



**ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF NURSING AND MIDWIFERY**

ASSESSMENT OF THE PRACTICE OF OBSTATRIC CARE PROVIDERS IN INITIAL MANAGEMENT OF POST PARTUM HEMORRHAGE AND ITS ASSOCIATED FACTORS, AT SELECTED HEALTH CENTERS OF ADDIS ABABA, ETHIOPIA, 2021.

BY: ETABEZAHU SHEWANAWUL (BSC)

A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY, COLLEGE OF HEALTH SCIENCES, SCHOOL OF NURSING AND MIDWIFERY IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR DEGREE OF MASTER IN MATERNITY AND REPRODUCTIVE HEALTH NURSING.

MAY, 2021

ADDIS ABABA, ETHIOPIA

**ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES
SCHOOL OF NURSING AND MIDWIFERY
POST GRADUATE PROGRAM**

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AND HEALTH OFFICERS IN INITIAL MANAGEMENT OF POST
PARTUM HEMORRHAGE AND ITS ASSOCIATED FACTORS,
AT SELECTED HEALTH CENTERS OF ADDIS ABABA,
ETHIOPIA, 2021.**

BY: Etabezahu Shewanawul (BSc.)

Address: etabezahushewa@gmail.com

+251906640864

ADVISORS

1. Sr. Semarya Berhe (BSc, MSc, Asst. Professor, PhD fellow)

Address: semitaye@yahoo.com

+251911010347

2. Sr. Yeshi Assefa (BSc, MSc, RN)

Address: assefayeshi@gmail.com

+251953841976

MAY, 2021

ADDIS ABABA, ETHIOPIA

Approval sheets

Addis Ababa University College Health Sciences

School of Nursing and Midwifery

Department of Midwifery

I, the undersigned MSc student, declare that I have submitted my original work on a title “assessment of the practice of obstetric care providers in initial management of post-partum hemorrhage and its associated factors, at selected health centers of Addis Ababa, Ethiopia, 2021” for the examination.

Submitted by:

Etabezahu Shewanawul _____

Name of student

Signature

Date

This thesis work has been submitted for examination with my approval as an advisor.

Approved by:

1. **Sr. Semarya Berhe (Asst. Professor, PhD fellow)** _____

Name of Major Advisor

Signature

Date

2. **Sr. Yeshi Assefa (BSc, MSc RN)** _____

Name of Co-Advisor

Signature

Date

APPROVAL BY THE BOARD OF EXAMINATION

I the under signed MRHN MSC student declare that I have submitted my original work on the title of “assessment of the practice of obstetric care providers in initial management of post-partum hemorrhage and its associated factors, at selected health centers of Addis Ababa, Ethiopia, 2021” for the examination.

RESEARCH ADVISORS:

Sr Semarya Berhe (BSc, MSc, Asst. Professor, PhD fellow)

_____	_____	_____
RANK	SIGNATURE	DATE

Sr Yeshi Assefa (BSc, MSc, RN)

_____	_____	_____
RANK	SIGNATURE	DATE

EXAMINER:

Dr. Endalew Gemechu (Asst. Professor, PhD)

_____	_____	_____
RANK	SIGNATURE	DATE

CHAIR OF DEPARTMENT

Sr Hawani Adugna (BSC, MSC _____

_____	_____	_____	_____
NAME	RANK	SIGNATURE	DATE

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By my signature below, I declare and affirm that this thesis is my own work. I have followed all ethical principles of scholarship in the preparation, data collection, data analysis and completion of this thesis. All scholarly matter that is included in the thesis has been given recognition through citation. I affirm that I have cited and referenced all sources used in this document. Every effort has been made to avoid plagiarism in the preparation of this thesis.

This thesis is submitted in partial fulfillment of the requirement for a graduate degree from the Addis Ababa University at College of Health Sciences, School of Allied Health Sciences department of Nursing and Midwifery. The thesis is deposited in the Addis Ababa University Digital Library and is made available to local, national and international scientific community. I solemnly declare that this thesis has not been submitted to any other institution anywhere for the award of any academic degree, diploma or certificate.

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STUDENT NAME

Etabezahu Shewanawul

SIGNITURE

DATE

RESEARCH ADVISORS:

1. Sr. Semarya Berhe (BSc, MSc, Asst. Professor, PhD fellow)

SIGNITURE

DATE

2. Sr. Yeshi Assefa Sr Yeshi Assefa (BSc, MSc, RN)

SIGNITURE

DATE

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LIST OF ABBREVIATIONS AND ACRONYMS

AARHB: Addis Ababa Regional Health Bureau

AAU: Addis Ababa University

ABC: Airway Breathing Circulation

AMNSTL: Active Management of third Stage of Labor

AWHONN: Association of Women's Health Obstetric and Neonatal Nurse

CBC: Complete Blood cell Count

ESPA: Ethiopia Service Provision Assessment

FMOH: Federal Minister of Health

IP: Principal Investigator

MM: Maternal Mortality

MOH: Major Obstetric Hemorrhage

PPH: Post-Partum Hemorrhage

QBL: Quantification of Blood Loss

SPSS: Statical Package for Social Science

WHO: World Health Organization

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ABSTRACT

Background: Post-partum hemorrhage (PPH) is one of the foremost reasons of maternal death globally. In Ethiopia 80% of maternal death is associated with PPH, there is not enough paper to assess the practice of mid-level health professionals specially in initial PPH management as primary respondents.

Objective: to assess the practice of obstetric care providers in initial management of PPH and its associated factors at selected health centers of, Addis Ababa, Ethiopia, 2021.

Methods: A descriptive cross-sectional facility-based study design was conducted with sample of 561 respondents. Through logistic regression in the bivariate analysis variables with p value at 0.25 was candidate for multivariate. And multivariate analysis was used to determine the association between the outcome variable. 95% CI used for association and p-value <0.05 stated as statistically significant. The result was explained in text, chart, graph and tables.

Result: In this study finding 53% of the study participants had good initial post-partum hemorrhage care practice, while 47% had poor practice. according to multivariable regression, male participants had 1.5 times good practice on PPH initial management than female (AOR=1.5, 95%CI=1.97, 2.18). the odds of being midwife in profession had almost two times good practice on PPH initial management than health officer (AOR=1.9, 95%CI=1.92, 3.70). Participant who has 4 year and above experience in labour ward has 2.5 times good practice on PPH initial management than duration of work less than six months in labour ward (AOR=2.5, 95%CI=1.09, 5.87). Participant who had training in BEMNOC had 3 times good practice on PPH initial management than had not training on BEMNOC (AOR=3.3, 95%CI=1.91, 5.76).

Conclusion and recommendation: in this study the overall practice for initial management of postpartum hemorrhage by mid-level health professional in health center level were (53%) good practice. the remaining (47%), poor practice could fulfill by training of professionals with updated PPH management, follow protocol and improve education. the determinant variable that affects positively were experience in labor ward, midwife profession, sex of participants and training in obstetric based management systems.

Key word: initial management of post-partum hemorrhage, practice, obstetric care providers, Addis Ababa.

CHAPTER 1.

1. Introduction

1.1. Background

Unindustrialized world accounting for 99% of the total maternal deaths estimate that about 303, 000 maternal deaths took place in the year 2015 (1). Poor quality of care is reason for a high maternal and newborn mortality proportion at the health facility level (2). Thirty five point five percent of maternal deaths that occurs in Ethiopia health facilities are associated to remedial errors and insufficient infirmary service such as deficiency of blood for transfusion, delay in transfusion, and untimely treatment (2). A large proportion of maternal deaths occur during the first 48 hours after birth (3).

PPH is the primary cause of approximately one-quarter of all maternal deaths globally and still the leading cause of maternal mortality in low-income countries including Ethiopia (4). PPH is excessive bleeding within 24 hours of delivery as primary PPH and secondary occurs after 24 hours post birth to 6 weeks of post-partum period (5) considered to be excess blood loss of 500 mL or more following a vaginal delivery or 1000 mL or more after a cesarean delivery but in case of preeclampsia or previous prenatal anemia blood loss less than this amount may lead the mother to sign of shock (6). For sever post-partum hemorrhage blood loss exceed or equals to 1000ml or any amount that cause enough hemodynamic compromise or shock (7).

PPH could be caused by different site 1. placental site, uterine atony accounts for 70% of cause 2. traumatic site (20%) caused by uterine rupture, cervical, perineal or vaginal tear 3. retained product of conception (10%) 4. bleeding disorder only 1% cause of PPH. to make those cause of PPH unforgettable named as 4 “T”s Tone of the uterus(atonic uterus), Trauma or tear to vagina ,cervix or perineum, Tissue for retained placental membrane or fragments and Thrombin for coagulation disorder (8).

Risk of postpartum hemorrhage is: multiple pregnancies, a history of PPH, pregnancy-induced hypertension, chorioamnionitis, increase duration of labor. In PPH

management first responder has goal to achieve these four steps recognition, communication, resuscitation, monitoring and investigation and directed treatment approach (8).

