



University of Kerbala

College of Nursing

**Effectiveness of an Educational Program on Nurses'
Knowledge regarding Active Management of Third
Stage of Labor to Control of Postpartum Hemorrhage**

Thesis Submitted

by

Noor Ali Mohammed

to

**The Department of Maternal and Neonatal Nursing
College of Nursing / University of Kerbala**

in

Partial Fulfillment of the Requirements for the

Master's Degree in the Nursing Sciences

Supervised By

Assist. Prof. Dr. Sajidah Saadoon Oleiwi PhD

Shaban- 1445 A.H

March -2024A.D

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

مِنَ أَجْلِ ذَلِكَ كَتَبْنَا عَلَى بَنِي إِسْرَائِيلَ أَنَّهُ مَن قَتَلَ نَفْسًا
بِغَيْرِ نَفْسٍ أَوْ فَسَادٍ فِي الْأَرْضِ فَكَأَنَّمَا قَتَلَ النَّاسَ جَمِيعًا
وَمَن أَحْيَاهَا فَكَأَنَّمَا أَحْيَا النَّاسَ جَمِيعًا ۚ وَلَقَدْ جَاءتْهُمْ رُسُلُنَا
بِالْبَيِّنَاتِ ثُمَّ إِنَّ كَثِيرًا مِّنْهُمْ بَعْدَ ذَلِكَ فِي الْأَرْضِ لَمُؤْسِفُونَ

(32)

"صدق الله العلي العظيم"

سورة المائدة اية (32)

Supervisor Certification

I certify that this thesis, which entitled *(Effectiveness of an Educational Program on Nurses' Knowledge regarding Active Management of Third Stage of Labor to control of Postpartum Hemorrhage)*, submitted by **(Noor Ali Mohammed)**, was prepared under our supervision at the college of nursing, university of Kerbala in partial fulfillment of the requirements for the degree of master in nursing sciences.



Supervisor

Assist Prof Dr. Sajidah Saadoon Oleiwi

College of Nursing / University of Kerbala

Date: 31 / 3 / 2024

Approval Certification

After reviewing the thesis (*Effectiveness of an Educational Program on Nurses' Knowledge regarding Active Management of Third Stage of Labor to control of Postpartum Hemorrhage*), we certify that it fulfills all the requirements for awarding the degree of master in nursing science.


Head of Maternal and Neonatal Nursing Department

Assist Prof Dr. Sajidah Saadoon Olewi

College of Nursing / University of Kerbala

31 / 3 / 2024


Associate Dean for Scientific Affairs and Higher Studies


Assist. Prof. Dr. Hassan Abdullah Athbi

College of Nursing / University of Kerbala

31 / 4 / 2024

Committee Certification

We are, examining committee, certify that we have read this thesis (Effectiveness of an Educational Program on Nurses' Knowledge regarding Active Management of Third Stage of Labor to Control of Postpartum Hemorrhage), which is submitted by (Noor Ali Mohammed) from the department of Maternal and Neonatal Nursing, and we have examined the student in its contents, and what is related to it and we decide that it is adequate for awarding the degree of master in nursing.

Member 

Assist Prof Dr. Nuha Adel Ibrahim

College of Nursing

University of Baghdad

Date: / /2024

Member 

Prof. Fatma Makee Mahmood

College of Nursing

University of Kerbala

Date: / /2024


Chairman

Prof. Khamees Bandar Obaid

University of Kerbala

Date: / /2024

Approved by the Council of the Faculty of Nursing


Signature

Assist. Prof. Dr. Selman Hussain Faris

Dean College of Nursing / University of Kerbala

/ /2024

Dedication

In the name of God, the most gracious, the most merciful.

I begin thanking God Almighty for the many blessings He has bestowed upon me.

To the One who sent to the worlds a mercy, a guide, and a teacher...the Noble Prophet Muhammad; The best blessings and peace be upon him and his family.

To the one who illuminated the path of knowledge and knowledge for me, and spent his life raising and caring for me; And my dear mother; Mercy, lasting health and wellness to my father and mother, my brothers and all members of my family.

I also dedicate this thesis to my travel companion and my assistant in completing my thesis, to my esteemed professor (Dr. Sajidah Saadon Oleiwi).

I dedicate this thesis to my children, Muhammed Sadiq and Fatima Colleagues and friends...I present to you this humble work.

Acknowledgment

Great thanks to our god 'Allah' most glorious, most merciful.

Firstly, I would like to thank all the people who contributed in one way or another to the work described in this thesis. My sincere appreciation to (Assist. Prof. Dr. Selman Hussain Faris), Dean of the College of Nursing at the University of Karbala and Assistant Dean for Scientific Affairs (Assist. Prof. Dr. Hassan Abdullah Athbi) and all members of the college for their friendliness and support. I would like to express my sincere gratitude and appreciation to my lecture supervisor (Assist Prof Dr. Sajidah Saadoon Oleiwi.) for her wonderful guidance, encouragement, patience and support throughout the course of this thesis.

I would also like to thank all the workers in the Maternal and Newborn Health Nursing Department at the College of Nursing - University of Karbala, who were inexhaustible sources of science and who taught me a lot.

Special thanks to the Maternity Teaching Hospital/Nursing Affairs Department for their dedicated efforts and cooperation.

Thanks to the nursing staff for their cooperation.

Finally, many thanks and gratitude to my family, my beloved mother, who was the best support for me to complete my thesis.

Abstract

Postpartum hemorrhage is a significant maternal morbidity and mortality issue, primarily occurring during the third stage of labor, requiring critical interventions. The study aims to assess the efficacy of an educational program for nurses to enhance their understanding of patient care during the third stage of labor.

In the city of Karbala, a quasi-experimental study design was carried out from December 1, 2021, to July 3, 2022. The Holy Governorate of Kerbala Obstetrics and Gynecology Teaching Hospital served as the study's location. Convenience non-probability sampling uses pre- and post-test to select a group of 60 nurses to ensure obtaining representative and accurate data.

A pre- and post-intervention first and second intervention design was used using a validated questionnaire, including a sample of nurses working in maternity units. 13 experts from various disciplines reviewed the questionnaire to ensure its validity. and increase the questionnaire's credibility, descriptive and inferential statistical data analysis techniques were applied to assess outcomes. According to the study's findings a mean score of 41.12 (± 9.09) for education revealed that nurses in the study group had substantial gaps in their understanding of Phase III management. With an average score of 61.67 (± 8.85), their understanding significantly improved after taking the first posttest (posttest 1). At the one-month mark (posttest2), nurses' mean score of 60.96 (± 9.75) on the knowledge test was comparable to what was shown in the first posttest.

According to the pre-test analysis, there is no statistically significant difference in the pre-test knowledge levels of study and control groups ($p = 0.807$). However, significant statistical discrepancies were observed between these groups at the post-tests for the first ($p = 0.000$) and second (p

= 0.000) educational program proved to be a valuable tool in enhancing nurses' knowledge about effective management during the third stage of labor as a strategy to control postpartum hemorrhage. The study recommends adding the effective management course for the third stage of childbirth to the curricula of nurses in health institutes.

List of Contents

NO.	Subject	Page NO.
A	Acknowledgment	I
B	Abstract	II-III
C	List of Contents	IV-V
D	List of Appendices	VI
E	List of Figures	VII
F	List of Tables	VIII
G	List of Abbreviations	VIII
H	List of statistical Symbols	IX
Chapter One		2-8
1.1	Introduction	2-4
1.2	Important of the study	4-6
1.3	Statement of the Problem	6
1.4	Objectives of the Study	7
1.5	Hypotheses	7
1.6	Definitions of Terms	7
1.6.1	Third stage of labor	7
1.6.2	Active Management of Third Stage of Labor	8
1.6.3	Postpartum hemorrhage (PPH)	8
Chapter Two		
2.1	Overview of Third Stage of Labor	10
2.1.1	Stages of Labor	11
2.1.2	Signs of Labor	12
2.2	Hemorrhage	13
2.2.1	Postpartum Hemorrhage	13-15
2.2.2	Risk Factors of Postpartum Hemorrhage	15-18
2.2.3	Epidemiology of Postpartum Hemorrhage	18
2.2.4	Significance of PPH in maternal health	19
2.2.5	Early (primary) postpartum hemorrhage	20

2.2.6	Causes of Early Postpartum Hemorrhage	21-28
2.3	Late postpartum hemorrhage	28-29
2.4	Historical Perspective of the Third Stage of Labor	29
2.5	Evolution of practices in the management of the third stage of labor	30
2.6	Importance of effective management of the third stage of labor	31-33
2.7	Effective measures during the third stage of labor	33
2.8	Previous intervention program on active management of the third stage of labor	34
2.9	Theoretical Framework	35
2.10	Components of Active Management	36-38
2.11	Active Management of Third Stage of Labor among Nurses	38-42
2.12	Implications for nursing practice and policy	42-44
2.13	Challenges and Barriers of Implementing Intervention	44
2.14	Previous Studies	45-55
Chapter Three		
3.1	Study Design	57
3.2	Administrative Arrangements	58
3.3	Setting of the Study	58-59
3.4	Sample of study	59
3.5	Steps of the Study	60
3.6	Group Assignment	61-62
3.7	Study Instrument	63
3.8	Validity of the Questionnaire	63
3.9	Pilot Study	64-65
3.10	Ethical Considerations	65
3.11	Methods of Data Collection	66
3.12	Statistical Analysis Approach	67-68
Chapter Four		
	Results of the Study	70-82
Chapter Five		

5.1	Socio-demographic Characteristics	84-88
5.2	Nurses Knowledge regarding Active Management of Third Stage of Labor in Study Group	88-91
5.3	Comparison the Nurses Knowledge between Periods of Measurements in Study Group	91-92
5.4	Nurses Knowledge in Study Group and Control Group	92-94
5.5	Comparison the Nurses Knowledge between Study Group and Control Group	94-97
5.6	Association between Study Variables in Predict the Nurses Knowledge Before Education Program	97-98
5.7	Association between Study Variables in Predict the Nurses Knowledge After Education Program	98-99
Chapter Six		
6.1	Conclusions	101
6.2	Recommendations	102
	References	104-133

List of Appendices

Appendix	Title
A1	Administrative agreements
A2	Ethical consideration
B	Assessment Nurses Knowledge regarding Active Management of Third Stage of Labor
C	Expert's Panel
D	Lectures of An Instructional Program
E	Questionnaire
F	Questionnaire of the Study English

List of Figures

Figure	Title	Page NO.
2.3	The common causes of postpartum hemorrhage	21
3.1	Steps of quasi-experimental study	58
4.1	Nurses Knowledge between Periods of Measurement in Study Group	74
4.2	Nurses Knowledge between Periods of Measurement in Control Group	79
4.3	Nurses Knowledge between Periods of Measurement in Study and Control Groups	80

List of Tables

Table NO.	Title	Page NO.
3.1	Reliability of the Studied Questionnaire (n=10)	65
4.1	Distribution of Study Sample by their Socio-Demographic Variables (SDVs)	70
4.2.1	Nurses Knowledge regarding Active Management of Third Stage of Labor in Study Group Responses	71
4.2.2	Overall Nurses Knowledge regarding Active Management of Third Stage of Labor in Study Group	73
4.2.3	Comparison the Nurses Knowledge between Periods of Measurements in Study Group	74
4.3.1	Nurses Knowledge regarding Active Management of Third Stage of Labor in Control Group Responses	75
4.3.2	Overall Nurses Knowledge regarding Active Management of Third Stage of Labor in Control Group	77

4.3.3	Comparison the Nurses Knowledge between Periods of Measurements in Control Group	78
4.4	Statistical Differences in Nurses Knowledge between Study and Control Groups with regards Periods of Measurement	79
4.5	Simple Liner Regression among the Study Variables in Predict the Nurses Knowledge in Pre-test among Study Group	80
4.6	Simple Liner Regression among the Study Variables in Predict the Nurses Knowledge in Post-test I among Study Group	81
4.7	Simple Liner Regression among the Study Variables in Predict the Nurses Knowledge in Post-test II among Study Group	81

List of Abbreviations

Items	Meaning
AMTSL	Active management of the third stage of labor
ACOG	American College of Obstetricians and Gynecologists
BEmONC	Basic Emergency Obstetric and Newborn Care
CME	Continuing medical education
CCT	Controlled cord traction
DCC	Delayed cord clamping
HCPs	Healthcare professionals
ICM	International Confederation of Midwives
MCHIP	Maternal and Child Health Integrated Program
ml	Milliliter
PPH	Postpartum haemorrhage
ACNM	The American College of Nurse-Midwives
CINAHL	The Cumulative Index of Nursing and Allied Health Literature
FIGO	The International Federation of Gynecology and Obstetrics
UM	Uterine massage
WHO	World health organization

List of statistical Symbols

Items	Meaning
A	Alpha
&	And
X	Chi-square
Df	Degree of freedom.
=	Equal
\geq	Equal and less than
\leq	Equal and more than
H	High
et al	Italia (others)
L	Low
M	Mean
M	Moderate
MCQs	Multiple choice Questions
N	Number
%	Percentage
P-value	Probability Value
Sig	Significant
SDVS	Socio-Demographic Variables
\pm SD	Standard Deviation
SD	Standard Deviation
SPSS-20	Statistical Package of Social Sciences 20

Chapter One

Introduction

Chapter One

1.1 Introduction

The most prevalent cause of maternal death and easily preventable is the postpartum hemorrhage (PPH), all women who progress past 20 weeks with their pregnancies are vulnerable to PPH and its sequelae, it occurs in 1-6% of deliveries and is the most common factor for morbidity and mortality during childbirth, while maternal mortality is critically declining worldwide, hemorrhage due to lack of infrastructure, shortage of trained midwives and poor active third stage management- kills mothers in developing countries especially those from sub-Saharan Africa (Muthoni et al., 2021).

According to the World Health Organization (WHO), around 295,000 mothers die annually due to pregnancy and childbirth furthermore, approximately 2.5 million premature neonate deaths and another two million lost before birth happen annually on the earth level. (Nishimwe et al., 2021).

The main cause of maternal mortality in low-income countries is postpartum hemorrhage, which accounts for approximately 20% of all cases worldwide (than et al., 2017).

Postpartum hemorrhage is the leading preventable cause of maternal morbidity and mortality globally, postpartum hemorrhage is the cause of 20% maternal mortality in developing countries and about eight percent globally, postpartum hemorrhage is the leading cause of maternal mortality in affluent nations that majorly accounts for 11% death mother cases within United States (Bienstock et al., 2021).

Postpartum hemorrhage refers to the blood loss after delivery that goes beyond 500 mL for a vaginal childbirth and more than 1000 ml in case of giving birth via cesarean section, the proposed alternative measures for defining and diagnosing PPH indicated by changes in hematocrit, transfusion demands, rate of blood loss as well as vital signs' change are further

complicated due to the nature or urgency that characterizes this condition is frequently divided into two groups: immediate, that occurs within 24 hours of birth and delayed or late stage occurring more than a day after the delivery. PPH can also be categorized as being in the third or fourth stage, based on whether it occurs before or after placenta extraction (Agrawal et al., 2016).

Postpartum hemorrhage is described as over 500ml of vaginal bleeding within hours after a natural birth, another 1 liter or more following caesarian section and any loss which threatens circulation (WHO, 2016).

Primary postpartum hemorrhage is characterized by bleeding within 24 hours of delivery that results primarily from uterine atony, coagulation impairment, and retained placenta, secondary PPH may arise twelve hours to 12 weeks after delivery it is mostly caused by infection and retained fetal tissue (Nuumbosho, 2020).

Postpartum hemorrhage causes considerable morbidity and mortality in reality, it is the second only to thromboembolic events in both Europe and North America as a cause of pregnancy-related death, negative effects of PPH may be hypovolemic shock, blood transfusion complications; surgical injuries fever renal and hepatic failure acute respiratory distress syndrome distributed intravascular coagulopathy infertility Sheehan's Syndrome (Oyelese et al., 2007).

At the end of third stage that begins with total fetal delivery, both placenta and attached membranes are delivered completely. From a realistic point of view, the doctor realizes that such difficulties remain probable even after placenta delivery, third and fourth stages of labor are usually uneventful but complications may still occur during this period, one of the major third stage of labor issues feared is postpartum hemorrhage annually, it is estimated that between 0.5 million to half a million mothers lose their life during giving birth on the planet and severe hemorrhage contributes with

about twenty five percent of these fatalities with reference to (Madhulika et al., 2019).

Preventative oxytocic medications after birth can reduce postpartum blood pressure by 40%, but they can also cause side effects like eclampsia and intracerebral hemorrhage, the active management of the third stage of labor (AMTSL) aims to decrease postpartum hemorrhage frequency. AMTSL consists of a uterotonic administration during delivery or after expulsion, continuous cord traction, and massage after removal. However, the relationship between AMTSL and other techniques remains unclear (Schorn et al., 2017).

The primary aim of uterotonic medication therapy is to prevent postpartum hemorrhage, thus, according to their guidelines on the integrated treatment of pregnancy and childbirths issued by WHO which recommend uterotonic 10 international units oxytocin once every hour (WHO, 2015).

To conduct the controlled cord traction, one hand is placed on to hold symphysis pubis providing counter-traction and another hand draws on a rope. Controlled cord traction is only recommended in settings where competent delivery attendants are present, while use of uterotonics has been viewed as a standard intervention for the prevention of PPH (Muzeya & Julie, 2020).

1.2. Importance of the study:

Postpartum hemorrhage is an obstetric crisis or postpartum haemorrhaging. It is a primary cause of maternal death within 24 hours after vaginal delivery or caesarean section, other major causes of maternal mortality include infections, prolonged labor, hypertensive disorders and unsafe abortions , in Sub-Saharan Africa (33.9%) and South East Asia (30.8%), haemorrhage along with hypertensive disorders are the major causes of maternal death In Tanzania PPH and hypertensive disorders contribute to 25% of maternal deaths (Angelina et al., 2019).

Primary postpartum hemorrhage is defined as bleeding from or into the vaginal tract, with more than 50% of total blood volume lost within 24 hours of childbirth; the kind, amount, and rate at which it occurs all determine how it appears, nearly 135 million kids are born worldwide each year, with the African area accounting for approximately 45 million and South Asia accounting for around 41 million (Scholar ,2021).

Almost two-thirds of deliveries are done in places where the death risk due to postpartum haemorrhage (PPH) is greatest and maternal/newborn mortality rates would be intolerable, despite the significant regional variation, PPH affects between 3 and 5 percent of infants born. PPH problems contribute to about 25% of the 30 k maternal deaths annually (Begum et al., 2022).

The third stage of labor, between birth and placental delivery, involves the contracting of the fundus and the separation of the placenta from the uterine wall, this stage can be elongated after 30 minutes, indicating potential issues anemia can interfere with lactation, septicemia, and even death, the Active Management of Third Stage of Labor (AMTSL) aims to enhance contractions and prevent postpartum hemorrhage by inducing uterine atony (Swamy & Choudhary, 2021).

This is the opposite of what happens in developed nations, where childbirth kills more than 50.k women per year. among them, twenty-five to sixty percent of deaths are caused by PPH, however, developing nations such as Uganda are in the majority of these deaths ,the uterus is the biggest type of PPH that affects close to 90 percent in dieting women (Ahmed,2018).

According to the ICM and FIGO in 2003, the standard AMTSL frameworks consisted of three pieces, these were the administration of uterotonic drugs and cord clamping within a minute after birth; controlled cord traction for active placenta removal when signs of separation were present; and immediate UM immediately following placental expulsion,

followed by gradually decreasing intervals every 15 minutes for the first two hours after delivery, updated recommendations in 2006 delayed cord clamping for 1 to 3 minutes after birth, therefore boosting the infant's iron status (Ramadhani et al.,2020).

1.3. Statement of the Problem

While there is training in Namibia that has Emergency Obstetric and Neonatal Care (EmONC), which also includes Active Management of the Third Stage of Labour, maternal deaths due to hemorrhage are still high Omusati region is first when it comes to maternal mortality having reported 78 deaths between years 2010-2012 living the region as a leading contributor of country's maternal mortality rate.

The commonly used management packages for the third stage of labour are active and expectant. Active management combines various preventive measures, after undergoing placental birth, the WHO recommends uterine massage followed by controlled cord traction and injection of oxytocin in expectant management, interventions in active treatment are held back until the need arises, AMTSL is a simple and feasible procedure for maternal mortality, which has been applied over the past decade to reduce PPH.

According to the WHO Making Pregnancy Safer Technical Update on prevention of postpartum hemorrhage by AMTSL, "AMTSL should be practiced at every birth by all skilled attendants to avoid avert, the Africa Region has the highest rates of maternal and neonatal death and morbidity among low-middle income regions" as was mentioned already the maternal mortality rate in Tanzania is 454 per 100,000. Training of service providers in Basic and Advanced Life Saving Techniques has been a key area that the Ministry of Health and Social Welfare has addressed, still, no information is available on the competence of those providing care to pregnant women and new-borns or outcomes following these trainings.

1.4. Objectives of the Study

The objectives of the study are the following:

1. Assess nurses' knowledge regarding active management of the third stage of labor to control postpartum hemorrhage
2. Determine the effectiveness of an educational program on nurses' knowledge regarding active management of the third stage of labor to control postpartum hemorrhage.
3. Find out the relationship between the effect of educational program with their 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. Third stage of labor

a. Theoretical

Refers to the interval of time between the placenta's full delivery and the infant's full delivery (Shikongo, 2019).

b. Operational

This study is primarily focused on the third stage of labor because that is when the AMTSL is expected to occur

1.6.2. Active Management of Third Stage of Labor

a. Theoretical

The delivery of the placenta with controlled cord traction (with counter pressure), multiple uterotonic agent injections prior to placental delivery, and cord clamping (Shikongo, 2019).

b. Operational

The aim of this research is to examine and assess nurses' comprehension of the application of AMTSL.

1.6.3. Postpartum hemorrhage (PPH)**a. Theoretical**

Is commonly understood to be blood loss that surpasses 500 milliliters (mL) in the case of vaginal birth and 1000 mL in the circumstance of cesarean delivery (Agrawal et al., 2016).

b. Operational

is usually defined as blood loss during vaginal birth of more than 500 milliliters (mL) and following cesarean delivery of more than 1000 mL.

Chapter Two

Review of Literature

Chapter Two

Review of Literature

This chapter provides a comprehensive literature review. A search for studies published within the last five years was conducted across several databases. Among the databases that you chose to use, Cumulative Index of Nursing and Allied Health Literature (CINAHL), Cochrane Database, and Google Scholar:

2.1. Overview of Third Stage of Labor

The third stage of labor is also referred to as the placental phase and this represents an important period in child delivery that follows after birth. During this stage, the placenta and membranes are eliminated from inside the mother's uterus. Defining the processes and management of third stage in detail is important for taking care of both mother's health as well as newborn the time frame of third stage may differ and it usually occurs in the 5-30 minutes after birth. In this phase, the uterus still contracts and thus causes separation of placenta from wall intrauterine during parturition, the vessels to the placenta contract preventing excessive bleeding (Güngördük et al., 2018).

Management of the third stage has become a standard procedure in an effort to minimise postpartum haemorrhage this includes the administration of uterotonic drugs, including oxytocin given within a minute after childbirth oxytocin causes uterine contractions which speed up the process of expulsion placenta minimizing chances of bleeding. It has been demonstrated that active management significantly reduces the postpartum hemorrhage rate compared with expectant or physiological management (Leduc et al., 2018).

Besides pharmacological interventions, controlled cord traction is most frequently utilized during the third stage. This traction applies gentle pressure on the umbilical cord while maintaining support to the uterus. The

controlled cord traction facilitates the quick removal of placenta, obviating retention and complications (Isacson et al., 2022).

2.1.1. Stages of Labor

Labor is a complicated and intricate process of events leading to the birth. Labor is further broken down into three major segments which include the physiological and mechanical changes that a woman's body goes through in preparing for pregnancy delivery (Raphael-Leff, 2018). These stages are marked by specific episodes and can last from one woman to another.

1. First Stage of Labor:

The first phase of labour is the longest, which includes early and active labor. In early labor, the cervix thins and widens gradually. Though there are contractions, they are usually mild and erratic. In the course of active labor, contraction becomes stronger and more frequent as well longer continued. The cervix is further dilated, and this results to about 7 centimeters or even more. This phase generally ends when dilation of the cervix reaches 10 centimeters (Alhafez & Berghella, 2020).

2. Second Stage of Labor:

The second phase starts when the cervix is fully dilated and continues up to birth. It is the birthing of a baby through vaginal birth. Contractions continue intensifying and the woman feels a pressure to push. This stage requires a lot of maternal effort and is known as the pushing phase. The first to appear is the head of a baby with all other parts following behind. The last phase is the delivery of a child (Hofmeyr & Singata-Madliki, 2020).

3. Third Stage of Labor:

The last stage is the placental delivery process, which supplies nutrients and oxygen to an unborn child. Following birth, uterine contractions remain in place causing the placental detachment from its wall. The placenta is finally forced out through the vagina. This stage is typically shorter than the previous two steps, but it plays a significant role in preventing postpartum haemorrhaging (Güngördük et al., 2018).

2.1.2. Signs of Labor

1. Onset of Labor:

Labor refers to the contraction of the uterus which helps in expelling out both baby and placenta from mother's body. It usually takes place at the 40th week of pregnancy, but it may also occur before or after this period (Serrano & Ayres-De-Campos, 2021). As Rutherford et al. (2019) noted, labor symptoms can be classified as early active and transitional phases

I. Early Signs:

Cervical dilation and effacement, caused by uterine contractions and ripening, are seen during vaginal examinations during labor. Lightening: As labor progresses, the baby descends further into the pelvis, alleviating pressure on the diaphragm and improving breathing. The bloody appearance is caused by vaginal mucus staining slightly with blood when the cervix dilates and effacement begins (Agah et al., 2018).

II. Active Signs:

Contractions: Real labor contractions are predictable, intensify over time and come closer to each other. It is only through timing the contractions that one can tell whether labor has really started. The amniotic sac can break, and there may be a bolus or drip loss of amnion. This is usually known as the breaking of water (Rutherford et al., 2019).

III. Transitional Signs:

Increased Discomfort: As labor progresses, the mother may experience increased discomfort and pain. The cervix continues to dilate and efface, preparing for the baby's passage. In the later stages of labor, there may be a strong urge to push as the baby moves down the birth canal (Rutherford et al., 2019).

2. Labor Progression:

Cervical Changes: Cervical dilation and effacement are monitored by healthcare providers as indicators of labor advancements. Dilation and

effacement means widening of the cervix and thinning out respectively (He et al., 2023).

Fetal Station: In measurement for station, positive numbers indicate that the head of baby is going down in regard to pelvic bones; the +4 is fully engaged (He et al., 2023).

2.2. Hemorrhage

A woman can develop any medical problem pertaining to birth, major complications due to childbirth fall under PP hemorrhage traditionally defined by blood loss greater than 500mL after a vaginal delivery and over one liter post caesarean with signs or symptoms of hypervolemia. Since the average woman's added blood volume from pregnancy is between 1 to well, she can lose up to these amounts of fluid more than would otherwise be likely. A majority of haemorrhage cases happen in the first hours after birth; however, others can be delayed up to weeks following delivery. Primary (or early) postpartum haemorrhage takes place within 24 hours of birth. Late PPH occurs anytime between 24 hours to the sixth week after delivery. The primary danger of haemorrhage is hypovolemic (low volume) shock, which causes interruption in blood supply to cells throughout the body. This impedes the normal oxygenation, nutrient supply and waste removal at cellular level. Although a minor issue, anemia is also likely to develop after hemorrhage. One of the most common causes of death in a postpartum woman is known as PPH (Leifer ,2019)

2.2.1. Postpartum Hemorrhage

One of the most hazardous and severe complications after childbirth is postpartum hemorrhage (PPH), which involves excessive bleeding within 24 hours from delivery. It is a public health crisis worldwide, especially in the developing world where getting skilled medical personnel and emergency obstetric care can be snail-paced. One of the main causes of maternal morbidity on a global scale is PPH, which leads to approximately one-quarter (25%) deaths in pregnant women (Rani & Begum, 2017).

The main cause of postpartum hemorrhage is uterine atony, which denotes the insufficient contraction of uterus after childbirth. Other contributory factors include retained placental tissue, genital tract injury and coagulation defects. Prompt diagnosis and treatment is absolutely necessary to prevent serious effects for the mother (Jena et al., 2023).

The most prevalent causes of severe PPH are uterine atony (60%), followed by placental problems (36%). Risk factors include maternal age ≥ 35 years, numerous pregnancies, fibroids, pre-eclampsia, amnionitis, placenta praevia and placental abruption, cervical lacerations, uterine rupture, assisted vaginal delivery, and caesarean section. (Sultana et al., 2020).

Adolescents are at a higher risk of postpartum hemorrhage than women due to their underdeveloped uterus, which expands during pregnancy. An overdistended uterus is more likely to contract less quickly than a typically distended uterus in the postpartum period, enabling bleeding to occur. (Kawakita et al., 2016).

Probable predisposing factors to postpartum hemorrhage include a history of PPH, numerous pregnancies attended by prolonged labor and some interventions such as induction of labour or cesarean section. Moreover, women who suffer from preeclampsia or clotting disorders are especially prone to complications (Liu et al., 2021).

In order to overcome the issue of postpartum hemorrhage, many international agencies and health organizations have drafted guidelines and protocols. The World Health Organization (WHO) accentuates the role of active management that involves oxytocin administration, controlled cord traction and uterine massage to prevent as well as treat PPH. These interventions are meant for all women irrespective of their level of risk (Escobar et al., 2022).

Hemorrhage is a significant cause of maternal mortality throughout pregnancy, labor, and the postpartum period. Postpartum hemorrhage is

defined as blood loss of 500 ml or more after a vaginal delivery, which affects up to 5% to 15% of women. (Dahlke, Menez-Figueroa, Maggio, et al., 2015)

Management of PPH in high-resource settings typically involves uterotonic drugs like oxytocin, which bring on contractions for the uterus. For unsuccessful bleeding, more invasive measures would need to be taken such as uterine bulb tamponade or surgical interventions like uterus artery embolization and hysterectomy in the instance of refractory hemorrhage (Lawrie et al., 2019).

However, in underserved communities where access to medical professionals and facilities may be restricted due to resource constraints, community-level interventions as well as training traditional birth attendants on emergency obstetric care is integral to preventing and dealing with postpartum hemorrhage (Griffiths et al., 2020).

Despite the progress made in tackling postpartum hemorrhage, continued efforts at research and advocacy remain crucial for eliminating maternal deaths. This includes designing new interventions, improvement of access to quality obstetric care and focusing on socio-economic aspects that lead delayed or inadequate seeking behavior (Mehta et al., 2021).

2.2.2. Risk Factors of Postpartum Hemorrhage

Postpartum hemorrhage (PPH) is a potentially life-threatening complication that occurs after childbirth, typically defined as the loss of 500 ml or more of blood within the first 24 hours following delivery. While childbirth is a natural process, various risk factors can increase the likelihood of postpartum hemorrhage (Ende et al., 2021).

One significant risk factor for postpartum hemorrhage is uterine atony, which refers to the inability of the uterus to contract adequately after childbirth. This can lead to excessive bleeding. Uterine atony is the leading cause of postpartum hemorrhage, accounting for approximately 70-80% of cases (Nyfløt et al., 2017).

Other factors that contribute to postpartum hemorrhage include prolonged labor and delivery. Prolonged labor can lead to exhaustion of the uterine muscles, increasing the risk of atony and subsequent hemorrhage. A systematic review and meta-analysis found that prolonged labor significantly increased the risk of postpartum hemorrhage (Almutairi, 2021).

Multiple pregnancies, such as twins or higher-order multiples, are also associated with an increased risk of postpartum hemorrhage. The presence of multiple fetuses can stretch and weaken the uterine muscles, making it more challenging for the uterus to contract effectively. A higher incidence of postpartum hemorrhage in multiple pregnancies compared to singleton pregnancies (Tkachenko et al., 2021).

Placental abnormalities, such as placenta previa and placental abruption, are additional risk factors for postpartum hemorrhage. These conditions can interfere with the normal detachment and expulsion of the placenta, leading to increased bleeding. A review article highlighted the association between placental abnormalities and postpartum hemorrhage (Omotayo et al., 2021).

Certain maternal health conditions, such as preeclampsia and coagulopathies, also contribute to the risk of postpartum hemorrhage. Preeclampsia, characterized by high blood pressure and organ damage, can affect blood vessel integrity, increasing the likelihood of bleeding. It is emphasized the association between preeclampsia and postpartum hemorrhage (Durmaz & Komurcu, 2018).

2.2.2.1. Obesity and Maternal Age:

Maternal obesity and advanced maternal age have also been identified as risk factors for postpartum hemorrhage. It is reported that obese women had a higher likelihood of experiencing postpartum hemorrhage compared to non-obese women, emphasizing the importance of addressing obesity as a modifiable risk factor (Butwick et al., 2018).

Additionally, advanced maternal age, typically defined as age 35 and older, is associated with an increased risk of postpartum hemorrhage due to factors such as decreased uterine muscle tone and increased rates of cesarean deliveries (Correa-de-Araujo & Yoon, 2018).

2.2.2.2. Induction and Augmentation of Labor:

The use of labor-inducing medications and augmentation of labor with oxytocin are associated with an elevated risk of postpartum hemorrhage. Women who underwent labor induction had a higher likelihood of experiencing postpartum hemorrhage compared to those who went into labor spontaneously (Kunimi et al., 2022). The administration of oxytocin to augment labor, especially at high doses, can lead to uterine hyperstimulation, increasing the risk of uterine atony and subsequent hemorrhage (Aziz et al., 2020).

2.2.2.3. Previous History of Postpartum Hemorrhage:

Women who have previously experienced postpartum hemorrhage are at an increased risk of recurrence. A history of postpartum hemorrhage significantly elevated the risk of recurrence in subsequent pregnancies. Recognition of this history is crucial for healthcare providers to implement preventive measures and closely monitor such pregnancies (Thams et al., 2023).

2.2.2.4. Placental Retention:

Failure of the placenta to separate and be expelled after delivery, known as retained placenta, is another risk factor for postpartum hemorrhage. This condition can lead to ongoing bleeding and may necessitate manual removal of the placenta (Ruiter et al., 2019).

2.2.2.5. Caesarean Section:

Caesarean section, especially emergency caesarean deliveries, is a recognized risk factor for postpartum hemorrhage. It is indicated that

caesarean section significantly increased the risk of postpartum hemorrhage compared to vaginal deliveries. The surgical nature of the procedure, as well as potential difficulties in achieving uterine contraction postoperatively, contribute to this heightened risk (Butwick et al., 2017).

2.2.3. Epidemiology of Postpartum Hemorrhage

After delivery, one of the most serious and sometimes fatal complications is postpartum hemorrhage (PPH). Associated with significant morbidity and mortality, PPH defined as hemorrhage of more than 500 ml within the first day after vaginal delivery or greater than 1 l in a post cesarean setting needs to be addressed immediately. Epidemiological studies are very important for understanding the incidence rate, risk factors and outcomes that accompanying this condition (Bláha & Bartošová, 2022).

