



**Addis Ababa University  
College of Health Sciences  
Department of Health Science Education**

**Educational Processes and Practices of Undergraduate  
Midwifery Clinical Teaching in Mekelle University**

**By: Azeb Tamrat (BSc, MPH)**

**May 2018**

**Addis Ababa, Ethiopia**

## DECLARATION

I, the signers hereby declare that this thesis entitled “Educational Processes and Practices of Undergraduate Midwifery Clinical Teaching in Mekelle University” is my own original work which has not been submitted anywhere, and that all source of materials used for the thesis have been duly acknowledge.

**Name of the student:** Azeb Tamrat Hailemeskel

**Signature** \_\_\_\_\_

**Date:** \_\_\_\_\_

This thesis represents the student’s owns work and effort has been submitted with my approval as advisor.

**Name of the advisor** \_\_\_\_\_

**Signature** \_\_\_\_\_

**Date:** \_\_\_\_\_

**APPROVED BY THE BOARD OF EXAMINATION**

This thesis by Azeb Tamrat is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of Masters of Health Science Education.

**Examiner:**

_____	_____	_____
Full Name	Rank	Signature and Date

**Advisor:**

_____	_____	_____
Full Name	Rank	Signature and Date

**ADDIS ABABA UNIVERSITY  
COLLEGE OF HEALTH SCIENCES  
DEPARTMENT OF HEALTH SCIENCE EDUCATION**

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**By: Azeb Tamrat (BSc, MPH)**

**This thesis is submitted to Addis Ababa University College of health sciences,  
for the Partial Fulfillment of the Requirements for the Degree of Master of  
Health Science Education Addis Ababa University, Health Science College**

**Advisors:**

- 1. Cynthia Whitehead (MD, PhD)**
- 2. David Rojas (MSc, PhD)**

**May 2018**

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## **ACKNOWLEDGMENT**

Above all I would like to express my gratitude to the almighty God. My sincere gratefulness goes to my research advisors, Cynthia Whitehead (MD, PhD) and David Rojas (MSc, PhD), all my instructors and classmates for their inputs and valuable suggestions on this thesis from the inception to the end. I would like to thank all data collectors; study participants whose contribution was vital to go through the data collection work; and Mekelle university department of midwifery education for their support given in each step. My heartily gratitude goes to my husband, Dr. Mekdim Tadesse, who encouraged and supported me all the way; families and friends who give me strength to keep going throughout the work.

## Table of Contents

<b>ACKNOWLEDGMENT .....</b>	<b>v</b>
<b>Table of Contents .....</b>	<b>vi</b>
<b>List of Tables .....</b>	<b>vii</b>
<b>List of Figures. ....</b>	<b>vii</b>
<b>Acronyms .....</b>	<b>viii</b>
<b>Abstract .....</b>	<b>ix</b>
<b>1. Introduction.....</b>	<b>1</b>
<b>2. Literature Review .....</b>	<b>4</b>
<b>3. Problem Statement.....</b>	<b>5</b>
<b>4. Theories.....</b>	<b>5</b>
<b>5. Objective of the study.....</b>	<b>6</b>
<b>6. Study Area/setting.....</b>	<b>6</b>
<b>7. Study Design.....</b>	<b>7</b>
<b>8. Study Population .....</b>	<b>7</b>
<b>9. Data Collection .....</b>	<b>7</b>
<b>10. Data Analysis Procedures .....</b>	<b>7</b>
<b>11. Variables.....</b>	<b>8</b>
<b>Independent Variables:.....</b>	<b>8</b>
<b>Dependent Variables:.....</b>	<b>8</b>
<b>12. Definition of Key Terms.....</b>	<b>9</b>
<b>13. Ethical Considerations.....</b>	<b>10</b>
<b>14. Dissemination of Results .....</b>	<b>10</b>
<b>15. Result .....</b>	<b>11</b>
<b>16. Discussion .....</b>	<b>21</b>
<b>16. Conclusion .....</b>	<b>24</b>
<b>17. Recommendation.....</b>	<b>24</b>
<b>18. Limitation of the study .....</b>	<b>25</b>
<b>Reference.....</b>	<b>26</b>
<b>ANNEX .....</b>	<b>27</b>
<b>I. Self-administered questioner for the final year midwifery students.....</b>	<b>27</b>
<b>II. Focus group discussion guide for midwifery faculty.....</b>	<b>30</b>