1.2. Statement of The Problem

Obviously PPH is universal cause of maternal mortality, it accounts 30% maternal death (10). About 27.1% of maternal death in developing countries is due to primary PPH(4),(9). Around 34% of maternal mortality in Africa as a result of PPH and a study in southern Ethiopia showed high prevalence rate of primary PPH was 16.6% ,47% of maternal death in Ethiopia are caused by PPH (10). that indicates PPH is still problem in our country Ethiopia, (11),(12). delayed and substandard obstetrics care can kill a woman within hours of Major Obstetric Hemorrhage (MOH)(13).

unless immediately action and intervention taken by first respondents' maternal life can pass easily with in short period of time. Early identification and proper management of PPH by skilled health care provider with step wise application of all initial intervention can save maternal life and reduce complication (7).

In developing countries decrease in maternal mortality due to PPH is not reported that is associated with lack of proper implementation action taken by first respondents. Since initial management acts as first line defense for prevention of maternal mortality and morbidity as a result of PPH(14).

Nevertheless, there are few studies on hand, A research conducted in Kenya in 2015 presented general management of PPH but the observation check list analyzed only the AMSTL practice rather than specific PPH initial management. on the other hand, a study exhibited in Mexico in 2019 in initial management of PPH but the study population were obstetrician and Gynecologists then not including other health professionals.

In Ethiopia majority of PPH is initially diagnosed in health centers. Thus, no clear evidence that shows maternal death associated with inadequate initial management, and lack of research to assess and analyze practice of obstetric care providers who

manage PPH case and what action to be done when they face PPH as first responder specially in our country Ethiopia.

The aim of this research is to full fill the gap to this issue (initial management of PPH) by assessing the practice of obstetric care providers who are working in Addis Ababa health centers when they face PPH and what factors affects their good practice in relation to protocol of initial management.

1.3. Significance of the study

There are many international and national guide lines for directing the proper management of PPH but lack of research to assess and analyze practice of obstetric care providers who manage PPH case and what action to be done when they face PPH case as first responder specially in our country Ethiopia furthermore the result of this research will be used by health care provider who manage PPH, individual mother and community in addition reference for future research in this area.

1.4. Justification of the study

Though PPH is one of the leading causes of maternal death worldwide and in Ethiopia. and it is preventable obstetric emergency; inadequate initial management is big challenge in developing countries.

Midwives, Nurses and Health Officers are the front-line professionals who manage PPH at health center level. So, assessment of their practice on PPH initial management contribute to decrease maternal mortality and complication.

Even if, studies show prevalence of PPH is high in low-income countries including Ethiopia. Thus, insufficient research done specially for initial management of PPH. So, further investigation is needed to fulfill the gap.

CHAPTER 2.

Literature review

2.1. Introduction:

Postpartum hemorrhage (PPH), is leading cause of preventable death. every year there are 14 million cases of postpartum hemorrhage worldwide. estimated that 90% of PPH occurs within 4 hours after delivery(15). the 2030 agenda for sustainable development put that one goal of sustainable development is decrease in maternal mortality ratio (MMR).75% of maternal deaths occurs as a result complication during pregnancy, child birth and postnatal period so this is reduced by timely and quality care(16). Primary (PPH) is a top straight reason of maternal death in low-income countries, representing 27.1% of maternal mortality as explain by research in Global causes of maternal death in 2014(9). According to 2020 annual report of maternal and perinatal death surveillance response(MPDSR) 47% of maternal death is due to PPH(10) the high prevalence rates, principally in the unindustrialized world, recommend the need for evidence-based practices in management and prevention of PPH. It is significant for health care practitioners, particularly the midwives, nurses and health officers, to be equipped with the right knowledge and skills to encounter patient needs(17).

2.2. Initial Management of PPH

Many researches indicates early recognition, immediate action and aggressive management could prevent death associated with PPH(18). as the royal Australian and New Zealand collage of obstetric and gynecologist placed general advice to practitioners in Management of (PPH) July 2017, for successful management of PPH needs a multidisciplinary team style. The clinical team intricate, their response to PPH, and capability to intensify this response in the appearance of severe loss Calculation of ongoing blood loss is an essential part of post-partum care and resuscitation is rebuilding of blood volume and oxygen-carrying capacity(17). AWHONN 2019 states that the benefit for quantification blood loss (QBL) reduces the possibility that clinicians will underestimate the volume of blood loss and delay early recognition and

action ,Improves maternal outcomes ,improves rapid recognition and reply to hemorrhage further more Reductions denial of blood loss and delay of live saving interventions (15).

‘ABC’ approach is often used initially but clinical judgement should be used to guide resuscitation in separately situation. Suitable monitoring and investigation should be guided by clinical judgement, but in all cases of PPH, should, at a minimum, include the recording of observations at regular intervals, and repeating, as specified, in a suitable time frame the hematological investigations. Pulse rate, (19) blood pressure, oxygen saturation and urinary output measurement (20) (21),(8). a research done in Mexico City in initial management of PPH shows that asking for help was stated by 45% of the respondents and 38% requested for vital signs. Only one-fifth of those surveyed requested for blood count, coagulation testing, arterial blood gas, or urinary catheter. Very few said hypothermia preventions, oxygen management, or blood transfusion. A total of 80% of those talk to only mentioned 3 of the 16 recommended activities(14).

The overall prevalence rate of primary postpartum hemorrhage was 16.6% in the finding of prevalence and predictor of primary PPH in southern parts of Ethiopia it is recommended that all obstetrics unit memberships should stay prepared to manage mothers who experience PPH , All health facilities should anticipate a way to recognition and prevention of measures in place for all mothers, all obstetric units must have guidelines intended for the routine administration of uterotonics in the immediate postpartum period and exercise active third stage management for all mothers(11).

According to research conduct in Kenya Nairobi, on how to recognize PPH after delivery that 40.9% indicate measuring of blood loss , other recognize by socked linen after delivery and by measuring maternal vital sign after delivery , entirely 90% of respondents give their answer on first diagnosis of PPH as shout for help but only 9.1% response to explore the cause of PPH even if the sample is small and lack of representing the whole country all of participants properly know the first step in management of PPH. furthermore skills on handling of PPH shows that 63.3% of

participants respond that able to do manage PPH with assistant this shows PPH is difficult to manage alone unless participation of all the team (22).

According to the result of survey conducted in Mexico City and published in 2019 on initial management of PPH asking for help was stated by 45% of the respondents and 38% asked for vital signs. Only one-fifth of those surveyed requested for blood count, coagulation testing, arterial blood gas, or urinary catheter. Very few said hypothermia prevention, oxygen administration, or blood transfusion. So overall of 80% of those questioned only declared 3 of the 16 recommended actions this indicate that only less than half of the physician reflect for the first step in PPH management the author explains by an insufficient course of actions by the primary respondent (14).

2.3. Associated Factors

2.3.1 Sociodemographic Factors

The obstetric care providers had voiced alarms in taking care of high-risk obstetric patients, especially given the high patient to provider ratios. AWHONN (2015) recommend that renowned that each obstetric and postpartum nurse should not be accountable for more than one woman through the first hours postpartum(5). Currently, each nurse attends to three postpartum women, in spite of having little experience in taking care of a postpartum patient. In January 2019 study in zone of Tanzania Dodoma concluded that Professional qualification and experience in a maternity unit are significant factors influencing nurses' knowledge and skills, respectively, in the prevention and management of PPH(23).a result on midwifery factors in PPH management in Kenya stated that age ($p=0.021$), professional qualification ($p=0.047$), experience in managing PPH ($p=0.032$) and training on emergency PPH ($p=0.010$) were significant sociodemographic factors(24).

a pilot study conducted on knowledge and skill retention of health professionals in Burundi states high score is detected in PPH management after BMONC training 86%, 83% and 59% in physician, midwives and nurses respectively(25). A before and after evaluation for the BEmONC intervention included a cross-sectional survey conducted in 134 rural health centers in Ethiopia explained that The implementation strength of

BEmONC is strongly associated with the improved availability and utilization of obstetric services in the intervention facilities augmented statistically significantly from 4.3 at baseline to 6.7 at follow-up ($p < .05$)(26).

A study in Kenya Nairobi explain the relationship between midwives age and their AMSTL practice did not yield statistically significance but their professional qualification and AMSTL practice has little significant association (p value 0.028) (22) Based on the result of ESPA Plus survey 2014 generally, the loyalty of providers to clinical rules with respect to client history taking, physical examination, and investigation for PPH is 48 % , 44 % , and 51% respectively. There is no main disparity on history taking, and physical examination of PPH by facility type, region, and providers' category. But general practitioner or medical specialists (72 %) are more likely to proposition laboratory investigations than diploma nurses or midwives (47 %) Percentage of health care providers responding accurate diagnosis for the given case scenario in health centers is 72% this is lower than the percentage in referral, general and primary Hospitals 75%, 77% and 79% respectively(27).

2.3.2. Institutional Factor

The result of study in Kenya describe uterotonic supplies always available, 86% of participants score their storage in recommended temperature ,72% respond that the availability of transport in case of referral(22).

2.3.3. Professional factor:

Majority of respondents replay that the ratio of staff on duty and patient is never appropriate based on a result of research in Kenya so number of staff affects in proper management of PPH according to this study(22). The main problems according to the professionals were: lack of simplicity of the guidelines, lack of knowledge and weakening team-communication. Team drill and checklists/ flowcharts were painstaking enablers (18).