The prevalence of PPH differs from one region or country to another but it is universally recorded as a leading factor for morbidity and mortality rates in women. WHO estimates that PPH accounts for a quarter of all maternal deaths in the world (Gyamfi-Bannerman et al., 2018). According to a study conducted by Tiruneh et al. (2022) the global incidence of PPH is around 6%, with significant regional differences. PPH is relatively high in sub-Saharan Africa and South Asia compared to other regions.

Many risk factors lead to the onset of PPH. Demographic risk factors include maternal age, parity multiple pregnancies and previous history of PPH gravity (Liu et al., 2021). Moreover, medical ailments like preeclampsia, gestational diabetes, and placental anomalies may increase the chances of PPH. Cesarean section deliveries, instrumental efforts and long-lasting labor are also considered major risk factors. These risk factors must be understood for identifying high-risk groups and implementing preventive measures (Li et al., 2021).

The prevention and management of PPH have been a central theme in maternal health. The WHO suggests using uterotonic drugs, which include oxytocin as the main intervention for averting and managing PPH. Third

stage of labor management, which entails the use of uterotonic medications, controlled cord traction and manual massage has been found to significantly reduce PPH. The timely and appropriate application of these interventions, therefore, necessitates a wide knowledge base in the epidemiology of PPH (Muñoz et al., 2019).

2.2.4. Significance of PPH in maternal health

PPH is another critical maternal health problem that requires careful consideration because of the potential life-threatening complications to the mothers and infants. Restricted to excessive bleeding after childbirth, PPH is the leading cause of maternal morbidity and mortality worldwide. WHO estimates that around 14% of all maternal deaths are attributable to PPH, which is a serious global health issue (Rani & Begum, 2017).

The importance of PPH lies in the quick onset and urgent treatment to avert serious consequences. When one is delivering, the uterus changes greatly and when it fails to contract properly after delivery heavy bleeding may be caused. The major contributors to PPH are uterine atony, retained placental tissue, genital organ trauma and coagulation abnormalities (Muñoz et al., 2019).

In low-income regions where the availability of skilled health providers and medical facilities might be poor, PPH has drastic effects. Maternal mortality in the developing world is high and PPH worsens this situation. The timely, and effective management of PPH is critical to combat maternal deaths. Implementation evidence-based practices forms an integral part in this regard (Menichetti & Troller, 2021).

The measures and interventions to prevent PPH have changed over time. Active management of third stage labor, that involves administration of uterotonic drugs, controlled cord traction as well as uterine massage has been proved to be associated with reduced risk for PPH. Furthermore, innovations in medicine and the ability to transfuse blood also help achieve better results from treating severe cases of PPH (Bishanga et al., 2018).

2.2.5. Early (primary) postpartum haemorrhage

Primary PPH occurs within 24 hours of delivery while secondary PPH refers to bleeding that takes place after 24 hours. The reasons for PPH include uterine atony, trauma (uterine or cervical injury), tissue as with retained placenta and clots due to preexisting acquired coagulopathy. The main cause of PPH is uterine atony. Maternal deaths caused by this complication include hypovolemic shock. Maternal survival is directly associated with the knowledge, skills of birth attendants, abundance in resources and ability to accurately assess blood loss by health professionals. There is a delay within facilities in many settings, such as seeking urgent non-facility-based assistance from other skilled providers and delayed referral (Emerich et al., 2016).

Primary postpartum hemorrhage (PPH) is the main direct cause of maternal mortality in low-income countries, accounting for 27.1% of all maternal fatalities. Approximately 54-93% of maternal fatalities due to obstetric hemorrhage are avoidable with the introduction of standardized and interdisciplinary programs (Zea-Prado et al., 2021).

WHO suggests active management of the third stage of labour to reduce PPH incidence (WHO, 2018). An important aspect of this management is the administration intramuscularly or intravenously post-delivery, oxytocin that serves as a uterotonic agent. In settings where oxytocin is unavailable, misoprostol can be used and this has the advantage of being heat-stable whose administration may be oral or rectal as well sublingually (Morris and Khatun 2019; WHO, 2018).

Uterotonic drugs that save lives for the treatment of PPH due to uterine atony include oxytocin and misoprostol. Other management strategies include: uterine massage, removal of retained tissue; isotonic crystalloid fluids administration; intrauterine balloon tamponade for refractory bleeding bimanual and aortic compression, non-pneumatic

antishock garments (this method is temporary pending definitive care availability) (Zaky, 2017)

2.2.6. Causes of Early Postpartum Haemorrhage

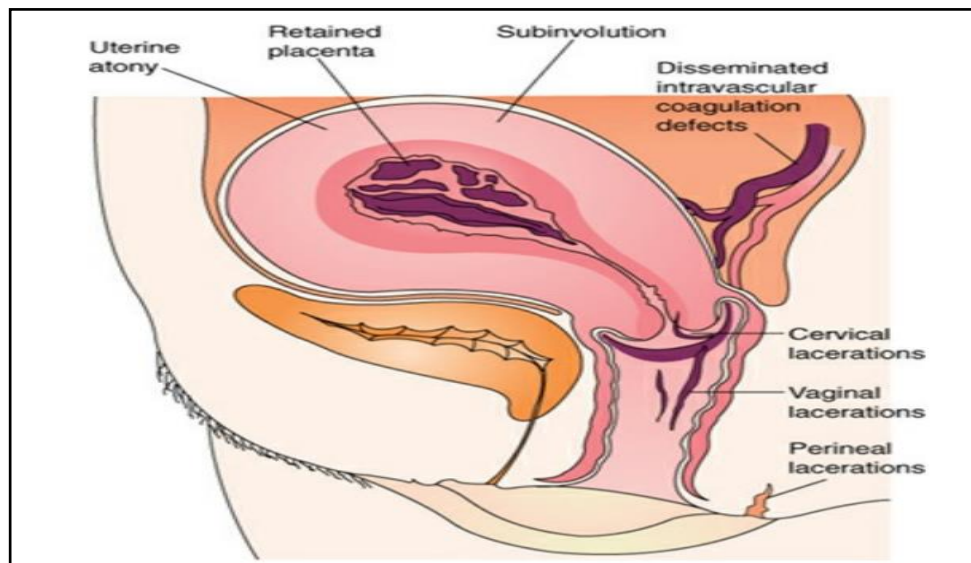


Fig 2.3: The common causes of postpartum hemorrhage. (Adele P & Joanne S, 2018)

1. Uterine atony (the most common cause)

Uterine atony is a serious medical condition which results when the uterus muscles do not contract properly after delivery. Atony is referred to as the lack of tone or weakness in uterine muscles that assist significantly in controlling postpartum hemorrhage. This physiological state is the leading cause of PPH, a potentially life-threatening complication that can lead to maternal morbidity and significant blood loss if not promptly managed (Felis, 2023).

Uterine atony, or relaxation of the uterus, is the most frequent cause of postpartum hemorrhage; it tends to occur most often in Asian, Hispanic, and Black woman (Grobman et al., 2015).

After childbirth, the uterus undergoes regular contractions to force out the placenta and prevent bleeding from where it was attached. These contractions are inadequate or absent during uterine atony, which results to the failure of blood vessels' contraction. This causes heavy bleeding that poses a great threat to the mother (Wray & Prendergast, 2019).

There are several factors that lead to uterine atony, which include: overdistension of the uterus due to multiple pregnancy or large fetal size and in some cases rapid labor and delivery; use of medication such as oxytocin among others like conditions such as fibroid. Besides, long labor and retained placental fragments as well as infections that may result to uterine atony. (Kim et al., 2020).

Even if the uterus reacts well to massage, the problem may not be totally cured since, as soon as you withdraw your hand from the fundus, the uterus may relax and the fatal seepage may resume. To avoid this, stay with a lady after massaging her fundus and ensure her uterus is not relaxing again. For the following four hours, continue to carefully examine. If a woman's uterus fails to contract, she should consult her health care practitioner. Interventions such as a bolus or dilute intravenous infusion of oxytocin (Pitocin) can assist (Lang & Robertson, 2015).

Immediate interventions to stimulate uterine contractions and control bleeding are usually instituted in the management of uterine atony. Uterotonic medications can include oxytocin, misoprostol or ergot alkaloids; such drugs are given by healthcare providers to provide uterine muscle stimulus. Manual massage of the uterus or surgical interventions such as uterine artery embolization, hysterectomy is required in severe cases whereby bleeding persists (Habek et al., 2022).

The WHO and professional medical associations develop evidence-based guidelines or protocols that describe the recommendations of how to detect, manage uterine atony by healthcare providers. Guidelines of this nature promote early identification, timely intervention, and close follow-up to avert secondary problems associated with postpartum (WHO, 2021).

Research seeks to find new ways of preventing and treating uterine atony, mechanisms underlying it remain a subject for further research as well as the development of specific treatments. The development of other medical technologies and continuous clinical research helps in perfecting uterine

atony management to minimize the associated morbidity, mortality among mothers (Almutairi, 2021; Hofmeyr, 2023).

In the event of uterine atony, the first step in controlling hemorrhage is to attempt fundal massage to encourage contraction. If fundal massage and the injection of uterotonics (drugs that constrict the uterus) do not halt uterine bleeding, a sonogram may be performed to detect any remaining placental pieces. The woman's primary care practitioner could attempt bimanual compression. (Weeks & Mallaiah, 2016).

A balloon catheter can be inserted vaginally and inflated with sterile water to provide pressure to the bleeding location. During this technique, vaginal packing is introduced to help keep the balloon in place. Document the presence of packing to remove it before agency discharge. Retained packaging can harbor bacteria and induce postpartal infection. (Vintejoux et al., 2015).

Uterine massage and uterine contraction drugs (uterotonics) are typically successful in stopping bleeding. In cases of severe bleeding, angiographic procedures may be used to embolize pelvic and uterine veins. If everything else fails, ligation of the uterine arteries or hysterectomy (removal of the uterus) may be required (Ghosh & Mala, 2015)

2. Lacerations (tears) of the reproductive tract

Reproductive tract laceration, or tears are possible for both the male and female but it is more associated with childbirth in case of women. These injuries may have serious consequences for the health of the injured and require immediate medical care. When talking about childbirth, lacerations typically arise during the delivery process and especially through the second stage of labour whereby a newborn is making its way passing out through birth canal (Muhleman et al., 2017).

Common type of tear that occur in women during childbirth is a perineal laceration. The region between the vaginal opening and anus is referred to as perineum. The perineal laceration is divided into four grades

from the first-degree involving skin only, to fourth-degree which compromises through anal sphincter complex. First and second-degree tears are the most common situations for they usually heal after suturing. Third and fourth-degree tears, however may need extensive repair resulting in long term complications such as continence and sexual dysfunctions (Goh et al., 2018).

Perineal lacerations are reported to vary in different populations and with increasing age, parity and also the use of these interventions during child birth like forceps or vacuum extraction. Through adequate prenatal care, good management during labor and skilled obstetricians' perineal lacerations can be reduced to severe cases (Pergialiotis et al., 2020).

3. Hematomas in the reproductive tract

There are hematomas in the female reproductive tract can appear at several points: uterus, cervix and vagina. These hematomas are usually characterized by extravasation of blood outside the vessel, which often occurs due to trauma or injuries and related complications during pregnancy. The degree of hematomas can vary from mild to severe, which also requires immediate diagnosis and proper treatment in order to avoid further complications (Lee et al., 2021).

A typical hematoma is the vulvar hematoma that develops in external genitalia. It is commonly linked with birth trauma, particularly when there are perineal lacerations or episiotomy. The rupturing of the blood vessels as a result of increased pressure during delivery often results in bleeding into surrounding tissues (Mangwi et al., 2019). A research carried out by Childs et al. in 2020 examined the incidence and risk factors of perineal trauma during childbirth emphasizing that knowledge regarding causes leading to vulvar hematomas is crucial.

Reproductive health has uterine hematomas as well. For example, subchorionic hematomas are formed between the uterine wall and chorionic membrane relate to some poor pregnancy outcomes such as spontaneous

abortion. The sonographic findings and clinical implications of subchorionic hematomas are investigated, highlighting the importance of ultrasound imaging in diagnosing such hematomas at any stage during pregnancy (Abdul-Kadir & Gomez, 2022).

Additionally, cervical hematoma can result from trauma or surgical complications. The hematomas can result in pain, swelling and vaginal bleeding. Managing cervical hematomas may include close follow-up, management supportive care or rarely undergoing surgery. It focuses on the management of cervical trauma, to explain how important a multidisciplinary approach in dealing with such cases is (Salehpour et al., 2019).

4. Retained placenta

Retained placenta is the second greatest cause of obstetrical bleeding, accounting for around 20% of post-partum hemorrhage and impacting 0.1-3.3% of births. Massive maternal hemorrhage may be caused by a retained placenta. The standard of care is to manually revise the uterine cavity and evacuate the whole placenta or its pieces. This technique has increased risks of analgesia, damage to the urogenital system, and post-partum infection. (Rottencrotch et al., 2021).

According to current definitions, the third stage of labor (placenta delivery) occurs within 30 minutes following fetal birth in a nulliparous or multiparous woman. The American Pregnancy Association defines a retained placenta as one that is not released within 30 minutes of the fetus's birth. Placental accrete can all result in a retained placenta. A retained placenta has various risks, including postpartum hemorrhage, which can cause maternal mortality if not addressed immediately. (Lekuikou, & Moreland, 2022).

The third stage of labor, placental delivery, should occur spontaneously within 30-60 minutes of the infant's delivery. However, in 0.5-1.5% of all vaginal births, this stage is incomplete, with retained products

of conception (RPOC) present. RPOC can lead to early and late problems, including uterine atony, postpartum hemorrhage (PPH), endometritis, Asherman's syndrome, and late PPH. (Rottencrotch, et al., 2022).

Retained placenta, seen in 0.1-3.3% of vaginal births, can result in substantial maternal morbidity and death in up to 10% of cases without intervention. The method for diagnosing and treating retained placenta or suspected retained placental pieces is manual revision of the uterine cavity with suitable analgesia/anaesthesia. Retained placentas require manual uterine revision under anesthesia, increasing risk of infection, bleeding, and late complications. Currently, there is no established methodology for treating problems in the third stage of labor. (Zmora et al., 2019).

Retained placenta after vaginal birth occurs when the placenta fails to release naturally within 18-60 minutes, or if bleeding occurs before delivery. It can develop in severe uterine atony or an abnormally adherent placenta. (Perlman& Carusi ,2019).

To prevent bleeding, the retained placental piece must be removed through dilatation and curettage, or methotrexate may be used. Monitor the lochia color and report discharge shifts. If the placenta accreta is deeply adhered, balloon occlusion and embolization may be necessary, or a hysterectomy may be necessary. (Silver, 2015).

Nurses should be aware of the following variables related with retained placenta: Pregnancy risks include retained placenta, premature birth, grand multiparity, dilation and curettage, tiny placental weight, prior cesarean delivery, abortions, induced labor, older maternal age, hypertension, and oxytocin usage. (Endler et al., 2019).

The physiological third stage may be longer. During the active third stage, unless the placenta is delivered quickly by controlled cord traction, Syntometrine /ergometrine may cause a constriction of the muscles of the lower segment and os, which prevents delivery until the action has worn off.

The placenta may still be partially attached. Placenta accrete is when the placenta is morbidly adherent to the uterine wall are causes of the Retained placenta. (Medforth et al., 2017).

5. Uterine inversion

This is an uncommon labor problem. The uterus flips inside out and prolapses into the vagina. It occurs abruptly during the third stage of labor. It can lead to maternal mortality due to shock and hemorrhage.

occurs when the uterus turns inside out after birth or delivery of the placenta. It is an uncommon occurrence, occurring in around one in 20,000 births. (Furukawa & Sameshima, 2015)

Maternal mortality from uterine inversion has been reported to be as high as 15% in previous studies, although more recent findings imply that this figure is substantially lower, especially in industrialized countries. Multiple risk factors have been observed, including fundal placental implantation, strong fundal pressure, severe umbilical cord traction prior to placental separation in the third stage of labor, and placenta accrete syndromes. Coad et al., 2017).

Because inversion occurs in varying degrees, the inverted fundus may remain within the uterine cavity or the vagina, or it may emerge from the vagina. When an inversion happens, a huge volume of blood suddenly flows from the vagina. The fundus is no longer palpable in the abdomen. Handling the uterus when inverted might lead to more bleeding, therefore never replace it. Attempting to remove the placenta while still connected increases the risk of hemorrhage. (Adele & Joanne, 2018).

6. Coagulation Disorders

Coagulation problems are an uncommon cause of postpartum hemorrhage. Patients with a familial history of coagulopathy, a personal history of excessive menstrual bleeding, or recurrent bleeding despite treatment of other reasons should be investigated for coagulation disturbances. The coagulopathic diseases described include disseminated

intravascular coagulation, platelet abnormalities, and coagulation factor alterations. These should not be missed while evaluating obstetric bleeding, since early detection and treatment can reduce severe maternal morbidity and death. (Bank et al., 2023).

Excessive bleeding during and after delivery is a primary cause of maternal death. (Massoth et al., 2023).

The physiology of coagulation in pregnant women varies from that in males and women who are not pregnant. Pregnant women commonly acquire physiological anemia and suffer changes in the levels of coagulation factors that shift the balance between coagulation and bleeding in preparation for bleeding during delivery. (Yoon, 2019).

Patients of severe PPH might have significant morbidity, including as organ failure due to hypoperfusion, disseminated intravascular coagulation (DIC), intensive care unit hospitalization, and hysterectomy. Given the severity of PPH-related maternal morbidity and death, improving doctors' ability to prevent and manage severe PPH should be a global maternal health priority. (Kumaraswami & Butwick ,2022).

Guidelines for managing PPH emphasize the need of early identification and treatment of coagulopathy. Severe PPH is associated with impaired hemostasis, which predicts more bleeding. (Rigouzzo et al., 2020).

2.3. Late postpartum hemorrhage

Late postpartum hemorrhage (bleeding at days 24 after childbirth to 6 weeks) typically occurs following discharge from the hospital and is most frequently due to two factors retention of placental fragments; subinvolution uterus Placental fragments are more likely to be retained if there Retained fragments are surrounded by clots that slough-off several days later, often with the retained fragment along. However, manual removal of the placenta increases the likelihood that retained pieces within it will occur. Other fragments of placenta are also more likely to be there if the depth at which it grows into uterine muscle is deeper than usual (Leifer ,2019).

Secondary postpartum hemorrhage (PPH) is abnormal or excessive bleeding from the birth canal between 24 hours and 12 weeks after delivery, causing mild to potentially fatal hemorrhage. Causes include endometritis, retained products, subinvolution, vagino-perineal trauma, and rare conditions. (Fox et al., 2023).

Secondary PPH affects up to 2.5% of postpartum women in high-income countries, with the greatest incidence occurring between days 7 and 14 postpartum. (Taylor et al., 2023).

2.4. Historical Perspective of the Third Stage of Labor

The third stage of labor that involves the delivery of placenta has also changed over time to ensure a healthy mother and an equally sound youth. Different historical perceptions about the management of this stage have changed significantly due to medical and technological training (Tribe et al., 2018).

During the early 20th century, active management became a third stage of labor standard procedure. This technique propounded by Dr. Edward Honigman in the 1920s included injection of uterotonic agents, controlled cord traction and manual leave toward bringing out placental delivery early enough..... The aim was to prevent postpartum hemorrhage, one of the leading causes of maternal mortality in those days (Lami & Deksisa, 2020).

This active management trend has gained momentum from the middle of twentieth century with synthesisity oxytocin adopting Pitocin in 1950s. Oxytocin was used to stimulate uterine contractions and promote placental delivery. This practice was adopted widely and became the norm for many decades (Furuya & Ivell, 2022).

Yet while medical practices became increasingly evidence-based, researchers started to reconsider regular practice of active management. During the 1990s and early 2000s, findings often emphasized that a more physiologic or expectant approach to the third stage was potentially beneficial, involving delayed cord clamping and spontaneous placental

delivery without routine interventions. This method sought to foster a more natural and gradual change for the mother as well as her baby (Herbert et al., 2022).

Both the WHO and other major international health organizations have highlighted individualized care, which has resulted in guidelines that promote a woman-focused approach to managing late part of labor. These guidelines recognize the merits of both active and expectant option, emphasizing on need for clinicians to adopt an approach in line with woman's unique needs and preferences (Fontein-Kuipers et al., 2018).

Scholarly works on third-stage management have also been led to numerous other dimensions such as the timing of cord clamping, uterotonic agent use and maternal position during childbirth. For example, delayed cord clamping is known to improve neonatal outcomes such as increased hemoglobin levels and low risk of iron deficiency (Beatson, 2020).

2.5. Evolution of practices in the management of the third stage of labor

The third phase of labor, which occurs from the birth to delivery of placenta has changed remarkable over time under instructions. In the past, there was less practice of active management for the third stage and spontaneous delivery was common. Nevertheless, the development of medical practices and research created a paradigm towards more active intervention to prevent PPH as well as other occurring complications (Nelson et al., 2020).

One critical breakthrough in the development of third stage management was when Dr. O'Driscoll came up with a concept active management in his work published around 1960s. This intervention included the intravenous administration of uterotonic drugs, controlled cord traction and manual compression after delivery. The goal was to speed up the process of delivery, minimize PPH and prevent postpartum anemia. However, this active management approach was adopted and endorsed by the World Health

Organization (WHO) and later became widely employed in clinical settings across many countries. (Hermesch et al., 2023).

Improvements in subsequent research and clinical trials also brought about changes in practices. For instance, the Women's Health Care Provider's Guide to Postpartum Hemorrhage published by ACOG recommended oxytocin as first-line uterotonic agent in prevention of PPH during third stage. In turn, the selection of uterotonic drugs and doses as well as routes for their administration have been controversial subjects to many studies ever since (Onuoha & Gaiser, 2017).

In the last decade, there has been an increased focus on individualized and woman-centered care in maternity services. This move has led to the reconsideration of routine preventive measures in third stage interventions based on issues that might include preferences by a woman, cultural components and lack of PPH risk factors. Other researches have been conducted to assess the safety and feasibility of a more physiological approach for third stage that includes natural spontaneous placental birth without exogenous interventions (Candib, 2023).

Although these advancements occurred, it is still important to realize that the management of third-stage labor phase depends on other factors such as settings used and resources available for one patient. Research, clinical trials and guidelines by reputable organizations play a part in the continuous change of practices used to manage the third stage of labor which keeps obstetric care evidence-based, safe and women appropriate (Auschra, 2018).

2.6. Importance of effective management of the third stage of labor

Third stage refers to a third labor phase that starts at the neonate birth and ends with placental extrusion. Management of this phase is critical for the health outcomes of both mother and infant because it also helps to prevent complications that have a high-risk during childbirth. Third stage refers to the expulsion of placenta, improper management causes massive

bleeding (postpartum hemorrhage), infection and retained placenta. (Begley et al., 2019).

An important requisite in third stage management is administration of uterotonic agents that cause the contraction and arrests bleeding from excessive loss during labour. However, the WHO advocates for oxytocin use – a uterotonic drug of choice- as means to prevent massive postpartum hemorrhage at this stage. The timing and dosage of uterotonic administration are critical for optimal performance with the least side effects (Leduc et al., 2018).

Besides the pharmacological interventions third stage management should also include non-pharmaceutical strategies including controlled cord traction and uterine massage. Controlled cord traction is the controlled, gentle pulling of the umbilical cord to assist with placental separation and delivery. When applied in a skillful manner, this method is known to speed up the birthing process of placenta and minimize complications (Nori et al., 2023).

It has been shown that active management of the third stage is superior to expectant or physiological management in preventing postpartum hemorrhage. Recent studies have demonstrated that active management such as administering uterotonic drugs, controlled elastic cord traction and uterine massage significantly reduce the occurrence of postpartum hemorrhage with its associated morbidity among women (Almutairi et al., 2021).

Additionally, the benefits of good third stage management go far beyond that immediate postpartum period. Healthcare professionals help ensure that the mother's well-being is not jeopardized by preventing complications like retained placenta resulting in infection and internal bleeding (Salati et al., 2019).

The management of the third stage is very important. It plays an important role in preventing postpartum hemorrhage and complications associated with it, safe transition to the puerperium period as well as long-

term health of both the mother and her newborn. At this crucial time the process of childbirth, healthcare providers need to follow evidence-based guidelines and protocols in order to achieve optimal outcomes (Bazirete et al., 2020).

2.7. Effective measures during the third stage of labor

Third stage is another vital phase that includes the delivery of the placenta after birth. The third stage involves the delivery of placenta as it is separated from uterus and this process has to be well managed so that there will not cause complications during birth, which may adversely affect both mother's and child's health. Various steps are taken during this phase to make the transition easy and safe. (Memon et al., 2022).

An important measure in third-stage labor is active management, a widely supported intervention for its potential to reduce the risk of postpartum hemorrhage (PPH). Active management would include the process of giving a uterotonic agent, usually oxytocin shortly after birth. This prevents the uterus from relaxing, therefore preventing uncontrolled bleeding WHO recommends active management as a uniform practice aimed at reducing the frequency of PPH (Masuzawa et al., 2018).

Other vital aspects of effective third-stage management include pharmacological interventions and controlled cord traction. Controlled cord traction involves light pressure on the umbilical during which counter-pressure is applied to the uterus. This method helps to achieve controlled and timely delivery of the placenta reducing the third stage time that lowers complications probability (Kearney et al, 2019).

In the third phase, timing matters a lot, and delayed cord clamping (DCC) has gained popularity by virtue of its presumed advantages. DCC entails waiting a minimum of 30 to 60 seconds before clamping the umbilical cord following birth. This delay ensures prolonged placental transfusion that subsequently enriches the baby's iron status and reduces risk of anemia (Xodo et al., 2021).

In addition, maternal positioning influences efficient third-stage management. Positional selection may impact on the rate of placental delivery and complication occurrence. Some of the research studies indicate that an upright or lateral fetus position can be faster to deliver placenta than Lithotomy (Zang et al., 2021; Agunda, 2022).

2.8. Previous intervention program on active management of the third stage of labor

Active management of the third stage of labor (AMTSL) is a series of interventions that are aimed at preventing postpartum hemorrhage, one among many causes known to lead maternal death globally. From the historical angle, a number of educational programs have been introduced to encourage employment of AMTSL practices in healthcare providers. These programs are meant to increase knowledge, skills and compliance with evidence-based guidelines for third stage management (Fritz et al., 2017).

The large-scale type of program as part of the promotion process for AMTSL knowledge is WHO's (World Health Organization) Safe Motherhood Program. The World Health Organization has played a critical role in formulating and advocating for global guidelines on maternal health which include suggestions of active management third-stage labor. These are ground-breaking guidelines for enhancing educational programs globally and become updated every time with the latest evidence (Southern et al., 2021).

Along with the international initiatives, several countries have developed national AMTSL awareness programs for health care providers. For example, the MCHIP in America has taken a significant part towards enhancing education and training programs regarding maternal and child health worldwide. The training materials and workshop sessions on AMTSL practices have been developed through MCHIP's collaboration with local health authorities and organizations (Muyanga & Joho, 2022).

In addition to that, academic institutions and professional groups have been actively involved in the process of educating healthcare professionals within obstetrics. CME programs and workshops organized by these organizations deal with the up-to-date evidence on AMTSL to assist clinicians in integrating best practices into their clinical practice (Chernysh et al., 2023).

Different research studies have evaluated the effect of diverse educational approaches on AMTSL implementation. According to a systematic review (Finlayson et al., 2019), the combined use of uterotonic drugs and other elements of AMTSL increased with educational programs aimed at healthcare providers thereby decreasing PPH rates.

However, despite the progress made so far, challenges continue to arise in trying to ensure widespread acceptance of AMTSL practices. Resource constraints, poor training infrastructure and provider resistance are some of the barriers that have also been identified. These challenges remain the focus of ongoing research and educational efforts, which help in identifying viable approaches to educating people about AMTSL (Sánchez-Polo et al., 2019).

2.9. Theoretical Framework

The theoretical basis for the relationship between an educational program and nurses' knowledge about the active management of third-stage labor to prevent PPH showed several important concepts that guided this study. This framework is critical for understanding the educational interventions that could be used to change nurses' knowledge and practice.

One of the underlying areas in both theoretical frameworks is based on adult learning theories, including Knowles' Andragogy to manage self-learning nature reached by adults. As nurses are professionals with different levels of experiences and competencies, the educational program should be designed based on their individual needs and include activities allowing them to actively reflect about themselves as practitioners while identifying

solutions. This coincides with research findings indicating that interactive and participatory learning techniques are more effective in enhancing knowledge, skills among health care professionals (Merien et al., 2010).

With respect to nursing, Benner's Novice-to-Expert theory is applicable because it emphasizes the transition of nurses from novices to proficient nurses. The educational program should incorporate the variation in level of preparation among nurses to cater for different populations ranging from novice ones and professional groups that would expect only refreshment aspect.

Further, Theory of Planned Behavior (Ajzen 1985) may be employed to analyze nurses' attitudes towards beliefs and intentions about AMTSL implementation. In this regard, the educational program can address potential barriers to change and promote positive perceptions towards such practice as a way of influencing behavioral transformation among nurses.

Evidence-based practice should be included for the development of theoretical framework. Studies such as those done by Sanci et al. (2000) and Braddick et al., (2016) Therefore, the educational program should be based on current evidence and guidelines concerning AMTSL as well as PPH prevention.

Additionally, the Diffusion of Innovation Theory (Rogers, 1962) should be taken into account when scaling up to launch an educational program. Knowledge of factors that contribute to the adoption of new practices such as AMTSL can inform development of strategies aimed at mainstreaming knowledge into routine nursing practice.

2.10. Components of Active Management

The active management of the third stage labor (AMTSL) is a set of interventions focused on preventing PPH, which remains one of major causes for maternal mortality and morbidity in countries across the world. The third phase of labor begins after the delivery of baby and ends with placenta ejection followed by membranes (Mir et al., 2019). AMTSL is the

use of uterotonic drugs, controlled cord traction, and manual massage which helps in enhanced quick removal of placenta with a reduced risk for blood loss that can often lead to PPH (Karunyaa et al., 2022).

1. Uterotonic Drugs:

One of the most important parts in AMTSL is administering uterotonic drugs. The most frequently employed uterotonic agent is oxytocin. It causes the uterine contraction, which increases hemostasis by compressing blood vessels to prevent excessive bleeding (Putri & Megasari, 2022). The World Health Organization (WHO) suggests the administration of oxytocin for AMTSL, and its efficacy in taking care of PPH risk has been demonstrated well enough (Charaya et al., 2022).

When oxytocin is unattainable or inconvenient, misoprostol a prostaglandin E1 analogue may serve as an acceptable substitute. Research has demonstrated that misoprostol can prevent PPH when administered during the third stage of labor. Yet, its administration needs proper consideration of dosage and adverse effects like fever (Anandh, 2020; Garg et al., 2020).

2. Controlled Cord Traction:

Gentle tension on the umbilical cord with counterpressure to stimulate delivery of placenta is called controlled cord traction. This method is typically used after uterine contraction has begun. Combined use of the uterotonic and controlled cord traction is found to reduce PPH instances when compared with expectant management (Hinkson et al., 2017).

3. Uterine Massage:

Uterine massage is usually planned in AMTSL procedures to compel strong uterus contraction eliminating the threat of atonic bleeding. Despite the poor evidence for isolated use of uterine massage, it has been included in AMTSL on the principle that uterine tone should be maintained to ensure effective hemostasis (Vijayalakshmi, 2018).

2.11. Active Management of Third Stage of Labor among Nurses

2.11.1. Nurses Roles towards Active Management of Third Stage of Labor

AMTSL implementation process is mainly dominated by nurses who work along with other health professionals ensuring that the mothers and babies remain healthy. This approach is highly comprehensive and encompasses a suite of evidence-based interventions which are implemented immediately after the baby's birth, throughout the placenta delivery process, and during early postpartum (Al-Jabri, 2023).

The administration of uterotonic agents is an important part of AMTSL. Oxytocin is the most common indicative drug for this purpose, a stimulator of uterine contractions that helps to prevent postpartum hemorrhage. According to international guidelines like those provided by ACNM and WHO, prompt administration of oxytocin should take place within one minute after birth (ACNM, 2020). This intervention helps with the rapid shortening of the uterus to avoid atonicity, which is a major cause of PPH (Murray et al., 2020).

Another integral element of AMTSL is controlled cord traction, and nurses play a vital role in its implementation. It is a method that involves pulling on the umbilical cord with light traction while applying counter-pressure in the lower abdomen to assist expulsion. Controlled cord traction training and applied skill by nurses occur in an effective way, reducing the risk of retained placental tissue lawsuit to postpartum hemorrhage (Einerson et al., 2022).

In addition, uterine massage is an active technique used by nurses to increase the strength of contractions and minimize postpartum hemorrhaging (El Sayed, 2021) This procedure is carried out by massaging the uterine fundus gently to stimulate contractions so that any remaining blood clots are

expelled. Uterine massage is especially important in cases of suspected uterine atony and the nurses' attentiveness as to monitor uterus tone plays a major role for early detection and intervention (ACNM, 2020).

Nurses also play an important role in the continuous monitoring of maternal vital signs and blood loss throughout this time, immediately after delivery. The monitoring helps to early detecting signs of bleeding, therefore taking timely measures and preventing complications. High-quality communication between nurses and other health care staff is critical to having an organized, timely response when deviation from the normal postpartum recovery occurs (Ruiz et al., 2017).

2.11.2. Nurses Knowledge Active Management of Third Stage of Labor

Active Management of the Third Stage of Labor (AMTSL) is a collection evidence-based practices conducted by various practitioners such as nurses to prevent and contains postpartum hemorrhage. PPH is a major public health problem and leading cause of maternal morbidity, mortality, which emphasized the important role of healthcare staff especially nurses to develop efficient strategies. (Kalu & Chukwurah, 2022).

The AMTSL process cannot function properly without the participation of nurses since it mostly involves administering uterotonic medicine, controlled cord traction, and immediate uterine massage (Sultana et al., 2018). Uterotonic such as oxytocin, which is most commonly used and administers within 1 minute of fetal delivery to initiate uterine contractions that decrease the chance for excessive bleeding shortly after birth. Several studies have shown that this intervention has been supported by a systematic review done, which was conducted in 2018 and led to significant reductions of the incidence of PPH for timely oxytocin use.

AMTSL also involves controlled cord traction, where the provider pulls gently on the umbilical cord while monitoring uterine contractions. The study by Creanga et al. (2020) emphasized the need for skillful controlled

cord traction performances done by skilled birth attendants such as nurses to reduce possible negative outcomes while increasing intervention effectiveness.

In addition, massaging the uterus is an integral part of AMTSL in order to achieve adequate tone. Defined in WHO guidelines pertaining to prevention and management of PPH, the uterine massage is advocated when massive oxytocin use results are not satisfactory. Nurses, being involved in the direct care of patients and responsible for providing manual uterine massage require special training to follow clinical protocols of ACNM (2020).

