (.....)
.9	الأجراء الذي يجب على القابلة القيام به أولاً عندما تشكو المرأة من ألم المخاض هو:	أ. تقييم شدة الألم (.....) ب. إعطاء تخدير (.....) ج. حقن المسكنات (.....) د. إجراء الولاده (.....)
.10	أي من العوامل التالية التي يمكن أن تزيد من ألم المخاض هي:	أ. تجربة مريرة من الحمل السابق (.....) ب. الحمل غير الطبيعي (.....) ج. المعرفة القليله بأتجاه الولاده (.....) د. كل ما ورد اعلاه (.....)

.11	أي من الاجزاء التالية تحتوي على الخلايا العصبية الخاصة التي تشكل البوابه العصبية التي تمر من خلالها محفزات الألم للوصول الى الدماغ	أ. المخ (.....) ب. المخيخ (.....) ج. الحبل الشوكي (.....) د. النخاع المستطيل (.....)
.12	طريقة لاماز تعني:	أ. التدخلات الطبية (.....) ب. التدخلات الطبية مع طرق أخرى (.....) ج. طرق أخرى غير التدخلات الطبية (.....) د. طرق تسكين الألم (.....)
.13	كيف تساعد طريقة لاماز في تقليل ألم المخاض؟	أ. عن طريق منع مستقبلات الألم (.....) ب. عن طريق سد بوابة الألم (.....) ج. عن طريق منع النبضات العصبية (.....) د. استخدام التدخلات الطبية (.....)
.14	طريقة لاماز تشمل:	أ. التنفس والاسترخاء (.....) ب. العلاج بالتدليك (.....) ج. التركيز أو التخيل (.....) د. كل ما ورد اعلاه (.....)
.15	أي من الفقرات التاليه تعد من المبادئ الاساسيه في طريقه لاماز؟	أ. يجب أن يبدأ المخاض من تلقاء نفسه ، لا أن يتم تحريضه بشكل مصطنع. (.....) ب. يجب أن تكون المرأة قادرة على التحرك بحرية أثناء المخاض ، لا يقتصر على الفراش. (.....) ج. يجب أن تتلقى النساء دعمًا مستمرًا أثناء المخاض (.....) د. كل ما وردااعلاه (.....)
.16	من مميزات طريقة لاماز أثناء المخاض هي:	أ. ذات تكلفة منخفضة (.....) ب. طريقه فعاله (.....) ج. اجراء غير جراحي (.....) د. كل ما ورد اعلاه (.....)
.17	تقنيات الاسترخاء بأي طريقة فهي تساعد الحامل على :	أ. تعزز تدفق الدم في الرحم (.....) ب- تقليل مستوى الألم والقلق (.....) ج. بلوغ حالة من الهدوء (.....) د. كل ما سبق (.....)