2.3.4. Patient Factor

According to the qualitative research perform in Netherlands the main obstacle for high quality PPH-care acknowledged by patients was the deficiency of information given by the professionals to the patient and spouse earlier, during and after the PPH

occurrence. An informative patient website, a patient leaflet and a follow-up discussion were stated as facilitators (19).

2.4. Conceptual framework

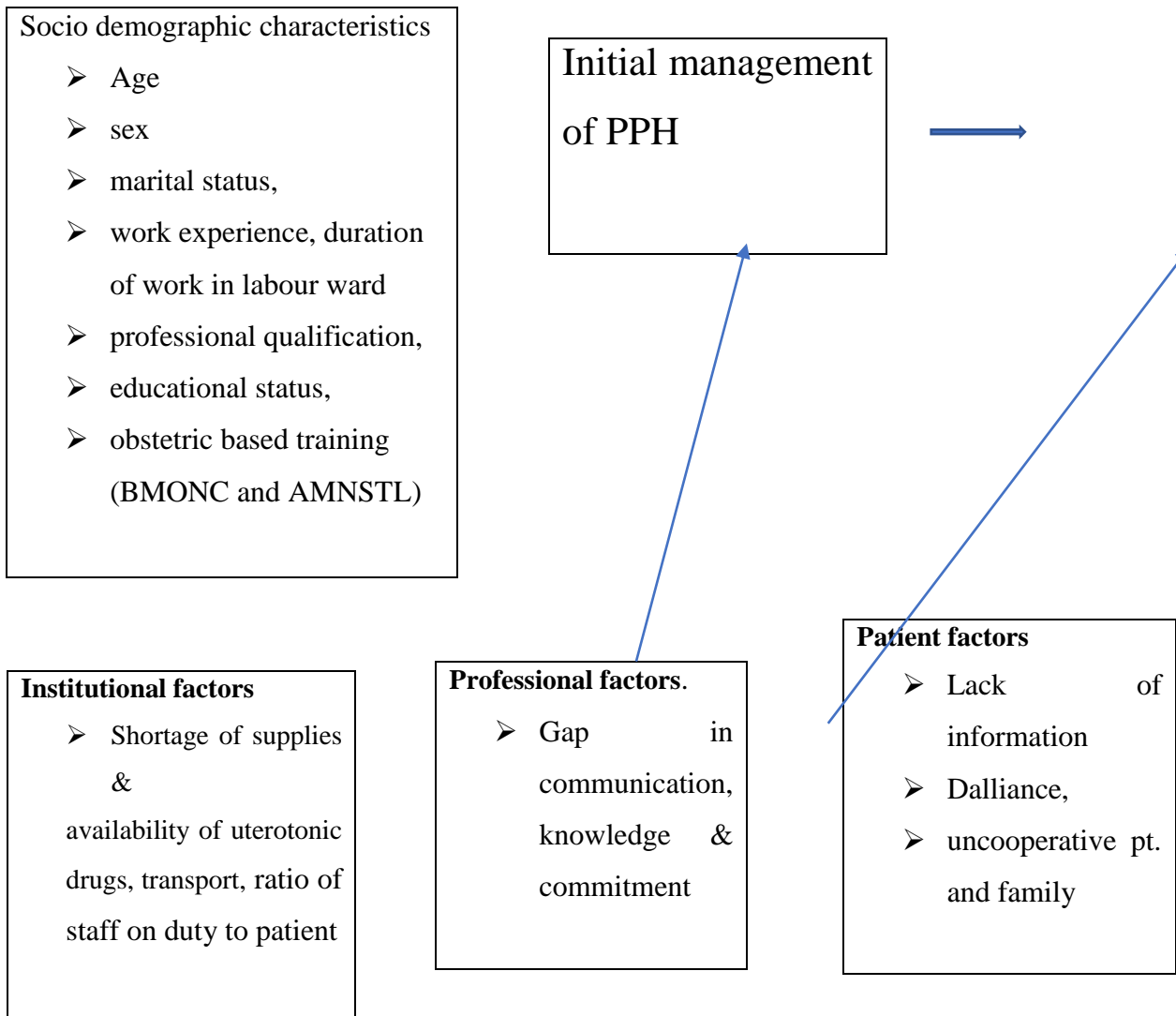


Figure 1. Conceptual framework adapted and modified (22) used to assess initial management of post-partum hemorrhage and its associated factors among midwives, nurses and health officers at selected health centers of Addis Ababa Ethiopia.

CHAPTER 3.

3. Objectives

3.1. General Objective

- To assess the practice of obstetric care providers in initial management of post-partum hemorrhage and its associated factors, at selected health centers of Addis Ababa, Ethiopia, 2021.

3.2. Specific Objectives

- To assess the practice of obstetric care providers in initial management of post-partum hemorrhage by using practice based self-administer questionnaire during the study period.
- To determine factors associated with the practice of obstetric care providers in initial management of post-partum hemorrhage during the study period.
- To evaluate the action performed by them in relation to protocol for initial management of PPH by observation of available PPH cases using check list during the study period.

CHAPTER 4.

4. Methods and materials

4.1. Study Area

This study was conducted in public health centers from 20 February, to 20 March, 2021 in Addis Ababa which is the capital city of Ethiopia with a total population of over 3 million (3,433,999) people. It is separated into ten sub-cities and 116 Kebeles. This city is placed at 9° 1' 48" north and 38° 44' 24" east and the whole land area is 54,000 ha). Here are 15 public hospitals of which 6 are under the managerial unit of Addis Ababa Regional Health Bureau (AARHB) and the other are under Federal Ministry of Health. Moreover, the city has 103 public health centers (28). The total number of mid-level professionals working in public health centers in Addis Ababa is 5690 in which midwives account 1226, health officers 1518 and nurses 2946 according to the Ethiopia minister of health HRIS (human resource information system) data of 2020 and compared with that of Addis Ababa administration health bureau human resource data.

4.2. Study Period

The study was conducted, from February 20 up to March 20, 2021.

4.3. Study Design

A quantitative Institutional based cross-sectional study design was used to assess practice of obstetric care providers in initial management of PPH and its associated factors at selected health centers in Addis Ababa by structured self-administered questionnaire plus observation of available PPH cases management according to protocol for initial management of PPH by using check list.

4.4. Source population

All health officers, midwives and nurses who are working in Addis Ababa health facilities.

4.5. Study population

All health officers, midwives and nurses those working currently at selected health centers.

4.6. Sample population

All health officers, midwives and nurses who has current or previous work experience in labor ward of selected health centers.

4.7. Eligibility criteria

4.7.1. Inclusion criteria

All health officers, midwives and nurses who have greater than six-month work experience at selected health centers and those who are willing to participate was included.

4.7.2. Exclusion criteria

- ✓ All midwives, health officers and nurses who are in any type of leave
- ✓ Not ever worked in labor ward

4.8. Sample Size Determination

Sample size is determined by using single population proportion formula using the following assumption:

$n = (Z_{1/2})^2 pq/d^2$ where=the desirable sample size is (if target population is >10000

$Z_{1/2}$ =the critical value at 95% level of significance (1.96)

d =the level of statistical significance

p =the proportion in the target population estimated to have the characteristics being measured (assumed to be 50%)

$q=1-p$

$n = (1.96)^2(0.5)(0.5)/(0.05)^2 = 384.16$

Then the study population 5690 (the total number of midwives, nurses and health officers in AA governmental health centers) is less than 10000 I used the alternative formula.

$nf = \frac{n}{1+n-1/N}$

$1+n/N$

were

nf = desired sample population (when sample size less than 10000

$nf = n/1+n-1/N$

$$nf=384.16/1=384.16/5690$$

$$nf=384.16/1.067$$

$$nf=360$$

but when goes through multistage sampling to keep design effect and minimize biases sample size is multiplied by 1.5 which equals 540

Then by adding 10% non-response rate total sample size (n) =594

Table 1: sample size determination for second objective

Factors	OR	Prevalence	Power	CT	Ratio	Sample	Reference
Age	11.5	37%	80	95%	1:1	48	(23)
Educational level	4.58	19.4%	80	95%	1:1	160	(23)
Work experience	9.14	32.5%	80	95%	1:1	62	(23)
Training	21.4	53%	80	95%	1:1	26	(19)
Lack of material	19	50%	80	95%	1:1	30	(19)
Professional factor	6.33	25%	80	95%	1:1	98	(19)

Based on the above calculation of sample size for second objective all the variables of associated factors have less sample size than calculated by single proportion alternative formula. So, sample size of 594, which is done by single proportion correction formula used as sample size for this study.

4.9. Sampling Technique

Out of 10 sub cities of Addis Ababa sample was selected from 7 sub cities by lottery method. Proportionally allocation of sample size for both health centers and professionals done using population proportion formula and total of 26 health centers

and 594 health professionals were randomly selected from each sub city, the study participants was selected using simple random sampling technique after stratification in to case team was applied used to reach specific unit.