Nursing staff members must have continuous training and education to be aware of the latest evidence-based practices related AMTSL. Bishanga et al. (2018) stressed the need for continuous training that focused on improving health provider's competence to manage third stage labor and prevent PPH. This highlights the importance of comprehensive AMTSL training integrated in nursing schools' curricula and their professional development programs.

2.11.3. Effectiveness of Educational Programs regarding Active Management of Third Stage of Labor

The healthcare community has conducted extensive study and evaluation on the efficacy of educational programs designed to augment nurses' knowledge on the active management of the third stage of labor. According to Leduc et al. (2018), active management of the third stage of labor involves interventions to prevent postpartum hemorrhage, a leading cause of maternal mortality worldwide. Educational programs play a crucial role in equipping nurses with the necessary knowledge and skills to implement evidence-based practices in this critical aspect of obstetric care.

Numerous studies have investigated the impact of educational interventions on nurses' knowledge and clinical performance related to the active management of the third stage of labor. A study by Nelissen et al.

(2017) and Finlayson et al. (2019), conducted a systematic review examining the effectiveness of educational programs on the prevention of postpartum hemorrhage. The findings revealed a significant improvement in nurses' knowledge and adherence to active management protocols following targeted educational initiatives.

Simulation-based education has also shown favorable results in increasing the nurses' ability to actively deal with third phase of labor. In a randomized controlled trial conducted by Lin et al. (2023), the researchers compared simulation-based training with traditional lecture-based education. It was found that nurses who received simulation training performed much better in knowledge retention and used active management techniques more effectively.

The researcher should bear in mind the environmental determinants affecting pedagogical programs implementation. A recent study conducted by Kale et al. (2023) highlighted the importance of customizing educational interventions to address the unique needs and barriers that guide on how healthcare providers operate in various settings. This entails taking into account the resource scarcity, cultural factors and the state of present health care system in planning for educational program developments.

2.11.4. Findings from Studies indicating Increased Knowledge Post-education

Many studies have focused on the effects of education relative to AMTSL knowledge among healthcare providers, which display considerable enhancements in understanding and implementation following such educations. Mohammed (2023) evaluated the impact of a training program to skilled birth attendants in terms of their knowledge and practice on maternal care as well as newborns such AMTSL. The results showed a significant increase in knowledge and better correct application of AMTSL after the educational intervention. This means that specially designed

training programs can improve the level of skills in active management techniques among healthcare professionals.

Additionally, a systematic review by Finlayson et al. (2019) focused on the results of educational interventions in preventing and managing PPH with AMTSL implementation included as one of its outcomes. This confirms the idea that education is a critical factor in ensuring compliance with best practices at the third stage of labor.

On the global stage, a study by Bogren et al. (2021) investigated training effects on knowledge and practice of health care providers in low-resource settings. The findings showed a significant improvement in the knowledge and practice of AMTSL after training interventions. The focus of this research is on the advantages that may be derived from proper use of interventions in teaching circumstances, where AMTSL implementation can have a significant positive effect upon maternal outcome.

In addition, Nkwonta and Oyetunde (2016) conducted a piece of research on how training midwives would impact their knowledge and skills in one of the Nigerian hospitals. The intervention used included didactic sessions, hands-on training and mentorship. The study found a significant increase in midwives' knowledge and confidence as regards to AMTSL practice, implying that multilayered educational strategies could improve both the theoretical understanding and practical applications.

2.12. Implications for nursing practice and policy

Well-developed programs on active third stage management have a profound influence in nursing practices and policies. The third stage of labor, which extends from the delivery of the baby until placental removal is crucial a phase where adequate management influences maternal outcomes.

1. Improved Patient Outcomes:

Educational programs that increase the nurse knowledge base in active management can reduce poor outcomes. By having updated knowledge and skills, nurses can better manage the third phase of labor

thereby minimizing complications such as postpartum hemorrhage (Ahsan et al., 2021).

2. Enhanced Patient Safety:

Evidence-based practice is common in nursing. A good educational program ensures that nurses are knowledgeable of recent research as well as best practice in managing the third stage. This body of knowledge helps improve patient safety by reducing the number of adverse events (Murray & Gayle Huelsmann, 2020).

3. Increased Nurse Confidence:

A nurse with adequate knowledge is likely to feel competent in dealing with complicated situations. Confidence among the nursing professionals plays an important role in decision-making and provision of quality care. A program on the education of active management during third stage of labor can improve confidence among nurses in administering obstetric care (Jae-Woo, 2021).

4. Alignment with Policy Guidelines:

Nursing policies and protocols are often created by following evidence-based practices. Should an education program on active management of the third stage labour prove successful, it can impact formulation or restructuring that a policy would take in healthcare institutions. This aligns nursing practices to the set guidelines (WHO, 2018).

5. Continuous Professional Development:

Implementing educational programs in nursing care fosters a culture of lifelong professional learning. Nurses who constantly learn to change correlate with healthcare practices and respond better to new challenges in maternal health (Kanda et al., 2023).

6. Collaborative Interdisciplinary Care:

A good learning strategy helps interdisciplinary collaboration. Since nurses who have deep understanding of active management for the third

stage of labor can communicate with other health care practitioners more effectively, teamwork in maternal (Prince & Armstrong, 2015).

2.13. Challenges and Barriers of Implementing Intervention

Here are some common challenges and barriers:

1. Resistance to Change:

Nurses can also be reluctant to change standard procedures if they have done something a certain way, over time. Resistance to change has been a longstanding issue in health care education and practice (Maben et al., 2006).

2. Time Constraints:

Moreover, nurses are usually very busy with their regular schedule and finding time for the additional training or educational programs may not be easy. One of the frequently cited barriers in healthcare environments is lack of time for study. (Coventry et al., 2015).

4. Resource Limitations:

Sometimes the limitation of resources or materials for education may prevent proper implementation educational programs. Limitations in resources are often used as the reason why healthcare interventions cannot be adopted (Okongo et al., 2015).

5. Organizational Support:

There may be a lack of cooperation from healthcare institutions or leadership to facilitate the implementation process and ensure that educational programs are successful. Organizational support is necessary for the success of educational interventions (West et al., 2015).

6. Inadequate Training Infrastructure:

The lack of infrastructure for training, like simulation labs and workshops can deny nurses the opportunity to have practical skills. Having enough training facilities is essential for skill acquisition (Kavinya et al., 2023).

7. Cultural and Language Barriers:

Cultural differences and language barriers among nurses may influence the interpretation of active management for the third stage of labor. Cultural competency and skills of effective communication is integral to healthcare education (Navarro-Prado et al., 2022).

8. Evaluation and Feedback Mechanisms:

The absence of a solid system that assesses the efficiency of an educational program and gives constructive feedback may impede continual improvement. Finally, regular assessment and feedback are key elements of effective educational interventions (Cornes et al., 2023).

2.14. Previous Studies

First Study

" Improving Maternity Nurses' Performance Regarding Prevention and Control of Postpartum Hemorrhage " Ibrahim, et al. (2016).

Aim: This study was undertaken to evaluate the effect of an educational intervention on Improving maternity nurses' performance regarding prevention and control of postpartum hemorrhage **Methods:** A quasi-experimental design was utilized. **Setting:** The study was conducted at obstetrics and gynecology departments affiliated to Benha University Hospital and Benha Teaching hospital. **Sample:** total sample of 64 maternity nurses were included in the current study. **Tools:** Two tools were used for data collection; 1) a structured interviewing schedule to collect data about the nurses' sociodemographic characteristics and knowledge regarding postpartum hemorrhage. 2); an observation checklist to assess the procedures provided by nurses during immediate postpartum period concerned with prevention and control of post-partum hemorrhage. **Results:** there were highly statistically significant differences ($P < .001$) before and after educational intervention regarding total knowledge and practices mean scores of the studied nurses. There were negative statistically significant correlations ($P \leq .01$) between studied nurses, total knowledge, total practices scores and their age and years of experience. **Conclusion and**

recommendation: The implementation of the educational intervention significantly improved nurses' knowledge and practices towards prevention and control of postpartum hemorrhage.

Second Study

" An Audit of the Knowledge and Practice of the Active Management of the Third Stage of Labor in a Resource Constrained Setting" Daef,et al . (2017).

Background: The high incidence of post-partum hemorrhage (PPH) in South Africa draws into question the knowledge and practice of HCPs with regard to AMTSL. Hence we carried out this assessment of HCPs knowledge and practice of AMTSL in the Pietermaritzburg Metropolitan Area (PMB). Aim: To evaluate HCP's knowledge and practice of AMTSL in the Pietermaritzburg Metropolitan Area and to determine if AMTSL is being correctly implemented. Method: A cross sectional questionnaire-based survey of 280 HCPs involved in maternity services, at a tertiary, regional and district hospital and 3 clinics. Results: 94% of questionnaires were completed by HCPs, 52.2% being midwives and 47.8% doctors. 71.2% of midwives and 71.1% of the doctors defined AMTSL according to the FIGO/WHO definition, with 93% of midwives and 91.9% of doctors practicing AMTSL. Manual removal of the placenta was incorrectly listed as a part of AMTSL by 60.3% of midwives and 50.5% of the doctors. 64% of midwives and 42.3% of doctors incorrectly thought that the routine administration of a uterotonic agent was part of expectant management of the third stage of labor (EMTSL). Early cord clamping was practiced by 69% of midwives and 73.8% of doctors, while 92% of midwives and 82.8% of doctors delivered the placenta by controlled cord traction. At caesarean delivery 65% of obstetric doctors and 87% of anaesthetic doctors use oxytocin (as a combination dose of intravenous bolus and infusion). Conclusion: This study highlights that while there is a deficiency in the knowledge and practice of the HCPs with regard to AMTSL in our setting,

the majority do practice AMTSL, with most of the recommended components being implemented.

Third Study

" Knowledge and Practice of Active Management of Third Stage of Labor (AMTSL) among Nursing Students in Selected Hospitals, Gangtok, Sikkim" Bhutia, et al., (2018).

Introduction: Active Management of Third Stage of Labor (AMTSL) as a prophylactic intervention is composed of a package of three components. WHO recommendations have supported active management of the third stage of labor (AMTSL) as a critical intervention for PPH prevention. The study aimed to assess the knowledge and practice of AMTSL among nursing students in selected hospitals, Gangtok, Sikkim. Materials and Methods: Investigators adopted quantitative approach with descriptive co-relational research design where 40 students were selected by convenient sampling technique. Validated structured knowledge questionnaire and observational checklist were used to collect the data. Pretesting and reliability of the tool was done which was found to be reliable. Results: The findings revealed that majority of the students i.e., out of 40 students, 33 (82.5%) had average knowledge, 5 (15%) students had poor knowledge and 1 (2.5%) had good knowledge. Majority 21 (52.5%) had poor practice and 19 (47.5%) had good practice on AMTSL. There was a positive correlation between knowledge and practice of AMTSL among nursing students which means with the increase of knowledge, the practice of AMTSL improves. Also, there was an association of practice with the number of return demonstration shown to the supervisor. Conclusion: Knowledge of Active Management of Third Stage of labor is a vital possession for the nurses and birth attendants to be skillful in the practice of AMTSL to prevent post-partum hemorrhage and other obstetric complication, which may risk the life of the women. Knowledge

based skill is optimal solution for reducing the maternal mortality rate.

Forth Study

" Active Management of the Third Stage of Labor: A Brief Review and Update " SULTANA, et al (2018).

Blood loss due to postpartum hemorrhage (PPH) and its complications constitute one of the major causes of maternal mortality and morbidity. Active management of third stage of labor (AMTSL) plays an immense role in preventing maternal death due PPH. But till date obstetricians all over the world and the concerned international bodies could not reach to a single agreement about its universal use. This approach is practiced widely in many centers and there are some specific guidelines regarding its practical use. AMTSL as a prophylactic intervention and is composed of a package of three components or steps: 1) administration of a uterotonic, preferably oxytocin, immediately after birth of the baby; 2) controlled cord traction (CCT) to deliver the placenta; and 3) massage of the uterine fundus after the placenta is delivered. In 2012, the results of a large WHO-directed, multi-centred clinical trial showed that the most important AMTSL component was the administration of an uterotonic, the other two steps contribute relatively less in blood loss. But WHO recommends to continue all three steps of AMTSL for management and training of third stage of labor. This article is a brief review of the recent guidelines and evidence-based practice of active management of the third stage of labor.

Fifth Study

Abd Elhakm et al (2018) evaluated the effects of simulation-based training on maternity nurses' performance, self-confidence in managing primary PPH. The quasi-experimental study conducted involved 65 maternity nurses from the Obstetrical and Gynaecological Emergency

Department at Benha University Hospital. The data-collection methodology involved a structured questionnaire, an observational checklist about nurses' practices and also a modified self-confidence measurement scale. Analysis of the results showed that prior to simulation training, most nurses had poor performance and low self-confidence when managing PPH. However, after simulation training was done, there were several areas of improvement regarding nurses' knowledge performance and self-confidence. The study concluded that simulation-based training had a desirable effect on nurses' skills and suggested the use of such an approach for all obstetric healthcare providers to improve their preparedness in dealing with emergencies during pregnancy.

Sixth Study

" Assessing the Impact of Mentorship on Rwandan Nurses' and Midwives' Knowledge and Self-Efficacy in Managing Postpartum Hemorrhage " Musabwasoni, (2019).

postpartum hemorrhage (PPH) remains the top universal cause of maternal morbidity and mortality. The aim of this study is to assess the impact of mentorship on nurses' and midwives' knowledge and self-efficacy in managing PPH. The pre and post study design recruited 141 nurses and midwives working in the labor and delivery department in selected health centers from the North Province of Rwanda. At post-mentorship, 123 nurses and midwives had completed the study. Using instruments adapted to knowledge and self-efficacy in managing PPH, a paired t-test was applied to estimate differences in scores between pre-and post-mentorship on participants' knowledge and self-efficacy in managing PPH. The results indicate an increase in knowledge scores from 68% prior to mentorship up to 87% (95% CI [15.65, 21.21] and self-efficacy from 6.9 to 9.5 (95% CI [2.3, 3.08] average score out of the maximum score of ten. The correlation between knowledge and self-efficacy was moderately positive at pre-

mentorship ($r=.214$; $p=.002$) and strongly positive at post-mentorship ($r=.585$; $p<.001$). The frequency of mentorship visits was associated with post-mentorship knowledge scores ($r=.539$; $p<.001$) and post-mentorship self-efficacy ($r=.623$; $p<.001$) as well. The results from this research will inform further studies and practitioners to develop a model to support knowledge and self-efficacy in managing PPH.

Seventh Study

" Efficacy of Lecture cum demonstration versus video-based teaching regarding active management of third stage of labor in terms of knowledge and skills of GNM students" David, et al (2020).

Educational interventions have been associated with improved performance and significant changes, especially in perinatal outcomes. Teaching is one of the main components in educational planning which is a key factor in conducting educational plans through various teaching strategies such as simulation, demonstration and video teaching. AIM: The study aimed to assess lecture cum demonstration (LCD) versus video-based teaching (VBT) regarding active management of the third stage of labor (AMTSL) in terms of knowledge and skills of General Nursing Midwifery (GNM) students. METHODS: This was a quasi-experimental study conducted on 100 GNM third-year students selected by purposive sampling and randomly assigned to LCD ($n = 50$) and VBT ($n = 50$) groups. Sample characteristics Performa, Structured Knowledge Questionnaire, and observational checklist were used to collect data from GNM students through self-report and observational technique. RESULTS: The study results showed that the mean posttest knowledge scores of LCD (17.32 ± 2.14) and VBT group (16.90 ± 2.41) were nearly equal and mean rank posttest skills score of LCD group (54.40) was slightly higher than VBT group (49.51), but computed "t" value of mean posttest knowledge and computed "Z" value of skill score of both LCD and VBT group ($0.47, 0.54$) were found to be

statistically non-significant at 0.05 level of significance. CONCLUSION: It can be concluded that both LCD and VBT were found to be effective in improving knowledge and skills of GNM students regarding AMTSL.

Eighth Study

" Effectiveness of using simulation in the development of clinical reasoning in undergraduate nursing students: A systematic review" Theobald, et al (2021).

Aim/This systematic review examines the effectiveness of undergraduate nursing students' using simulation to acquire clinical reasoning. Background Use of simulation to positively impact practice outcomes is an established method in nursing education. Clinical reasoning is a graduate capability that contributes to safe practice, so developing clinical reasoning requires explicit scaffolding in undergraduate contexts. While research has primarily evaluated specific clinical reasoning frameworks, variability in clinical reasoning definitions has obscured simulation efficacy for clinical reasoning acquisition. Design This review uses the Joanna Briggs Institute Systematic Reviews approach. Methods An electronic database search was conducted to identify studies published from May 2009 to January 2020 using a three-step search strategy. Selected papers were assessed by at least two independent reviewers for inclusion criteria, methodological validity, and data extraction. Ten studies using quasi-experimental designs involving 1532 students were included. Results Evidence regarding the effectiveness of simulation for undergraduate nursing students' acquisition of clinical reasoning was limited but of high quality. Review results showed no statistically significant gains in clinical reasoning with a single simulation exposure. Two emerging concepts, situation awareness and teamwork support the enhancement of clinical reasoning within simulation. In order to draw future conclusions on the efficacy of simulation to develop clinical reasoning, more research is

warranted. Conclusions New insights about team-based simulations and situation awareness were identified as integral for development of clinical reasoning in the context of simulation. More consistent use of terminology in the context of simulation research is also recommended.

Ninth Study

" The effect of an mLearning application on nurses' and midwives' knowledge and skills for the management of postpartum hemorrhage and neonatal resuscitation: pre–post intervention study" Nishimwe, et al (2021).

Background Globally, mobile learning (mLearning) tools have attracted considerable attention as a means of continuous training for healthcare workers. Rwanda like other low-resource settings with scarce in-service training opportunities requires innovative approaches that adapt technology to context to improve healthcare workers' knowledge and skills. One such innovation is the safe delivery application (SDA), a smartphone mLearning application for Basic Emergency Obstetric and Neonatal Care (BEmONC) content. This study assessed the effect of the SDA intervention on nurses' and midwives' knowledge and skills for the management of postpartum hemorrhage (PPH) and neonatal resuscitation (NR). **Methods** The study used a pre–posttest design to compare knowledge and skills of nurses and midwives in the management of PPH and NR at two measurement points: immediately prior to SDA intervention and after 6 months of SDA intervention. The intervention took place in two district hospitals in Rwanda and included 54 participants. A paired-sample t-test was used to measure the pre–post intervention, mean knowledge and skills scores differences. Confidence intervals (CIs) and effect size were calculated. A t-test and a one-way Anova were used to test for potential confounders. **Results** The analysis included 54 participants. Knowledge scores and skills scores on PPH management and NR increased significantly from baseline to endline measurements. The mean difference for PPH knowledge is 17.1 out of 100;

95% CI 14.69 to 19.49 and 2.6% for PPH skills; 95% CI 1.01 to 4.25. The mean difference for NR knowledge is 19.1 out of 100; 95% CI 16.31 to 21.76 and 5.5% for NR skills; 95% CI 3.66 to 7.41. Increases were unaffected by participants' attendance to in-service training 6 months prior and during SDA intervention and previous smartphone use. However, pre- and post-intervention skills scores were significantly different by years of experience in obstetric care. Conclusion The SDA intervention improved the knowledge and skills of nurses and midwives on the management of PPH and NR as long as 6 months after SDA introduction. The results are highly relevant in low-income countries like Rwanda, where quality of delivery care is challenged by a lack of in-service continuous training for healthcare providers.

Ten Study

" The Impact of Low Fidelity Simulation on Nurse Competence in Active Management of Third Stage of Labor: An Intervention Study in Primary Health Care Settings in Tanzania" Angelina, et al (2021).

Background Simulation-based training on obstetric management has demonstrated promising results. However, its impact has not been well documented particularly in low- and middle-income countries. Therefore, this study aimed to test the effectiveness of a low fidelity simulation-based training intervention in improving knowledge and skills of nurses on Active management of third stage of labor (AMTSL). Methods A quasi experimental study including 172 randomly selected nurses using low fidelity simulation-based training was conducted. Baseline, immediate and retention assessments were done. Findings Overall knowledge and skills on AMTSL were significantly improved after simulation training, skills retained even after six months. Conclusions A low fidelity simulation intervention showed positive change in knowledge and skills immediately

after intervention and skills were highly retained even after six months of training.

Eleven Study

Memon et al. (2022) was undertaken to assess the impact of training and education on knowledge, skills practice among nurses and midwives related to active management third stage labor (AMTSL). The quasi-experimental study lasted from January to June of 2020 and used nonprobability convenience sampling. It employed a sample size comprising about 140 participants, divided into intervention (n =7) and control groups (n =7). The findings showed that age group and previous training on AMTSL had a significant positive relationship with the study group. In the case of training, a significant mean difference was observed in post-knowledge and between pre – practice. Between the intervention and control groups, post-test knowledge of nurses was found to be superior in the former group. Overall, the paper indicates that training and education in AMTSL is very effective because it resulted to increased post-test knowledge score as well as improved practice scores among nurses and midwives.

Twelve Study

Mohammed et al. (2023) sought to evaluate the efficacy of an educational approach on nurses' and midwives' performance during placenta examination at a Maternity Teaching Hospital located in Sulaimani, Iraq. The quasi-experimental study included 87 participants and lasted from August to December of 2021. The respondents who worked in different settings of maternity care were assessed using a structured questionnaire and an observation checklist. Sample performance was poor as 90% of them turned out to have low performance during the pre-test; however, after having been through an educational program these subjects improved their outcomes and now are able to perform well because only 5.7 % exhibited inefficient practice on a post-quiz test: The study found that practices in placenta examination by the participants were often poor and they used

traditional approaches. Moreover, overall practice was found as a significantly related factor with age among the nurses and midwives.

Thirteen Study

Ezzat Osman et al. (2023) In order to evaluate the effect of competency-based education on how intern nursing students manage active third stage labor, The quasi-experimental study included 60 female intern nursing students at Mansoura University in Egypt during the academic year of 21/22. The tools used were a self-administered questionnaire, practical observational checklist attitudes assessment sheet and satisfaction Likert scale. The results reported highly significant changes in the interns' knowledge, attitudes and practical skills concerning active management of third stage labor immediately after intervention and during follow-up. Negative significant correlation was found between total knowledge and intern students' practices before, immediately after class session and follow up. Around 75% of the students reported satisfaction with the clinical training method after intervention. In summary, CBE helped the intern nursing students developed better knowledge, beliefs and practices about active management of third stage labor which resulted in increased satisfaction scores. The study proposes a need for constant competency-based education to yet improve students' capacities in this area.

Chapter Three

Methodology

Chapter Three

Methodology

Scientific research methodology refers to specific scientific standards, criterion and controls that are followed during the process of doing scientific research. As such, the scientific research methodology is one of its pillars that form a basis for good research organization. One of the most significant scientific studies controls is that it be organized and correct, so every reader or guide regarding lines benefits from it; therefore, we should handle different sciences research standards as a scientist can use during proper formed study. In this chapter, the research design and all scientific procedures that were pursued by the researcher throughout initial stage until end point will be discussed.

3.1. Study Design

To fulfill the objectives of this study, a quasi-experimental design was adopted where an adapted pre and post-test approach for both treatment group as well as control groups were undertaken during 1st December, 2021 to 3rd, July 2022.

A quasi-experiment is an empirical interventional study that estimates the causal effect of intervention (education program) on a target population (nurse), but it fails to allocate by randomization. The quasi-experimental design resembles the traditional experimental model or randomized controlled trial in some aspects, but it does not include assignments to particular treatments or controls. However, the quasi-experimental designs usually enable control over assignment to treatment in some other way than randomize.

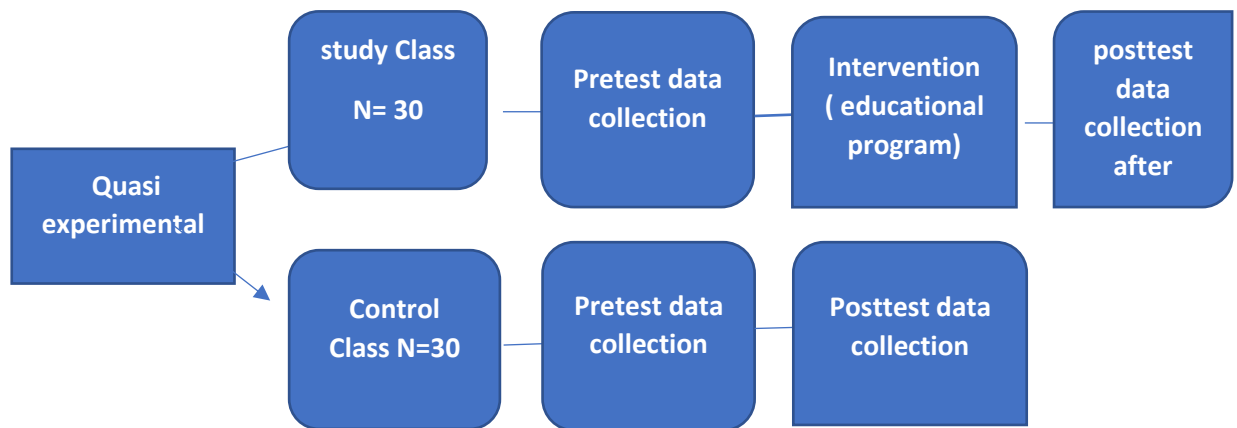


Figure 3-1: Steps of quasi-experimental study

3.2. Administrative Arrangements

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

1. The University of Karbala/ College of Nursing provided the research protocol and official permission to conduct that study.
2. The title, structured educational program, and questionnaire were shown to the Ethics Committee formed in College of Nursing who approved study tools (program and questionnaires)
3. At the final stage of administrative arrangements, an official letter written by (Training Department and Development) Karbala Health Directorate.
4. Permission issued by Obstetrics and Gynecology Teaching Hospital is selected to support the presented study in Appendix A.
5. Moreover, the consent granted by the nurses to join this study after educating them on its objectives and benefits as well as their assurance that any information they will provide will be kept confidential for scientific and research purposes (autonomy privacy).

3.3. Setting of the Study

The study here is conducted at obstetrics and gynecology teaching hospital in Karbala province was the best place for data collection

This hospital was chosen for the following reasons:

1. This is the only teaching hospital related to maternity and which has delivery rooms with large staff of nurses and midwives.
2. Nurse cooperators in the program of implementation.
3. Physical availability of classrooms, chairs and tables in hospitals, data shows, computers, speakers and light during the program implementation.

3.4. Sample of study

Nurses (60) had been convenience sampling selected from a non-probability sample to get represent and valid data. Sample size is (60) participants divided into two groups, one group consisting of 30 nurses as the study population and other control subjects having their number standing at 30. The control group is not exposed to the study program, which aims at enhancing nurses' knowledge of Active Management of Third Stage Labor in bid to check postpartum hemorrhage while as compared analyst and chose for comparison. Some nurses were also barred from the survey due to their involvement in course activity for one week outside and intermittently by Training and Development Center as well as under Department of Health. It was established in Higher Health Institute located at Holy Karbala that led some nurses to withdraw from their course participation if they failed to acquire an adequate number of samples.

3.4.1. Inclusion Criteria:

1. Nurses who scored less than 60% in the assessment need (Appendix B).
2. Nurses who are different educational levels.
3. Nurses who performed poorly on the pretest.
4. Nurses who are ready to participate in the research.
5. Nurses who have one year and more experience

3.4.2. Exclusion Criteria:

1. Nursing staff that rejected to take part in the research.
2. Nurses with less than one year of experience.

3. Nurses who declined to finish the study.
4. Nurses who selected for pilot study.
5. Nurses who were on vacation.
6. Nurses who were participating in other training courses and workshops at the same time.

3.5. Steps of the Study

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

3.5.1. Preliminary Assessment of Nurses Knowledge Regarding Active Management of Third Stage of Labor to Control of Postpartum Hemorrhage

The primary purpose of this assessment is to comprehensively evaluate the educational needs of nurses who specialize in caring for Third Stage of Labor to Control of Postpartum Hemorrhage, specifically focusing on safety measurements within this context. Acquiring a nuanced understanding of the educational requirements for these healthcare professionals is crucial to educational program.

To gather pertinent data, a targeted sample of (10) experienced nurses, specializing in the care of Third Stage of Labor to Control of Postpartum Hemorrhage, was selected. Each nurse participated in the assessment by dedicating (10-15) minutes to respond to a structured instrument designed to capture their insights and knowledge related to Active Management of Third Stage of Labor to Control of Postpartum Hemorrhage. The assessment tool consisted of a series of questionnaire items, each requiring a binary response (true or false).

The results obtained from the questionnaire items have been meticulously compiled and are presented below. This data serves as a foundation for identifying areas of strength and potential knowledge gaps among the participating nurses. The subsequent analysis of this information

will facilitate the development of a targeted education program tailored to address the specific needs of nurses involved in the managing of Third Stage of Labor to Control of Postpartum Hemorrhage. Ultimately, the overarching goal is to enhance the quality of care provided to maternity and contribute to improved outcomes in the management of Third Stage of Labor to Control of Postpartum Hemorrhage.

<i>Level of knowledge</i>	<i>Frequencies</i>	<i>Percentage</i>
<i>Fail (≤ 59)</i>	8	80.0
<i>Fair (60-69)</i>	2	20.0
<i>Good (≥ 70)</i>	0	0.0

3. 5.2: Building the Instruction program

The nurses' findings informed the design of the education program. needs assessment, and analysis derived from interpreting relative. by previous studies, scientific literature and the researcher's own experience. The program content was evaluated by various experts working in a diverse field of nursing sciences (Appendix E). These experts' recommendations and suggestions influenced the revision of the program form contents. It has been achieved that the program was made in an effective way for improving nurses' knowledge concerning to Active Management of Third Stage of Labor to Control Postpartum Hemorrhage. This education program was tailored to deliver the necessary improvement with regard to nurses' knowledge (Appendix C).

3.6. Group Assignment

3.6.1. Control Group:

The nurses in the control group were recruited from Obstetrics and Gynecology Teaching Hospital who received only usual activities of teaching reflecting their profession according to it along with study settings. The only two tests taken in this study were the pre-posttests.

3.6.2. Study Group:

The study group received the same information as did the control group, in addition to an educational program aimed at improving nurses' knowledge of Active Management of Third Stage of Labor (AMTSL) for Control PPH. The program had three sessions and was conducted for a week-day, in the hospital hall that is equipped with facilities necessary to implement educational programs. Each session addresses the following:

Educational Program

1 st Sessions: - Normal labor

- ‡ Definition of Normal labor
- ‡ Labor stages
- ‡ Signs of labor

2 nd Sessions: Stages of labor -

-Nursing interventions Stages of labor

3 rd Sessions: -

Definition of Postpartum hemorrhage (PPH)

Primary postpartum hemorrhage (PPH)

Causes of postpartum hemorrhage

Signs and Symptoms of PPH

Control postpartum hemorrhage

Recommendations for the prevention of PPH

Recommendations for the treatment of PPH

4 th Sessions: -

Active Management of Third Stage of Labor

Definition of Active Management of Third Stage of Labor

Physiology of the third stage of labor

Care during the third stage of labor

Steps of Active Management of Third Stage of Labor

WHO Recommendations for Active Management of the Third Stage of Labor (AMTSL).

3.7. Study Instrument

The survey is among the mechanisms to facilitate collection of corresponding data towards reaching the desirable outcomes anticipated by this study; therefore, a questionnaire was developed with a focus on elucidating these objectives and significance through answering questions posed in consideration herein.

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

The first included the socio-demographic variables like (age, level of education years of experience number at labor wards and training sessions).

The second section focuses on the study knowledge of Active Management of Third Stage Labor to Control Postpartum Hemorrhage which was modified by the researcher based on literature review and research (Taha, 2015) (Memon et al., 2022) (Mohammed & Muhamed, 2023). whereby it is built with 35 items MCQ. The researcher followed the writing guidelines for the questionnaire because of such fact as to what type information, on which she is interested in being sufficient and comprehensive concerning all aspects of problem could be met with reliable and trustful sources. To vague and complex answers. Closed questions were required, the answering to which was dependent on what would be correct.

3.8. Validity of the Questionnaire

Validity of a questionnaire, which should be honest (elements included for analysis and clarification), must test if paragraphs plus terms make it understandable to all users. To establish the validity of the questionnaire, it was administered to 13 experts from different areas in order for them to make it more legitimate. They were specialists of various fields, PhDs in Psychiatric and Mental Health Nursing, PhDs in Maternal and Neonatal Health Nursing, Ph.D s With respect to the linguistic correctness of each item, its correspondence with a dimension it was meant for and

applicability for study population context, experts were asked their opinion. The experts' responses showed that slight modifications should be made in some items, and they were performed according to their recommendations while the final draft was ready for conducting a study.

3.9. Pilot Study

Reliability and consistency of the research tool, its clarity, effectiveness were corroborated as well as average time required for collecting data on each subject that can be established during interview processes also potential limitations.

The pilot study was to accomplish the following goals.

1. Construction of and validation the suitability for research tools.
2. Determining the validity of this instrument.
3. Finding logistical issues by using the proposed methods.
4. Evaluation of the proposed approaches to data analysis for detecting early signs of issues.
5. Calculate the duration during which data was collected by a researcher.

Results of Pilot Study:

1. The questionnaire is reliable.
2. Completing the questionnaire took between fifteen and twenty minutes.
3. The whole instrument items were clarified and thus, the underlying phenomenon of study got understood (Table 3-1). Before the questionnaire reached its final form, it went through the following stages:
 - i. Deciding what kind of information will be gathered through the questionnaire in relation to study questions.
 - ii. Deciding on the mode and type of questionnaire.
 - iii. Identifying the criterion type that determines response criteria in questionnaire.
 - iv. The questionnaire should be presented to supervising so showing him our idea and notice about developing the questionnaire.

- v. Presenting the questionnaire to several panels of experts who expressed their opinion and remarks in framing it up and changing as per what they submitted.
- vi. Testing it for reliability by administering the questionnaire to a sample of 10 nurses.

3.9.2. Reliability of the Questionnaire:

The degree by which repeated usage of the tools will result in almost same level is referred to as reliability. The researcher used the test-retest reliability approach by employing a random exploration sample of 10 nurses, who each received the questionnaire with no indication that they were being employed as subjects to determine stability. The people in this sample were subsequently dropped from the initial population that was used for conducting of subsequent final study. The confidence coefficient is calculated as the Alpha Cronbach sample coefficient, which follows below.

Reliability		
Knowledge 35 – Items	Test	Re-test
		0.71

Table 3-1: Reliability of the Studied Questionnaire (n=10)

3.10. Ethical Considerations

One of the most critical aspects that a researcher needs to observe and fulfill during the study is ethical obligations. The researcher should define the purpose and outcome of conducting this study for understanding that section included in the sample, as well keep strictly confidential to data collected from their survey respondents with pledging use it only within scientific perspective relevant to such studies.