.18	إن إحدى تقنيات الاسترخاء قبل المخاض وأكثرها فعالية هي:	أ. التنفس العميق (.....) ب. كمادات حاره (.....) ج. كمادات بارده (.....) د. العلاج بالموسيقى (.....)
.19	أي من أنواع انماط التنفس التالية تستخدم في طريقة لاماز أثناء المخاض؟	أ. التنفس البطيء (.....) ب. التنفس المنتظم (.....) ج. التنفس المطهر(تنفس الشهيق والزفير بعمق) (.....) د. كل ما سبق (.....)
.20	كم عدد مستويات التنفس المستخدمة في طريقه لاماز هي :	أ. ٣ مستويات ب. ٦ مستويات ج. ١٠مستويات د. ٥ مستويات
.21	جميع تقنيات التنفس من لاماز تبدأ وتنتهي بـ:	أ. التنفس البطيء (.....) ب. التنفس المنتظم (.....) ج. التنفس المطهر(تنفس الشهيق والزفير بعمق) (.....) د. التنفس العميق
.22	كيف تكون تمارين التنفس اثناء المخاض مفيدة لأم :	أ. تخفف القلق والألم (.....) ب. تزيد من شده التقلصات الرحميه (.....) ج. تزيد من توتر الأم (.....) د. تخفف الألم فقط (.....)
.23	كيف تكون تمارين التنفس اثناء المخاض مفيدة للجنين؟	أ. تقلل من نقاط مقياس أبكار لطفل حديث الولاده (.....) ب. تقلل من الدورة الدموية الجنينية (.....) ج. توفر المزيد من الأكسجين للجنين (.....) د. يؤدي إلى ضائقة جنينية (تعب الجنين) (.....)
.24	ما هو الوقت المثالي لممارسة تمارين التنفس بمختلف مستوياته اثناء المخاض؟	أ. في نهاية كل تقلص للرحم (.....) ب. في بداية ونهاية كل تقلص للرحم (.....) ج. في بداية كل تقلص للرحم (.....) د. بين التقلصات الرحمية (.....)
.25	كم معدل تنفس المرأة في المستوى الأول من أنماط التنفس في طريقة لاماز؟	أ. بمعدل ٤-٧ نفس بالدقيقه (.....) ب. بمعدل ٣-٥ نفس بالدقيقه (.....) ج. بمعدل ٦- ٩ نفس بالدقيقه (.....) د. بمعدل ١٢- ٢٤ نفس بالدقيقه (.....)

.26	كم معدل تنفس المرأة في المستوى الخامس من أنماط التنفس في طريقة لاماز؟	أ. بمعدل ٤٠ - ٥٠ نفس بالدقيقه (.....) ب. بمعدل ٦٠ نفس بالدقيقه (.....) ج. بمعدل ٢٠ – ٣٠ نفس بالدقيقه (.....) د. بمعدل ٧٠ نفس بالدقيقه (.....)
.27	ما هو تسلسل أنماط التنفس عند بدء الانقباضات الرحميه ؟	أ- تنفس الشهيق والزفير بعمق ، مستوى التنفس 1 ، المستوى 2 ، المستوى 3. (.....) ب. المستوى التنفس 1 ، المستوى 2 ، المستوى 3 ، تنفس الشهيق والزفير بعمق . (.....) ج. تنفس الشهيق والزفير بعمق ، المستوى التنفس 1 ، المستوى 2 ، المستوى 3 ، تنفس الشهيق والزفير بعمق . (.....) د. تنفس الشهيق والزفير بعمق ، المستوى 3
.28	ما هو تسلسل أنماط التنفس عندما تقل الانقباضات الرحميه؟	أ. تحول إلى المستوى 3 ، المستوى 2 ، تنفس الشهيق والزفير بعمق. (.....) ب. تحول إلى المستوى 2 ، المستوى 1 ، تنفس الشهيق والزفير بعمق. (.....) ج. تحول إلى مستوى التنفس 1 ، المستوى 2 ، تنفس الشهيق والزفير بعمق (.....) د. تحول الى مستوى 2 ، تنفس الشهيق والزفير بعمق (.....)
.29	متى يجب على المرأة الحامل استخدام المستوى 4 من مستويات التنفس أثناء المخاض؟	أ. عندما تكون التقلصات الرحميه هي الأطول والأقوى (.....) ب. عندما تقل التقلصات الرحميه (.....) ج. عندما تبدأ التقلصات الرحميه (.....) د. بين التقلصات الرحميه (.....)