4.10. Tool and Data Collection Method

The questionnaire was adapted and modified from related literature(22). English version was used for data collection. In order to measure the internal consistency, Cronbach Alpha reliability test was conducted on 13 practical questions and its value was 0.840. more over pretest was conducted before data collection to check inconsistency and unclear words & some clarification on questionnaire was added.

Data was collected using pretested, structured and self-administered both open ended and closed ended questionnaires which has four sections, section 1. sociodemographic and associated characteristics, section 2. Practical questions, section 3. Questions on initial management of PPH.

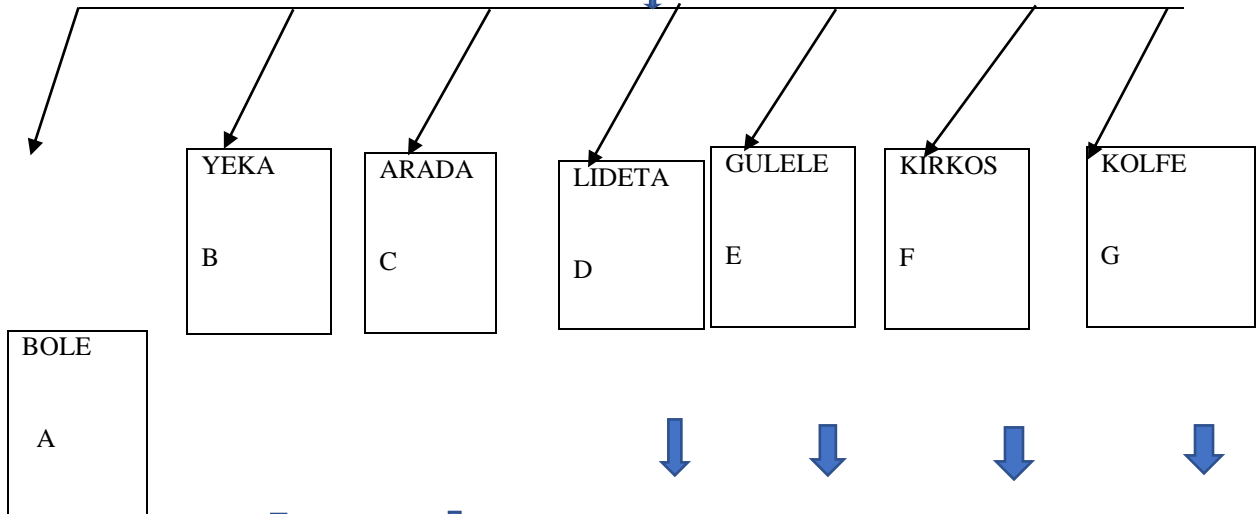
evaluation of professional's action while facing PPH was conducted by observation of available cases using check list adapted and modified from protocol for initial management of PPH(14).out of total study participants seven obstetric care providers was purposively selected one from each sub cities. They were not aware being watched for consideration of ethical issue with this regard communicate with the representative of ward. six trained data collectors and 2 supervisors BSC midwives and nurses in their profession who have experience of data collection was enrolled.

**ADDIS ABABA
ADMINISTRATION**

**CITY
HEALTH BUREAU**

10 SUB CITIES

7 SUB CITIES BY LOTTORY APPROACH



<p>HCS</p> <p>A1 meri</p> <p>A2 bole 17</p> <p>A3 bole arabasa</p> <p>A4 sumit</p> <p>n1=mw=31</p> <p>n2=ns=33</p> <p>n3=ho=22</p>	<p>HCS</p> <p>B1 aware</p> <p>B2 woreda 12</p> <p>B3 yeka</p> <p>B4 woreda 10</p> <p>B5 kotebe</p> <p>B6 woreda 13</p> <p>n1=44</p> <p>n2= 42</p> <p>n3=56</p>	<p>HCS</p> <p>C1 beata</p> <p>C2 jalmeda</p> <p>C3 afincober</p> <p>C4 kebena</p> <p>n1=26</p> <p>n2=25</p> <p>n3=40</p>	<p>HCS</p> <p>D1 t/haymanot</p> <p>D2 w/ro Beletshew</p> <p>n1=15</p> <p>n2=17</p> <p>n3=19</p>	<p>HCS</p> <p>E1 hidase</p> <p>E2 selam</p> <p>E3 shegole</p> <p>E4 Addis hiwot</p> <p>n1=29</p> <p>n2=30</p> <p>n3=40</p>	<p>HCS</p> <p>F1 kazanchis</p> <p>F2 Feres meda</p> <p>n1=18</p> <p>n2=28</p> <p>n3=9</p>	<p>HCS</p> <p>G1 lomimeda</p> <p>G2 kolfe</p> <p>G3 mikililand</p> <p>G4 woreda 11</p> <p>n1=31</p> <p>n2=38</p> <p>n3= 32</p>
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Simple

random

sampling

PPS (proportionally allocated)

26 health centers & 594 health professionals

Figure 2. Schematic representation of sampling procedure.

4.11. Variables

4.11.1. Independent Variables

- Socio demographic characteristic (Age, sex, educational level, Marital status, work experience, training and professional qualification).
- institutional factors,
- professional factors and
- patient factors.

4.11.2. Dependent Variables

Initial management of post-partum hemorrhage

4.12. Operational Definition

First responder: is a person with specialized training who is among the first to arrive and provide assistance at the scene of an emergency or First usually the first on the scene to face challenging, dangerous, and draining situations.(29)

Hemodynamic compromise as a clinical state is, either perfusion failure characterized by clinical features of circulatory shock or advanced heart failure, or just one or more measurements which may show out of range and Physical signs of acute circulatory failure establish primary references for shock, with hypotension, abnormal heart rates, cold extremities, peripheral cyanosis and decreased urine flow(30).

Initial management of PPH: is action taken by first responder which include communication, monitoring, initial resuscitation, and hemorrhage control and consist of identifying PPH, determining the cause, and implementing appropriate interventions based on the etiology(21).

Maternal mortality: mortality is defined as the death of a woman whereas pregnant or in 42 days of delivery or end of pregnancy.

Obstetric care providers: are professionals who provide obstetric service for mothers according to this study includes midwives, nurses and health officers.

Post-partum hemorrhage:

PPH is generally defined as blood loss greater than or equal to 500 ml within 24 hours after vaginal birth, while is blood loss greater than or equal to 1000 ml within 24 hours following cesarean section as well as any amount of bleeding significant enough to show sign and symptom of shock.

practice: - the practice-based question has yes -no based question and unable to do, able to do with assistance and able to do without assistance-based question. Therefore, for yes-no question 1 is given for correct activity and 0 is given for incorrect practice and 0 given for unable to do, 1 is given for able to do with assistance and 2 is given for able to do without assistance.

Practice: - the ability of health provider to perform initial management of PPH with standard protocol.

Good practice: - provider who correctly respond above the mean value

The level of health provider practice to perform initial management of PPH was measured by 13 items. Those who scored greater the mean value (6.5) was considered as having good practice i.e., respondents who scored 6-13 points from 13 practice questions were declared as having good practice.

Poor practice: - health provider who responds below the mean value.

Those who scored less than the mean value (6.5) was considered to have poor knowledge i.e., respondents who scored 0-5 points from 13 practice questions were declared as having poor practice.

4.13. Data Quality Control

The questionnaires were pre-tested on 5% of the total sample size on professionals who are working in Raye health centers at yeka sub city in Addis Ababa, which was not part of study. The objective of the study explained to respondents. after expressing their willingness to participate in the study, they were required to give written consent and

complete the data by themselves. Prior to data collection two-day training on the objective of the study was given to data collectors and supervisors. Data completeness was checked by data collectors, supervisors and PI.

4.14. Data processing and Analysis

The collected data was entered, cleaned and coded using EPI data version 3.1 and exported to SPSS version 25. after assessing the normality of distribution of the data; logistic regression was carried and in the bivariate analysis variables with p value at 0.25 was candidate for multivariate. and multivariate analysis was used to determine the association between the outcome variable. those variables that have p-value of 5% was declared to have significance at 95% C.I and the strength of association be looked using odds ratio. finally, result was presented in texts, pie chart and tables.

4.15. Ethical Consideration

Ethical clearance was obtained from School of Nursing and Midwifery ethical review committee. official letter of cooperation was taken from the School of Nursing and Midwifery to Addis Ababa Administration health bureau and from there to selected sub cities and health centers in Addis Ababa for data collection to the respective departments. Moreover, the purpose of the study was explained to the respondents under study and data was collected after obtaining written consent to confirm their willingness and their right not to participate in the study was assured. all collected information was kept confidential and not linked to third party.

4.16. Dissemination and Utilization of The Result

The final finding of this study will be disseminated to, School Nursing and Midwifery, Addis Ababa health bureau and health centers where study is conducted and finally attempt will be made to present the thesis to different workshops and send for publication to national and international journals to reach the science community.

CHAPTER 5.

RESULT

5.1 Sociodemographic variable

In this study 561 participants were self-administered making a response rate of 94.4%. More than half of the participants were under the age group of 26-30 years with mean and SD of 30.3 & ± 5.7 years respectively. two third of the participants were females and half of them were single. regarding to education and 77.2% were degree holders and half of them had nurses in profession. fifty-three percent of them were 5-10 year of professional experience (table 1).