Prior to the start of information gathering from those who are taking part in this study. The researcher gave a partial description of the project's study design, objective and personnel carried out by nurses in order to provide foundational information for individuals involved. However, the researcher

pointed out that all nurses who were currently participating in this study had a right to not complete their participation and leave this study if they felt uncomfortable or irritated by some questions on questionnaire which was used as the tool of conducting a qualitative nature for data collection.

The program went through various significant phases from January 5, 2022, until April 29, 2023, which was the implementation phase. When the initiative was presented to the study group, it included the following elements:

3.11. Methods of Data Collection

The talks took place during January 5th, 2022 to April 29th, 2023. The following were included in the program's implementation, which was presented to the study group:

1. The demographic data form was provided to all of the nurses, in both experimental and control groups.
2. All nurses underwent an individual pre-test encompassing 15 to 20 minutes.
3. In the same classroom sessions, they were called to be part of an education program.
4. Thirty-five questions regarding the knowledge of nurses. Different choices were given to the experimental group. The test was designed to evaluate nurses' knowledge on the Active Management of Third Stage of Labor for management and control of postpartum hemorrhage.
5. The duration of each class will be between 60 and 90 minutes.
6. The sample was collected and an educational program was given in the lecture hall of the hospital and program continuing for one week
7. All respondents from both experimental and control groups were subjected to a post-test two weeks after the completion of end education program.

8. The experimental group and then after one month, they were subjected to post-test II as a measure of the effect which emanated out from the tutorial.
9. The control group, except the education program and post-test II followed same procedures as experimental.
10. The following teaching resources were used in these sessions: (Classroom, Lectures; whiteboard computer data show and notebook).

3.12. Statistical Analysis Approach

Data gathered from the study sample was statistically analyzed using SPSS-20 and Microsoft Excel (2010) to deduction link between variables, final findings based on a series of statistical tests.

3.12.1. Descriptive approach:

Given a set of mathematical and statistical procedures, descriptive statistics are characterized by quantitative description to the main properties through tables and graphs. Descriptive statistics are always considered the processing, organizing, summarization as well as categorization of data to be presented and described simply when done for easier recognition by a recipient. 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 (\pm 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

For a single group, such as where the research is based on pre-post study sample of any size to find out significance for change difference between two groups this equation can be used.

2. Independent Sample t-test

For an unrelated sample the t test looks at two independent groups' means in order to see if there is statistical evidence that related population mean is significantly different from each other.

3. Analysis of Variance

For equal variances, use (one-way ANOVA test when the mean parameter changes).

Source of variance	Sum of square	d.f	Mean square	F
Between Groups	$SS_b = \frac{(\sum xP)^2}{n} - \frac{(\sum xP)^2}{N}$	$df_b = K-1$	$\frac{MS_b}{MS_w}$	
Within Groups	$SS_w = \frac{\sum (\sum xP)^2}{N} - \frac{(\sum xP)^2}{N}$	$df_w = N-k$	$\frac{SS_w}{DF_w}$	$\frac{MS_b}{MS_w}$
Total	$SS_T = \frac{\sum (\sum xP)^2}{N} - \frac{(\sum xP)^2}{N}$	$df_T = N-1$		

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

Results of the Study

The finding of data analysis systematically in figures and tables, which are corresponded with the objectives of the study as follows:

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

SDVs	Classification	Study Group		Control Group	
		No.	%	No.	%
Age	20-29 years old	9	30.0	17	56.7
	30-39 years old	11	36.7	7	23.3
	40-49 years old	8	26.7	5	16.7
	50 and older	2	6.7	1	3.3
	<i>M ± SD</i>	35.93 ± 8.52		33.50 ± 8.72	
Education Level	School nursing	2	6.7	2	6.7
	Preparatory nursing	22	73.3	17	56.7
	Diploma nursing	5	16.7	11	36.7
	BSc. Nursing	1	3.3	0	0.0
Experience in Hospital	<5 years	6	20.0	9	30.0
	5-10 years	15	50.0	19	63.3
	>10 years	9	30.0	2	6.7
Workplace	Maternity	11	36.7	10	33.3
	Postpartum	19	63.3	20	66.7
Experience in Workplace	1-3 year	12	40.0	8	26.7
	4-6 years	16	53.3	19	63.3
	>6 years	2	6.7	3	10.0
Training Courses	Yes	11	36.7	14	46.7
	No	19	63.3	16	53.3

No.= Number; %= Percentage

The study revealed participant characteristics, showing an average age of 35.93 (SD=8.52) in the study group and 33.50 (SD=8.72) in the control group. In terms of education, 73.3% of study group nurses and 56.7% of control group nurses had graduated from preparatory nursing. Experience in the hospital ranged from 5-10 years for 50% of nurses in the study group

and 63.3% in the control group. A majority of nurses in both groups (63.3% in study and 66.7% in control) worked in postpartum areas. Regarding workplace experience, over half of the study group (53.3%) and control group (63.3%) nurses had 4-6 years of experience without training.

Table 4-2.1. Nurses Knowledge regarding Active Management of Third Stage of Labor in Study Group Responses

Study Group		Pre-test		Post test I		Post test II	
		Ms	Ass.	Ms	Ass.	Ms	Ass.
1	Stages of childbirth are divided into:	1.23	L	1.87	H	1.83	H
2	What stage is the placenta born at?	1.27	L	1.53	H	1.53	H
3	The third stage of labor refers to the period that begins immediately after the baby is born and ends when the placenta and its associated membranes are fully expelled (delivered). How long does it take for the placenta to deliver?	1.20	L	1.87	H	1.83	H
4	Signs of placenta separation	1.23	L	1.80	H	1.77	H
5	Do you know what Active Management of Third Stage of Labor?	1.23	L	1.87	H	1.83	H
6	Have you used these active Management of Third Stage of Labor before?	1.20	L	1.53	M	1.53	M
7	While awaiting delivery of the placenta and after delivery (expulsion) of the placenta Monitor (heartbeat, blood pressure, volume of blood loss) because the risk of postpartum hemorrhage continues	1.27	L	1.90	H	1.87	H
8	What is the volume of blood lost during the delivery of the placenta?	1.17	L	1.90	H	1.87	H
9	Postpartum hemorrhage is	1.20	L	1.53	M	1.53	M
10	Can you believe that the correct use of active Management is in the third stage of labor can prevent postpartum hemorrhage?	1.10	L	1.63	M	1.60	M
11	The recommended first-line uterotonic for active Management in the third stage of labor is	1.07	L	1.90	H	1.87	H
12	The recommended dose of this drug during active Management in the third stage of labor continues in the previous question	1.07	L	1.83	H	1.80	H
13	Medications for uterotonics are	1.13	L	1.80	H	1.8	H

14	The recommended method of giving Oxytocin is	1.13	L	1.67	H	1.63	H
15	What is your role immediately after the birth of the fetus	1.2	L	1.53	M	1.53	M
16	When to give oxytocin	1.13	L	1.73	H	1.73	H
17	While performing active Management in the third stage of labor, midwives need to: Monitor the mother continuously	1.20	L	1.87	H	1.83	H
18	A full bladder can prevent the uterus from contracting efficiently	1.33	L	1.90	H	1.87	H
19	Pull and cut the umbilical cord 1-3 minutes after the baby is born	1.13	L	1.80	H	1.80	H
20	The retraction of the umbilical cord is controlled during pregnancy	1.20	L	1.80	H	1.77	H
21	How long do you need to take active Management in the third stage of labor?	1.20	L	1.90	H	1.87	H
22	How often do you perform a uterine massage?	1.17	L	1.80	H	1.77	H
23	Delayed cord clamping is the process of waiting before the cord is cut for 3 minutes after the baby is born	1.20	L	1.73	H	1.70	H
24	The need to maintain the duration of cord clamping helps prevent anemia in the newborn	1.10	L	1.63	M	1.63	M
25	The total duration of placental delivery is	1.20	L	1.83	H	1.80	H
26	Abdominal massage before the delivery of the placenta leads to partial separation of the placenta	1.10	L	1.90	H	1.87	H
27	After the placenta is delivered, the midwife needs to feel the uterus every 15 minutes	1.20	L	1.77	H	1.77	H
28	Palpation of the uterus after the delivery of the placenta is important to ensure its solidity	1.20	L	1.83	H	1.83	H
29	Constant rubbing of the uterus until it hardens after delivery is not necessary to prevent PPH.	1.20	L	1.60	M	1.57	M
30	Active Management for the third stage of labor include all but	1.10	L	1.90	H	1.87	H
31	If misoprostol is used, the recommended dose (in micrograms):	1.13	L	1.83	H	1.83	H
32	The method of administration of misoprostol is:	1.17	L	1.53	M	1.53	M
33	From the baby's abdominal wall, the cord is fixed at approx.	1.1	L	1.60	M	1.60	M

34	All of the following are signs of placental abruption, EXCEPT:	1.13	L	1.83	H	1.83	H
35	All vertebrae are complications of the third stage of labor, except for:	1.23	L	1.73	H	1.67	H

"Level of Assessment (Low [L]=1-1.33, Moderate [M]=1.34-1.66, High [H]=1.67-2"

The results indicate that before engaging in the educational program, a majority of the nurses exhibited low responses as evidenced by their pre-test scores ($M \leq 1.33$). Nevertheless, upon completion of the education program, a notable and significant enhancement in their knowledge scores was observed in the post-test phase, when compared to their initial pre-test scores ($M \geq 1.67$). Moreover, this improvement in knowledge was sustained in the subsequent assessment, referred to as post-test II ($M \geq 1.67$).

Table 4-2.2. Overall Nurses Knowledge regarding Active Management of Third Stage of Labor in Study Group

Study Group	Pre-test			Post-test I			Post-test II		
	No.	%	M ± SD	No	%	M ± SD	No	%	M ± SD
Poor	23	76.7	41.12 ± 9.09	3	10.0	61.67 ± 8.85	4	13.3	60.96 ± 9.75
Moderate	6	20.0		2	6.7		2	6.7	
Good	1	3.3		25	83.3		24	80.0	
Total	30	100.0		30	100.0		30	100.0	

[Poor=35-46.66; Moderate= 46.67-58.33, Good=58.34-70]

The findings unveiled that in the initial assessment phase, nurses within the study group exhibited a notable deficit in their knowledge about active management of the third stage, as indicated by an average score of 41.12 (± 9.09). Nevertheless, following their participation in the initial post-test (Post-test I), a significant enhancement in their knowledge became evident, with an average score of 61.67 (± 8.85). Intriguingly, one month later (Post-test II), the nurses displayed a comparable level of knowledge to that observed in Post-test I, with an average score of 60.96 (± 9.75).

Table 4-2.3. Comparison the Nurses Knowledge between Periods of Measurements in Study Group

Study Group	Knowledge (I)	Knowledge (J)	Mean Differences (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
						Pre-test	Post-test I
Post-test II	-.56667-*	.06820	.000	-.7022-	-.4311-		
Post-test I	Pre-test	.58762*	.06820	.000	.4521	.7232	
	Post-test II	.02095	.06820	.759	-.1146-	.1565	
Post-test II	Pre-test	.56667*	.06820	.000	.4311	.7022	
	Post-test I	-.02095-	.06820	.759	-.1565-	.1146	

*. The mean difference is significant at the 0.05 level.

Results indicate the nurses' knowledge of active management during the third stage of labor significantly varied between the pretest and posttest I ($p = .000$), as well as between the pretest and posttest II ($p = .000$). Notably, there was a significant difference in this knowledge between posttest I and the pretest ($p = .000$), but no significant difference when comparing posttest I and posttest II ($p = .759$). Similarly, the knowledge of active management in posttest II significantly differed from the pretest ($p = .000$), with no notable difference between posttest II and posttest I ($p = .759$).

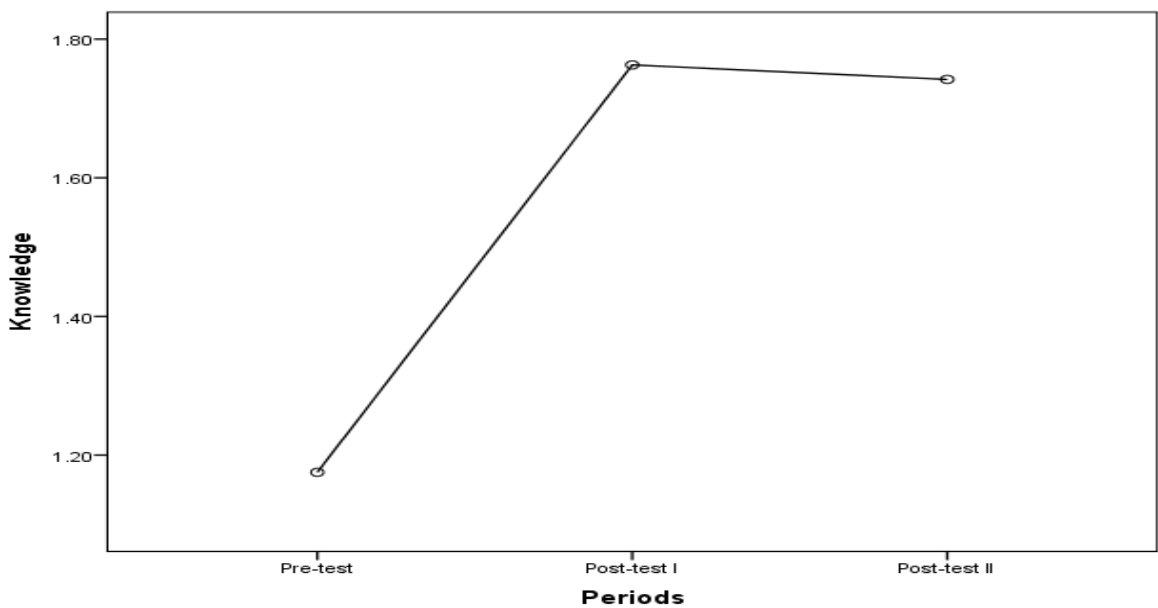


Fig. 4-1. Nurses Knowledge between Periods of Measurement in Study Group

Table 4-3.1. Nurses Knowledge regarding Active Management of Third Stage of Labor in Control Group Responses

Control Group		Pre-test		Post test I		Post test II	
		Ms	Ass.	Ms	Ass.	Ms	Ass.
1	Stages of childbirth are divided into:	1.27	L	1.30	L	1.30	L
2	What stage is the placenta born at?	1.30	L	1.30	L	1.30	L
3	The third stage of labor refers to the period that begins immediately after the baby is born and ends when the placenta and its associated membranes are fully expelled (delivered). How long does it take for the placenta to deliver?	1.23	L	1.23	L	1.27	L
4	Signs of placenta separation	1.27	L	1.27	L	1.30	L
5	Do you know what Active Management of Third Stage of Labor?	1.23	L	1.23	L	1.27	L
6	Have you used these active Management of Third Stage of Labor before?	1.23	L	1.23	L	1.23	L
7	While awaiting delivery of the placenta and after delivery (expulsion) of the placenta Monitor (heartbeat, blood pressure, volume of blood loss) because the risk of postpartum hemorrhage continues	1.27	L	1.27	L	1.30	L
8	What is the volume of blood lost during the delivery of the placenta?	1.20	L	1.20	L	1.23	L
9	Postpartum hemorrhage is	1.20	L	1.23	L	1.23	L
10	Can you believe that the correct use of active Management is in the third stage of labor can prevent postpartum hemorrhage?	1.13	L	1.13	L	1.17	L
11	The recommended first-line uterotonic for active Management in the third stage of labor is	1.07	L	1.10	L	1.10	L
12	The recommended dose of this drug during active Management in the third stage of labor continues in the previous question	1.10	L	1.10	L	1.10	L

13	Medications for uterotonics are	1.13	L	1.17	L	1.20	L
14	The recommended method of giving Oxytocin is	1.13	L	1.13	L	1.17	L
15	What is your role immediately after the birth of the fetus	1.23	L	1.23	L	1.27	L
16	When to give oxytocin	1.17	L	1.17	L	1.20	L
17	While performing active Management in the third stage of labor, midwives need to: Monitor the mother continuously	1.20	L	1.23	L	1.23	L
18	A full bladder can prevent the uterus from contracting efficiently	1.33	L	1.33	L	1.33	L
19	Pull and cut the umbilical cord 1-3 minutes after the baby is born	1.13	L	1.17	L	1.20	L
20	The retraction of the umbilical cord is controlled during pregnancy	1.20	L	1.20	L	1.20	L
21	How long do you need to take active Management in the third stage of labor?	1.20	L	1.23	L	1.23	L
22	How often do you perform a uterine massage?	1.17	L	1.17	L	1.20	L
23	Delayed cord clamping is the process of waiting before the cord is cut for 3 minutes after the baby is born	1.20	L	1.23	L	1.27	L
24	The need to maintain the duration of cord clamping helps prevent anemia in the newborn	1.10	L	1.13	L	1.13	L
25	The total duration of placental delivery is	1.20	L	1.20	L	1.23	L
26	Abdominal massage before the delivery of the placenta leads to partial separation of the placenta	1.13	L	1.13	L	1.17	L
27	After the placenta is delivered, the midwife needs to feel the uterus every 15 minutes	1.23	L	1.23	L	1.23	L
28	Palpation of the uterus after the delivery of the placenta is important to ensure its solidity	1.20	L	1.20	L	1.20	L

29	Constant rubbing of the uterus until it hardens after delivery is not necessary to prevent PPH.	1.23	L	1.23	L	1.27	L
30	Active Management for the third stage of labor include all but	1.13	L	1.13	L	1.17	L
31	If misoprostol is used, the recommended dose (in micrograms):	1.13	L	1.17	L	1.20	L
32	The method of administration of misoprostol is:	1.2-	L	1.20	L	1.20	L
33	From the baby's abdominal wall, the cord is fixed at approx.	1.13	L	1.13	L	1.13	L
34	All of the following are signs of placental abruption, EXCEPT:	1.17	L	1.17	L	1.20	L
35	All vertebrae are complications of the third stage of labor, except for:	1.27	L	1.30	L	1.30	L

"Level of Assessment (Low [L]=1-1.33, Moderate [M]=1.34-1.66, High [H]=1.67-2"

The results indicate that throughout both pre-test and post-test I and II, nurses in the control group displayed limited responses with knowledge about active management of the third stage of labor (*mean score* ≤ 1.33) across all items. In the first post-test, their responses remained consistent across all scale items (*mean score* ≤ 1.33), and this pattern persisted in post-test II (*mean score* ≤ 1.33).

Table 4-3.2. Overall Nurses Knowledge regarding Active Management of Third Stage of Labor in Control Group

Control Group	Pre-test			Post-test I			Post-test II		
	No.	%	M \pm SD	No	%	M \pm SD	No	%	M \pm SD
Poor	22	73.3	41.71 \pm 9.78	22	73.3	42.07 \pm 10. 43	21	70.0	42.73 \pm 10.93
Moderate	6	20.0		5	16.7		6	20.0	
Good	2	6.7		3	10.0		3	10.0	
Total	30	100.0		30	100.0		30	100.0	

[Poor=35-46.66; Moderate= 46.67-58.33, Good=58.34-70]

The results revealed that during the pretest phase, the nurses in the control group showed a limited knowledge regarding the active management of the third stage of labour, as evidenced by a mean score of 41.71 (± 9.78). After the first post-test, very little improvement (still within the lower range) was observed, with their knowledge advancing to an average score of 42.07 (± 10.43). Interestingly, at post-test II, their knowledge seemed to plateau, reflecting similar scores for both pre- and post-test I, with an average of 42.73 (± 10.93).

Table 4-3.3. Comparison the Nurses Knowledge between Periods of Measurements in Control Group

Control Group	Knowledge (I)	Knowledge (J)	Mean Differences (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Pre-test		Post-test I	-.01048-	.07607	.891	-.1617-
		Post-test II	-.02857-	.07607	.708	-.1798-	.1226
Post-test I		Pre-test	.01048	.07607	.891	-.1407-	.1617
		Post-test II	-.01810-	.07607	.813	-.1693-	.1331
Post-test II		Pre-test	.02857	.07607	.708	-.1226-	.1798
		Post-test I	.01810	.07607	.813	-.1331-	.1693

The results indicate that the nurses' knowledge regarding active management of the third stage of labor in the control group did not showed statistically significant differences between the pretest and posttest I ($p = .891$), as well as between the pretest and posttest II ($p = .708$). Furthermore, there were no statistically significant differences in knowledge observed between posttest I and the pretest ($p = .891$), or between posttest I and posttest II ($p = .813$). Similarly, no statistically significant differences were found in the knowledge levels between posttest II and the pretest ($p = .708$), as well as between posttest II and posttest I ($p = .813$).

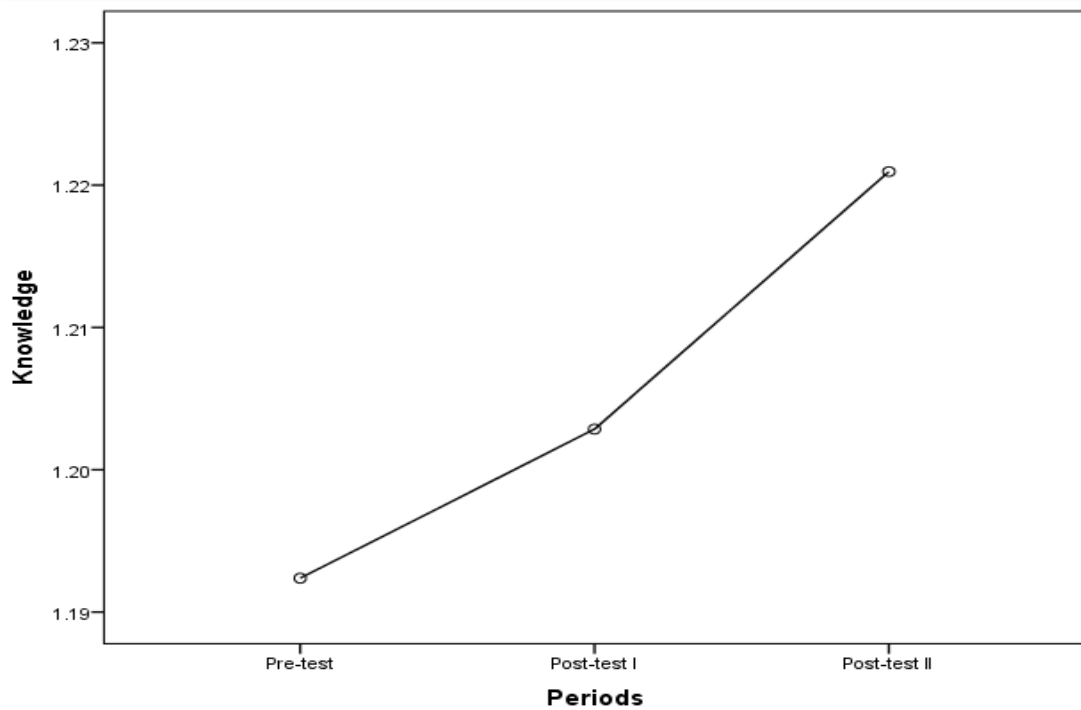


Fig. 4-2. Nurses Knowledge between Periods of Measurement in Control Group

Table 4-4. Statistical Differences in Nurses Knowledge between Study and Control Groups with regards Periods of Measurement

Periods	Weighted	M	SD	Std. Error	t-value	d.f	Sig.
Pre-test	Study	1.17	.259	.04743	.246	58	.807
	Control	1.19	.279	.05105			
Post-test I	Study	1.76	.253	.04622	7.843	58	.000
	Control	1.20	.298	.05442			
Post-test II	Study	1.74	.278	.05090	6.899	58	.000
	Control	1.22	.305	.05578			

M: Mean, SD: Standard deviation, t: t-test, d.f: Degree of freedom, Sig.: Significant level

The table depicts results that reveal no statistically significant differences in pre-test knowledge between the study and control groups ($t=0.246$; $p=0.807$). However, noteworthy statistical disparities emerge between these groups in the post-test periods I ($t=7.843$; $p=0.000$) and II ($t=6.899$; $p=0.000$). Importantly, the findings from the study indicate a significant enhancement in knowledge within the study group, compared to the control group, subsequent to the implementation of the educational program.

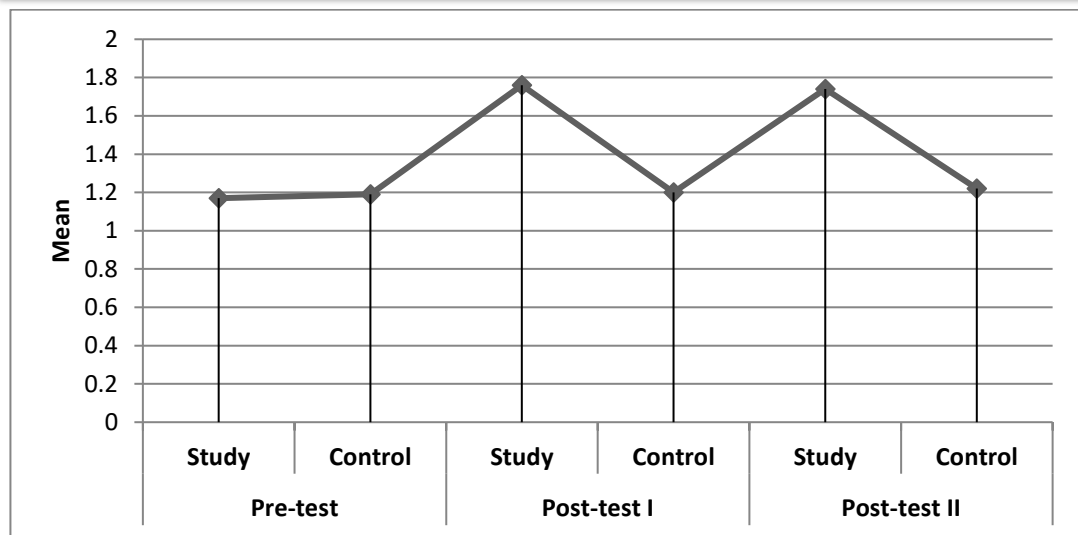


Fig. 4-3. Nurses Knowledge between Periods of Measurement in Study and Control Groups

Table 4-5. Simple Liner Regression among the Study Variables in Predict the Nurses Knowledge in Pre-test among Study Group

Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Age	.156	.113	.276	1.379	.181
Education Level	-.218	.146	-.247	-1.494	.149
Experience in Hospital	.005	.013	.074	.396	.696
Workplace	.208	.176	.196	1.187	.247
Workplace Experience	.266	.178	.310	1.499	.147
Training Courses	.020	.183	.019	.110	.914

Dependent Variable: Nurses Knowledge

The results have substantiated that factors such as the nurses' age ($p = .181$), education level ($p = .149$), experience in the hospital ($p = .696$), workplace ($p = .247$), workplace experience ($p = .147$), and participation in training courses ($p = .914$) do not serve as predictors for their knowledge towards active management of the third stage of labor prior to the implementation of the educational program.

Table 4-6. Simple Liner Regression among the Study Variables in Predict the Nurses Knowledge in Post-test I among Study Group

Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Age	-.154-	.173	-.222-	-.892-	.382
Education Level	-.124-	.222	-.115-	-.558-	.582
Experience in Hospital	.001	.020	.016	.068	.946
Workplace	-.253-	.268	-.194-	-.943-	.356
Workplace Experience	.094	.271	.089	.348	.731
Training Courses	-.344-	.280	-.264-	-1.232-	.230

Dependent Variable: Nurses Knowledge

The results have substantiated that factors such as the nurses' age ($p = .181$), education level ($p = .582$), experience in the hospital ($p = .946$), workplace ($p = .356$), workplace experience ($p = .731$), and participation in training courses ($p = .230$) do not serve as predictors for their knowledge towards active management of the third stage of labor after the implementation of the educational program.

Table 4-7. Simple Liner Regression among the Study Variables in Predict the Nurses Knowledge in Post-test II among Study Group

Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Age	-.347-	.184	-.450-	-1.886-	.072
Education Level	-.095-	.237	-.079-	-.400-	.693
Experience in Hospital	.012	.021	.122	.544	.592
Workplace	-.300-	.286	-.207-	-1.049-	.305
Workplace Experience	.172	.289	.147	.594	.558
Training Courses	-.198-	.298	-.136-	-.664-	.513

Dependent Variable: Nurses Knowledge

The results have substantiated those factors such as the nurses' age ($p = .072$), education level ($p = .693$), experience in the hospital ($p = .592$), workplace ($p = .305$), workplace experience ($p = .558$), and participation in training courses ($p = .513$) do not serve as predictors for their knowledge towards active management of the third stage of labor after a month of implementation of the educational program.

Chapter Five

Discussion of The

Study Result

Chapter Five

Discussion of the Study Results

The investigation aimed at improving nurses' knowledge on active management of third stage labor to prevent PPH by using MCQ items in a questionnaire form. These items were strategically divided into two response categories: Correct and Incorrect. The study was conducted in two phases: Pre-Post I and II, which include in the study group as well as control groups. This study sought to determine the status of knowledge levels among a study group following an educational program.

The significance level for the statistical test used was P-value 0.05 or lower whereby there were remarkable differences in results obtained. This implied that the educational program was effective in increasing knowledge of nurses under investigation. This result provides enormous support to the successful application and significance of the suggested educational program. On the contrary, when no notable differences were found with a P-value above 0.5 it meant that the proposed program failed to show other effects.

The efficacy of an educational program for increasing the knowledge about nursing documentation among nurses was measured in this study by administering MCQ-based questionnaire items. The statistical findings highlighted large gains in the study group, which supported the conclusion regarding effectiveness of implemented program, while no significant differences showed that need to revise it. The tables in this chapter discuss the findings of research with reference to objectives which are as follows:

5.1. Socio-demographic Characteristics

The results of the study are important for understanding not only nurses' traits but also their knowledge about AMTSL, the sample was allocated to the control and study groups that had marked discrepancies in

age, education level, experience, workplace type. Let's delve into a discussion about these findings:

5.1.1. Age:

The study aimed at measuring nurses' knowledge of Active Management of the Third Stage (AMTSL) Labor. This phase includes measures to control postpartum hemorrhaging, a life-threatening complication after the parturition process. The researchers have described the nurse population which participated in a study by looking at average nurses' age—35.93 years with standard deviation 8.52 across various interest groups. Compared to this, the control group 3 had an age mean of 33.50 with a higher standard deviation at point .872.

Moreover, another study performed in Baghdad maternity hospitals by Hasan and Hussein (2020) provided surprising results. The study revealed that most nurses-midwives were within the age range 20 to 24 years with a proportion of (25%). This indicates relative dominance of the young in this profession for as specific Baghdad. Additionally, 77.3% of the respondents within this study were in this age bracket

These numbers indicate that, on average; the nurses in this study group were slightly older than those of the control groups. On the other hand, there is an overlapping degree of variance which means that both groups are within some age ranges.

5.1.2. Education Level:

The findings revealed some intriguing trends regarding the nurses' educational backgrounds. For the study and control groups that included a group of nurses respectively, 73.3% and 56.7 graduated from pre-prepree nursing programs. This indicates that majority of nurses in this category may have received education specifically designed for nursing practices, which might positively influence understanding the AMTSL protocols. In the paper by Getu et al. in 2020, diploma nursing was the most common educational background among nurses and midwives. Such variations might be attributed

to the extent of sample size and individual institutions that offer such training programs. It is important to note, however, that in Ethiopia there are no specialized educational institutions graduating only nursing schools.

5.1.3. Experience in Hospital:

With respect to experience, it was noted that 50% of the respondent nurses had in between five- and ten-years' work life as they were working within a hospital setting. On the other hand, 63.3% of nurses in the control group also belonged to this experience range. This indicates that most of the nurses in both groups had an intermediate level of experience in their positions. This finding is supported by Zeleke et al. (2021) who demonstrated that nurses in antenatal hospitals tend to have some expertise between 5 and 10 years but may lack adequate exposure to delivery rooms because of rotations among different hospital units. Interestingly, years of experience correlate with participants' age strongly meaning that most young midwives have less number of working year

In the study, there is no direct information on how different levels of nurse experience correlated with their knowledge about active management during third-stage labor. Although experience is traditionally referred to a better understanding of clinical practices, this research did not identify the links between nurses' years.

In order to better elucidate the significance of these results, it would be necessary then to investigate whether nurses' experience is related with their knowledge on active management third stage labor. Second, other variables such as continuing education and training opportunities; hospitals policies could also shape nurses' knowledge and practice related to this crucial aspect of maternal care.

5.1.4. Workplace

The findings showed that most nurses from the study group (63.3%) as well as those in control were working at postpartum areas; The results

imply that most of the study nurses were already located in settings directly associated with postpartum care. This is significant because it indicates that the nurses were likely to have practical experience and exposure with active management of third stage labour. The results of this study also reveal specialization among nursing staff. In post-natal units, many nurses may have gained skills and expertise related to maternal and neonate care. Such specialization can be very useful in care provision but also prevents it from adapting to other domains of nursing. It would be intriguing to investigate how this specialization influences a total skill set and career flexibility of such nurses (Needleman et al., 2020). It is worth mentioning that the percentages are largely close to each other between study and control groups; however, additional analysis would be required in order answers could give an idea of importance. Or, the study could benefit from investigating aspects such as training or education levels that nurses in both groups received and how those might relate to their knowledge scores.

5.1.5. Workplace Experiences and Training

It was noted that a considerable number of both study group and control nurses had 4-6years workplace. None of the groups has undergone any specialized training on active management in third stage labor. This implies that most of the nursing members might not have had any formal training or lack exposure to the latest protocols and practices in this important area of maternal care. This is supported by the study undertaken at Debre Tabor Comprehensive Specialized Hospital in Ethiopia. The research resulted in the finding that a large number of healthcare professionals (85.8%) had not been trained on non-pharmacological pain management modalities. This gaping hole in the training can therefore be attributed to lack of these topics on curriculum (Zelege et al., 2021).

This finding could have two implications. On the other hand, it emphasizes that there is a need for ongoing professional development and

training programs even among nurses involved in maternity care. Having up-to-date knowledge and skills is crucial in making sure that both the mother and baby are safe during childbirth.

However, the high number of nurses with several years' experience yet without formal training indicates that there may be a gap in evidence-based practice dissemination within this healthcare institution. Closing this gap may require rolling out more elaborate and standardized training programs that will help nurses to handle the third phase of labor effectively.

The results of the study emphasize continuous education and training in maternal care for nurses. Healthcare institutions can help improve maternal outcomes and the overall quality of care women receive, by increasing nurses' knowledge and level in active management of third stage.

The following points emerge from these findings. To begin with, the larger average age in the observed group might suggest that nurses who have more experience understand better concepts about AMTSL. On the other hand, this discrepancy in education can offset such an advantage. Second, a large proportion of the nurses in both groups work in post-partum zones that point to how significant AMTSL training is specific for this field. To conclude, the presence of nurses having 4-6 years without training specifies that there is a need to develop specific education and practicing programs for this group.

5.2. Nurses Knowledge regarding Active Management of Third Stage of Labor in Study Group

The third-stage active management of labor is a recognized part of maternal care, focusing on the prevention of postpartum hemorrhages and nursing both the mother and her child. Nurses are an essential component of this process and need to fully comprehend the philosophies as well as practices employed. In this study, we determine the level of knowledge

among nurses in implementing active management during initial assessment and its improvement following an educational intervention.