.30	اي من الفقرات التاليه تعد من فوائد المشي أو الجلوس باستقامة :	أ. يسرع عمليه الولاده (.....) ب. يؤخرعمليه الولاده (.....) ج. يؤدي إلى الولادة المبكرة (.....) د. يؤدي إلى سوء تمثيل الجنين (.....)
.31	اي من الفقرات التاليه تعد من فوائد تغيير الوضعيه والحركة للأم أثناء المخاض:	أ. تعزيز تدفق الدم في الرحم (.....) ب. يمنع تشنج العضلات (.....) ج. يسرع عمليه الولاده (.....) د. يمنع نزول الجنين (.....)
.32	يعرف التدليك بأنه :	أ. تمسيد العضلات (.....) ب. الضغط الخفيف على عضلات الجسم (.....) ج . التدليك القوي للبطن (.....) د. اللمس السطحي الخفيف للبطن والظهر والفخذ (.....)
.33	يعتبر التدليك إحدى تقنيات :	أ. تقنية تشتيت الانتباه (إلهاء) (.....) ب. طريقة الاستشفاء (.....) ج.تقنية الجس العميق (.....) د. تقنية النقر المباشر (.....)
.34	يساعد التدليك في التقليل من ألم المخاض عن طريق:	أ. منع إنتاج الأدرينالين (.....) ب. تحفيز إفراز الأندورفين (.....) ج. تعزيز تقلصات الرحم (.....) د- تعزيز استرخاء العضلات (.....)
.35	يعرف التركيز أو التخيل بأنه :	أ. التحرك بحرية أثناء المخاض (.....) ب. استخدام العلاجات التكميلية أو العشبية (.....) ج. تشتت الانتباه عن الألم وتوجيهه إلى محفز آخر مثل التدليك، الموسيقى (.....) د. تغيير الوضعيه (.....)

.36	ما هو المبدأ الرئيسي للتركيز أو التخيل؟	أ. الحفاظ على المدخلات الحسية من الوصول إلى قشرة الدماغ. (.....) ب. يجب أن تتلقى النساء دعمًا مستمرًا أثناء المخاض. (.....) ج. ليست هناك حاجة إلى تدخلات روتينية مثل السوائل الوريدية (.....) د. تقلصات المخاض ليست مؤلمة (.....)
.37	أفضل أنواع التنفس أثناء المرحلة الثانية من المخاض هو:	أ. التنفس البطيء (.....) ب. التنفس العميق (.....) ج. المستوى الخامس من انماط التنفس (.....) د. التنفس المنتظم (.....)
.38	من أسباب عدم تشجيع المرأة أو السماح لها بالدفع اثناء المخاض:	أ. تمزق الاغشيه (السلى) (.....) ب. عدم توسع عنق الرحم بشكل كامل (.....) ج. محو عنق الرحم بشكل كامل (.....) د. زياده التقلصات الرحميه المنتظمه (.....)
.39	أي من الوضعيات التالية هي الوضعية الجيدة للأم عند الدفع أثناء المخاض:	أ. القرفصاء والجلوس في وضع مستقيم (.....) ب. وضعيه الاستلقاء (.....) ج. وضعيه الجثوم (.....) د. وضعية الوقوف (.....)

Appendix D2

Questionnaire of the Study- English

PART - I

Instructions:

The following statements relate to the demographic and occupational variables of the participants.

Please mark the answers that you think are appropriate. The obtained information will be kept confidential. The information collected will be used for the purpose of scientific research only.

Code No: *Date:*

1. Age (in years)

2. educational level:

1. Diploma in midwifery

2. midwifery secondary school

3. Number of years worked in hospital:

4. Number of years working in the antenatal / labor ward:

5. Have you participated in a training course on nursing care for pain during labour؟

- *Yes* *No*

• *If the answer is (yes): the number of courses* ☐

• *Place of courses:*

inside Iraq ☐ *outside Iraq* ☐

PART – II

Midwives' knowledge of the Lamaze method during labour.

• *Read the questions carefully, and please put a check mark (√) in the space to get the appropriate answer.*

Choose the correct answer for each paragraph and the necessity of not leaving a question, please		
No.	Question	Answer
1.	Which of the following paragraphs is correct regarding the normal duration of pregnancy?	a. 28 weeks b. 32 weeks c. 36 weeks d. 40 weeks.
2.	Normal labor is known as:	a. It is the expulsion of viable products of conception through the vagina. b. It is the expulsion of viable products of conception through the uterus c. It is the removal of viable products of conception through the abdomen. d. It is the expulsion of products of conception before 28 wks.
3.	How many stages are there in normal labor?	a. five stages b. four stages c. three stages d. six stages