Table 2: the Sociodemographic characteristics of health provider in selected Addis

Ababa, Ethiopia, 2021 (n=561).

Variable	Frequency	Percent
Age of participants		
≤25	65	11.6
26-30	318	56.7
31-35	110	19.6
36-40	36	6.4
≥41	32	5.7
Sex of participants		
Male	197	35.1
Female	364	64.9
Marital status		
Married	240	43.2
Married/cohabited	19	3.4
Single	279	49.7
Divorced	23	4.1
Higher level Education		
College level	189	33.7
University level	372	66.3
Level of certified		
Diploma	102	18.2
Degree	433	77.2
Masters	26	4.6
Profession		
Health officer	81	14.4
Midwife	197	35.1
Nurse	283	50.4
Duration of work in labour ward		
≤6 month	167	29.8
7 months up to 2 years	216	38.5
2-4 years	68	12.1
≥4 years	110	19.6
Total work experience in year		
<5	175	31.2
5-10	300	53.5
11-15	56	10
≥16	30	5.3

5.2 Obstetrics related training

In this study from all participants 14% received AMSTL, 25.3% received BEMNOC and 12.5% received CEMNOC training as shown in the figure 3.

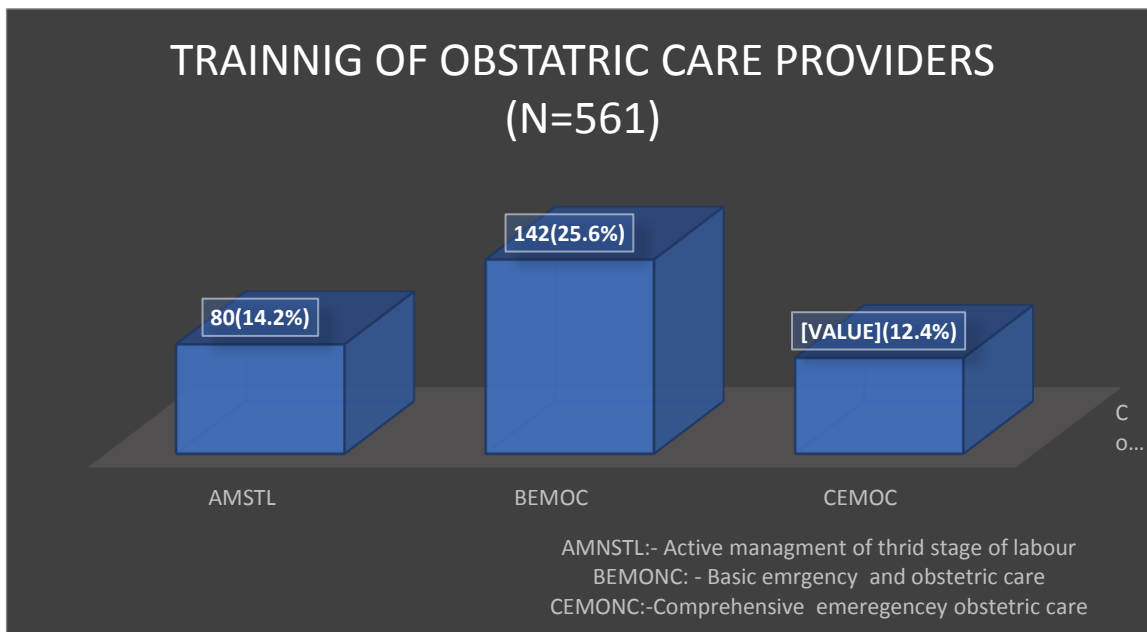


Figure 3. The characteristics of participant on obstetrics management training

5.3 Institutional characteristics

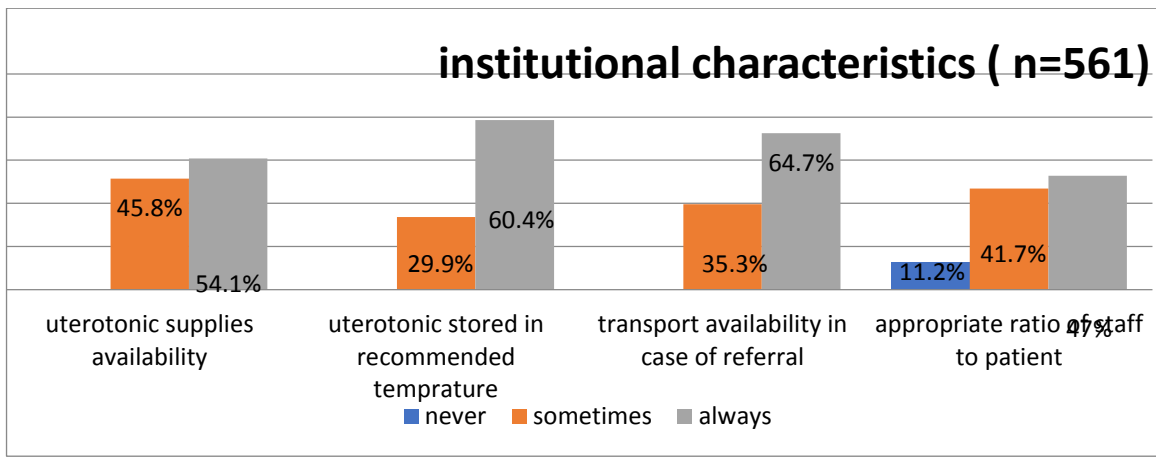


Figure 4. Institutional supply characteristics on pertinent obstetric management

5.4 Practice on initial management of postpartum hemorrhage

In this study finding 53% of the study participants had good initial post-partum hemorrhage care practice, while 47% had poor practice.



Figure 5.the Over all practice of obstetric care providers on initial management of PPH

On the specific practice-based question, 82% answered that they were massaged the uterus during PPH, 85% of them examined placental completion during active management of third stage of labor. Half of the participants were able to identify cause of PPH without assistance and 56.5% manually remove placenta without assistance. Concerning to the first action of PPH initial management, 82.5% practiced shout to help during PPH was their first action as shown the table below (table 2).

Table 3: The practice of study participants on initial management of PPH in selected health center, Addis Ababa, Ethiopia, 2021 (n=561).

Correctly respond of the practice-based question of study participants on initial management of PPH (n=561)		
Variable	Correctly respond (%)	Incorrectly respond (%)
Uterine massage	460(82)	101(18)
Placenta completion examination	477(85)	84(15)
Identification of PPH risk factor		
Unable to do	10(1.8)	551(98.2)
Able to do with assistant	270(48.1)	291(51.9)
Able to do without assistant	281(50.1)	280(49.9)
Diagnosis of postpartum hemorrhage		
Unable to do	8(1.4)	553(98.6)
Able to do with assistant	239(42.6)	322(57.4)
Able to do without assistant	314(56)	248(44)
Bimanual compression of uterus		
Unable to do	33(5.9)	528(94.1)
Able to do with assistant	280(49.9)	281(50.1)
Able to do without assistant	248(44.2)	313(55.8)
Suturing of perineal tear		
Unable to do	32(5.7)	529(94.3)
Able to do with assistant	241(43)	320(57)
Able to do without assistant	288(51.3)	273(48.7)
Suture episiotomy		
Unable to do	27(4.8)	534(95.2)
Able to do with assistant	209(37.3)	352(62.7)
Able to do without assistant	325(57.9)	236(42.1)
Manual removal of placenta		
Unable to do	34(6.1)	527(93.9)
Able to do with assistant	210(37.4)	351(62.6)
Able to do without assistant	317(56.5)	244(43.5)
Shout for help is the first response for initial management of PPH	463(82.5)	98(17.5)
Asking for help, refractoriness is facing on PPH management	553(98.6)	8(1.4)
Monitoring v/s, CBC, BG and coagulation are facing for PPH management	143(25.5)	418(74.5)
Reanimation like IV line secure, fluid action is facing during PPH management	490(87.3)	71(12.7)
Hemorrhage control, uterotonic action are facing on PPH case management	435(77.5)	124(22.5)

5.5. Result of Observation

In this study seven available cases during the data collection time were observed based on check list for PPH initial management while obstetric care providers facing on PPH case management. From this fluid augmentation, strong uterine massage and uterotonic drugs administration is performed by all 7 obstetric care providers (100%) who manage PPH, 4 (57.1%), of them asked for help and hematologic study was requested by 5 (71.4%) of obstetric care providers.