The study used a quasi-experimental to determine the levels of change in nurses' knowledge on active management of third stage. During the first phase of assessment, a baseline measurement for nurses' knowledge was performed with an approach based on constructing an evaluation tool. An education program was then implemented, followed by two post-test assessments at different time points: Post-test I immediately after the education program and Post-test II one month later.

The first assessment phase showed a large shortfall in nurses' knowledge about active management of the third stage, with an average score of 41.12 (9.09). Such a weakness brings about the need for interventions to improve their understanding. After the implementation of the education program, there was a significant increase in knowledge levels (mean score 61.67(\pm 8.85) at Post-test I). The educational intervention seems to have positive and immediate effects on better acquisition of knowledge scores analyzed by post-education improvement test tier first

On the other hand, an interesting finding was observed at Post-test II, that took place one month after education program. Though there was some improvement, the average knowledge score of nurses returned back to about the same level they had Post-test I at 60.96 (\pm 9.75) despite initial enhancement This implies that although the intervention was successful in enhancing knowledge at first, this might not have held over time.

The results of this study emphasize the importance of educational interventions for increasing nurses' knowledge about active management Immediate post-education program (Post – test I) provides evidence of the efficacy in passing knowledge through intervention. This is in line with previous research findings that show well-structured educational programs can result to short-term knowledge gains among healthcare professionals

(Angelina et al., 2021; Memon et al., & Muyanga& Joho). These studies established that the training and education on AMTSL is as effective much post-test knowledge, and scores after their practice were higher than pre testing.

Nonetheless, the drop in knowledge scores for Post-test II creates concerns about those types of gains' longevity. The ephemeral nature of the knowledge improvement may be brought about by various aspects such as insufficient chances for reinforcement, workplace hindrances and so on It may also be necessary to adopt a continuous learning approach which integrates periodic refresher sessions, clinical simulations and reinforcement strategies for knowledge gains maintenance (Ibrahim & Abdel-Menim, 2016; David et al., 2020; Ramadhani et al., 2020).

Daef et al. (2017) also used research findings to reveal that a significant number of nurses had poor perceptions on AMTSL aspects, including the administration of uterotonic agents and controlled cord traction as well as performing uterine massage. Sultana et al. (2018) reported that a significant number of nurses were either ignorant about the best time to administer uterotonic medication or did not know how it was done.

Inaccurate knowledge and improper implementation of AMTSL by nurses may result in late intervention during the third stage labor, which makes PPH death more possible. According to Angelina et al. (2021) insufficient AMTSL practices were associated with PPH prevalence elevating above the WHO thresholds, which implied directly between deficits in knowledge and negative maternal outcomes

In order to mitigate these knowledge gaps, attention must be drawn towards more inclusive nursing education and training programs. Bhutia et al. in 2018 showed that nurses involved in structured training on AMTSL had better knowledge scores and implemented the components of AMTSL more accurately, promptly when needed which observed a reduction in incidence rate PPH.

To conclude, this study underlines the effectiveness of an educational program in improving nurses' knowledge about active management of third stage. At the same time, it emphasizes persistence with regards to sustaining as well as increasing such knowledge over years. Thus, there appears to be a need for comprehensive approaches that not only ensure initial education but also continuous reinforcing of the skills ensuring nurses appear with proper knowledge about crucial aspects of maternal care.

The data supports the immediate requirement for focused educational interventions to improve nurses' knowledge and proficiency in administration of AMTSL. As a result of concentrating on these knowledge gaps, healthcare facilities can practice the quality of care offered during the third stage of labour so that its occurrences and seriousness will be reduced postpartum hemorrhage with better maternal outcomes.

5.3. Comparison the Nurses Knowledge between Periods of Measurements in Study Group

The research assessed the progression of nurse's knowledge about active management during the third stage labor. The study undertook two posttests after an initial pretest and produced some interesting results. The findings showed pronounced differences in the knowledge level of nurses when comparing pretest with both post- test I ($p = .000$) and post-est II ($P = .0$). This implies that the intervention or educational program carried out between pretest and posttests managed to improve nurses' knowledge on active management during third stage of labor.

These results correlate with the studies that consider targeted educational interventions as effective in improving knowledge and skills of healthcare professionals. For example, the Bergh et al. (2015) study revealed that such structured educational programs improved nurses' abilities to manage obstetric emergencies. Training interventions have also been shown

to benefit healthcare providers by improving their ability in managing postpartum hemorrhages (Nishimwe et al. 2019).

Interestingly, there was a significant difference in knowledge both between posttest I and the pretest ($p = .000$), which reflects quite an improvement due to educational intervention. Nevertheless, there was no significant difference between posttest I and posttest II ($p = .759$), which means that the retention of knowledge from one point in time to another remained constant.

Similarly, the difference between posttest II and pretest led to a statistically significant change in knowledge ($p = .000$), which points out that educational intervention impacted learners till post-II. The lack of a meaningful difference between posttest II and post-test I ($p = .759$) suggests that the knowledge level established by using post-test I was maintained throughout the study.

Basically, the study depicts how efficient this educational intervention is in increasing nurses' knowledge about active management during third stage labour. The findings underscore the necessity of ongoing education and its ability to influence health-care professionals' competencies in favor of better outcomes on behalf of patients.

5.4. Nurses Knowledge in Study Group and Control Group

the evaluation of knowledge about active management of third stage labour and impact educational program on improving their know how. The findings reveal variation of scores with knowledge among the groups studied and control over various phases pertaining to study. Let's address the results and their meaning.

5.4.1. Initial Knowledge Deficit:

The study first ascertained that there was a knowledge gap among nurses from the treatment group and the control group with regards to active management of third stage labour. This was apparent from their baseline

scores, which indicated a mean score of 41.12 (9.09) for the study group and 43.71 (9.68) for the control group. This means that most of the nurses had inadequate knowledge regarding this field.

5.4.2. Impact of Educational Program - Post-test I:

Upon the implementation of an education program, the study group manifested a significant improvement in their knowledge. The Post-test I scores increased to 61.67 (± 8.85), which means that the educational intervention positively influenced their knowledge of active management in third stage labor. This achievement reflects the possibility of educational programs' effectiveness in overcoming knowledge gaps between nurses.

5.4.3. Retention of Knowledge - Post-test II:

One month later following the educational program (post-test II), mean scores of study group were moderate high, 60.96 \pm 9.75). Though this score was lower in comparison with Post-test I, it proved that the nurses retained a large proportion of information acquired during educational session. This implies the possibility of long-lasting memory effect caused by focused teaching.

5.4.4. The Control Group Findings:

In general, the control group demonstrated minimal knowledge improvement during this study. Their scores showed minimal changes: From 41.71 (9.78 \pm) during the pre-test to 42.07 (± 10.35) from first post-test and eventually, in second post-test of 42. Such outcomes suggest that without the educational initiative, the nurses' knowledge kept under significant change while remaining mostly stable.

The results of the conducted study show that an educational program improves nurses' knowledge in terms of active management third stage labor. The study group showed significant post-intervention, and at one month after the intervention their level of knowledge remained significantly higher compared to those in the control group.

The results of the study indicate that the education program caused improvements in knowledge about active management during the third stage for those involved. The constant knowledge level seen Post-test II documents that the education program was successful in not only improving short-term understanding but also preserving this comprehension over time. However, this lack of sustained improvement when comparing the control group emphasizes not only such importance to targeted education programs in healthcare settings but also passive learning approaches' limitations. This research highlights the importance of additional reinforcement and potentially long-term educational activities that encourage knowledge retention to be practiced in clinical contexts.

5.5. Comparison the Nurses Knowledge between the Study Group and the Control Group

The obtained results imply an interesting phenomenon in the setting of educational research which indicates that between study and control groups, pre-test knowledge was not significantly different. When looking at results of the post-test, substantial and statistically significant differences between groups became apparent. This, in turn, raises an interesting conclusion that the education program was effective at improving knowledge among study population as compared to control group.

5.5.1. Pre-test Comparison:

The first comparison compares the pre-test knowledge level for study and control groups. ($t = 0.246$; $p = 0.87$) These statistical values are found in table 4- These findings support the results obtained from Tanzania, where (Angelina et al., 2021). The t-value measures the difference between group means in standard error units. P-value refers to the likelihood of getting results as such if there were no actual differences in groups (null hypothesis). Here, based on the p-value which is 0.807 greater than commonly used alpha level of significance of .5 it means that there's no

statistically significant difference in pretest knowledge levels between study and control groups. This implies that prior to any intervention or treatment the two groups had almost equal levels of knowledge on active management in the third stage labour.

5.5.2. Post-test Comparison - Period I:

The second comparison considers post-test knowledge levels in period I between the study and control groups. The above statistical values are ($t = 7.843$; $p=0$). This finding is in accordance with another study from Portugal that validated the efficacy of active management to minimize post-delivery bleeding. Although the practices of actively managing labor's third stage differ in their details, most interventions selected followed international recommendations (de Castro Parreira & Gomes 2013).

The t-value in this case is very high and the p-value incredibly low (close to 0). This implies that there is a significant difference in post-test knowledge levels between the two groups during period I. In other words, after intervention or treatment, the knowledge level of study and control group is different from each other in period I small p value indicates probability minimized for this divergent by chance

This outcome conforms to the formula for randomized clinical trials, which shows statistically significant mean knowledge differences between control and intervention. Additionally, the groups differed significantly on mean post-practice. The nurses' gross knowledge post-testing revealed that the intervention group had a better understanding as compared to the control group (Memon et al., 2022) The process of training the auxiliary nurses to use oxytocin in performing AMTSL has proven effective in reducing P-PPH prevalence, but it may increase dependency on intrapartum Oxytocin (Low et al., 2012; David et al., 2020).

5.5.3. Post-test Comparison - Period II:

The third comparison concentrates on post-test knowledge levels in period II between the study and control groups, presenting statistical values ($t = 6.899$; $p = 0.000$) (table 4-4). Similar to the previous comparison, the high t -value and very low p -value indicate a statistically significant difference in post-test knowledge levels during period II. This discrepancy underscores the impact of the educational program on knowledge acquisition in the study group, suggesting its effectiveness beyond chance.

The observed differences in post-test results emphasize the effectiveness of the educational program, specifically designed for the study group. This implies that the program had a measurable impact on knowledge acquisition, going beyond natural variability. These findings hold implications for educational practices and research, emphasizing the benefits of tailored educational interventions and the importance of considering participants' pre-existing knowledge levels to ensure valid conclusions from post-test results.

The results demonstrate a noteworthy enhancement in knowledge between the study group and the control group after an educational program was implemented. The claim that the program contributed to the observed post-test discrepancies is supported by the fact that there were no initial differences in pre-test knowledge levels. This underscores the importance of well-designed educational interventions in driving substantial improvements in learning outcomes.

These findings align with previous research highlighting the effectiveness of targeted interventions or educational programs in enhancing healthcare professionals' knowledge and practices. The observed differences may be attributed to specific educational strategies employed in the study group, such as workshops, training sessions, or informational materials. Such interventions play a crucial role in keeping healthcare providers updated with

the latest guidelines and practices, ultimately improving patient care and outcomes (Agrawal et al., 2016; Theobald et al., 2021; Hosseini et al., 2022).

5.6. Association between Study Variables in Predict the Nurses Knowledge Before Education Program

The knowledge that nurses have regarding AMTSL is necessary for its adequate implementation and improved maternal outcomes. This conversation discusses an article that investigated possible factors predicting the level of knowledge among nurses about AMTSL before introducing a program to teach them.

The findings of the study revealed that none of the studied factors was significant predictors for nurses' knowledge about AMTSL before implementing an educational program. The p-values associated with each factor were as follows: age, educational level, hospital experience, workplace history, work-related experience and training courses.

5.6.1. Nurses' Age:

Surprisingly, however, nurses' age did not show considerable associations with their knowledge of AMTSL. This is in agreement with Akes et al. (2014) who also reported that there was no significant correlation between nurses' age and their knowledge of evidence based obstetric practices

5.6.2. Education Level:

In a surprising contrast, lack of educational correlation with AMTSL knowledge is observed as higher education usually connotes better understanding and adoption of clinical guidelines. This observation correlates with the study by McCutcheon et al. (2015), which discovered that nurses' educational levels do not have a significant association with their specific level of knowledge on labor management procedures.

5.6.3. Experience in the Hospital:

Hospital experience did not work as a predictor of AMTSL knowledge. This is contrary to results obtained by Derksen et al. (2020) who found a significant positive relationship between the years of experience and better compliance with obstetric guidelines. This can be justified based on the sample size.

5.6.4. Workplace and Workplace Experience:

The no significance of workplace and work experience as predictors for AMTSL knowledge indicate that the hospital settings, including a particular type department or unit might not directly connect to nurses' familiarity with AMTSL recommendations. This result does not agree with the study conducted by Ndwiga et al. (2017), who observed that nurses working for specialized obstetric units had higher knowledge scores.

5.6.5. Participation in Training Courses:

Interestingly, attending training courses was not a good indicator of nurses' knowledge about AMTSL. These results differ from those obtained in studies such as that of Muzeya and Julie (2018) which focused on the positive effects generated by continuous training on compliance with evidence-based practices.

The findings of the study reveal that, prior to implementation of an educational program relating nurses' age, level education and experience in hospital workplace as impossible predictors for their knowledge on AMTL. These results indicate that other elements including hospital policies, organizational culture and access to current information may likely have a greater impact on the thinking patterns of nurses.

5.7. Association between Study Variables in Predict the Nurses Knowledge After Education Program

The research results revealed that none of the analyzed factors was found to have a statistically significant predictive association with nurses'

knowledge about active management of third-stage labor. The p-values of age ($p = .181$), level of education ($p = .582$) experience inside the hospital ($p = .946$); workplace, work experiences and training courses were above a conventional threshold for significance, ($P < 0.05$).

5.7.2. Education Level:

Like this study revealed, Ramadhani (2011) showed no significant association between nurses' education level and their understanding of obstetric practices that are relevant to active management third stage

5.7.3. Experience in the Hospital:

The insignificant correlation between years of experience with knowledge about active management in line with Blackman et al.'s (2018) finding that did not reliably predict nurses' knowledge on obstetric care.

5.7.4. Workplace and Workplace Experience:

The results of this study on workplace-related factors are consistent with the findings by Candela et al. (2015), who discussed workplace environmental effects on knowledge in nursing where unit type and facility size did not significantly predict outcome knowledge

5.7.5. Participation in Training Courses:

The non-significant effect of this study is consistent with the literature by Kazdin et al. (2008), who suggested that participant involvement in training courses alone does not necessarily create higher knowledge outcomes if they are not adapted well enough to yield better results.

According to the outcomes of study, these factors could not be considered as predictors for knowledge about active management of third trimester from nurses' point following intervention implementation. These results underline the complexity of knowledge acquisition and a necessity for multimodal approaches to enhance nurses' understanding and implementation in obstetric care.

Chapter Six

Conclusions &

Recommendations

Chapter Six

Conclusions and Recommendations

6.1. Conclusions

In view of the findings and their discussion, this quantitative study adopts a pre-post I and II tests approach, and concludes that:

6.1.1. It was found that the knowledge of nurses on active management during third stage labour before intervention in this study was deficient. The positive impact of the educational program was registered immediately after its implementation and underscores those timely interventions facilitate short-term knowledge acquisition.

6.1.2. This, obviously enough can result in poor performance leading to late interventions which increase the risk of PPH. It is, therefore imperative to rectify the abovementioned knowledge gaps by conducting comprehensive education and training programs; only through which maternal outcomes can be enhanced.

6.1.3. The study showed that educational program had considerable effect on changes in third stage of labor management knowledge among nurses who participated in the experimental group as compared to control mean with immediate post intervention measures and follow-up.

6.1.4. In this study, age, level of education, experience working as a nurse and workplace were shown to have the potential effect on nurses' knowledge concerning active management for third stage of labor. Nevertheless, none of these factors were established as a significant predictive relationship.

6.2. Recommendations

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

- 6.2.1.** In the light of the rapid positive changes achieved with this program, it is necessary to organize a permanent education and training regime for nurses concerning active management in late pregnancy. This may include weekly workshops, seminars and regular updates to ensure that nurses remain well informed with the latest practices.
- 6.2.2.** Carry out repeat assessments at intervals to monitor how well nurses retain the knowledge long term and identify gaps requiring reinforcement.
- 6.2.3.** Ensure the easy incorporation of knowledge obtained in educational programs into nurse clinical work through collaborations with healthcare entities.
- 6.2.4.** The study has failed to find strong predictive relationships between such factors as age, level of education and knowledge; it is therefore necessary evaluate periodically these factors. The situation may vary over time, and continuous assessment will provide information about upcoming issues that might affect nurses' knowledge.
- 6.2.5.** Promote more research collaborations to investigate the possible factors beyond this study, which may affect nurses' knowledge of active management of the third stage of labor. A more comprehensive understanding of these drivers might inform better interventions in the future.
- 6.2.6.** Make sure that the effect of educational interventions is properly reflected and analyzed over time. This will act as a foundation for the evidence-based decision and can inform modifications and enhancements on future education activities.

References

المصادر العربية

الآية القرآنية, سورة المائدة , الآية (43)

المصادر الأجنبية

- Abd Elhakm, E. M., & Elbana, H. M. (2018). Effect of simulation basetraining on maternity nurses' performance and self-confidence regarding primary postpartum hemorrhage management. *American Journal of Nursing*, 6(6), 388-397.
- Abdul-Kadir, R., & Gomez, K. (2022). Reproductive health and hemostatic issues in women and girls with congenital factor VII deficiency: A systematic review. *Journal of Thrombosis and Haemostasis*, 20(12), 2758-2772.
- Adele P & Joanne S. (2018). *Maternal & child Health Nursing*. 18th edn. China, Wolters Kluwer
- Agah, J., Baghani, R., Nazarzadeh, M., & Borna, S. (2018). Comparison of effacement curve with dilatation curve for prediction of labor progression. *Journal of Obstetrics and Gynaecology Research*, 44(1), 102-108.
- Agnes, A., Euphemia, A., Eunice, N., Anthonia, C., & Yolanda, O. (2015). Knowledge and willingness of prenatal women in Enugu Southeastern Nigeria to use in labour non-pharmacological pain reliefs. *African health sciences*, 15(2), 568-575.
- Agrawal, N., Kumar, S., Balasubramaniam, S. M., Bhargava, S., Sinha, P., Bakshi, B., & Sood, B. (2016). Effectiveness of virtual classroom training in improving the knowledge and key maternal neonatal health skills of general nurse midwifery students in Bihar, India: a pre-and post-intervention study. *Nurse education today*, 36, 293-297.
- Agunda, S. D. (2022). Effect of Upright ('all Fours') Versus Lithotomy Birth Position on Obstetric Outcomes Among Low-risk Parturients at Kenyatta National Hospital; a Mixed Method Study (Doctoral dissertation, University of Nairobi).

- Ahsan, A., Dewi, E. S., Suharsono, T., Setyoadi, S., Soplanit, V. G., Ekowati, S. I., ... & Laili, N. (2021). Knowledge management-based nursing care educational training: a key strategy to improve healthcare associated infection prevention behavior. *SAGE Open Nursing*, 7, 23779608211044601.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control: From cognition to behavior* (pp. 11-39). Berlin, Heidelberg: Springer Berlin Heidelberg.
- Akese, M. I., Adejumo, P. O., Ilesanmi, R. E., & Obilor, H. N. (2014). Assessment of nurses' knowledge on evidence-based preventive practices for pressure ulcer risk reduction in patients with impaired mobility. *Afr J Med Med Sci*, 43(3), 251-258.
- Alhafez, L., & Berghella, V. (2020). Evidence-based labor management: first stage of labor (part 3). *American journal of obstetrics & gynecology MFM*, 2(4), 100185.
- Al-Jabri, N. S. H. (2023). Management of third stage of labour by midwives and maternity nurses in Oman: a mixed methods study (Doctoral dissertation).
- Al-Jabri, N. S. H. (2023). Management of third stage of labour by midwives and maternity nurses in Oman: a mixed methods study (Doctoral dissertation).
- Almutairi, W. M. (2021, May). Literature review: physiological management for preventing postpartum hemorrhage. In *Healthcare* (Vol. 9, No. 6, p. 658). MDPI.
- Almutairi, W. M. (2021, May). Literature review: physiological management for preventing postpartum hemorrhage. In *Healthcare* (Vol. 9, No. 6, p. 658). MDPI.
- Almutairi, W. M. (2021, May). Literature review: physiological management for preventing postpartum hemorrhage. In *Healthcare* (Vol. 9, No. 6, p. 658). MDPI.

- Almutairi, W. M. (2021, May). Literature review: physiological management for preventing postpartum hemorrhage. In *Healthcare* (Vol. 9, No. 6, p. 658). MDPI.
- American College of Nurse-Midwives. (2020). Management of the third stage of labor. Retrieved from
- Anandhi, S. (2020). A Comparative study between Misoprostol Combined with Oxytocin Versus Oxytocin Alone in reducing PPH (Doctoral dissertation, Coimbatore Medical College, Coimbatore).
- Angelina, J. A., Kibusi, S. M., & Mwampagatwa, I. (2019). Factors influencing nurses' knowledge and skills in the prevention and management of postpartum haemorrhage. *African Journal of Midwifery and Women's Health*, 13(4).
- Angelina, J. A., Stephen, K. M., & Ipyana, M. (2021). The impact of low fidelity simulation on nurse competence in active management of third stage of labor: An intervention study in primary health care settings in Tanzania. *Clinical Simulation in Nursing*, 56, 10-21.
- Auschra, C. (2018). Barriers to the integration of care in inter-organisational settings: a literature review. *International journal of integrated care*, 18(1).
- Aziz, M. A. A., Jahanfar, S., Abedi, P., & Faal, S. (2020). Concurrent administration of oxytocin with Foley catheter versus Misoprostol for induction of labor: A systematic review and meta-analysis.
- Aziz, M. A. A., Jahanfar, S., Abedi, P., & Faal, S. (2020). Concurrent administration of oxytocin with Foley catheter versus Misoprostol for induction of labor: A systematic review and meta-analysis.
- Bank, T. C., Ma'ayeh, M., & Rood, K. M. (2023). Maternal Coagulation Disorders and Postpartum Hemorrhage. *Clinical Obstetrics and Gynecology*, 66(2), 384-398.
- Bazirete, O., Nzayirambaho, M., Umubyeyi, A., Uwimana, M. C., & Evans, M. (2020). Influencing factors for prevention of postpartum

- hemorrhage and early detection of childbearing women at risk in Northern Province of Rwanda: beneficiary and health worker perspectives. *BMC pregnancy and childbirth*, 20(1), 1-14.
- Beatson, D. (2020). Midwives' Facilitation of Physiological Placental Birth: A Delphi Study.
- Begley, C. M., Gyte, G. M., Devane, D., McGuire, W., Weeks, A., & Biesty, L. M. (2019). Active versus expectant management for women in the third stage of labour. *Cochrane database of systematic reviews*, (2).
- Begley, C. M., Gyte, G. M., Devane, D., McGuire, W., Weeks, A., & Biesty, L. M. (2019). Active versus expectant management for women in the third stage of labour. *Cochrane database of systematic reviews*, (2).
- Benner, P. (1984). Excellence and power in clinical nursing practice. Chapter, 14, 207-20.
- Bergh, A. M., Baloyi, S., & Pattinson, R. C. (2015). What is the impact of multi-professional emergency obstetric and neonatal care training?. *Best practice & research Clinical obstetrics & gynaecology*, 29(8), 1028-1043.
- Bhutia, S., Shadap, A., & Pangambam, S. (2018). Knowledge and practice of active management of third stage of labor (AMTSL) among nursing students in selected hospitals, Gangtok, Sikkim. *Int. J. Nurs. Midwif. Res*, 5(4).
- Bishanga, D. R., Charles, J., Tibaijuka, G., Mutayoba, R., Drake, M., Kim, Y. M., ... & Rawlins, B. (2018). Improvement in the active management of the third stage of labor for the prevention of postpartum hemorrhage in Tanzania: a cross-sectional study. *BMC pregnancy and childbirth*, 18(1), 1-10.
- Bishanga, D. R., Charles, J., Tibaijuka, G., Mutayoba, R., Drake, M., Kim, Y. M., ... & Rawlins, B. (2018). Improvement in the active management of the third stage of labor for the prevention of postpartum hemorrhage

- in Tanzania: a cross-sectional study. *BMC pregnancy and childbirth*, 18(1), 1-10.
- Blackman, I., Papastavrou, E., Palese, A., Vryonides, S., Henderson, J., & Willis, E. (2018). Predicting variations to missed nursing care: A three-nation comparison. *Journal of nursing management*, 26(1), 341.
- Bláha, J., & Bartošová, T. (2022). Epidemiology and definition of PPH worldwide. *Best Practice & Research Clinical Anaesthesiology*.
- Bogren, M., Denovan, A., Kent, F., Berg, M., & Linden, K. (2021). Impact of the Helping Mothers Survive Bleeding After Birth learning programme on care provider skills and maternal health outcomes in low-income countries—An integrative review. *Women and Birth*, 34(5), 425-434.
- Braddick, L., Tuckey, V., Abbas, Z., Lissauer, D., Ismail, K., Manaseki-Holland, S., ... & Stokes, T. (2016). A mixed-methods study of barriers and facilitators to the implementation of postpartum hemorrhage guidelines in Uganda. *International Journal of Gynecology & Obstetrics*, 132(1), 89-93.
- Braddick, L., Tuckey, V., Abbas, Z., Lissauer, D., Ismail, K., Manaseki-Holland, S., ... & Stokes, T. (2016). A mixed-methods study of barriers and facilitators to the implementation of postpartum hemorrhage guidelines in Uganda. *International Journal of Gynecology & Obstetrics*, 132(1), 89-93.
- Burke, H., & Mancuso, L. (2012). Social cognitive theory, metacognition, and simulation learning in nursing education. *Journal of Nursing Education*, 51(10), 543-548.
- Butwick, A. J., Abreo, A., Bateman, B. T., Lee, H. C., El-Sayed, Y. Y., Stephansson, O., & Flood, P. (2018). Effect of maternal body mass index on postpartum hemorrhage. *Anesthesiology*, 128(4), 774-783.

- Butwick, A. J., Abreo, A., Bateman, B. T., Lee, H. C., El-Sayed, Y. Y., Stephansson, O., & Flood, P. (2018). Effect of maternal body mass index on postpartum hemorrhage. *Anesthesiology*, 128(4), 774-783.
- Butwick, A. J., Ramachandran, B., Hegde, P., Riley, E. T., El-Sayed, Y. Y., & Nelson, L. M. (2017). Risk factors for severe postpartum hemorrhage after cesarean delivery: case-control studies. *Anesthesia and analgesia*, 125(2), 523.
- Butwick, A. J., Ramachandran, B., Hegde, P., Riley, E. T., El-Sayed, Y. Y., & Nelson, L. M. (2017). Risk factors for severe postpartum hemorrhage after cesarean delivery: case-control studies. *Anesthesia and analgesia*, 125(2), 523.
- Candela, L., Gutierrez, A. P., & Keating, S. (2015). What predicts nurse faculty members' intent to stay in the academic organization? A structural equation model of a national survey of nursing faculty. *Nurse Education Today*, 35(4), 580-589.
- Candib, L. M. (2023). The Elements of the Woman-Centered Clinical Relationship. In *Women-Centered Care in Pregnancy and Childbirth* (pp. 387-414). Routledge.
- Charaya, H., Soni, M., Gupta, J., & Nayak, A. (2022). Comparison of sublingual misoprostol with intramuscular oxytocin in active management of the third stage of labor. *Journal of Current Research in Scientific Medicine*, 8(2), 124-128.
- Chernysh, T., Opitz, L., Riabtseva, N., Raab, M., & Pavlova, M. (2023, July). Experience with the Implementation of Continuous Medical Education among Mother-and-Child Healthcare Providers in Ukraine: A Case Study Based on Two International Collaboration Initiatives. In *Healthcare* (Vol. 11, No. 13, p. 1964). MDPI.
- Childs, C., Sandy-Hodgetts, K., Broad, C., Cooper, R., Manresa, M., & Verdú-Soriano, J. (2020). Birth-Related Wounds: Risk, Prevention and

- Management of Complications After Vaginal and Caesarean Section Birth. *Journal of Wound Care*, 29(Sup11a), S1-S48.
- Choubey, V., & Werner, E. F. (2015). Complications of labor & delivery. In J. L. Bienstock, H. Fox, E. E. Wallach, et al. (Eds.), *The Johns Hopkins manual of gynecology and obstetrics* (5th ed., pp. 104–115). Philadelphia, PA: Wolters Kluwer
- Coad, S. L., Dahlgren, L. S., & Hutcheon, J. A. (2017). Risks and consequences of puerperal uterine inversion in the United States, 2004 through 2013. *American journal of obstetrics and gynecology*, 217(3), 377-e1.
- Cornes, S., Torre, D., Fulton, T. B., Oza, S., Teherani, A., & Chen, H. C. (2023). When students' words hurt: 12 tips for helping faculty receive and respond constructively to student evaluations of teaching. *Medical Education Online*, 28(1), 2154768.
- Correa-de-Araujo, R., & Yoon, S. S. (2021). Clinical outcomes in high-risk pregnancies due to advanced maternal age. *Journal of Women's Health*, 30(2), 160-167.
- Correa-de-Araujo, R., & Yoon, S. S. (2021). Clinical outcomes in high-risk pregnancies due to advanced maternal age. *Journal of Women's Health*, 30(2), 160-167.
- Coventry, T. H., Maslin-Prothero, S. E., & Smith, G. (2015). Organizational impact of nurse supply and workload on nurses continuing professional development opportunities: an integrative review. *Journal of advanced nursing*, 71(12), 2715-2727.
- Creanga, A. A., Jiwani, S., Das, A., Mahapatra, T., Sonthalia, S., Gore, A., ... & Shah, H. (2020). Using a mobile nurse mentoring and training program to address a health workforce capacity crisis in Bihar, India: Impact on essential intrapartum and newborn care practices. *Journal of global health*, 10(2).

- Daef, G., Naidoo, T. D., & Moodley, J. (2017). An Audit of the Knowledge and Practice of the Active Management of the Third Stage of Labor in a Resource Constrained Setting. *J Comm Pub Health Nursing, 3*(200).
- Dahlke, J. D., Mendez-Figueroa, H., Maggio, L., Hauspurg, A. K., Sperling, J. D., Chauhan, S. P., & Rouse, D. J. (2015). Prevention and management of postpartum hemorrhage: a comparison of 4 national guidelines. *American journal of obstetrics and gynecology, 213*(1), 76-e1.
- David, D., Kaur, S., Siddiqui, A., & Sarin, J. (2020). Efficacy of Lecture cum demonstration versus video-based teaching regarding active management of third stage of labor in terms of knowledge and skills of GNM students: An interventional study. *Journal of Education and Health Promotion, 9*.
- Davidson, M. R., London, M. L., & Ladewig, P. A. W. (2012). *Olds' Maternal-Newborn across the Lifespan NURSING & Women's Health*.
- De Castro Parreira, M. V., & Gomes, N. C. F. (2013). Preventing postpartum haemorrhage: active management of the third stage of labour. *Journal of clinical nursing, 22*(23-24), 3372-3387.
- Derksen, C., Keller, F. M., & Lippke, S. (2020). Obstetric healthcare workers' adherence to hand hygiene recommendations during the covid-19 pandemic: Observations and social-cognitive determinants. *Applied Psychology: Health and Well-Being, 12*(4), 1286-1305.
- Durham, R., & Chapman, L. (2013). *Maternal-newborn nursing: The critical components of nursing care*. FA Davis.
- Durmaz, A., & Komurcu, N. (2018). Relationship between maternal characteristics and postpartum hemorrhage: a meta-analysis study. *Journal of Nursing Research, 26*(5), 362-372.

- Durmaz, A., & Komurcu, N. (2018). Relationship between maternal characteristics and postpartum hemorrhage: a meta-analysis study. *Journal of Nursing Research*, 26(5), 362-372.
- Einerson, B. D., Gilner, J. B., & Zuckerwise, L. C. (2022). Placenta accreta spectrum. *Obstetrics & Gynecology*, 10-1097.
- El Sayed, S. L. M. (2021). Effect of uterine massage and emptying of the urinary bladder on alleviation of afterpains among mothers in the immediate postpartum period. *International Journal of Africa Nursing Sciences*, 15, 100327.
- Ende, H. B., Lozada, M. J., Chestnut, D. H., Osmundson, S. S., Walden, R. L., Shotwell, M. S., & Bauchat, J. R. (2021). Risk factors for atonic postpartum hemorrhage: a systematic review and meta-analysis. *Obstetrics and gynecology*, 137(2), 305.
- Ende, H. B., Lozada, M. J., Chestnut, D. H., Osmundson, S. S., Walden, R. L., Shotwell, M. S., & Bauchat, J. R. (2021). Risk factors for atonic postpartum hemorrhage: a systematic review and meta-analysis. *Obstetrics and gynecology*, 137(2), 305.
- Endler, M., Grünewald, C., & Saltvedt, S. (2012). Epidemiology of retained placenta: oxytocin as an independent risk factor. *Obstetrics & Gynecology*, 119(4), 801-809.
- Escobar, M. F., Nassar, A. H., Theron, G., Barnea, E. R., Nicholson, W., Ramasauskaite, D., ... & Wright, A. (2022). FIGO recommendations on the management of postpartum hemorrhage 2022. *International Journal of Gynecology & Obstetrics*, 157, 3-50.
- Ezzat Osman, N., El-Ansary, E. S., & Hassan Mohamady, S. (2023). Effect of Competency-Based Education on Interns Nursing Students' Performance Regarding Active Management of Third Stage of Labor. *International Egyptian Journal of Nursing Sciences and Research*, 3(2), 342-362.

-
- Felis, S. (2023). Postpartum Hemorrhage. *American Journal of Medical and Clinical Research & Reviews*, 2(11), 1-28.
- Finlayson, K., Downe, S., Vogel, J. P., & Oladapo, O. T. (2019). What matters to women and healthcare providers in relation to interventions for the prevention of postpartum haemorrhage: a qualitative systematic review. *PloS one*, 14(5), e0215919.
- Finlayson, K., Downe, S., Vogel, J. P., & Oladapo, O. T. (2019). What matters to women and healthcare providers in relation to interventions for the prevention of postpartum haemorrhage: a qualitative systematic review. *PloS one*, 14(5), e0215919.
- Finlayson, K., Downe, S., Vogel, J. P., & Oladapo, O. T. (2019). What matters to women and healthcare providers in relation to interventions for the prevention of postpartum haemorrhage: a qualitative systematic review. *PloS one*, 14(5), e0215919.
- Finlayson, K., Downe, S., Vogel, J. P., & Oladapo, O. T. (2019). What matters to women and healthcare providers in relation to interventions for the prevention of postpartum haemorrhage: a qualitative systematic review. *PloS one*, 14(5), e0215919.
- Fontein-Kuipers, Y., De Groot, R., & Van Staa, A. (2018). Woman-centered care 2.0: Bringing the concept into focus. *European journal of Midwifery*, 2.
- Fox, R., Aitken, G., & Mooney, S. S. (2023). Management of secondary postpartum haemorrhage: A systematic review. *European Journal of Obstetrics & Gynecology and Reproductive Biology*.
- Fritz, J., Walker, D. M., Cohen, S., Angeles, G., & Lamadrid-Figueroa, H. (2017). Can a simulation-based training program impact the use of evidence based routine practices at birth? Results of a hospital-based cluster randomized trial in Mexico. *PloS one*, 12(3), e0172623.