4.	The first stage of labor starts with the onset of:	a. Cervical effacement b. True uterine contractions c. Rupture of membranes d. bloody Show (mucous plug)
5.	Which of the following paragraphs is correct in terms of the true characteristics of labor pain?	a. Pain is from the abdomen, back, and then thigh b. Pain is from the back, abdomen, and then thigh c. Pain is felt over the lower abdomen and then thigh d. Pain is felt from the lower back to thigh
6.	Which of the following is a major contributor to pain in the first stage of labor?	a. The stretching of the perineal tissue. b. The constriction of the blood vessels. c. The anoxia to the cells. d. The pressure of the fetal presenting part against the tissues.
7.	Which of the following is not a technique of the Lamaze method?	a. Breathing techniques b. Focusing and imagery c. Relaxation d. transcutaneous electrical nerve stimulation (TENS).
8.	The most important aspect of nursing care during the first stage of labor is:	a. aseptic management b. psychological support c. minimizing labor pain d. maintaining body temperature
9.	What the midwife should do first when a woman complains of labor pain is:	a. assess severity of pain b. administer anesthetics c. inject analgesics d. conduct delivery
10.	Which of the following factors can make labor pain worse:	a. bitter experience of previous pregnancy b. having an abnormal pregnancy c. low knowledge d. all of the above

11.	Which of the following parts contains special neurons that make up the neural gateway through which pain stimuli pass to the brain	a. cerebrum b. cerebellum c. spinal cord d. medulla oblongata
12.	The Lamaze method means :	a. Medical interventions b. Medical interventions along with other methods c. Methods other than medical interventions d. Pain relief methods
13.	How does Lamaze method during labor help in minimizing labor pain?	a. By blocking pain receptors b. By blocking pain modulation gate c. By blocking nerve impulses d. By using medical interventions
14.	The Lamaze method involves:	a. breathing and relaxation b. massage therapy c. focusing or imagery d. all of the above
15.	Which of the following paragraphs is one of the basic principles of the Lamaze method?	a. Labor should begin on its own, not be artificially induced. b. Women should be able to move about freely during labor, not be confined to bed. c. Women should receive continuous support during labor. d. All of the above
16.	Among the advantages of the Lamaze method during labor are:	a. Low cost b. Effective method c. A non-surgical procedure d. All of the above
17.	Relaxation techniques in any way that help the pregnant woman to:	a. relax b. reduce pain and anxiety level c. attain a state of increased calmness d. all of the above

18.	One of the most effective pre-labor relaxation techniques is:	a. deep breathing b. hot compresses c. cold compresses d. music therapy
19.	Which of the following types of breathing patterns are used in the Lamaze method during labor?	a. Slow-Paced Breathing b. Patterned-Paced Breathing c. cleansing breathing d. all above
20.	How many levels of breathing are used in the Lamaze method:	a. 3 levels b. 6 levels c. 10 levels d. 5 levels
21.	All levels of the Lamaze Breathing Technique begin and end with:	a. Slow-Paced Breathing b. Patterned-Paced Breathing c. cleansing breathing d. deep breathing
22.	How can breathing exercises during labor be beneficial for a mother:	a. relieves anxiety and pain b. relaxes the mother c. redirects the mother d. reduces pain
23.	How are breathing exercises beneficial to the fetus?	a. decreases APGAR score b. decreases fetoplacental circulation c. provides more oxygen to the baby d. leads to fetal distress
24.	What is the ideal time to do breathing exercises at all levels during labour?	a. at the end of each contraction b. at the beginning and end of each contraction c. at the beginning of each contraction d. in between contractions
25.	How much does a woman's respiration rate in the first level of the Lamaze method respiration patterns?	a. At a rate of 4-7 breaths per minute b. At a rate of 3-5 breaths per minute c. At a rate of 6-9 breaths per minute d. At a rate of 12-24 breaths per minute