Table 4: Result of Observational check list

VARIABLES/recommended actions	PERFORMED	NOT PERFORMED
--------------------------------------	------------------	--------------------------

A	COMMUNACTION		
	1.Ask for help	4	3
	2.Referal	3	4
	3.Counseltation to senior staff	2	5
B	MONITORING		
	4.CNS/mental status examination	3	4
	5.V/S and oxygen saturation monitoring	3	4
	6.urinary catheterization	3	4
	7. hematologic studies	5	2
	8. coagulation test	3	4
C	INITIAL REANIMATION		
	9. IV access and fluid augmentation	7	0
	10.oxygen administration	2	5
	11. keep blood and plasma available	1	6
	12. prevent hypothermia, warm fluid, cover patient	2	5
D	HEMORRHAGE CONTROL		
	13. bimanual uterine compression	1	6
	14. strong uterine massage	7	0
	15.therapuatic uterotonic administration	7	0
	16. ask for uterine tamponade resource	2	5

Table 5: Participants assumption for the effect on initial management of PPH

Variable	Response	Percent
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Institutional factor like lack of supplement, staff to patient ratio &

transportation has effect on for the management of PPH

Yes	312	55.6
No	249	44.4

Professional knowledge, commitment & communication condition has effect on initial management of PPH

Yes	168	29.9
No	393	70.1

Patient factor like diligence, uncooperativeness has effect on PPH management

Yes	80	14.3
No	481	58.7

5.7. The determinant factor of practice of initial management of PPH among study participants

The association of socio-demographic characteristics, training characteristics with initial PPH management was examined. The strength of the relationship was quantified using Odds Ratio (AOR) and 95% confidence interval. Accordingly in the bivariate logistics regression model when practice of PPH initial management was examined and age of participants, sex, types of profession, experience, training in AMSTL and BEMNOC with p-value <0.05.

According to multivariable regression, participants who were male had 1.5 times good practice on PPH initial management than female participants (AOR=1.5, 95%CI=1.97, 2.18). The odds of having midwife in profession had almost two times good practice on PPH initial management than health officer (AOR=1.9, 95%CI=1.92, 3.70).

Participant who has 4 year and above experience in labour ward has 2.5 times good practice on PPH initial management than experience less than six months (AOR=2.5, 95%CI=1.09, 5.87). Participant who had training in BEMONC had 3 times good

practice on PPH initial management than had not training on BEMONC (AOR=3.3, 95%CI=1.91, 5.76). male sex, being midwife in profession, 4 years and above experience in labour ward and Participant who had training in BEMONC had positive association on initial PPH care practice. while, less than 6-month experience in labour ward setting and participants not trained on BEMONC has negative association based this study.

Table 6: Factors associated with PPH initial management among health provider, in selected health center Addis Ababa, Ethiopia, 2021 (n=561).

variable	Poor practice	Good practice	COR	AOR
Age				
≤25	43	22		
26-30	152	166	2.1(1.22, 3.73) *	1.4(0.73, 2.86)
31-35	38	72	3.7(1.93, 7.07) *	1.9(0.84, 4.49)
36-40	11	25	4.4(1.85, 10.66) *	2.34(0.77, 7.10)
≥41	17	15	1.7(0.73, 4.09)	0.81(0.25, 2.16)
Sex				
Male	79	118	1.5(1.05, 2.12) *	1.5(1.97, 2.18) **
Female	182	182		
profession				

Health officer	46	35		
Midwife	56	141	3.3(1.93, 5.66)	1.9(1.92, 3.70) **
Nurse	159	124	1.0(0.625, 1.68)	1.2(0.67, 2.02)
Duration of work in labor ward				
≤6months	116	51		
7month-2 years	103	113	2.5(1.63, 3.81) *	1.8(1.08, 2.82) **
2-4 years	19	49	5.7(3.14, 10.95) *	2.7(1.23, 5.70) **
>4years	23	87	8.6(4.9, 15.14) *	2.5(1.09, 5.87) **
Total professional experience in years				
<5	103	72		
5-10	126	174	1.9(1.35, 2.88) *	1.4(0.80, 2.33)
11-15	16	40	3.6(1.86, 6.87) *	2.0(0.82, 4.99)
≥16	16	14	1.25(0.57, 2.72)	1.3(0.45, 3.87)
Training on AMSTL				
Yes	17	63	3.8(2.17, 6.71) *	1.4(0.74, 2.71)
No	244	237		
Training on BEMOC				
Yes	24	118	6.4(3.96, 10.34) *	3.3(1.91, 5.76) **
No	237	182		

Note: - * & ** are variables having p- value <0.05 in bivariable and multivariable regression respectively

CHAPTER 6.

6.1 DISCUSSION

Postpartum hemorrhage (PPH) remains a major traumatic event that can occur after delivery. All expectant women are considered to be at risk of PPH and its effects. PPH is the leading cause of maternal mortality. All women who carry a pregnancy beyond 28 weeks' gestation are at risk for PPH and its sequelae. Although maternal mortality rates have declined greatly in the developed world, but PPH remains a leading cause of maternal mortality elsewhere.

Therefore, initial management of PPH is a core fore reduce maternal mortality concerning to PPH. So, good practice of health personnel is the first way to save the life of the women from death and morbidity related to PPH.

Analysis of the research showed that the practice of initial management of PPH among obstetric care providers indicates that 53% of the participants had good practice on initial management of PPH. this is optimal when compared to a study conducted in Egypt on assessment of nurse's practical skills in PPH management greater than $\frac{3}{4}$ (75%) of nurses had incorrect practice(31). while in this study only 47% of participants had poor practice of initial management of PPH.

In this study 82.5% of the study participants says that they used shout for help for the first activity of PPH management. This finding is almost in line with the study finding of Kenya, Nairobi (82.5% vs 90% (21) and also a study conducted in Mexico (84.3%) of participants mentioned shout for help. This similarity is may be in all study the participants w health providers, the provider understands the urgency of needing power to manage and save life and also, they understand how much PPH is life threatening, they also know the first protocol for top urgent emergency management.

The finding also explained that 25.5% participants monitor Monitoring v/s, CBC, BG and coagulation during initial management PPH management. This finding was discordant from the study finding of Mexico City (25.5% vs 38%) (13). This may be due to the knowledge difference related to rapid monitoring is important for proper PPH management as the study participants were gynecologist and obstetrician cause identification is their main attentive whereas mid-level professionals focused in actual care rather than investigating the cause.

Monitoring is vital to detect sign of shock and CBC indicate whether the mother needs transfusion or not. As recent advance in management of post-partum hemorrhage (review by Rani, P Reddi Begum, Jasmina 2017) discussed that third protocol for PPH management is monitoring. This includes appropriate measure of pulse rate, urine output, CBC, oxygen saturation that the main goal of PPH management is to maintain hemoglobin(13). Therefore, the importance of vital signs monitoring is that it allows medical professionals to assess the patient wellbeing.

The main initial management of postpartum hemorrhage are bimanual compression of uterus manage with assistance by 49.9%, suturing perineal tear with assistance by 43% and manual removal of placenta with assistance by 37.4%. this finding is lower than the study conducted in Kenya Nairobi (21). In fact, the listed mechanism is the main initial management of PPH, the percentage of the activity were low. This is may be due to lack of training as evidenced by 86% of participants had not received training on active management of third stage of labor, 25.3% had not received training on basic management of obstetric care. bimanual compression of uterus was mentioned by 37%

of physician in study at Mexico which is lower than the finding of this study(49.9%) it could be deference in professional exposure that mid-level professionals more devoted to practical activities(14).

According to the multivariable logistic regression model, Professional qualification (midwife), experience in labour ward (as experience increase), sex of participants and training in BEMONC were statistically significance variable for practice initial management of PPH.

Professional qualification, being midwife in profession had positively association in PPH management when compared to health officer this finding is congruent with the study finding in Tanzania (22) and also in Kenya professional qualification associated with PPH management ($p=0.047$) (24). this may be explained by profession has special approach for specific activity, that is why being midwife is statistically significant.

Experience in labour ward (as experience increase), affect PPH management positively Participant who has 4 year and above experience in labour ward has 2.5 times good practice on PPH initial management than experience less than six months (AOR=2.5, 95%CI=1.09, 5.87).this finding is almost similar with a study finding of Kenya experience in PPH management has significance association ($p=0.032$)(24) and with finding of Tanzania, having greater than 5years experience in maternity unit(OR=3.06, $p=0.00$) This is may be due to experience may lead to inherit practice through long time(23).

The other newly yielded significant variable based on this study for practice of initial management of PPH were sex of participants. no study finding that sex of professionals as determinant factors for PPH management. this may be due to male had more time than female inhouse hold care activity. or character deference, that females are more careful than male that is why they need assistance during PPH management while males done activities alone and seems significance but it needs further investigation.

Having training on basic emergency and obstetric management also another significant variable for determining initial management of PPH even if the percentage of BMONC trainees were low (25.3%) in this study when compared to a pilot study conducted on knowledge and skill retention of health professionals in Burundi high score is observed in PPH management after BMONC training 86%, 83% and 59% in physician, midwives and nurses respectively(25).

Even though the objective and method is different, Another study that shows the significance of BEMONC training like current is A before and after evaluation for the BEmONC intervention included a cross-sectional survey conducted in 134 rural health centers in Ethiopia the implementation strength of BEmONC is strongly associated with the improved availability and utilization of obstetric services in the intervention facilities increased statistically significantly from 4.3 at baseline to 6.7 at follow-up ($p < .05$), which eventually will increase the uptake of life-saving interventions like PPH to challenge the main causes of maternal mortality in Ethiopia. it shows BMONC training is important in PPH management. this is may be due to the fact that, training update the trainer's knowledge, attitude and practice for the activity of they can take. that is why BEMOC was significant.