- Furukawa, S., & Sameshima, H. (2015). The Importance of the monitoring of resuscitation with blood transfusion for uterine inversion in obstetrical hemorrhage. *Obstetrics and Gynecology International*, 2015.
- Furuya, K., & Ivell, R. (2022). The Role of Oxytocin in Pregnancy. *Hormones and Pregnancy: Basic Science and Clinical Implications*, 20.
- Garg, N. (2020). Evaluation of Postpartum Blood Loss After Misoprostol-Induced and Oxytocin with Foley's Catheter-Induced Labour: A Comparative Study (Doctoral dissertation, Rajiv Gandhi University of Health Sciences (India)).
- Getu, A. A., Getie, S. A., Gela, G. B., Maseresha, E. A., Feleke, B. E., & Muna, A. M. (2020). Non-pharmacological labor pain management and associated factor among skilled birth attendants in Amhara Regional State health institutions, Northwest Ethiopia. *Reproductive Health*, 17(1), 1-8.
- Ghosh, S. B., & Mala, Y. M. (2015). Alternate sequential suture tightening: a novel technique for uncontrolled postpartum hemorrhage. *Obstetrics and Gynecology International*, 2015.
- Goh, R., Goh, D., & Ellepola, H. (2018). Perineal tears-A review. *Australian journal of general practice*, 47(1/2), 35-38.
- Govender, D., Taylor, M., & Naidoo, S. (2020). Adolescent pregnancy and parenting: Perceptions of healthcare providers. *Journal of multidisciplinary healthcare*, 1607-1628.
- Green, R. D., & Schlairet, M. C. (2017). Moving toward heutagogical learning: Illuminating undergraduate nursing students' experiences in a flipped classroom. *Nurse education today*, 49, 122-128.
- Griffiths, F., Watkins, J. A., Huxley, C., Harris, B., Cave, J., Pemba, S., ... & Sturt, J. (2020). Mobile consulting (mConsulting) and its potential for providing access to quality healthcare for populations living in low-resource settings of low-and middle-income countries. *Digital health*, 6, 2055207620919594.

- Grobman, W. A., Bailit, J. L., Rice, M. M., Wapner, R. J., Reddy, U. M., Varner, M. W., ... & Human Development (NICHD) Maternal-Fetal Medicine Units (MFMU) Network. (2015). Racial and ethnic disparities in maternal morbidity and obstetric care. *Obstetrics & Gynecology*, 125(6), 1460-1467.
- Güngördük, K., Olgaç, Y., Gülseren, V., & Kocaer, M. (2018). Active management of the third stage of labor: A brief overview of key issues. *Turkish journal of obstetrics and gynecology*, 15(3), 188.
- Gyamfi-Bannerman, C., Srinivas, S. K., Wright, J. D., Goffman, D., Siddiq, Z., D'Alton, M. E., & Friedman, A. M. (2018). Postpartum hemorrhage outcomes and race. *American journal of obstetrics and gynecology*, 219(2), 185-e1.
- Habek, D., Marton, I., Prka, M., Luetić, A. T., Vitić, M., & Jurković, A. M. (2022). Transvaginally surgically treatment of early postpartum hemorrhage caused by lower uterine segment atony. *Journal of Perinatal Medicine*, 50(7), 933-938.
- Hasan, R. T., & Hussein, E. (2020). Effectiveness of an Educational Program on Nurses-midwives' Knowledge about Pain Management during Labor in Baghdad Maternity Hospitals. *Iraqi National Journal of Nursing Specialties*, 33(1), 21-32.
- He, X., Zeng, X., Troendle, J., Ahlberg, M., Tilden, E. L., Souza, J. P., ... & Zhang, J. (2023). New insights on labor progression: a systematic review. *American Journal of Obstetrics and Gynecology*.
- Herbert, R., Jamtvedt, G., Hagen, K. B., & Elkins, M. R. (2022). *Practical Evidence-Based Physiotherapy-E-Book: Practical Evidence-Based Physiotherapy-E-Book*. Elsevier Health Sciences.
- Hermesch, A. C., Kernberg, A. S., Layoun, V. R., & Caughey, A. B. (2023). Oxytocin: physiology, pharmacology, and clinical application for labor management. *American journal of obstetrics and gynecology*.

- Hinkson, L., Suermann, M. A., Hinkson, S., & Henrich, W. (2017). The Windmill technique avoids manual removal of the retained placenta—A new solution for an old problem. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 215, 6-11.
- Hofmeyr, G. J. (2023). Novel concepts and improvisation for treating postpartum haemorrhage: a narrative review of emerging techniques. *Reproductive Health*, 20(1), 116.
- Hofmeyr, G. J., & Singata-Madliki, M. (2020). The second stage of labor. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 67, 53-64.
- Hosseini, M. M., Hosseini, T. M., Qayumi, K., & Baeradeh, N. (2022). Game-based vs. Case-based Training for Increasing Knowledge and Behavioral Fluency of Nurse Students Regarding Crisis and Disaster Management; a Quasi-Experimental Study. *Archives of Academic Emergency Medicine*, 10(1).
https://www.midwife.org/acnm/files/ccLibraryFiles/Filename/000000001383/Third-Stage-of-Labor_Final-1.pdf
- Ibrahim, H., & Abdel-Menim, S. (2016). Improving maternity nurses' performance regarding prevention and control of postpartum hemorrhage. *Novelty Journals*, 3(3).
- Isacson, M., Thies-Lagergren, L., Oras, P., Hellström-Westas, L., & Andersson, O. (2022). Umbilical cord clamping and management of the third stage of labor: A telephone-survey describing Swedish midwives' clinical practice. *European Journal of Midwifery*, 6.
- Jae-Woo Oh, H. J. (2021). A Study of Between Forensic Nursing Competence, Ethical Decision-Making Confidence, and Nursing Professional Value among Nursing Students. *Annals of the Romanian Society for Cell Biology*, 846-853.
- Jena, B. H., Biks, G. A., Gete, Y. K., & Gelaye, K. A. (2023). Determinants of postpartum uterine atony in urban South Ethiopia: a community-

- based unmatched nested case-control study. *BMC Pregnancy and Childbirth*, 23(1), 499.
- Kale, S., Hirani, S., Vardhan, S., Mishra, A., Ghode, D. B., Prasad, R., & Wanjari, M. (2023). Addressing cancer disparities through community engagement: lessons and best practices. *Cureus*, 15(8).
- Kalu, F. A., & Chukwurah, J. N. (2022). Midwives' experiences of reducing maternal morbidity and mortality from postpartum haemorrhage (PPH) in Eastern Nigeria. *BMC Pregnancy and Childbirth*, 22(1), 1-10.
- Kanda, K., Blythe, S., Grace, R., Elcombe, E., Rodgers, K., & Kemp, L. (2023). 'Everything's adaptable': A qualitative study of how nurses make decisions in sustained home-visiting care with mothers and children experiencing adversity. *Journal of Advanced Nursing*.
- Karunyaa, M. (2022). Effectiveness of Samartharam Suction Canula in High Risk Women for PPH (Doctoral dissertation, Theni Government Medical College, Theni).
- Kavinya, M. P., Lugulu, J., & Mosol, P. (2023). Examining the Challenges Affecting the Application of Innovative Simulation-Based Teaching and Learning among Teaching Staff in Selected Kenya Medical Training College Campuses Offering Medical Laboratory Sciences in Kenya. *Int J Trop Dis*, 6, 071.
- Kawakita, T., Wilson, K., Grantz, K. L., Landy, H. J., Huang, C. C., & Gomez-Lobo, V. (2016). Adverse maternal and neonatal outcomes in adolescent pregnancy. *Journal of pediatric and adolescent gynecology*, 29(2), 130-136.
- Kazdin, A. E. (2008). Evidence-based treatment and practice: new opportunities to bridge clinical research and practice, enhance the knowledge base, and improve patient care. *American psychologist*, 63(3), 146.
- Kearney, L., Reed, R., Kynn, M., Young, J., & Davenport, L. (2019). Third stage of labour management practices: A secondary analysis of a

- prospective cohort study of Australian women and their associated outcomes. *Midwifery*, 75, 110-116.
- Kim, M. L., Hur, Y. M., Ryu, H., Lee, M. J., Seong, S. J., & Shin, J. S. (2020). Clinical outcomes of prophylactic compression sutures for treatment of uterine atony during the cesarean delivery of twins. *BMC pregnancy and childbirth*, 20, 1-7.
- Kirkpatrick, D., & Kirkpatrick, J. (2006). *Evaluating training programs: The four levels*. Berrett-Koehler Publishers.
- Kumaraswami, S., & Butwick, A. (2022). Latest advances in postpartum hemorrhage management. *Best Practice & Research Clinical Anaesthesiology*, 36(1), 123-134.
- Kunimi, Y., Minami, M., Muchanga, S. M. J., Eitoku, M., Hayashi, K., Fujieda, M., ... & Maeda, N. (2022). Exogenous oxytocin used to induce labor has no long-term adverse effect on maternal-infant bonding: Findings from the Japan Environment and Children's Study. *Journal of Affective Disorders*, 299, 37-44.
- Kunimi, Y., Minami, M., Muchanga, S. M. J., Eitoku, M., Hayashi, K., Fujieda, M., ... & Maeda, N. (2022). Exogenous oxytocin used to induce labor has no long-term adverse effect on maternal-infant bonding: Findings from the Japan Environment and Children's Study. *Journal of Affective Disorders*, 299, 37-44.
- Lami, H., & Deksisa, A. (2020). Knowledge and Practice towards Active Management of Third Stage of Labour, among Obstetric Care Providers Adama Town Governmental Health Facilities, Oromia, Ethiopia From September 12 to November 08 2019. *American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS)*, 73(1), 128-142.
- Lang, D. L., Zhao, F. L., & Robertson, J. (2015). Prevention of postpartum haemorrhage: cost consequences analysis of misoprostol in low-resource settings. *BMC Pregnancy and Childbirth*, 15(1), 1-9.

- Lawrie, T. A., Rogozińska, E., Sobiesuo, P., Vogel, J. P., Ternent, L., & Oladapo, O. T. (2019). A systematic review of the cost-effectiveness of uterotonic agents for the prevention of postpartum hemorrhage. *International Journal of Gynecology & Obstetrics*, 146(1), 56-64.
- Leduc, D., Senikas, V., & Lalonde, A. B. (2018). No. 235-active management of the third stage of labour: prevention and treatment of postpartum hemorrhage. *Journal of Obstetrics and Gynaecology Canada*, 40(12), e841-e855.
- Leduc, D., Senikas, V., & Lalonde, A. B. (2018). No. 235-active management of the third stage of labour: prevention and treatment of postpartum hemorrhage. *Journal of Obstetrics and Gynaecology Canada*, 40(12), e841-e855.
- Leduc, D., Senikas, V., & Lalonde, A. B. (2018). No. 235-active management of the third stage of labour: prevention and treatment of postpartum hemorrhage. *Journal of Obstetrics and Gynaecology Canada*, 40(12), e841-e855.
- Lee, H. J., Kim, M., Lim, B. B., Kim, Y. R., Jeon, G. S., & Jung, S. H. (2021). Transcatheter arterial embolization in the management of postpartum hemorrhage due to genital tract injury after vaginal delivery. *Journal of Vascular and Interventional Radiology*, 32(1), 99-105.
- Lekuikou, L. S. T., & Moreland, C. (2022). Retained Placenta and Postpartum Hemorrhage: A Case Report and Review of Literature. *Cureus*, 14(4).
- Li, S., Gao, J., Liu, J., Hu, J., Chen, X., He, J., ... & Wang, X. (2021). Incidence and risk factors of postpartum hemorrhage in China: a multicenter retrospective study. *Frontiers in Medicine*, 8, 673500.
- Lin, H., Liu, G., Wang, X., Xu, Q., Guo, S., & Hu, R. (2023). A virtual simulation-based training program on birthing positions: a randomized controlled trial. *BMC nursing*, 22(1), 318.

- Liu, C. N., Yu, F. B., Xu, Y. Z., Li, J. S., Guan, Z. H., Sun, M. N., ... & Chen, D. J. (2021). Prevalence and risk factors of severe postpartum hemorrhage: a retrospective cohort study. *BMC pregnancy and childbirth*, 21(1), 1-8.
- Liu, C. N., Yu, F. B., Xu, Y. Z., Li, J. S., Guan, Z. H., Sun, M. N., ... & Chen, D. J. (2021). Prevalence and risk factors of severe postpartum hemorrhage: a retrospective cohort study. *BMC pregnancy and childbirth*, 21(1), 1-8.
- Lofthouse, C. (2014). Postpartum Haemorrhage in Humanitarian Crises: Obstacles and facilitators to the adoption of the non-pneumatic anti-shock garment (NASG) into humanitarian settings.
- Low, L. K., Bailey, J. M., Sacks, E., Robles, C., & Medina, L. (2012). Reduced postpartum hemorrhage after implementation of active management of the third stage of labor in rural Honduras. *International Journal of Gynecology & Obstetrics*, 119(3), 217-220.
- Maben, J., Latter, S., & Clark, J. M. (2006). The theory–practice gap: impact of professional–bureaucratic work conflict on newly-qualified nurses. *Journal of advanced nursing*, 55(4), 465-477.
- Macdonald, S., & Johnson, G. (Eds.). (2017). *Mayes' Midwifery E-Book*. Elsevier Health Sciences.
- Mangwi, A. A., Ebasone, P. V., Aroke, D., & Ngek, L. T. (2019). Non-obstetric vulva haematomas in a low resource setting: two case reports. *Pan African Medical Journal*, 33(1).
- Marshall, J. E., & Raynor, M. D. (2014). *Myles' Textbook for Midwives E-Book*. Elsevier Health Sciences.
- Massoth, C., Wenk, M., Meybohm, P., & Kranke, P. (2023). Coagulation management and transfusion in massive postpartum hemorrhage. *Current Opinion in Anaesthesiology*, 36(3), 281-287.

- Masuzawa, Y., Kataoka, Y., Fujii, K., & Inoue, S. (2018). Prophylactic management of postpartum haemorrhage in the third stage of labour: an overview of systematic reviews. *Systematic reviews*, 7(1), 1-24.
- McCutcheon, K., Lohan, M., Traynor, M., & Martin, D. (2015). A systematic review evaluating the impact of online or blended learning vs. face-to-face learning of clinical skills in undergraduate nurse education. *Journal of advanced nursing*, 71(2), 255-270.
- Medforth, J., Ball, L., Walker, A., Battersby, S., & Stables, S. (Eds.). (2017). *Oxford Handbook of Midwifery 3e*. Oxford University Press.
- Mehta, L. S., Sharma, G., Creanga, A. A., Hameed, A. B., Hollier, L. M., Johnson, J. C., ... & American Heart Association Advocacy Coordinating Committee. (2021). Call to action: maternal health and saving mothers: a policy statement from the American Heart Association. *Circulation*, 144(15), e251-e269.
- Memon, S., Imdad, B., Aziz, A., Aziz, F., Memon, F., & Zafar, S. N. (2022). Assessing the Effectiveness of Training and Education on the Knowledge about active Management of 3rd Stage Labor by Nurses and Midwives. *Journal of Liaquat University of Medical & Health Sciences*, 21(04), 285-290.
- Memon, S., Imdad, B., Aziz, A., Aziz, F., Memon, F., & Zafar, S. N. (2022). Assessing the Effectiveness of Training and Education on the Knowledge about active Management of 3rd Stage Labor by Nurses and Midwives. *Journal of Liaquat University of Medical & Health Sciences*, 21(04), 285-290.
- Memon, S., Imdad, B., Aziz, A., Aziz, F., Memon, F., & Zafar, S. N. (2022). Assessing the Effectiveness of Training and Education on the Knowledge about active Management of 3rd Stage Labor by Nurses and Midwives. *Journal of Liaquat University of Medical & Health Sciences*, 21(04), 285-290.

- Menichetti, C. P., & Troller, R. (2021). 19 Obstetrics in Limited-Resource Settings. *Fundamentals of Frontline Surgery*.
- Merién, A. E. R., Van de Ven, J., Mol, B. W., Houterman, S., & Oei, S. G. (2010). Multidisciplinary team training in a simulation setting for acute obstetric emergencies: a systematic review. *Obstetrics & Gynecology*, 115(5), 1021-1031.
- Mir, S. A., Shah, M. A., Ganai, S. A., Ahmad, T., & Gani, M. (2019). Understanding the role of active components from plant sources in obesity management. *Journal of the Saudi Society of Agricultural Sciences*, 18(2), 168-176.
- Mohammed, A. K., & Muhamed Nury, L. A. H. (2023). Effectiveness of Educational Program on Nurses/Midwives Performance Regarding Placenta Examination at Maternity Teaching Hospital in Sulaimani/Iraq. *Mosul Journal of Nursing*, 11(2), 332-341.
- Mohammed, N. A. (2023). Effectiveness of an Educational Program on Nurses Knowledge regarding Active Management of Third Stage of Labor to Control of Postpartum Hemorrhage. *Migration Letters*, 20(S7), 435-441.
- Muhleman, M. A., Aly, I., Walters, A., Topale, N., Tubbs, R. S., & Loukas, M. (2017). To cut or not to cut, that is the question: A review of the anatomy, the technique, risks, and benefits of an episiotomy. *Clinical Anatomy*, 30(3), 362-372.
- Muñoz, M., Stensballe, J., Ducloy-Bouthors, A. S., Bonnet, M. P., De Robertis, E., Fornet, I., ... & Hardy, J. F. (2019). Patient blood management in obstetrics: prevention and treatment of postpartum haemorrhage. A NATA consensus statement. *Blood Transfusion*, 17(2), 112.
- Muñoz, M., Stensballe, J., Ducloy-Bouthors, A. S., Bonnet, M. P., De Robertis, E., Fornet, I., ... & Hardy, J. F. (2019). Patient blood management in obstetrics: prevention and treatment of postpartum

- haemorrhage. A NATA consensus statement. *Blood Transfusion*, 17(2), 112.
- Murray, M., & Gayle Huelsmann, B. S. N. (2020). *Labor and delivery nursing: a guide to evidence-based practice*. Springer publishing company.
- Murray, M., & Gayle Huelsmann, B. S. N. (2020). *Labor and delivery nursing: a guide to evidence-based practice*. Springer publishing company.
- Musabwasoni, M. G. S. (2019). *Assessing the Impact of Mentorship on Rwandan Nurses' and Midwives' Knowledge and Self-Efficacy in Managing Postpartum Hemorrhage* (Doctoral dissertation, The University of Western Ontario (Canada)).
- Musabwasoni, M. G. S., Kerr, M., Babenko-Mould, Y., Nzayirambaho, M., & Ngabonzima, A. (2020). Assessing the impact of mentorship on nurses' and midwives' knowledge and self-efficacy in managing postpartum hemorrhage. *International Journal of Nursing Education Scholarship*, 17(1), 20200010.
- Muyanga, D. L., & Joho, A. A. (2022). Knowledge and skills on active management of third stage of labor for prevention of post-partum haemorrhage among health care providers in Lake Zone, Tanzania: a cross sectional study. *BMC Women's Health*, 22(1), 36.
- Muyanga, D. L., & Joho, A. A. (2022). Knowledge and skills on active management of third stage of labor for prevention of post-partum haemorrhage among health care providers in Lake Zone, Tanzania: a cross sectional study. *BMC Women's Health*, 22(1), 36.
- Muyanga, D. L., & Joho, A. A. (2022). Knowledge and skills on active management of third stage of labor for prevention of post-partum haemorrhage among health care providers in Lake Zone, Tanzania: a cross sectional study. *BMC Women's Health*, 22(1), 36.

- Muzeya, F., & Julie, H. (2020). Student midwives' knowledge, skills and competency in relation to the active management of the third stage of labour: A correlational study. *curationis*, 43(1), 1-8.
- Navarro-Prado, S., Sánchez-Ojeda, M. A., Marmolejo-Martín, J., Kapravelou, G., Fernández-Gómez, E., & Martín-Salvador, A. (2022). Cultural influence on the expression of labour-associated pain. *BMC Pregnancy and Childbirth*, 22(1), 1-9.
- Ndwiga, C., Warren, C. E., Ritter, J., Sripad, P., & Abuya, T. (2017). Exploring provider perspectives on respectful maternity care in Kenya: “work with what you have”. *Reproductive health*, 14(1), 1-13.
- Needleman, J., Liu, J., Shang, J., Larson, E. L., & Stone, P. W. (2020). Association of registered nurse and nursing support staffing with inpatient hospital mortality. *BMJ quality & safety*, 29(1), 10-18.
- Nelissen, E., Ersdal, H., Mduma, E., Evjen-Olsen, B., Twisk, J., Broerse, J., ... & Stekelenburg, J. (2017). Clinical performance and patient outcome after simulation-based training in prevention and management of postpartum haemorrhage: an educational intervention study in a low-resource setting. *BMC pregnancy and childbirth*, 17(1), 1-9.
- Nelson, D. B., McIntire, D. D., & Leveno, K. J. (2020). Second-stage labor: consensus versus science. *American journal of obstetrics and gynecology*, 222(2), 144-149.
- Ngwenya, S. (2016). Postpartum hemorrhage: incidence, risk factors, and outcomes in a low-resource setting. *International journal of women's health*, 647-650.
- Nishimwe, A., Ibisomi, L., Nyssen, M., & Conco, D. N. (2021). The effect of an mLearning application on nurses' and midwives' knowledge and skills for the management of postpartum hemorrhage and neonatal resuscitation: pre–post intervention study. *Human Resources for Health*, 19(1), 1-10.

- Nkwonta, C. A., & Oyetunde, M. O. (2017). Midwives utilization of life saving skills for prevention and management of hemorrhage in primary health centers in Anambra State, Nigeria. *International Journal of Childbirth*, 7(2), 87-100.
- Nori, W., Kassim, M. A. K., Helmi, Z. R., Pantazi, A. C., Brezeanu, D., Brezeanu, A. M., ... & Serbanescu, L. (2023). Non-Pharmacological Pain Management in Labor: A Systematic Review. *Journal of Clinical Medicine*, 12(23), 7203.
- Nyfløt, L. T., Sandven, I., Stray-Pedersen, B., Pettersen, S., Al-Zirqi, I., Rosenberg, M., ... & Vangen, S. (2017). Risk factors for severe postpartum hemorrhage: a case-control study. *BMC pregnancy and childbirth*, 17, 1-9.
- Nyfløt, L. T., Sandven, I., Stray-Pedersen, B., Pettersen, S., Al-Zirqi, I., Rosenberg, M., ... & Vangen, S. (2017). Risk factors for severe postpartum hemorrhage: a case-control study. *BMC pregnancy and childbirth*, 17, 1-9.
- Okongo, R. B., Ngao, G., Rop, N. K., & Wesonga, J. N. (2015). Effect of availability of teaching and learning resources on the implementation of inclusive education in pre-school centers in Nyamira North Sub-County, Nyamira County, Kenya.
- Omotayo, M. O., Abioye, A. I., Kuyebi, M., & Eke, A. C. (2021). Prenatal anemia and postpartum hemorrhage risk: a systematic review and meta-analysis. *Journal of Obstetrics and Gynaecology Research*, 47(8), 2565-2576.
- Omotayo, M. O., Abioye, A. I., Kuyebi, M., & Eke, A. C. (2021). Prenatal anemia and postpartum hemorrhage risk: a systematic review and meta-analysis. *Journal of Obstetrics and Gynaecology Research*, 47(8), 2565-2576.
- Onuoha, O. C., & Gaiser, R. R. (2017). *Obstetric Anesthesia, An Issue of Anesthesiology Clinics* (Vol. 35, No. 1). Elsevier Health Sciences.

- Otolorin, E., Gomez, P., Currie, S., Thapa, K., & Dao, B. (2015). Essential basic and emergency obstetric and newborn care: from education and training to service delivery and quality of care. *International Journal of Gynecology & Obstetrics*, 130, S46-S53.
- Pergialiotis, V., Bellos, I., Fanaki, M., Vrachnis, N., & Doumouchtsis, S. K. (2020). Risk factors for severe perineal trauma during childbirth: An updated meta-analysis. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 247, 94-100.
- Perlman, N. C., & Carusi, D. A. (2019). Retained placenta after vaginal delivery: risk factors and management. *International journal of women's health*, 527-534.
- Pillitteri, A. (2010). *Maternal & child health nursing: care of the childbearing & childrearing family*. Lippincott Williams & Wilkins.
- Prince, A. W., & Armstrong, E. (2015). Empowering nurses to help reduce the rate of primary cesarean births. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 44(s1), S23-S23.
- Putri, N. R., & Megasari, A. L. (2022). Uterotonic Use In The Active Management Of Third Stage Of Labor (AMTSL): Systematic Review. *Placenta: Jurnal Ilmiah Kesehatan dan Aplikasinya*, 10(1), 53-65.
- Putri, N. R., & Megasari, A. L. (2022). UTEROTONIC USE IN THE ACTIVE MANAGEMENT OF THIRD STAGE OF LABOR (AMTSL): SYSTEMATIC REVIEW. *PLACENTUM: Jurnal Ilmiah Kesehatan dan Aplikasinya*, 10(1), 53-65.
- R Davidson, M. (2012). *Maternal-newborn nursing & women's health across the lifespan*. Pearson.
- Ramadhani, F. (2011). *Midwives' competency for implementation of active management of third stage of labor in Dar es Salaam Municipal Hospitals, Tanzania* (Doctoral dissertation, Muhimbili University of Health and Allied Sciences).

- Ramadhani, F. B., Liu, Y., & Lembuka, M. M. (2020). Knowledge and barriers on correct use of modified guidelines for active management of third stage of labour: a cross sectional survey of nurse-midwives at three referral hospitals in Dar es Salaam, Tanzania. *African Health Sciences*, 20(4), 1908-17.
- Rani, P. R., & Begum, J. (2017). Recent advances in the management of major postpartum haemorrhage-a review. *Journal of clinical and diagnostic research: JCDR*, 11(2), QE01.
- Rani, P. R., & Begum, J. (2017). Recent advances in the management of major postpartum haemorrhage-a review. *Journal of clinical and diagnostic research: JCDR*, 11(2), QE01.
- Raphael-Leff, J. (2018). *The psychological processes of childbearing*. Routledge.
- Ricci, S. S. (2013). *Essentials of Maternity, Newborn, and Women's Health Nursing*. 3rd edn. China, Wolterskluwer Health
- Rigouzzo, A., Louvet, N., Favier, R., Ore, M. V., Piana, F., Girault, L., ... & Constant, I. (2020). Assessment of coagulation by thromboelastography during ongoing postpartum hemorrhage: a retrospective cohort analysis. *Anesthesia & Analgesia*, 130(2), 416-425.
- Rogers, E. M. (1962). *Diffusion of innovations the free Press of Glencoe*. NY, 32, 891-937.
- Rosenbloom, J. I., Stout, M. J., Tuuli, M. G., Woolfolk, C. L., López, J. D., Macones, G. A., & Cahill, A. G. (2017). New labor management guidelines and changes in cesarean delivery patterns. *American journal of obstetrics and gynecology*, 217(6), 689-e1.
- Rottenstreich, M., Atia, O., Greifner, N., Rotem, R., Grisaru-Granovsky, S., Vernea, F., ... & Y. Sela, H. (2022). Prospective evaluation of clinical characteristics and maternal outcomes of women with pathologically confirmed postpartum retained placental fragments. *The Journal of Maternal-Fetal & Neonatal Medicine*, 35(25), 7322-7329

- Rottenstreich, M., Rotem, R., Bergman, M., Rottenstreich, A., & Grisaru-Granovsky, S. (2021). Recurrence of retained placenta in multiple consecutive deliveries. *The Journal of Maternal-Fetal & Neonatal Medicine*, 34(21), 3574-3579.
- Ruiter, L., Kazemier, B. M., Mol, B. W., & Pajkrt, E. (2019). Incidence and recurrence rate of postpartum hemorrhage and manual removal of the placenta: A longitudinal linked national cohort study in The Netherlands. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 238, 114-119.
- Ruiter, L., Kazemier, B. M., Mol, B. W., & Pajkrt, E. (2019). Incidence and recurrence rate of postpartum hemorrhage and manual removal of the placenta: A longitudinal linked national cohort study in The Netherlands. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 238, 114-119.
- Ruiz, M. T., Paraiso, N. A., Machado, A. R. M., Ferreira, M. B. G., Wysocki, A. D., & Mamede, M. V. (2017). Blood loss and signs or symptoms during puerperal assessment: implications for nursing care. *Rev enferm UERJ*, 25, e22756.
- Rutherford, J. N., Asiodu, I. V., & Liese, K. L. (2019). Reintegrating modern birth practice within ancient birth process: What high cesarean rates ignore about physiologic birth. *American Journal of Human Biology*, 31(2), e23229.
- Salati, J. A., Leathersich, S. J., Williams, M. J., Cuthbert, A., & Tolosa, J. E. (2019). Prophylactic oxytocin for the third stage of labour to prevent postpartum haemorrhage. *Cochrane Database of Systematic Reviews*, (4).
- Salehpour, F., Mirzaei, F., Kazemzadeh, M., & Alavi, S. A. N. (2018). Spontaneous epidural hematoma of cervical spine. *International Journal of Spine Surgery*, 12(1), 26-29.

- Sánchez-Polo, M. T., Cegarra-Navarro, J. G., Cillo, V., & Wensley, A. (2019). Overcoming knowledge barriers to health care through continuous learning. *Journal of Knowledge Management*, 23(3), 508-526.
- Sanci, L. A., Ker, J., Coffey, C. M. M., Veit, F. C. M., Carr-Gregg, M., Patton, G. C., ... & Bowes, G. (2000). Evaluation of the effectiveness of an educational intervention for general practitioners in adolescent health care: randomised controlled trial. *Commentary: Applying the BMJ's guidelines on educational interventions. Bmj*, 320(7229), 224-230.
- Sanci, L. A., Ker, J., Coffey, C. M. M., Veit, F. C. M., Carr-Gregg, M., Patton, G. C., ... & Bowes, G. (2000). Evaluation of the effectiveness of an educational intervention for general practitioners in adolescent health care: randomised controlled trial. *Commentary: Applying the BMJ's guidelines on educational interventions. Bmj*, 320(7229), 224-230.
- Serrano, S., & Ayres-de-Campos, D. (2021). Normal Labour. *The EBCOG Postgraduate Textbook of Obstetrics & Gynaecology: Obstetrics & Maternal-Fetal Medicine*, 1, 359.
- Silver, R. M. (2015). Abnormal placentation: placenta previa, vasa previa, and placenta accreta. *Obstetrics & Gynecology*, 126(3), 654-668.
- Southern, E. T. H. I. O. P. I. A., Zone, O. W. H., & Conjoined, D. P. T. D. (2021). A systematic review and meta-analysis on women's knowledge of preconception care. *Ethiop J Reprod Health (EJRH)*, 13(2), 2-15.
- Sultana, N., Begum, F., & Shermin, S. (2018). Active Management of the Third Stage of Labour: A Brief Review and Update. *Bangladesh Journal of Obstetrics & Gynaecology*, 33(2), 149-156.
- Sultana, N., Begum, F., & Shermin, S. (2018). Active Management of the Third Stage of Labour: A Brief Review and Update. *Bangladesh Journal of Obstetrics & Gynaecology*, 33(2), 149-156.

- Sultana, R., Manzoor, S., & Humayun, S. (2020). Primary postpartum hemorrhage: risk factors, causes and maternal outcome. *Journal of The Society of Obstetricians and Gynaecologists of Pakistan*, 10(1), 40-46.
- Taha, F. A. N. (2015). Knowledge and practice of nurse midwives regarding management and prevention of postpartum hemorrhage in three selected teaching hospitals-Khartoum State-Sudan 2014.
- Taylor, N., & Brazel, N. (2023). Management challenges in primary and secondary postpartum haemorrhage. *Obstetrics, Gynaecology & Reproductive Medicine*.
- Thams, A. B., Larsen, M. H., Rasmussen, S. C., Jeppegaard, M., & Krebs, L. (2023). Incidence of postpartum hemorrhage and risk factors for recurrence in the subsequent pregnancy. *Archives of Gynecology and Obstetrics*, 307(4), 1217-1224.
- Thams, A. B., Larsen, M. H., Rasmussen, S. C., Jeppegaard, M., & Krebs, L. (2023). Incidence of postpartum hemorrhage and risk factors for recurrence in the subsequent pregnancy. *Archives of Gynecology and Obstetrics*, 307(4), 1217-1224.
- Theobald, K. A., Tutticci, N., Ramsbotham, J., & Johnston, S. (2021). Effectiveness of using simulation in the development of clinical reasoning in undergraduate nursing students: A systematic review. *Nurse Education in Practice*, 57, 103220.
- Tiruneh, B., Fooladi, E., McLelland, G., & Plummer, V. (2022). Incidence, mortality, and factors associated with primary postpartum haemorrhage following in-hospital births in northwest Ethiopia. *Plos one*, 17(4), e0266345.
- Tkachenko, A. V., Khalil, A., & Tepla, I. (2021). Multiple Pregnancy. *The EBCOG Postgraduate Textbook of Obstetrics & Gynaecology*, 1, 147-58.

- Tkachenko, A. V., Khalil, A., & Tepla, I. (2021). Multiple Pregnancy. The EBCOG Postgraduate Textbook of Obstetrics & Gynaecology, 1, 147-58.
- Tribe, R. M., Taylor, P. D., Kelly, N. M., Rees, D., Sandall, J., & Kennedy, H. P. (2018). Parturition and the perinatal period: can mode of delivery impact on the future health of the neonate?. *The Journal of physiology*, 596(23), 5709-5722.
- Vijayalakshmi, M. (2018). A study on assessment of blood loss in third stage of labour using vacuum refraction cannula (Doctoral dissertation, Madurai Medical College, Madurai).
- Vintejou, E., Ulrich, D., Mousty, E., Masia, F., Marès, P., de Tayrac, R., & Letouzey, V. (2015). Success factors for Bakri™ balloon usage secondary to uterine atony: a retrospective, multicentre study. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 55(6), 572-577
- Voillequin, S., Rozenberg, P., Ravaud, P., & Rousseau, A. (2022). Promptness of oxytocin administration for first-line treatment of postpartum hemorrhage: a national vignette-based study among midwives. *BMC Pregnancy and Childbirth*, 22(1), 1-10.
- Walsh, D., & Downe, S. (Eds.). (2010). *Essential midwifery practice: intrapartum care*. Chichester: Wiley-Blackwell.
- Weeks, A. D., & Mallaiah, S. (2016). Beyond MBRRACE: new developments to stem the tide of postpartum haemorrhage. *European Journal of Obstetrics and Gynecology and Reproductive Biology*, 199, 66-68.
- Weissbach, T., Haikin-Herzberger, E., Bacci-Hugger, K., Shechter-Maor, G., Fejgin, M., & Biron-Shental, T. (2015). Immediate postpartum ultrasound evaluation for suspected retained placental tissue in patients undergoing manual removal of placenta. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 192, 37-40.