26.	What is the respiratory rate of a woman in the fifth level of the Lamaze method of breathing patterns?	a. At a rate of 40-50 breaths per minute. b. At a rate of 60 breaths per minute. c. At a rate of 20-30 breaths per minute. d. At a rate of 70 breaths per minute.
27.	What is the sequence of breathing patterns when contractions begin?	a.cleansing breath, level 1 breathing, level 2, level 3. b. level 1 breathing, level 2, level 3, cleansing breath. c. cleansing breath, level 1 breathing, level 2, level 3, cleansing breath.
28.	What is the sequence of breathing patterns when contraction is lessening?	a. shift down to level 3 breathing, level 2, cleansing breath. b. shift down to level 2 breathing, level 1, cleansing breath. c. shift down to level 1 breathing, level 2, cleansing breath.
29.	When should a pregnant woman use level 4 of breathing levels during labor?	a. When the uterine contractions are the longest and the strongest. b. When uterine contractions decrease. c. When uterine contractions begin. d. Between uterine contractions.
30.	Which of the following paragraphs is one of the benefits of walking or sitting upright:	a. speeds the rate of labor b. delays labor c. leads to premature delivery d. leads to malpresentation of the fetus
31.	Which of the following paragraphs is considered one of the benefits of changing the position and movement of the mother during labor:	a. enhance uterine blood flow b. prevents muscle spasms c. speeds up the rate of labor d. prevents fetal descend

32.	effleurage is defined as:	a. Muscle stroking b. Light pressure on the muscles of the body c. Strong abdominal massage d. Light superficial touch of the abdomen, back, and thigh
33.	effleurage is considered one of the techniques:	a. distraction technique b. Recovery method c. deep palpation technique d. direct percussion technique
34.	effleurage helps in minimizing labor pain by :	a. stimulating release of endorphins b. blocking the production of adrenaline c. promoting uterine contractions d.promoting muscle relaxation
35.	Focusing or Imagery is mean:	a. Move freely during labor. b. Use of complementary or herbal remedies c. Distracting the attention from the pain and directing it to another stimulus such as massage, or music. d. Changing position
36.	What is the main principle of Focusing or Imagery?	a. keeping sensory input from reaching the cortex of the brain. b. Women should receive continuous support during labor. c. No routine interventions such as intravenous fluid are needed. d. Labor contractions aren't painful
37.	The best type of breathing during the second stage of labor is:	a. slow-paced breathing b. deep breathing c. The fifth level of breathing patterns. d. Patterned-Paced Breathing
38.	Reasons why a woman is not encouraged or allowed to push during labor:	a. Rupture of the amniotic membranes b. The cervix is not fully dilated c. Complete effacement of the cervix d. Increasing regular uterine contractions

39.	Which of the following is a good position for the mother when pushing during labor:	a. squatting, sitting upright position b. supine position c. all fours position d. standing position

Appendix E

Expert's Panel

قائمة أسماء لجنة الخبراء

ت	اسم الخبير	العنوان الوظيفي	الشهادة	الاختصاص العلمي	سنوات الخدمة	مكان العمل
.1	د. علي كريم خضير	استاذ	دكتوراه في علم التمريض	تمريض صحه النفسيه والعقلية	30	جامعة كربلاء / كلية التمريض
.2	د. ربيعة محسن علي	أستاذ	دكتوراه في علم التمريض	تمريض صحة الام والوليد	39	جامعة بغداد / كلية التمريض
.3	د. شكريه شدهان جياد	أستاذ	دكتوراه في علم التمريض	تمريض صحة الام والوليد	32	جامعة الفرات الاوسط التقنيه
.4	د. فاطمة مكي محمود	استاذ مساعد	دكتوراه في علم التمريض	تمريض البالغين	27	جامعة كربلاء / كلية التمريض
.5	د. حسن عبد الله عذبي	استاذ مساعد	دكتوراه في علم التمريض	تمريض البالغين	19	جامعة كربلاء / كلية التمريض
.6	د. صافي داخل نوام	استاذ مساعد	دكتوراه في علم التمريض	تمريض صحه النفسيه والعقلية	15	جامعة كربلاء / كلية التمريض
.7	د. حوراء حسين غافل	استاذ مساعد	دكتوراه في علم التمريض	تمريض صحة الأم والوليد	16	جامعة بغداد / كلية التمريض
.8	د. حميدة هادي عبد الواحد	استاذ مساعد	بورد عربي وبورد عراقي	اختصاص طب نسائيه وتوليد	29	مستشفى النسائيه والتوليد التعليمي/محافظة كربلاء
.9	د.سراب نصر فاضل	مدرس	دكتوراه في علم التمريض	تمريض صحة الأم والوليد	12	جامعة بغداد / كلية التمريض
.10	د. عبلة موسى عبدالله محمد	رئيس ممرضين جامعيين أقدم أختصاص	دكتوراه في علم التمريض	تمريض صحة الأم والوليد	31	وزارة الصحة/دائرة الامور الفنية قسم الشؤون التمريض
.11	د. بتول جمعه المالكي	طبيبب استشاري	بكالوريوس طب وجراحه عامه/دبلوم عالي نسائيه وتوليد	اختصاص طب نسائيه وتوليد	22	مستشفى النسائيه والتوليد التعليمي/محافظة كربلاء