This study described that what seems to be PPH initial management and its associated factors among obstetric care providers (midwives, nurses and health officers) in Addis Ababa Ethiopia.

6.2. Strength

- Thesis was conducted in twenty-six selected governmental health centers proportionally allocated to insure the representativeness of all governmental health centers as well as professionals.
- The questionnaire was pretested and corrected accordingly to make easily understandable.
- The practice-based assessment supported by observational checklist.

6.3. Limitation

- This study did not assess skills in the management of PPH using an objective structured clinical examination (OSCE) tool on PPH.
- cross-sectional studies: the primary limitation of the cross-sectional study design is that because the exposure and outcome are simultaneously assessed, there is generally no evidence of a temporal relationship between exposure and outcome.
- Lack of similar local study with the same objective makes comparisons difficult.

CHAPTER 7.

7.1. Conclusion

In this study the overall practice for initial management of postpartum hemorrhage by mid-level health professional in health center level were good practice (53%) and poor practice (47%). the determinant variable that affects positively were experience in labor ward, midwife profession, sex of participants and training in obstetric based management systems. This result is generalized to the source population since study conducted out of 103 governmental health centers including 26 of them. Obstetric care providers should update their academic level and improve their skills to provide fruitful service towards PPH management and save mothers' lives. Health institutions should arrange training for all midwives, and the regional government should upgrade the midwives' educational level.

7.2. Recommendation

PPH is the leading cause of maternal mortality and morbidity due to poor practice of initial management by different level of health personnel. So, according to the finding of this research on initial management of postpartum hemorrhage the recommendation goes to: -

For AARHB

- increase the exposure of health provider about PPH management.
- Arrange training to update about PPH management
- follow the practice of the health provider by PPH management checklist.
- put in curriculum the special trainings like CEMOC components.
- In addition, blood transfusion set up to facilitate for all health centers.

For researcher: -

- The researcher recommends to further researcher to do the research by using an objective structured clinical examination (OSCE) tool on PPH.
- Nationwide study on PPH management including regions to representation of the country (Ethiopia).

Health centers:

- Prepare in sight training about PPH management, upgrade their education level, follow the practice about PPH management.
- PPH initial management protocol flow chart posted to labour ward for recall of actual practice.

Professional (practice)

- Update them self by reading guidelines,
- Update themselves by upgrade their level of education,

- Be eager for the practice of urgent management.
- Be adherent to PPH management protocol.

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8. Annexes

Annex I: Information Sheet and consent form

Greetings

My name is Etabezahu Shewanawul. At this time, I am a post graduate student at Addis Ababa University, College of Health Sciences, School of Nursing and Midwifery Department of Midwifery. and now I am conducting a research to assess initial management of post-partum hemorrhage among midwives, nurses and health officers at selected health centers of Addis Ababa Ethiopia.

Title of the research: assessment of the practice of midwives, nurses and health officers in initial management of post-partum hemorrhage and its associated factors, at selected health centers of, Addis Ababa, Ethiopia, 2021.

Objective: to assess initial management of post-partum hemorrhage among midwives, nurses and health officers and its associated factors at selected health centers of Addis Ababa Ethiopia.

Participants: randomly selected midwives, nurses and health officers from selected study health centers.

Potential Risks: There is no expected risk by being in this study.

Benefits: No financial benefits are related with this study. But by contributing in this study, you will give an involvement for decrease maternal death and complication.

I would like to ask you few questions. Your honest response to the questions can make the study to achieve its objective. All the information that you give will be kept confidential and private. Only the principal investigator and data collectors will have access to the information. You are kindly requested to respond voluntarily. You can also choose not to participate in this study totally or if you become uncomfortable during the study, you will be allowed to leave the study at any time. At any time that you have questions, you can contact me by using the following addresses.

Etabezahu Shewanawul

Mobile: 09 06 64 08 64

E-mail: etabezahushewa@gmail.com

Informed consent

Addis Ababa University

College of Health Sciences

School of Allied Health Sciences

Department of Nursing and Midwifery

I here with declare that:

The objectives of this study are explained to me and are clear.

The contents of the consent are verified to me to participate in the study.

I recognize that involvement in this study is fully voluntary and that I may withdraw at any time without providing reasons. I agree to participate in this study, providing my privacy is guaranteed. When approval this consent form to join in the study, I promise to response honestly to all rational questions and not offer any untruthful evidence or in any other way intentionally mislead the researcher.

participant's signature _____

If not, skip to the next participant

Date: _____

Data _____ collector's

Name _____ Signature _____ Date _____

Supervisor's name _____ signature _____

የተሳታፊዎች መረጃ መስጫ ቅጽ-በአማርኛ

እንደምን አደሩ/ዋሉ?

እታበዛሁ ሸዋንአዉል እባላለሁ :: በአዲስ አበባ ዩኒቨርሲቲ፣ ጤና ሳይንስ ኮሌጅ፣ ነርሲንግና ሚዲካል ትምህርት ክፍል በእናቶችና ስነተዋልዶ ጤና የ2ኛ ዓመት የማስትሬት ድግሪ ተመራቂ ተማሪ ነኝ። በአሁኑ ሰዓት ስለ ድህረ ወሊድ ድማት የባለሙያዎች የመጀመሪያ የህክምና ምን እንደሚመስል በማጥናት ላይ ነኝ። የጥናቱ ርዕስ:-የድህረ ወሊድ ድማት የመጀመሪያ የህክምና በአዲስ አበባ ዉስጥ ባሉ የተመረጡ ጤና ጣቢያዎች በሚገኙ ነርሶች፣ጤና መኮንኖችና አዋላጅ ነርሶች 2020።

የጥናቱ አላማ፡ የድህረ ወሊድ ድማት የመጀመሪያ የህክምና በአዲስ አበባ ዉስጥ ባሉ የተመረጡ ጤና ጣቢያዎች በሚገኙ ነርሶች፤ ጤና መኮንኖችና አዋላጅ ነርሶች ምን እንደሚመስል ለመዳሰስ።

ተሳታፊዎች፡- በአዲስ አበባ ዉስጥ ባሉ የተመረጡ ጤና ጣቢያዎች የሚገኙ ጤና መኮንኖችና አዋላጅ ነርሶች።

የጎንዮሽ ጉዳት፡- በዚህ ጥናት መሳተፍ ምንም አይነት ጉዳት የለውም።

ጥቅማ ጥቅም፡- በዚህ ጥናት መሳተፍ ምንም አይነት ገንዘብ አያስገኝም። ነገር ግን በዚህ ጥናት በመሳተፍዎ ለእናቶች ሞት መቀነስ እንዲሁም ጥሩ እንክብካቤ አስተዋፅኦ ያደርጋሉ።

ስለዚህ የተወሰኑ ጥያቄዎችን ልጠይቅዎት እወዳለሁ። የእርስዎ በእውነት ላይ የተመሰረተ መልስ ለዚህ ጥናት መሳካት አስተዋፅኦ ያደርጋል። እርስዎ የሚሰጡት መረጃ ከአጥኚውና ቃለመጠይቅ አድራጊው በስተቀር በማንኛውም መልኩ ለሌላ ጓኛ ወገን ተላልፎ አይሰጥም። በሙሉ ፈቃደኝነት እንዲሳተፉ እየጠየቅሁ ያለመሳተፍ ወይም በማንኛውም ጊዜ ራስዎን ከጥናቱ የማግለል ሙሉ መብት አለዎት።

ማንኛውም ጥያቄ ካለዎት በሚከተለው አድራሻዬ ማግኘት ይችላሉ።

እታበዛሁ ሸዋንአዉል

ስ.ቁ. 09 06 64 08 64

ኢ. ሜይል፡etabazahushewa@gmail.com

የስምምነት መግለጫ ፎርም - በአማርኛ

አዲስ አበባ ዩኒቨርሲቲ

ጤና ሳይንስ ኮሌጅ

ነርሲንግ እና ሚዲካል ዲፓርትመንት ድህረ ምረቃ ፕሮግራም

እኔ ከዚህ በታች የተገለጸው የዚህ ጥናት ዓላማ በደንብ የተብራራልኝ ሲሆን የጥናቱንም ዓላማ ተረድቻለሁ። በዚህ ጥናት ላይ መሳተፍ በሙሉ ፈቃደኝነት ላይ የተመሰረተ መሆኑን በሚገባ የተረዳሁ ሲሆን በማንኛውም ጊዜ ከጥናቱ ራሴን የማግለል

መብት እንዳለኝ አውቄአለሁ። ስለሆነም የምስጠው መረጃ እስከተጠበቀ ድረስ በዚህ ጥናት ለመሳተፍ ተስማምቻለሁ። በዚህ ጥናት ለመሳተፍ ስምምነቴን ስገልፅ ለምጠየቀው ጥያቄ በእውነት ላይ የመሰረተ መልስ ለመስጠት የተስማማሁ መሆኔን አረጋግጣለሁ።