- West, C. P., Dyrbye, L. N., & Shanafelt, T. D. (2018). Physician burnout: contributors, consequences and solutions. *Journal of internal medicine*, 283(6), 516-529.
- World Health Organization. (2018). Implementation guidance: protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services: the revised baby-friendly hospital initiative.
- World Health Organization. (2021). WHO recommendation on uterine balloon tamponade for the treatment of postpartum haemorrhage. World Health Organization.
- Wray, S., & Prendergast, C. (2019). The myometrium: from excitation to contractions and labour. *Smooth Muscle Spontaneous Activity: Physiological and Pathological Modulation*, 233-263.
- Xodo, S., Xodo, L., Baccarini, G., Driul, L., & Londero, A. P. (2021). Does Delayed Cord Clamping Improve Long-Term (≥ 4 Months) Neurodevelopment in Term Babies? A Systematic Review and a Meta-Analysis of Randomized Clinical Trials. *Frontiers in Pediatrics*, 9, 651410.
- Yaekob, R., Shimelis, T., Henok, A., & Lamaro, T. (2015). Assessment of knowledge, attitude, and practice of midwives on active management of third stage of labour at selected health centers of Addis Ababa, Ethiopia, 2014. *Assessment*, 5(11).
- Yoon, H. J. (2019). Coagulation abnormalities and bleeding in pregnancy: an anesthesiologist's perspective. *Anesthesia and pain medicine*, 14(4), 371-379.
- Zang, Y., Lu, H., Zhang, H., Huang, J., Zhao, Y., & Ren, L. (2021). Benefits and risks of upright positions during the second stage of labour: An overview of systematic reviews. *International Journal of Nursing Studies*, 114, 103812.

-
- Zea-Prado, F., Hernández-Pacheco, J., Ortiz-Ramírez, M., Gutiérrez-Marín, A., Estrada-Gutierrez, G., Escobar, M., ... & Espino-y-Sosa, S. (2021). Initial management of primary postpartum hemorrhage: a survey. *The Journal of Maternal-Fetal & Neonatal Medicine*, 34(17), 2841-2847.
- Zelege, S., Kassaw, A., & Eshetie, Y. (2021). Non-pharmacological pain management practice and barriers among nurses working in Debre Tabor Comprehensive Specialized Hospital, Ethiopia. *Plos one*, 16(6), e0253086.
- Zmora, I., Bas-Lando, M., Armon, S., Farkash, R., Ioscovich, A., Samueloff, A., & Grisaru-Granovsky, S. (2019). Risk factors, early and late postpartum complications of retained placenta: a case control study. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 236, 160-165.

Appendices

Appendix A1: Administrative agreements

جمهورية العراق

محافظة كربلاء المقدسة
دائرة صحة كربلاء المقدسة
مركز التدريب والتنمية البشرية
شعبة ادارة المعرفة / وحدة ادارة البحوث

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

العدد: ٢١٧٦
التاريخ: ٢٠٢٢ / ١٢ / ٢٢

الى / جامعة كربلاء / كلية التمريض
الموضوع / تسهيل مهمة

تحية طيبة....



كتابكم المرقم د.ع/٣٠٠ في ٢٠٢٢/١٢/٧
نود إعلامكم بأنه لا مانع لدينا من تسهيل مهمة طالبة ماجستير (نور علي محمد اسماعيل
لإجتاز بحثها الموسوم:
(فاعلية برنامج تعليمي على معارف الممرضات فيما يتعلق بالادارة الفعالة للمرحلة الثالثة
من المخاض للسيطرة على نزيف ما بعد الولادة)
في مؤسستنا الصحية وبإشراف الدكتورة (حميدة هادي عبد الواحد) على ان لا تتحمل
دائرتنا اي نفقات مادية مع الاحترام .

الدكتور
نجيم الدكتور شمس الدين
١٥ تقوى خضر عبد الكريم
مدير مركز التدريب والتنمية البشرية
٢٠٢٢/١٢/٢٢

نسخة منه الى
مستشفى النسائية والتوليد التعليمي اجراء اللازم مع الاحترام .

CS CamScanner

Appendix A2: 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 أخلاقيات البحث العلمي
استمارة أخلاقيات البحث العلمي		
عنوان مشروع البحث		
Effectiveness of an Educational Program on nurses Knowledge regarding Active Management of Third Stage of Labor to control of postpartum hemorrhage فاعلية برنامج تعليمي على معارف الممرضات فيما يتعلق بالإدارة الفعالة للمرحلة الثالثة من الولادة للسيطرة على نزيف ما بعد الولادة		
بيانات عن الباحث الرئيسي		
مستوى الدراسة	الإسم الثلاثي للطالب	
طالبة دراسات عليا / ماجستير - فرع تمريض الام والوليد	نور علي محمد	
بيانات الباحث او الباحثين المشتركين		
اللقب العلمي	الإسم الثلاثي للأستاذ المشرف	
دكتور مدرس	ساجدة سعدون عليوي	
اهمية موضوع البحث وأهدافه (Importance of the research and its objectives)		
Importance of the research Postpartum hemorrhage (PPH) is the leading cause of maternal death yet the most preventable cause of maternal mortality. All women who carry a pregnancy beyond 20 weeks' gestation are at risk for PPH and its sequelae. As the leading cause of morbidity and mortality in childbirth, it occurs in approximately 1% to 6% of all deliveries.		
Objectives		
1. Evaluate nurses' knowledge regarding active management of the third stage of labor to control postpartum hemorrhage 2. Determine the effectiveness of an educational program on nurses' knowledge regarding active management of the third stage of labor to control postpartum hemorrhage 3. Find out the relationship between the effect of educational program with their demographic characteristics		
Time and Setting of the Research (وقت ومكان اجراء البحث (الاماكن المقترحة لأجراء البحث فيها)		
The Obstetrics and Gynecology Teaching Hospital / Time of study from 26/9/2022 to 19/9/2023		
منهجية البحث (Methodology)		
A quasi -experimental "test-retest" design has carried throughout the present study with the application of a pre - test and post- test for nurses' knowledge toward Active management of third stage of labor to control postpartum hemorrhage		
عينة الدراسة Sample of the study		
A non-probability sampling the sample is sixty nurses from the Obstetrics and Gynecology Teaching Hospital, 30 nurses are the study sample, and 30 are the control sample		
الاعتبارات الاخلاقية خلال اجراء البحث (Ethical consideration during research)		
التعهد		
<ul style="list-style-type: none"> • التي الموقع اذناه نورعلي محمد 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 أقدم الإيضاحات والمعومات الخاصة بالدراسة لأفراد العينة للمشاركين في حال طلبها. وان اتعامل بسرية تامة مع بيانات افراد العينة. 		
اسم وتوقيع الباحث N/A توقيع		
توصية لجنة أخلاقيات البحث العلمي في الكلية		
قرار اعضاء لجنة أخلاقيات البحث العلمي حسب جلساتها المنعقدة بتاريخ : / / 202 :		
عدم الموافقة على اجراء البحث <input type="checkbox"/> الموافقة على اجراء البحث <input checked="" type="checkbox"/>		
		

Appendix B: Assessment Nurses Knowledge regarding Active Management of Third Stage of Labor

(تقييم معارف الممرضات حول التدابير الفاعلة للمرحلة الثالثة من المخاض)

ت	الفقرات	نعم	لا
1.	تنقسم مراحل الولادة إلى اربع مراحل		
2.	تولد المشيمة في المرحلة الثانية		
3.	هل تعرف ماهي التدابير الفاعلة في المرحلة الثالثة من الولادة ؟		
4.	هل استخدمت هذه التدابير من قبل		
5.	من علامات المخاض الوشيكة : تقلصات براكستون هيكس , زيادة في مستوى النشاط فقط		
6.	هل تصدق ان الاستخدام الصحيح للتدابير الفاعلة في المرحلة الثالثة من الولادة يمكن أن يمنع نزيف ما بعد الولادة		
7.	الخط الأول المقوي لتوتر الرحم الموصى به للتدابير الفاعلة في المرحلة الثالثة من الولادة هو اوكسيتوسين		
8.	يؤدي تدليك البطن قبل ولادة المشيمة إلى فصل جزئي للمشيمة		
9.	طريقة إعطاء الميزوبروستول هي العضلي		
10.	المدة الإجمالية للولادة المشيمة هي 15 دقيقة		
11.	جس الرحم بعد ولادة المشيمة مهم للتأكد من صلابته		
12.	في حالة استخدام الميزوبروستول ، يوصى باستخدام الجرعة (بالميكروجرام) هي 600 ميكروغرام		

Appendix C: Experts Panel

مكان العمل	الخدمة	التخصص	اللقب العلمي	اسم الخبير	ت
كلية التمريض /جامعة كربلاء	32	تمريض صحة المجتمع	أستاذ مساعد	د.سلمان حسين فارس	1
كلية التمريض /جامعة كربلاء	30	تمريض الصحة النفسية والعقلية	أستاذ	د.علي كريم الجبوري	2
كلية التمريض /جامعة كربلاء	20	تمريض البالغين	أستاذ مساعد	د.حسن عذبي عبدالله المالكي	3
كلية التمريض /جامعة كربلاء	28	تمريض البالغين	أستاذ	د.فاطمة مكي محمود	4
كلية التمريض /جامعة كربلاء	20	تمريض الصحة النفسية والعقلية	أستاذ مساعد دكتور	د.صافي داخل نوام	5
كلية الطب/جامعة وارث	30	طبيب استشاري نسائية وتوليد	أستاذ مساعد	د.حميدة هادي عبد الواحد	6
كلية التمريض /جامعة كربلاء	4	تمريض أطفال	أستاذ مساعد	د . زكي صباح مصيحب	7
مستشفى النسائية والتوليد	14	دكتورة اختصاص نسائية وتوليد	طبيب اختصاص	د .كوثر صالح مهدي الاسدي	8
كلية التمريض/جام عة العميد	6	تمريض الام والوليد	مدرس دكتور	د .منتهى عبدالله ريشان	9
مستشفى النسائية والتوليد	40	طبيب اختصاص نسائية	طبيب /أستاذ مساعد	د . موسى العلاك	10
جامعة الفرات الأوسط التقنية	32	تمريض الام والوليد	أستاذ	د .شكرية شدهان العكيلي	11
/مركز التدريب والتنمية البشرية صحة كربلاء	19	طب جراحة عامة وبورد عراقي طب المجتمع	طبيب اختصاص	د .نعيم عبيد طلال	12
جامعة بابل /كلية التمريض	36	تمريض الام والوليد	أستاذ	د .وفاء احمد امين	13

Appendix D: Lectures of An Instructional Program

Effectiveness of an Educational Program on nurses Knowledge regarding Active Management of Third Stage of Labor to control of postpartum hemorrhage

فاعلية برنامج تعليمي على معارف الممرضات فيما يتعلق بالإدارة الفعالة
للمرحلة الثالثة من الولادة للسيطرة على نزيف ما بعد الولادة

البرنامج المقدم من قبل: نور علي محمد

باشراف : ا. م . د. ساجدة سعدون عليوي

اهداف البرنامج



الهدف العام من البرنامج التعليمي:

الهدف من البرنامج التعليمي المقدم هو تطوير معارف الممرضات فيما يتعلق بالإدارة الفعالة
للمرحلة الثالثة من الولادة للسيطرة على نزيف ما بعد الولادة

اهداف الخاصة البرنامج التعليمي:

1. تقييم معارف الممرضات فيما يتعلق بالإدارة الفعالة للمرحلة الثالثة من الولادة للسيطرة على
نزيف ما بعد الولادة

2. نحدد معارف الممرضات قبل وبعد البرنامج التعليمي

الطريقة التعليمية والوسائل التوضيحية المساعدة:

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

مكان وقت المحاضرة:

قاعة المحاضرات في مستشفى النسائية والتوليد التعليمي ولمدة 45 دقيقة لكل محاضرة

الطبيعية

الولادة



الولادة الطبيعية : هي العملية الفسيولوجية التي يتم بها إخراج الجنين والمشيمة والأغشية عبر قناة الولادة.

او

المخاض: هو العملية الفسيولوجية التي تنتقل فيها نواتج الحمل (الجنين والأغشية والحبلى السري والمشيمة) من الرحم إلى العالم الخارجي بين 38 و 42 أسبوعاً من الحمل.

المخاض هو سلسلة من الأحداث التي تؤدي من خلالها تقلصات الرحم وضغط البطن إلى طرد الجنين والمشيمة من جسم المرأة. تسبب الانقباضات المنتظمة اتساعاً تدريجياً لعنق الرحم وقوة عضلية كافية

للسماح بدفع الجنين إلى الخارج. يبدأ المخاض عادة بشكل عفوي ، بعد حوالي (280) يومًا من الحمل ، ولكن يمكن أن يبدأ بوسائل اصطناعية إذا استمر الحمل بعد (42) أسبوعًا من الحمل. متوسط طول المخاض حوالي (14) ساعة للحمل الأول وحوالي (8) ساعات في حالات الحمل اللاحقة. ومع ذلك ، فإن العديد من النساء يعانين من فترة مخاض أطول أو أقصر.

من الصعب تحديد سبب بدء المخاض بالضبط وما الذي يبدأ به. على الرغم من أنه تم اقتراح العديد من النظريات لشرح بداية المخاض ، إلا أنه لم يتم إثبات أي من هذه النظريات علميًا. من المعتقد على نطاق واسع أن العمل يتأثر بمجموعة من العوامل ، بما في ذلك:

- ينتج عن تمدد عضلات الرحم إفراز البروستاجلاندين
- ضغط على عنق الرحم مما يحفز إفراز الأوكسيتوسين
- يعمل الأوكسيتوسين مع البروستاجلاندين لبدء التقلصات

نظريات:

1. تغيير في نسبة هرمون الاستروجين إلى البروجسترون ، مما يسهل تنسيق تقلص الرحم وتمدد عضل الرحم
2. زيادة مستوى البروستاجلاندين في أواخر الحمل الثانوي إلى ارتفاع مستوى هرمون الاستروجين. يحفز تقلص العضلات الملساء للرحم.
3. التقليل من مقاومة عنق الرحم: يصبح عنق الرحم لينًا ويصبح رقيقًا ويتوسع أثناء المخاض.
4. زيادة عدد مستقبلات الأوكسيتوسين في وقت متأخر من الحمل ، مما أدى إلى زيادة الحساسية للأوكسيتوسين كما زاد أيضا استجابة لارتفاع هرمون الاستروجين.
5. يساعد الأوكسيتوسين أيضًا في تحفيز تخليق البروستاجلاندين في الساقط

ينقسم المخاض إلى أربع مراحل

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

الآلية التي يتم بها المخاض لا تزال غير مفهومة تماما. تشير بعض النظريات إلى أنها تنطوي على تفاعل معقد للغاية بين الأم والجنين والبيئة

بداية المخاض

علامات ما قبل الولادة

قبل بدء المخاض ، غالبًا ما تعاني المرأة من علامات خفية تشير إلى بداية المخاض ، والتي تشمل

1. ما قبل المخاض 1(-4 أسابيع قبل المخاض):
2. يسقط الطفل (البرق) وينخفض رأسه.
3. زيادة آلام الظهر وتشنجاته
4. وجع بطن
5. المفاصل تشعر بالراحة
6. إسهال
7. انحناء وتمدد عنق الرحم

علامات البدء في الولادة

قبل بدء المخاض ، جسد المرأة الحامل يخضع لعدة تغييرات استعدادًا للولادة التغييرات التي تحدث في كثير من الأحيان تؤدي إلى التغييرات التي تحدث إلى ظهور علامات وأعراض مميزة تشير إلى اقتراب المخاض

1. انخفاض في مستوى الرحم خلال الاسابيع الاخيرة 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 يحدث عندما يبدأ جزء تقديم الجنين بالنزول إلى حوض الأم. سيسبب هذا التغيير:

1. التنفس أسهل بكثير
2. زيادة ضغط الحوض
3. آلام الساق
4. زيادة في الإفرازات المهبلية كثرة التبول
5. يحدث في بكرية قبل 10-14 يوم من بدء المخاض
6. يحدث في المتعددة الولادة يحدث في يوم الولادة

2. زيادة في مستوى النشاط

تشير بعض النساء إلى زيادة مفاجئة في الطاقة قبل المخاض. يشار إلى هذا باسم التعشيش ، لأن العديد من النساء سوف يركزن هذه الطاقة على أنشطة تنظيف المنزل مثل التنظيف والطهي وإعداد وقضاء وقت إضافي مع الأطفال الآخرين في المنزل. عادة ما يحدث مستوى الطاقة المتزايد قبل 24 إلى 48 ساعة من بدء المخاض

3. تقلصات براكستون هيكس

قد تصبح تقلصات براكستون هيكس أقوى وأكثر تواترا. عادة ما يتم الشعور به كإحساس شد أو شد في الجزء العلوي من الرحم. تحدث في المقام الأول في البطن والأربية وتنتشر تدريجياً إلى أسفل قبل الاسترخاء. تساعد هذه الانقباضات في تحريك عنق الرحم من الموضع الخلفي إلى الموضع الأمامي. كما أنها تساعد في إنضاج عنق الرحم وتليينه. ومع ذلك ، فإنها انقباضات غير منتظمة ويمكن تقليلها عن طريق المشي أو الإفراغ أو الأكل أو زيادة تناول السوائل أو تغيير الوضع. عادة ما تستمر انقباضات براكستون هيكس حوالي 30 ثانية ولكن يمكن أن تستمر لمدة دقيقتين

4. تغيرات في عنق الرحم

يحدث تغير كبير في عنق الرحم خلال فترة ما قبل الولادة وأثناء الولادة. يكون عنق الرحم في بداية الحمل صلباً ، ويجب أن يلين حتى يتمدد ويتسع ليمرر الجنين. هذا التلين في عنق الرحم ، المسمى بالنضوج ، يخضع لتأثير العوامل الهرمونية قبل بدء المخاض ، يحدث تليين عنق الرحم واحتمال اتساع عنق الرحم مع نزول الجزء الظاهر إلى الحوض. يمكن أن تحدث هذه التغييرات من شهر إلى ساعة واحدة قبل بدء المخاض الفعلي

5. عرض دموي البشارة

أثناء الحمل ، تتراكم إفرازات عنق الرحم في قناة عنق الرحم لتشكل حاجزا يسمى السدادة المخاطية مع تليين عنق الرحم وتوسعه ، يتم خروج السدادة المخاطية تقريبا ضمن 24-48 ساعة قبل المخاض في بداية المخاض أو قبله ، يتم طرد السدادة المخاطية التي تملأ قناة عنق الرحم أثناء الحمل بسبب تليين عنق الرحم وزيادة ضغط الجزء الحالي. هذه الشعيرات الدموية العنقية الممزقة تطلق كمية صغيرة من الدم تختلط بالمخاط ، مما يؤدي إلى إفرازات وردية اللون تعرف باسم العرض الدموي.

6. تغيرات في الجهاز الهضمي

أقل شيوعاً عند بعض النساء ، تعاني من الاسهال والغثيان وعسر الهضم الذي يسبق المخاض.

7. خسارة طفيفة في الوزن

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).

8. آلام الظهر

قد تعاني المرأة من آلام أسفل الظهر والانزعاج العجزي الحرقفي الناجم عن استرخاء مفاصل الحوض بسبب تأثير هرمون الريالكسين على مفاصل الحوض.

9. تمزق الاغشية الامنيوسية

في بداية المخاض ، تنتفخ الاغشية الامنيوسية التي تحيط بالجنين عبر عنق الرحم وتكون على شكل مخروط تتحسسه الممرضة عند الفحص المهبلي. عندما تتمزق الاغشية ، قد يتم تدفق السائل الامنيوسي بكميات كبيرة. يحدث التمزق التلقائي لأغشية الامنيوسية **SROM** بشكل عام في ذروة التقلصات الرحمية القوية فيتدفق السائل الامنيوسي خارج المهبل.

العوامل التي تؤثر على المخاض

تتفاعل أربعة عوامل رئيسية **Ps5** أثناء الولادة الطبيعية ؛ العناصر الاربعة مترابطة وتعتمد على بعضها البعض من أجل والدة آمنة وهي

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

STAGES OF LABOR

ينقسم المخاض عادة إلى أربع مراحل:

first stage المرحلة الأولى

خلال المرحلة الأولى من المخاض ، التغيير الأساسي الكامنة وراء العملية هو التوسع التدريجي لعنق الرحم.

يتم قياس اتساع عنق الرحم بشكل شخصي عن طريق الفحص المهبلي ويتم التعبير عنه بالسنتيمتر. تنتهي المرحلة الأولى عندما يتسع عنق الرحم إلى 10 سم قطرها كبير بما يكفي للسماح بمرور رأس جنين متوسط الحجم

المرحلة الأولى تنقسم إلى ثلاث مراحل: مرحلة كامنة أو مبكرة، المرحلة نشطة والمرحلة الانتقالية.

المرحلة الكامنة أو المبكرة Latent or Early Phase

تبدأ هذه المرحلة مع البداية التقلصات المنتظمة وتنتهي عندما يبدأ عنق الرحم بالتمدد السريع. يحدث نحو عنق الرحم خلال هذه المرحلة، ويتمدد عنق الرحم من 0 إلى 3 سم. تحدث التقلصات عادة كل 5 إلى 10 دقائق، تستمر من 30 إلى 45 ثانية، ويتم وصفها بأنها خفيفة عن طريق الجس.

المرحلة النشطة Active Phase

يبدأ تمدد عنق الرحم بالحدوث بسرعة أكبر خلال المرحلة النشطة. يتسع عنق الرحم عادة من 4 إلى 7 سم، مع 40% إلى 80% من الانمحاء.

تصبح الانقباضات أكثر تكرارًا (من 2 إلى 5 دقائق) وزيادة المدة (من 45 إلى 60 ثانية). يشتد انزعاج المرأة (معتدل إلى قوي عن طريق الجس).

المرحلة الانتقالية Transition Phase

المرحلة الانتقالية هي المرحلة الأخيرة من المرحلة الأولى من الولادة. خلال هذه المرحلة، التمدد من 8 إلى 10 سم، مع المحو من 80% إلى 100%. تكون الانقباضات أقوى (صعبة بالمامسة)، مؤلمة أكثر، أكثر تواترًا (كل دقيقة إلى دقيقتين)، تستمر لفترة أطول (60 إلى 90 ثانية)

المرحلة الثانية Second stage

تبدأ المرحلة الثانية من المخاض بتمدد كامل لعنق الرحم (10 سم) وتمويه وتنتهي بولادة المولود الجديد تحدث التقلصات كل 2 إلى 3 دقائق، وتستمر لمدة 60 إلى 90 ثانية، ويتم وصفها بأنها قوية عن طريق الجس إنها تركز على عمل الدفع. هناك طريقتان لتوجيه المرحلة الثانية من المخاض: الدفع التلقائي والدفع الموجه. يمثل الدفع العفوي طريقة طبيعية لإدارة المرحلة الثانية من المخاض

المرحلة الثالثة Third Stage

تشير المرحلة الثالثة من المخاض إلى الفترة التي تبدأ مباشرة بعد توليد الطفل وتنتهي مع خروج (ولادة) المشيمة والأغشية المرتبطة بها بشكل كامل.

توجد خطورة كبيرة لحدوث نزف خلال هذه المرحلة. تحتاج جميع المريضات إلى المراقبة عن قرب والوقاية الروتينية من النزف التالي للولادة.

الوصف

تستغرق هذه المرحلة عادةً 5-15 دقيقة.

– بعد توليد الطفل، تكون هناك فترة راحة بدون انقباضات تستمر 10 دقائق في المتوسط. يتم استغلال هذا الوقت في رعاية حديث الولادة. مع ذلك، يجب مراقبة الأم بعناية لظهور علامات النزف التالي للولادة، الذي قد يحدث في أي وقت.

– بعد ذلك، تعود الانقباضات وتنفصل المشيمة بشكل تلقائي. عند جس البطن، يمكن الشعور بصعود قاع الرحم ثم هبوطه مرة أخرى، مما يقابل نزوح (هجرة)/نزول المشيمة. عندما تصل المشيمة بالكامل إلى المهبل، ينكمش الرحم ليشكل كرة صلبة فوق عظمة العانة.

– يجب ألا يتجاوز حجم فقدان الدم المصاحب لخروج (ولادة) المشيمة مقدار 500 مل.

في حالة عدم حدوث النزف التالي للولادة، يمكن الانتظار 30-45 دقيقة بعد أقصى لإخراج (طرد) المشيمة. بعد ذلك يجب إزالة المشيمة يدويًا

تبدأ المرحلة الثالثة من المخاض بولادة المولود الجديد وتنتهي بانفصال وولادة المشيمة. يتكون من مرحلتين: انفصال المشيمة وطرد المشيمة

Placental Separation انفصال المشيمة

بعد ولادة الرضيع ، يستمر الرحم في الانقباض بقوة ويمكن الآن التراجع ، والتراجع بشكل ملحوظ في حجم. تؤدي هذه الانقباضات إلى انسحاب المشيمة من جدار الرحم.

علامات الانفصال التالية تشير إلى أن المشيمة جاهزة للولادة

- الرحم يرتفع إلى أعلى.
- يطول الحبل السري.
- خروج نزيف مفاجئ من الدم من فتحة المهبل • الرحم يغير شكله إلى كروي.

Placental Expulsion طرد المشيمة

بعد فصل المشيمة عن جدار الرحم ، يؤدي استمرار تقلصات الرحم إلى حدوث طرد المشيمة في غضون 2 إلى 30 دقيقة بعد طرد المشيمة ، يتم تدليك الرحم لفترة وجيزة من قبل الطبيب المعالج أو القابلة حتى يصبح صلبا بحيث تضيق الأوعية الدموية الرحمية ، مما يقلل من إمكانية حدوث النزف. يبلغ فقدان الدم الطبيعي حوالي 500 مل للولادة المهبلية و 1000 مل للولادة القيصرية

المرحلة الرابعة Fourth Stage

تبدأ المرحلة الرابعة باستكمال طرد المشيمة والأغشية وتنتهي بالتكيف الفسيولوجي الأولي واستقرار الأم (من 1 إلى 4 ساعات بعد الولادة) يجب أن يكون قاع رحم الأم صلباً ومقبض جيداً. عادةً ما يقع في خط الوسط بين السرة والارتفاق ، ولكنه يرتفع ببطء بعد ذلك إلى مستوى السرة خلال الساعة الأولى بعد الولادة إذا أصبح الرحم وهنا ، يتم تدليكه لإبقائه صلباً

الهلبة (إفرازات مهبلية) حمراء ، مختلطة مع صغيرة جلطات ، وتدفق معتدل. إذا كانت المرأة قد خضعت لقص الفرج خلال المرحلة الثانية من المخاض ، فيجب أن تكون سليمة ، مع تقريب الأطراف ونظيفة وعدم احمرار أو وذمة موجودة

ينصب التركيز خلال هذه المرحلة على مراقبة الأم عن كثب لمنع النزيف وانتفاخ المثانة والتخثر الوريدي

عادة ما يتم مراقبة قاع الرحم كل 15 دقيقة لساعة واحدة على الأقل. ستشعر المرأة بانزعاج يشبه التقلصات خلال هذا الوقت بسبب تقلص الرحم.

التدخلات التمريضية الرئيسية في المرحلة الأولى من الولادة

1. تحديد تاريخ وقت التقديري للولادة من المريضة ومخطط ما قبل الولادة
2. التحقق من صحة تاريخ ما قبل الولادة للمريضة لتحديد حالة المخاطر المحتملة
3. تحديد ارتفاع قاع الرحم للتحقق من صحة التواريخ ونمو الجنين
4. إجراء مناورات ليوبولد Leopold's Manoeuvres لتحديد موقع ووضع وجيئة الجنين
5. التحقق من FHR
6. إجراء فحص مهبلي (حسب الاقتضاء) لتقييم تقدم التمدد والمحو لعنق الرحم
7. فحص السائل الأمنيوسي الرائحة اللون الكمية
8. معرفة التدخلات المناسبة عندما تكون غير طبيعية أنماط FHR موجودة

التدخلات التمريضية الرئيسية في المرحلة الثانية من الولادة

- إرشاد المرأة إلى النزول مع الرغبة في الدفع
- تم إحراز مزيد من التقدم ولوحظ عدد أقل من الصدمات للأم والجنين عن طريق الدفع التلقائي
- مراقبة استجابة الجنين للدفع ؛ تحقق FHR كل 5-15 دقيقة أو بعد كل انقباض.
- تقييم استجابة معدل ضربات قلب الجنين لجهود الدفع
- توفير تدابير الراحة.

- دعم وتشجيع الدفع التلقائي للمرأة
 - احرصى على النظافة العجان حسب الحاجة ، كما قد تفعل المرأة تمرير البراز مع الدفع
 - يوفر مسارًا أنظف
 - اعطاء الثناء والتشجيع على التقدم المحرز
 - تشجيعي على الراحة بين الانقباضات عن طريق التنفس المريض
 - يقلل من التعب ونقص الأكسجة في الجنين عن طريق التغذية زيادة الأوكسجين
 - مراجعة وتعزيز أسلوب الدفع من خلال:
 - الحفاظ على التواصل البصري.
 - تطوير إيقاع وأسلوب الدفع للتعامل مع كل انقباض يزيد من رغبة المرأة في الدفع.
 - استخدام التواصل المباشر والبسيط والمركز ، تجنب المحادثات غير الضرورية
1. **العلامات الحيوية.** في حالة المخاض الطبيعي ، فإن التسجيلات غير الضرورية لضغط الدم والنبض ستعيق تركيز المرأة . قد تتأثر بالألم والقلق والخوف والتقلصات ، وبالتالي فإن أخذ ضغط الدم يكون ذا قيمة ضئيلة عندما تدفع المرأة بنشاط
 2. **التقلصات.** لاحظ التردد والقوة والطول. تحديد المراحل المختلفة للمرحلة الثانية
 3. **فقدان المهبل.** مراقبة السائل الأمنيوسي أو فقدان الدم. كن على علم بأي تشوهات
 4. **المثانة.** شجع المرأة على إفراغ مثانتها عند بدء المرحلة الثانية. يمكن أن يؤدي عدم القيام بذلك إلى تأخير المثانة وإصابتها عند الولادة
 5. **النظافة والراحة.** نظرًا لجهود المرأة الجسدية الزائدة والتوتر العاطفي ، فقد يساعد في:

- اسفجة على وجهها ، أو استخدمي رذاذ ماء ناعم
- اسفجة على يديها ورقبتها وذراعيها
- أعطيه رشفات من الماء المثلج أو غسول الفم بين الانقباضات
- ضع مروحة في الغرفة إذا كانت ساخنة
- قم بتدليكها بشكل بسيط ، خاصة إذا كانت عرضة للتشنج العضلي
- امنحها الدعم الجسدي أثناء الانقباضات
- قم بتنظيف / مسح منطقة الفرج وتوفير وسادة نظيفة بشكل متكرر

■ الدعم العاطفي

- إعطاء التشجيع اللفظي وغير اللفظي.

- تقدير خصوصية المرأة واحتياجاتها.
- كن على دراية بخيارات خطة الولادة.
- التواصل والطمأنينة.
- تجهيزها للترحيب بالطفل في العالم.

تدخلات التمريض خلال المرحلة الرابعة تشمل:

• تقديم الدعم والمعلومات للمرأة فيما يتعلق بإصلاح بضع الفرج وما يتعلق بذلك من تخفيف الآلام وإجراءات الرعاية الذاتية

- وضع كمادات ثلجية على منطقة العجان للترويح لها الراحة وتقليل التورم
- المساعدة في النظافة والعناية بالعجان. تعليم المرأة كيفية العناية بمنطقة العجان بالشكل الصحيح
- مراقبة عودة الإحساس والقدرة على الفراغ إذا تم استخدام التخدير الموضعي
- تشجيع المرأة على الفراغ عن طريق الذهاب إلى الحمام ، والاستماع إلى الماء الجاري ، أو صب الماء الدافئ فوق منطقة العجان مع peribottle



- مراقبة المؤشرات الحيوية وحالة الرحم والهلاية كل 15 دقيقة وتوثيقه
- تعزيز الراحة من خلال تقديم المسكنات للآلام اللاحقة والبطانيات الدافئة لتقليل البرودة
- تقديم السوائل والتغذية إذا رغبت في ذلك
- تشجيع الارتباط بين الوالدين والرضيع من خلال توفير الخصوصية للعائلة

• مساعدة الأم على الإرضاع ، إذا اختارت ، خلال فترة التعافي لتعزيز صلابة الرحم (يحفز إفراز الأوكسيتوسين من الغدة النخامية الخلفية تقلصات الرحم)

• توضيح استخدام حمام المقعدة المحمول كإجراء لراحة العجان إذا كان لديها تمزق أو إصلاح بضع الفرج

• شرح تدابير الراحة / النظافة ومتى يتم استخدامها

• المساعدة في التمشي عند الخروج من السرير المرة الأولى

• توفير معلومات حول الروتين في وحدة الأم والطفل أو الحضانة خلال إقامتها

Postpartum hemorrhage (PPH)

يُعرَّف نزيف ما بعد الولادة (PPH) عمومًا بأنه فقد دم يتجاوز 500 مليلتر (مل) بعد الولادة المهبلية و 1000 مل بعد الولادة القيصرية

يصنف النزف التالي للوضع غالبًا على أنه أولي / فوري / مبكر ، يحدث خلال 24 ساعة من الولادة ، أو ثانوي / متأخر / متأخر ، يحدث أكثر من 24 ساعة بعد الولادة وحتى 12 أسبوعًا بعد الولادة. بالإضافة إلى ذلك ، يمكن وصف النزف التالي للوضع بأنه المرحلة الثالثة أو الرابعة اعتمادًا على ما إذا كان يحدث قبل أو بعد ولادة المشيمة ، على التوالي

أسباب نزيف ما بعد الولادة

.. فشل الرحم في الانقباض بشكل كافٍ (ونى)

.. إصابة الجهاز التناسلي (مثل تمزقات المهبل أو عنق الرحم)

.. تمزق الرحم

.. احتباس نسيج المشيمة، أو اضطرابات نزيف الأم.وهن الرحم هو السبب الأكثر شيوعًا وبالتالي السبب الرئيسي لوفيات الأمهات في جميع أنحاء العالم.