المستخلص

غالبًا ما تستخدم القابلات تدابير غير دوائية (مثل تقنيات لاماز) لتسهيل الراحة للمرأة أثناء المخاض. ومع ذلك ، فإن المبادئ التوجيهية لاستخدام هذه التدابير عادة ما تكون غير كافية أو غائبة. الامر الذي دفع الباحثة الى دراسة تقييم أثر البرنامج التعليمي على معارف القابلات بطريقة لاماز.

أجريت دراسة شبه تجريبية على مجموعة من القابلات في محافظة كربلاء باعتماد الاختبار القبلي والبعدي. استخدام عينة غرضيه مكونة من 60 قابلة مقسمة إلى مجموعتين. تم إجراء البرنامج التعليمي على 30 قابلة وتم مقارنتهن بـ 30 قابلة في المجموعة الضابطة. تم التحقيق من مصداقية الاستبيان من خلال دراسة تجريبية ثم عرضها على الخبراء لإثبات موثوقيتها. بلغ إجمالي عدد الفقرات المدرجة في الاستبيان 39 فقرة. جمعت البيانات باستخدام طريقة التقرير الذاتي وحللت من خلال تطبيق نهج تحليل البيانات الإحصائية الوصفي والاستنتاجي.

تشير نتائج الدراسة إلى أن (83.3٪) من القابلات أظهرن نقصاً في المعرفة ، وبعد تطبيق البرنامج التعليمي وإجراء الاختبار البعدي، عبرت القابلات عن معارف جيدة بنسبة (86.7٪). لا توجد فروق ذات دلالة إحصائية بين مجموعة الدراسة ومجموعة الضابطة في الاختبار القبلي للقياس (p=0.129). بينما، هناك فرق ذو دلالة إحصائية بين مجموعة الدراسة ومجموعة الضابطة في الاختبار البعدي للقياس بعد تنفيذ البرنامج التعليمي (p=0.000).

خلصت الدراسة إلى أن هناك تحسنا في معارف القابلات بعد الاختبار البعدي للمجموعة التجريبية بسبب البرنامج التعليمي لطريقة لاماز. وأوصت الدراسة بتدريب القابلات من خلال تنفيذ مثل هذا البرنامج التدريبية الذي يساعد بالفعل على تنمية معارفهن.

جامعة كربلاء

كلية التمريض

أثـر البرنـامج التعليمي على معارف القابلات المتعلقة بطريقة لاماز أثناء المخاض

رسـالة تقدمت بها:

شيـرين عـويز حسـن

الى مجـلس كلـية التمـريض/ جامعة كـربلاء

وهـي جزء من متطلبات نيل درجة الماجستير في علوم التمريض

أشـــــراف

م.د. سـاجدة سـعدون عـليوي

ذو الحجة ١٤٤٣ هـ تموز ٢٠٢٢ م