የመረጃ ሰጪው ፊርማ _____

የመረጃ ሰብሳቢው ስም-----ፊርማ-----

የተቆጣጣሪ ስም -----ፊርማ-----

Annex II questionnaire

Code ----- date -----

Instructions

- 1. please do not write your name on questionnaire
- 2. please circle one most appropriate answer.
- 3. where no response provided, please write on the space provided

SECTION1:SOCIODEMOGRAPHI CHARACTERSTICES OF PARTICIPANTES

Number	Variables	Response
101	What is your age in years?
102	What is your gender?	1.Male 2. Female
103	What is your marital status now?	1.Married 2.Married\cohabited 3.Single 4. Divorced
104	What is your highest level of education?	1.College 2. University
105	What is your highest level of training?	1.Diploma 2. Degree 3. Masters
106	What is your professional qualification?	1. Health officer 2. Midwife 3. Nurse

107	How many years have you worked in labor ward?	-----
108	Have you ever been trained on the following? (circle all training attended)	1. AMSTL-active management of third stage of labor 2. BEMOC-basic emergency obstetric care 3.CEMOC- comprehensive emergency obstetric care 4. All

SECTION 2: PRACTICAL QUESTIONS

201		1. yes
-----	--	--------

	Do you perform uterine massage?	2. no
202	Do you always examine the placenta, its membranes and umbilical cord after delivery for completion?	1.Yes 2.No

For questions 203 to 208 indicate your response in the columns provided

Number	Variables	Unable to Do	Able to do with assistance	Able to do with Out assistance
		1	2	3
203.	Identification of risk factors for PPH			
204.	Diagnosis of PPH			
205.	Bimanual compression to the uterus			
206.	Suturing of perineal tears			
207.	Suturing of episiotomy			
208.	Manual removal of Placenta			

SECTION 3: QUESTIONS ON INITIAL MANAGEMENT OF PPH

Number	Activities
--------	------------

301.	what would be your first response on diagnosis of PPH? 1. Shout for help 2. explore the cause 3. Arrest the bleeding 4. any other, specify-----
302.	If a woman delivered spontaneously through vagina with in 24hours and has bleeding from her birth canal which is excess visually as initial management what actions will be done as first responder? Please list out what you will be perform as management to this woman

SECTION: 4. INSTITUTIONAL FACTORS

For questions 401 to 403 please indicate response as never, sometimes, or always

Number	Variables	Never	someti mes	Alway s
		1	2	3
401.	Uterotonic supplies Available			
402.	Uterotonic supplies stored at recommended temperature			
403.	Transport available in case of a referral			
404.	Ratio of staff on duty to patients appropriate (1:6)			

Number	variable	Response
405	What factors do you think affects your initial management of PPH?	

Observational check-list

recommended actions	Performed	Mentioned
<p>Communication</p> <ul style="list-style-type: none"> ➤ Ask for help 		
<p>Monitoring</p> <ul style="list-style-type: none"> ➤ Central nervous system/mental status evaluation ➤ Vital signs and O2 saturation ➤ Urinary catheter ➤ Hematologic studies ➤ Coagulation tests 		
<p>Initial reanimation</p> <ul style="list-style-type: none"> ➤ Fluid augmentation ➤ Intravenous access ➤ High-flow oxygen ➤ Keep blood and plasma available ➤ Prevent hypothermia ➤ Warm solutions ➤ Cover the patient 		
<p>Hemorrhage control</p> <ul style="list-style-type: none"> ➤ Bimanual uterine compression ➤ Strong uterine massage ➤ Therapeutic uterotonics ➤ Ask for uterine tamponade resource 		

This protocol is adapted and edited from: THE JOURNAL OF MATERNAL-FETAL & NEONATAL MEDICINE <https://doi.org/10.1080/14767058.2019.1671342>

አማራኛ መጠይቅ

የመጠይቁ መለያ ቁጥር.....

ቀን-----

መመሪያዎች

1. እባክዎትን በመጠይቁ ላይ ስምዎትን አይጻፉ
2. እባክዎትን ከተሰጡት አማራጮች ውስጥ ተገቢ ነዉ ያሉትን አንዱ ላይ ብቻ ያክብቡ
3. አማራጭ ላልተሰጣቸዉ መጠይቆች እባክዎትን በተሰጠዉ ባዶ ቦታ ላይ ምላሽዎትን ያስቀምጡ

ክፍል አንድ የባለሙያዎች አጠቃላይ የማህበራዊ ሁኔታ

ተራ ቁጥር	መጠይቅ	ምላሽ
101	እድሜዎት ስንት ነዉ	-----
102	ጾታዎት ምንድን ነዉ	1. ወንድ 2. ሴት
103	የጋብቻ ሁኔታዎት	1. ያገባ/ች 2. ሳይጋቡ አብረዉ የሚኖሩ

		<p>3.ያላገባ/ች</p> <p>4. የተፋታ/ች</p>
104	የትምህርት ደረጃዎች ምንድን ነዉ.	<p>1. ኮሌጅ</p> <p>2. ዩንቨርሲቲ</p>
105	ያለዎት ክፍተኛ የትምህርት ስልጠና	<p>1. ዲፕሎማ</p> <p>2. ዲግሪ</p> <p>3. ማስትሬት</p>
106	ሞያዎት ምንድን ነዉ.	<p>1. ጤና መኮንን</p> <p>2. አዋላጅ ነርስ</p> <p>3. ነርስ</p>
107	በማዋለጃ ክፍል ለምን ያክል ጊዜ አገለገሉ	-----
108	ከሚከተሉት ዉስጥ የትኛዉን ስልጠና ወስደዋል (ከአንድ በላይ ምላሽ ይቻላል)	<p>1. ሰስተኛ ደረጃ የማዋለድ ሂደትን በፍጥነት ማከናወን</p> <p>2. መሰረታዊ እና ድንገተኛ የእናቶችና ጽንሰ እንክብካቤ</p> <p>3. አጠቃላይ እና ድንገተኛ የእናቶችና ጽንሰ እንክብካቤ</p> <p>4. ሁሉም</p>

109	ከወሊድ በኋላ የማህጸን መዳበስ (ማሳጅ) አከናወነው ያወቃሉ	1. አዎ 2. አላወቅም
110	ከወሊድ በኋላ የእንግዴ ልጅ ሙሉ በሙሉ መወጣቱን ሁል ጊዜ ያረጋግጣሉ	1. አዎ 2. አይደለም

ከጥያቄ 11 እስከ 16 ያሉትን ምላሾች በተሰጠው ሰንጠረዥ ውስጥ ይሆናል ያሉትን ተገቢውን ቁጥር ስር ምልክት ያድርጉ

ተራ ቁጥር	ተግባር	አልተገብረም	በአጋዥ እተገብራለሁ	ያለአጋዥ እተገብራለሁ
		1	2	3
111	ለድህረ ወሊድ ደም መፍሰስ ችግር የሚያጋልጡ ነገሮችን መለየት			
112	የድህረ ወሊድ ደም መፍሰስ ችግርን መለየት			
113	በሁለቱም እጅ ማህጸንን መጫን			

114	የተቀደደ ፕሪንፕሎን መስፋት			
115	ኢፒዙቶሚን መስፋት			
116	የቀረ የእንግዶ ልጅን በእጅ ማወጣት			

ክፍል ሶስት

የድህረወሊድ ድማት የመጀመሪያ ህክምና እርምጃ መጠይቆች

ተራ ቁጥር	መጠይቅ	ምላሽ
301.	ድህረ ወሊድ ድማት መከሰቱን እንዳወቁ ወዲያውኑ ምን ያደርጋሉ	1. በመጨረሻ የሁሉንም ባለሙያዎች እገዛ እጠይቃለሁ 2. መንስኤውን እፈልጋለሁ 3. ደሙን አቆማለሁ 4. ሌላ ካለ ይጥቀሱ.....
302.	አንዲት ሴት በወሲብ ብልታ በኩል በወለደች

	<p>በ24 ሰዓት ውስጥ ከመጠን ያለፈ ደም እየፈሰሰ ሲያጋጥመዎት እንደ መጀመሪያ ምላሽ ሰጭ ባለሙያ ለሴትዬ ምን ምን ህክምና እርዳታ ያደርጉላታል።</p> <p>እባክዎን ለሴትዬ የሚያደርጉላትን የህክምና እርዳታ በዝርዝር ይጻፉ</p>	
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ከፍል አራት

ተቀማዊ ችግሮች

እባክዎን ምላሽዎን በሰንተረገፍ ውስጥ ያስቀምጡ

		በጭራሽ	አልፎ አልፎ	ሁል ጊዜ
ተራ ቁጥር	ምክንያቶች	1	2	3
401.	የዩኒቨርሲቲ መድሃኒቶች አቅርቦት አለ			
402.	የዩኒቨርሲቲ መድሃኒቶች በተገቢው የሙቀት ይከማቻሉ			
403.	በሪፈራል ጊዜ ትራንስፖርት አለ			
404.	የባለሙያዎች የበሽተኛው ቁጥር ተመጣጣኝ ነው			

405	<p>ይህን ህክምና እርዳታ ሲያደርጉ እንቅፋት ይሆናል ብለዉ የሚያስቡት ነገር ካለ እባክዎትን ይዘርዝሩ</p>	<p>.....</p>
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