الأعراض

1. نزيفًا حادًا من المهبل لا يبطئ أو يتوقف بمرور الوقت.
2. زيادة في معدل ضربات القلب ، والشعور بالإغماء عند الوقوف ، وزيادة معدل التنفس.
3. فقدان المزيد من الدم ، قد يشعر المريض بالبرد ، وقد ينخفض ضغط الدم ، وقد يفقد الوعي
4. قد تشمل علامات وأعراض صدمة الدورة الدموية أيضًا رؤية ضبابية ، وبرودة

والجلد رطب ، والارتباك ، والشعور بالنعاس أو الضعف

تعد المراقبة المستمرة في غرفة الولادة ضرورية لمدة ساعتين بعد الولادة، لاكتشاف وعلاج النزف التالي للولادة بشكل سريع.

غالبًا ما يتم تقدير حجم فقدان الدم بشكل خاطئ (بنسبة تصل إلى 50%).

قد يؤدي تأخر العلاج إلى حدوث اضطرابات التخثر مع خطورة حدوث نزف غزير .

تعد الأسباب الأربعة الرئيسية للنزف التالي للولادة هي:

– **الوئي الرحمي (70% من الحالات):** تم إخراج (طرد) المشيمة، لكن لم ينكمش الرحم. يتسع الرحم ويتمدد ويصبح رخوًا. تشمل عوامل حدوث الوئي الرحمي: فرط التمدد (الحمل المتعدد، عملاقة الجنين)، المخاض المطول والعدوى . قد يكون هو السبب أو العامل المُفاقم للنزف التالي للولادة.

– **الرضوح التوليدية (20% من الحالات):** تمزق الرحم، خاصةً في حالة الولادة المهبلية للنساء اللاتي لديهن ندوب في الرحم، وأيضًا اللاتي ليس لديهن ندوب في الرحم؛ مثل تمزقات في عنق الرحم أو المهبل أو العجان و تمزق الرحم ؛ انقلاب الرحم.

– **المشيمة المحتبسة (10% من الحالات):** تبقى المشيمة بالكامل أو حطام (بقايا) المشيمة متبقية في الرحم.

– **اضطرابات التخثر (> 1% من الحالات)**

توصيات للوقاية من نزيف ما بعد الولادة

1. يوصى باستخدام مقويات توتر الرحم للوقاية من النزف التالي للوضع أثناء المرحلة الثالثة من المخاض لجميع الولادات
2. **الأوكسيتوسين (10 IU ، IM / IV)** هو الدواء المقوي لتوتر الرحم الموصى به للوقاية من النزف التالي للوضع.
3. في الأماكن التي لا يتوفر فيها الأوكسيتوسين ، يوصى باستخدام مقويات توتر الرحم الأخرى القابلة للحقن (إذا كان مناسبًا **إرغومترين / ميثيل إرجومترين** أو **تركيبية دوائية ثابتة من الأوكسيتوسين والإرجو مترين**) أو **الميزوبروستول الفموي (600 ميكروغرام)**.
4. في الأماكن التي تتوفر فيها قابلات ماهرات ، يوصى باستخدام **Controlled CCT Cord Traction** للولادات المهبلية إذا رأى مقدم الرعاية والمرأة المخاض انخفاضًا طفيفًا في فقدان الدم

5. يوصى بربط الحبل المتأخر (الذي يتم إجراؤه بعد 1 إلى 3 دقائق بعد الولادة) لجميع الولادات أثناء بدء رعاية الأطفال حديثي الولادة الأساسية في وقت واحد.
6. لقط الحبل المبكر (أقل من دقيقة واحدة بعد الولادة) لا يوصى به إلا إذا كان الطفل مصابًا ويحتاج إلى تحريكه على الفور للإنعاش
7. لا ينصح بتدليك الرحم المستدام كتدخل لمنع النزف التالي للوضع لدى النساء اللاتي تلقين الأوكسيتوسين الوقائي.

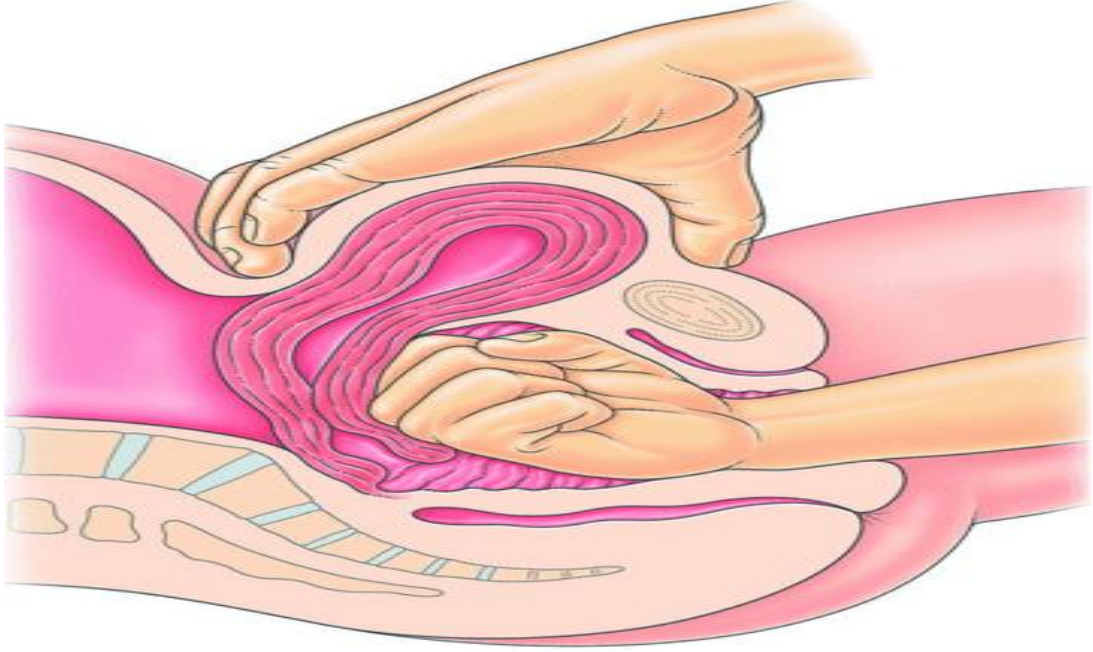
توصيات لعلاج نزيف ما بعد الولادة

1. الأوكسيتوسين في الوريد وحده هو الدواء المقوي لتوتر الرحم الموصى به لعلاج النزف التالي للوضع.
2. إذا كان الأوكسيتوسين الوريدي غير متوفر ، أو إذا كان النزيف لا يستجيب للأوكسيتوسين ، يوصى باستخدام الإرغومترین في الوريد ، أو جرعة ثابتة من الأوكسيتوسين - الإرغومترین ، أو عقار البروستاجلاندين (بما في ذلك الميزوبروستول تحت اللسان ، 800 ميكروغرام).
3. يوصى باستخدام حمض الترانيكساميك لعلاج النزف التالي للوضع إذا فشل الأوكسيتوسين ومقويات توتر الرحم الأخرى في وقف النزيف أو إذا كان يُعتقد أن النزيف قد يكون جزئيًا بسبب الصدمة.
4. يوصى بتدليك الرحم لعلاج نزيف ما بعد الولادة.
5. إذا لم تستجب النساء للعلاج باستخدام مقويات توتر الرحم ، أو إذا كانت مقويات توتر الرحم غير متوفرة ، يوصى باستخدام سدادة بالون داخل الرحم لعلاج النزف التالي للوضع بسبب الرحم وهن.
6. إذا فشلت الإجراءات الأخرى وإذا توفرت الموارد اللازمة ، يوصى باستخدام إصمام الشريان الرحمي كعلاج للنزف التالي للوضع بسبب ونى الرحم.
7. إذا لم يتوقف النزيف على الرغم من العلاج باستخدام مقويات توتر الرحم وغيرها من التدخلات المحافظة المتاحة (مثل تدليك الرحم ، السدادة بالبالون) ، يوصى باستخدام التدخلات الجراحية
8. يوصى باستخدام ضغط الرحم الثنائي كإجراء مؤقت حتى تتوفر الرعاية المناسبة لعلاج النزف التالي للوضع بسبب ونى الرحم بعد الولادة المهبلية
9. لا يوصى باستخدام حشوة الرحم لعلاج النزف التالي للوضع بسبب ونى الرحم بعد الولادة المهبلية

10. إذا لم يتم طرد المشيمة من تلقاء نفسها ، يوصى باستخدام IV / IM oxytocin (10 IUg) مع جر الحبل المنضبط

11. يوصى بجرعة واحدة من المضادات الحيوية (الأمبيسيلين أو الجيل الأول من السيفالوسبورين) إذا تم الإزالة اليدوية للمشيمة.





Active Management of Third Stage of Labor

التدابير الفعالة للمرحلة الثالثة من الولادة

دعم التدبير التوقعي الطبيعي للمرحلة الثالثة من المخاض.

هي مجموعة من الإجراءات التي تتم تنفيذها خلال المرحلة الثالثة من الولادة تهدف الى تسريع

وتسهيل ولادة المشيمة عن طريق زيادة تقلصات الرحم والتقليل من النزيف ما بعد الولادة

السبب الأكثر شيوعاً لوفيات الأمهات في جميع أنحاء العالم هو نزيف ما بعد الولادة (PPH) والتدابير

الفعالة للمرحلة الثالثة من المخاض (AMTSL) هي أهم تدخل وقائي للوقاية من النزف التالي للوضع

تتكون التدابير الفعالة للمرحلة الثالثة من المخاض (AMTSL) كتدخل وقائي من حزمة من مكونات

(1) وضع الطفل على بطن امه دون اي حائل وتجفيف المولود من رأسه الى اخمص قدميه

ومساعدة المولود على تأسيس التنفس الطبيعي واذا لزم الامر، يتم إجراء انعاش للمولود كما

يجب تغطية الأم وطفلها كاملاً

(2) اعطاء الام الوالدة علاجات منشطة لانقباضات الرحمية (العلاج المفضل هو عقار

الأوكسيتوسين (بعبة 10 وحدات اما وريدي/ عضلي) مباشرة بعد ولادة المولود وبعد التأكد

من عدم وجود اي طفل اخر

(3) وضع المشبك او الملقط على الحبل السري وقطعه بعد أن يتوقف نبضه او مرور 2-3 دقائق

من الولادة تقريبا، ايهما يحدث اولاً. يتم تغطية الحبل السري بقطعة شاش عتد قطعه لكي يتم

تجنب تناثر الدم

4 . وضع الرضيع مباشرة على صدر الأم منبطح على بطنه بحيث يلامس جسده العاري جسد والدته دون اي حائل. ويجب تغطية رأس الطفل بقبعة أو قطعة قماش، كما يجب تغطية الام وطفلها كامل

5) يتم سحب الحبل السري تحكماً بسحب الحبل (CCT) ببطء وثبات وفي نفس الوقت وفي نفس الوقت مساندة الرحم من خلال القيام بضغط خارجي عليه في الاتجاه العلوي نحو راس الام

6) بعد خروج المشيمة والاغشية يتم فحص انبساط وانقباض الرحم وفي حال انه لينا يتم تنشيطه من خلال تدليكه حتى يشتد ويتم مراقبته بشكل متكرر تدليك قاع الرحم بعد خروج المشيمة. في عام 2012 ، نُشرت نتائج تجربة سريرية كبيرة متعددة المراكز بتوجيه من منظمة الصحة العالمية ، وأظهرت أن أهم مكون AMTSL كان إعطاء مقوٍ لتوتر الرحم.

7) مساعدة المرأة بعد انتعاشها وصحائها على البدء في ممارسة الرضاعة الطبيعية، كما يجب على القابلة مراقبة الوليد والمرأة عن كثب وباهتمام، وفحص الرحم بلمس بطن المرأة كل 15 دقيقة لمدة ساعتين للتأكد من أن الرحم غير لين، مع فحص ومراقبة كمية النزيف المهبلية، وعند اللزوم يجب تقديم الرعاية التي من شأنها توفير الوقاية من النزيف

مقوي لتوتر الرحم Uterotonic

استخدم مقويًا لتوتر الرحم (الأوكسيتوسين أو الميزوبروستول) في غضون دقيقة واحدة بعد ولادة الطفل وبعد استبعاد وجود طفل آخر (المقوي المفضل لتوتر الرحم هو الأوكسيتوسين 10 IU IM). أعط 600 ميكروغرام من الميزوبروستول عن طريق الفم في غضون دقيقة واحدة بعد ولادة الطفل وبعد استبعاد وجود طفل آخر



قص الحبل السري Cord Cutting

اربطي وقطع الحبل السري بعد توقف نبضات الحبل أو بعد حوالي 2-3 دقائق من ولادة الطفل . قم بتغطية الحبل بقطعة من الشاش عند قطع الحبل لتجنب تناثر الدم

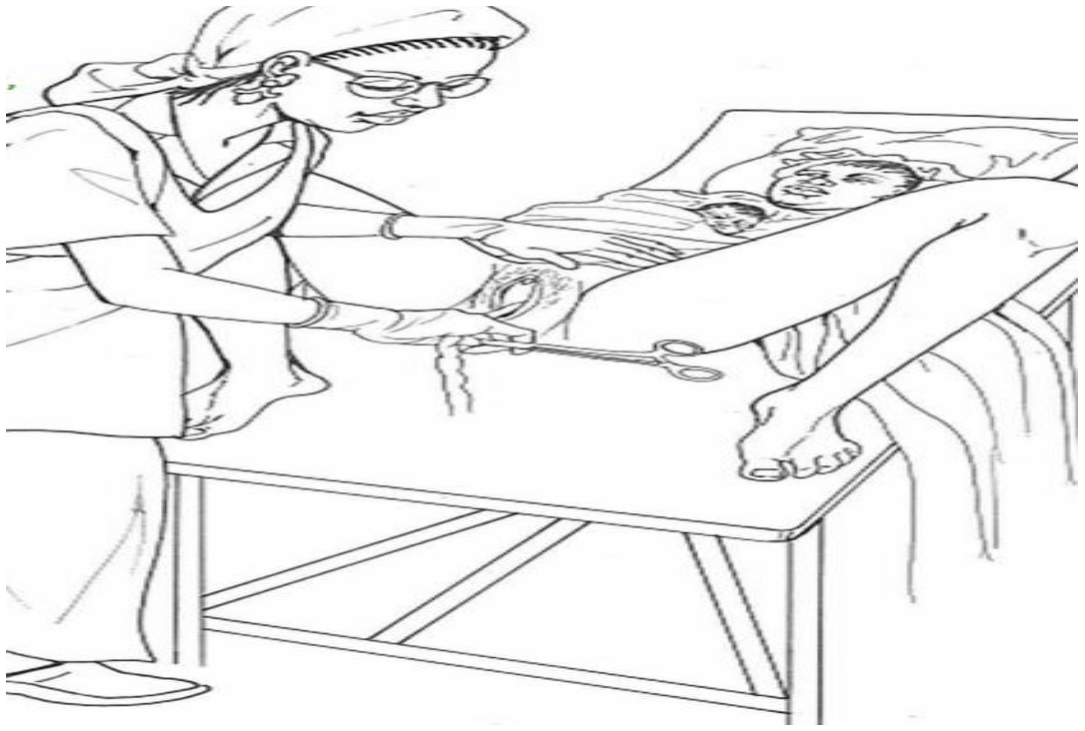


Controlled Cord Traction التحكم في سحب الحبل

أداء جر الحبل المتحكم به (CCT):

1. ضع المشبك بالقرب من عجان المرأة لتسهيل CCT امسك الحبل بالقرب من العجان باستخدام مشبك. ضع راحة اليد الأخرى على أسفل البطن فوق عظم العانة مباشرة لتقييم تقلصات الرحم. إذا لم يكن المشبك

متوفر ، يمكن تطبيق CCT عن طريق تطويق الحبل حول اليد.



2. عندما يكون هناك تقلص ، مارس ضغطًا خارجيًا على الرحم في اتجاه تصاعدي (باتجاه رأس المرأة) مع وضع اليد فوق عظم العانة مباشرةً. في الوقت نفسه ، اسحب يدك الأخرى بشد ثابت وثابت على الحبل في اتجاه هبوطي (اتبع اتجاه قناة الولادة تجنب الشد المتشنج أو القوي. لا تحرر الدعم على الرحم حتى تظهر المشيمة عند الفرج. أنزل المشيمة ببطء وادعها بكلتا يديك



Only release support of the uterus when the placenta is visible at the vulva.



ولادة المشيمة Delivery of the Placenta

أثناء خروج المشيمة ، أمسكها ولفها برفق بكلتا يديك حتى تلتوي الأغشية. اسحب ببطء لإكمال التسليم. حرك الأغشية برفق لأعلى ولأسفل حتى توصلها



تدليك Massage

قومي بتدليك الرحم مباشرة بعد ولادة المشيمة والأغشية حتى يصبح الرحم صلباً أثناء فترة الشفاء ، ساعد المرأة على الرضاعة إذا كان هذا هو اختيارها ، راقب المولود والمرأة عن كثب ، جس الرحم من خلال البطن كل 15 دقيقة لمدة ساعتين للتأكد من ثباته ومراقبة كمية النزيف المهبلية. توفير رعاية الوقاية من انتقال العدوى من الأم إلى الطفل حسب الحاجة.



توصيات منظمة الصحة العالمية للتدابير الفعالة ل

المرحلة الثالثة من العمل (AMTSL)

- يوصى باستخدام مقويات توتر الرحم للوقاية من نزيف ما بعد الولادة (PPH) خلال المرحلة الثالثة من المخاض لجميع الولادات. الأوكسيتوسين (10 IU) ، (IM / IV هو الدواء المقوي لتوتر الرحم الموصى به للوقاية من PPH.
- في البيئات التي تتوفر فيها قابلات ماهرات ، يوصى باستخدام جر الحبل المنضبط (CCT) للولادات المهبلية إذا كان مقدم الرعاية والمرأة التي تلد يراعيان انخفاضاً طفيفاً في فقدان الدم وانخفاض طفيف في معدل فقدان الدم.
- في الأماكن التي لا تتوفر فيها القابلات الماهرات ، لا يوصى بـ CCT
- لا ينصح بتدليك الرحم المستدام كتدخل لمنع النزف التالي للوضع لدى النساء اللواتي تلقين الأوكسيتوسين الوقائي.
- CCT هي الطريقة الموصى بها لإزالة المشيمة في الولادة القيصرية.

Appendix E: Questionnaire

بسم الله الرحمن الرحيم

إستبيان

أضع بين ايديكم الكريمة هذه الأستبانة لبحث الماجستير بعنوان:

Effectiveness of an Educational Program on Nurses Knowledge
Regarding Active Management of Third Stage of Labor to Control of
Postpartum Hemorrhage

فاعلية برنامج تعليمي على معارف الممرضات فيما يتعلق بالتدابير الفاعلة للمرحلة الثالثة
من المخاض للسيطرة على نزيف ما بعد الولادة

Objectives

The present study aims to:

1. Evaluate nurses' knowledge regarding active management of the third stage of labor to control postpartum hemorrhage
2. Determine the effectiveness of an educational program on nurses' knowledge regarding active management of the third stage of labor to control postpartum hemorrhage
3. Find out the relationship between the effect of educational program with their demographic characteristics

المشرف :-د. ساجدة سعدون عليوي

الطالبة: نور علي محمد

● هل توافقين على الأشتراك في هذه الدراسة العلمية كعينة ...

كلا

نعم ●

الجزء الاول: المعلومات الديموغرافية

العبارات التالية تتعلق بالمتغيرات الديموغرافية والوظيفية للمشاركين .

يرجى وضع علامة على الإجابات التي تعتقد أنها مناسبة. ستبقى المعلومات التي تم الحصول عليها سرية. سيتم استخدام المعلومات التي تم جمعها لغرض البحث العلمي فقط .

التاريخ:

رقم الأستمارة :

1. العمر (بالسنوات):

2. المستوى التعليمي:

1 خريج مدرسة تلميذ

2. خريج اعدادية التلميذ

3. خريج معهد التلميذ

4. خريج بكالوريوس تلميذ

3. الخبرة في المستشفى: سنة

4. مكان العمل في المستشفى

2. ما بعد الولادة:

1. جناح الولادة

5. الخبرة في مجال العمل سنة

6. هل شاركتي بدورات تدريبية تتعلق بالتدابير الفاعلة للمرحلة الثالثة من الولادة

لسيطرة على نزيف ما بعد الولادة :

كلا

نعم

الجزء الثاني : معارف الممرضات اتجاه التدابير الفاعلة للمرحلة الثالثة من

المخاض للسيطرة على نزيف ما بعد الولادة

- اقرأ الأسئلة بعناية ، ويرجى وضع علامة صح (✓) امام الاختيار الصحيح للحصول على الإجابة المناسبة.

ت	الفقرات	الاستجابة
1.	تنقسم مراحل الولادة إلى	ا) مرحلتين ب) اربع مراحل ج) ثلاث مراحل
2.	في أي مرحلة تولد المشيمة	أ) الأولى ب) الثالثة ج) الرابعة د) الثانية
3.	تشير المرحلة الثالثة من المخاض إلى الفترة التي تبدأ مباشرة بعد توليد الطفل وتنتهي مع خروج (ولادة) المشيمة والأغشية المرتبطة بها بشكل كامل كم من الوقت تستغرق ولادة المشيمة؟	أ) اقل من 5 دقائق ب) 5-10 دقائق ج) 10-15 دقيقة
4.	من علامات انفصال المشيمة	ا) تكور الرحم ب) استطالة الحبل السري ج) دفقة دموية د) كل الخيارات السابقة
5.	هل تعرف ماهي التدابير الفاعلة في المرحلة الثالثة من الولادة	أ.نعم ب.لا
6.	هل استخدمت هذه التدابير الفاعلة من قبل	أ. نعم ب. لا
7.	أثناء انتظار توليد المشيمة وبعد إخراج (طرد) المشيمة المراقبة (نبض القلب، ضغط الدم، حجم فقدان الدم) نظرًا لاستمرار خطورة حدوث النزف التالي للولادة	ا. كل 15 دقيقة خلال الساعة الأولى ب. كل 30 دقيقة خلال الساعة التالية د. الجميع.
8.	ما هو حجم الدم المفقود المصاحب لولادة المشيمة	أ. 1000 مل ب. 800 مل ج. 500 مل د. 1000 و 500 مل
9.	نزيف ما بعد الولادة هو	أ. 1000 مل ب. 800 مل ج. 500 مل د. 1000 و 500 مل
10.	هل تصدق ان الاستخدام الصحيح للتدابير الفاعلة في المرحلة الثالثة من الولادة يمكن أن يمنع نزف ما بعد الولادة	أ) نعم ب) لا

Appendices

أ. اوكسيتوسين ب. إرغومترین ج. اخرى	الخط الأول المقوي لتوتر الرحم الموصى به للتدابير الفاعلة في المرحلة الثالثة من الولادة هو	11.
أ. mg0.5 ب. IU10 ج. mg10 د. IU0.5	الجرعة الموصى بها من هذا الدواء خلال التدابير الفاعلة في المرحلة الثالثة من الولادة	12.
أ. اوكسيتوسين ب. إرغومترین ج. ميسوبروستول د. الجميع	الأدوية المقوية لتوتر الرحم هي	13.
أ. IM ب. IV	الطريقة الموصى بها لاعطاء الاوكسيتوسين هي	14.
أ. إعطاء أدوية الأوكسيتوسين ب. تحقق من وجود طفل آخر ج. تدليك الرحم	ما هو دورك بعد ولادة الجنين مباشرة	15.
أ. بعد ولادة الكتف الأمامي ب. خلال الدقيقة الأولى بعد ولادة الطفل ج. خلال 3 دقائق الأولى بعد ولادة الطفل د. بعد ولادة المشيمة	متى يعطي الأوكسيتوسين	16.
أ. نعم ب. لا	أثناء إجراء التدابير الفاعلة في المرحلة الثالثة من الولادة ، تحتاج القابلات إلى: مراقبة الام باستمرار	17.
أ. نعم ب. لا	المثانة الممتلئة يمكن أن تمنع الرحم من التقلص بكفاءة	18.
أ) نعم ب) لا	شد الحبل السري وقطعه بعد 1-3 دقائق بعد ولادة الطفل	19.
أ) الانقباض ب) الاسترخاء ج) تدفق الدم	يتم التحكم بسحب الحبل السري اثناء	20.
أ) خلال 3 دقائق ب) 5 دقائق ج) 5-10 دقائق د) أخرى (يرجى التحديد)	كم من الوقت تحتاج لإجراء التدابير الفاعلة في المرحلة الثالثة من الولادة	21.
أ) كل 10 دقائق لأول ساعتين ب) كل 15 دقيقة لأول ساعتين ج) كل 30 دقيقة لأول ساعتين د) كل ساعة واحدة لأول ساعتين	كم مرة تقومين بإجراء تدليك الرحم	22.
أ) نعم ب) لا	لقط الحبل المتأخر هو عملية انتظار قبل قطع الحبل لمدة 3 دقائق بعد ولادة الطفل	23.
أ. نعم ب. لا	تساعد الحاجة إلى الحفاظ على المدة الزمنية لقط الحبل في الوقاية من فقر الدم عند حديثي الولادة	24.
أ) 15 دقيقة	المدة الإجمالية للولادة المشيمة هي	25.

ب) 10 دقائق ج) 30 دقيقة		
أ) نعم ب) لا	يؤدي تدليك البطن قبل ولادة المشيمة إلى فصل جزئي للمشيمة	26.
أ) نعم ب) لا	بعد ولادة المشيمة ، تحتاج القابلة إلى جس الرحم كل 15 دقيقة	27.
أ. نعم ب. لا	جس الرحم بعد ولادة المشيمة مهم للتأكد من صلابته	28.
أ. نعم ب. لا	فرك الرحم باستمرار حتى يصبح صلبا بعد الولادة ليس ضروريًا لمنع النزف التالي للوضع.	29.
أ. التحكم في سحب الحبل السري ب. إعطاء الادوية المقوية لتوتر الرحم ج. إعطاء الدم د. تدليك الرحم	تشمل التدابير الفاعلة للمرحلة الثالثة من المخاض الكل ما عدا	30.
أ. 100 ميكروغرام ب. 600 ميكروغرام ج. 500 ميكروغرام	في حالة استخدام الميزوبروستول ، يوصى باستخدام الجرعة (بالميكروجرام) هي	31.
أ. عن طريق الفم ب. عضلي ج. وريدي	طريقة إعطاء الميزوبروستول هي	32.
أ. 5 سم ب 2 إلى 3 سم ج. 3 إلى 4 سم	من جدار بطن الطفل ، يكون الحبل مثبت حوالي	33.
أ) تقلصات الرحم ب) رقة او طراوة في البطن ج) نزيف مهلي	جميع العلامات التالية تدل على انفصال المشيمة ، ما عدا	34.
أ. انسداد السائل الأمنيوسي ب . انقلاب الرحم ج . نزيف مابعد الولادة	جميع الفقرات تعد من مضاعفات المرحلة الثالثة من المخاض باستثناء	35.

Appendix F: Questionnaire of the Study English

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. Graduate School of Nursing

2. Graduate of Nursing Preparatory School

3. Graduate of the Institute of Nursing

4. Bachelor's degree in Nursing

3. Number of years worked in hospital:

4. The place of work is in the hospital

1 . Maternity ward

2. Postpartum

5. Experience in the field of work

6. Have you participated in training courses related to Active Management of Third Stage of Labor to Control of Postpartum Hemorrhage:

Yes

No

PART – II

. Nurses Knowledge Regarding Active Management of Third Stage of Labor to Control of Postpartum Hemorrhage

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

No.	Question	Answer
1	Stages of childbirth are divided into:	a) two-stage b) four stages c) three stages
2	What stage is the placenta born at?	a) the first b) the third c) Fourth d) the second
3	The third stage of labor refers to the period that begins immediately after the baby is born and ends when the placenta and its associated membranes are fully expelled (delivered). How long does it take for the placenta to deliver?	a) Less than 5 minutes b) 5-10 minutes c) 10-15 minutes
4	Signs of placenta separation	A) uterine swelling b) Elongation of the umbilical cord c) a bloody splash d) All of the above options
5	Do you know what Active Management of Third Stage of Labor?	A. Yes B. No
6	Have you used these active Management of Third Stage of Labor before?	A. Yes B. No
7	While awaiting delivery of the placenta and after delivery (expulsion) of the placenta Monitor (heartbeat, blood pressure, volume of blood loss) because the risk of postpartum hemorrhage continues	a. every 15 minutes for the first hour b. every 30 minutes for the next hour d. All
8	What is the volume of blood lost during the delivery of the placenta?	a. 1000 ml b. 800 ml c. 500 ml d. 1000 and 500 ml

Appendices

9	Postpartum hemorrhage is	a. 1000 ml b. 800 ml c. 500 ml d. 1000 and 500 ml
10	Can you believe that the correct use of active Management is in the third stage of labor can prevent postpartum hemorrhage?	A. Yes B. No
11	The recommended first-line uterotonic for active Management in the third stage of labor is	a. Oxytocin b. ergometrine c. other
12	The recommended dose of this drug during active Management in the third stage of labor continues in the previous question	a. 0.5 mg b. 10 IU c. 10 mg d. 0.5 IU
13	Medications for uterotonics are	a. Oxytocin b. ergometrine c. Misoprostol d. All
14	The recommended method of giving oxytocin is	a. I.M b. IV
15	What is your role immediately after the birth of the fetus	a. Giving oxytocin medication b. Check for another child c. Uterine massage
16	When to give oxytocin	a. After the birth of the anterior shoulder b. During the first minute after the birth of the baby c. During the first 3 minutes after the baby is born d. after the birth of the placenta
17	While performing active Management in the third stage of labor, midwives need to: Monitor the mother continuously	A. Yes B. No
18	A full bladder can prevent the uterus from contracting efficiently	A. Yes B. No
19	Pull and cut the umbilical cord 1-3 minutes after the baby is born	A. Yes B. No

20	The retraction of the umbilical cord is controlled during pregnancy	a) contraction b) relaxation c) blood flow
21	How long do you need to take active Management in the third stage of labor?	a) Within 3 minutes (b) 5 minutes (c) 5-10 minutes (d) other
22	How often do you perform a uterine massage?	(a) Every 10 minutes for the first 2 hours (b) every 15 minutes for the first two hours (c) Every 30 minutes for the first two hours (d) every one hour for the first two hours
23	Delayed cord clamping is the process of waiting before the cord is cut for 3 minutes after the baby is born	A. Yes B. No
24	The need to maintain the duration of cord clamping helps prevent anemia in the newborn	A. Yes B. No
25	The total duration of placental delivery is	a) 15 minutes b(10minutes c) 30 minutes
26	Abdominal massage before the delivery of the placenta leads to partial separation of the placenta	A. Yes B. No
27	After the placenta is delivered, the midwife needs to feel the uterus every 15 minutes	A. Yes B. No
28	Palpation of the uterus after the delivery of the placenta is important to ensure its solidity	A. Yes B. No
29	Constant rubbing of the uterus until it hardens after delivery is not necessary to prevent PPH.	A. Yes B. No

Appendices

30	active Management for the third stage of labor include all but	a. Control of umbilical cord retraction B. Giving tonics for uterine tension c. give blood d. Uterine massage
31	If misoprostol is used, the recommended dose (in micrograms) is:	a. 100 mcg b. 600micrograms. C. 500 mcg
32	The method of administration of misoprostol is:	a. Oral B. muscular c. intravenous
33	From the baby's abdominal wall, the cord is fixed at approx.	a. 5 cm B. 2 to 3 cm c. 3 to 4 cm
34	All of the following are signs of placental abruption, EXCEPT:	a) Uterine contractions b) Tenderness or tenderness in the abdomen c) vaginal bleeding
35	All vertebrae are complications of the third stage of labor, except for:	a. Amniotic fluid embolism b. Uterine inversion c. Postpartum hemorrhage

المستخلص

يعد نزيف ما بعد الولادة مشكلة كبيرة في معدلات الاعتلال والوفيات بين الأمهات ، تحدث بشكل أساسي خلال المرحلة الثالثة من المخاض ، وتتطلب تدخلات حرجة. تهدف الدراسة إلى تقييم فعالية برنامج تدريبي للممرضات لتعزيز فهمهم لرعاية المرضى خلال المرحلة الثالثة من المخاض في مدينة كربلاء ، تم تنفيذ تصميم دراسة شبه تجريبية من 1 ديسمبر 2021 إلى 3 يوليو 2022. موقع الدراسة هو مستشفى كربلاء التعليمي لأمراض النساء والتوليد في محافظة كربلاء المقدسة. يستخدم أخذ العينات غير الاحتمالية الراحة قبل وبعد الاختبار لتحديد مجموعة من الممرضات 60 لضمان الحصول على بيانات تمثيلية ودقيقة. تم استخدام تصميم التدخل الأول والثاني قبل وبعد التدخل باستخدام استبيان تم التحقق منه ، بما في ذلك عينة من الممرضات العاملات في وحدات الأمومة. استعرض 13 خبيراً من مختلف التخصصات الاستبيان للتأكد من صحته. كانت الأهداف هي: زيادة مصداقية الاستبيان. كان الإبلاغ الذاتي هو الطريقة المستخدمة لجمع البيانات ، وتم تطبيق تقنيات تحليل البيانات الإحصائية الوصفية والاستنتاجية لتقييم النتائج. أعضاء مجموعة البحث (35.93 = SD) (8.52) سنة في المتوسط. في حين (33.50 = SD) (8.72) في المجموعة الضابطة ، وفقاً لنتائج الدراسة. كشف متوسط درجة (41.12 ± 9.09) للتعليم أن الممرضات في مجموعة الدراسة لديهن فجوات كبيرة في فهمهن لإدارة المرحلة الثالثة. بمتوسط درجات (61.67 ± 8.85) ، تحسن فهمهم بشكل ملحوظ بعد إجراء الاختبار اللاحق الأول (الاختبار اللاحق 1). عند علامة الشهر الواحد (الاختبار اللاحق الثاني) ، كان متوسط درجة الممرضات (60.96 ± 9.75) في اختبار المعرفة مشابهاً لما تم عرضه في الاختبار اللاحق الأول. وفقاً لتحليل ما قبل الاختبار ، لا يوجد فرق ذو دلالة إحصائية في مستويات المعرفة قبل الاختبار لمجموعات الدراسة والسيطرة (p = 0.807). ومع ذلك ، لوحظت اختلافات إحصائية كبيرة بين هذه المجموعات في الاختبارات اللاحقة للبرنامج التعليمي الأول (p = 0.000) والثاني (p = 0.000) أثبت أنه أداة قيمة في تعزيز معرفة الممرضات حول الإدارة الفعالة خلال المرحلة الثالثة من المخاض كاستراتيجية للسيطرة على نزيف ما بعد الولادة.



جامعة كربلاء

كلية التمريض

فاعلية البرنامج التعليمي على معارف الممرضات فيما
يتعلق بالإدارة الفعالة للمرحلة الثالثة من المخاض
للسيطرة على نزيف ما بعد الولادة

رسالة تقدمت بها

نور علي محمد

الى مجلس كلية التمريض / جامعة كربلاء كجزء من متطلبات نيل درجة الماجستير

في علوم التمريض

اشراف

ا.م.د.ساجدة سعدون عليوي

آذار ٢٠٢٤ م

شعبان ١٤٤٥ هـ