<u>List of Tables</u>	<u>Page No.</u>
Table 1. Clinical attachment site and logistics-----	18
Table 2. Number of students per unit-----	19
Table 3. Tutors company during clinical attachment-----	20
Table 4. Student-clinical tutor interaction-----	20

<u>List of Figures</u>	<u>Page No.</u>
Fig 1: Proportion of student participants by sex-----	17
Fig 2. Students rating for the general clinical teaching-----	21

## **Acronyms**

AAU	Addis Ababa University
ANC	Antenatal Care
BSc.	Bachelor of Science
CS	Cesarian Section
FGD	Focus Group Discussion
FP	Family Planning
ICM	International Confederation of Midwives
IUCD	Intra uterine contraceptive device
MCH	Maternal and Child Health
MOE	Ministry of Education
MOH	Ministry of Health
MOU	Memorandum of Understanding
MVA	Manual Vacuum Aspiration
PMTCT	Prevention of Mother to Child Transmition
TT	Tetanus Toxoid
TVET	Technical and Vocational Education and Training
WHO	World Health Organization

## Abstract

**Background:** Clinical practice experiences are critically important to achieve the maximum level of clinical competence after obtaining adequate theoretical and practical instructions. However, graduates have problems in doing some easy tasks. Most new bachelor graduates have adequate theoretical knowledge but lack competence in the clinical environment. The objective of this study was to study the educational process and practice of clinical teaching of undergraduate BSc. midwifery education at Mekelle university.

**Method:** Institutional based cross sectional study and qualitative exploratory design is conducted. Mixed method (qualitative and quantitative) data collection is implemented. The quantitative data is collected using structured questionnaire and the qualitative data is obtained from focus group discussion (FGD). Data is processed using SPSS statistical software, and descriptive analysis is made to describe the findings.

**Result:** 72.7% said there are enough number of cases available in affiliate clinical attachment sites; and 75.8% of them responded those health facilities are well equipped so that they can practice well. Around 70% of the respondents' said instructors company during the clinical attachment would help acquire better skill, 60% of the respondents said, their tutors relate the clinical teaching with theory (knowledge) and simulation teaching. More time is needed to be allocated in the curriculum for the skill teaching.

**Conclusion and recommendation:** This study revealed the value of effective clinical placement of students will enhance midwifery practice. The study participants preferred affiliation sites for exercising midwifery care practice. This can be explained as the proportion of clients per student is high due to minimal number of students that assigned at affiliate hospital/health center. Instructors company during the clinical attachment would help acquire better skill since they can relate the theory and practice. Availability of equipment and fulfilled infrastructure of the institution are the key element for improving clinical practice. There is a huge need to revise the curriculum in order to give emphasis to skill teaching and have enough time allocated for the skill teaching.

## 1. Introduction

Midwives are the frontline workers for maternal and neonatal health service provision. (1)

The national road map for Ethiopian midwifery education and service provision 2016-2025 draws upon this model, stating that midwives are key members of the health workforce who provide skilled attendance during pregnancy, child birth and the postnatal period. Midwives are anticipated to be able to provide 87% of the essential care for pregnant women and newborn babies. (2).

As of 2014, Ethiopia has an estimated 9457 midwives in 2014 (2). Midwife to population ration is reported to be 1:21,810, on “Success factors for women’s and children’s health, Ethiopia” whereas the WHO recommended midwife to population ratio is 1:5000, which shows the country needs many more additional number of midwives in the health system. In addition, it is important to consider the quality of midwives who will graduate and serve the community.

The midwifery professional categories in Ethiopia includes Midwife Level IV (having been admitted to midwifery educational at TVET level IV diploma program for three years), Midwifery Service Manager Level V (having been admitted to TVET level V program), Midwife professional (a practitioner who, having been admitted to BSc midwifery educational program), and Midwifery Professional Specialist (a practitioner who, having been admitted to a postgraduate educational program). (3)

Midwifery education in Ethiopia has started during 1954 as a post basic nursing course. The direct entry diploma and BSc midwifery programs were initiated in1998at Addis Ababa university (AAU) and 2008 at University of Gondar and AAU respectively. The Government of Ethiopia has rapidly expanded the training institutions that provide midwifery training. The number of public universities offering midwifery training increased from 2 in 2006 to 18 in 2012. Currently there are about 48 midwifery training institutions. 20 of these provide BSc level training while the rest 20 regional colleges are giving training at diploma level. (13)

The ICM defines a midwife as:

“A midwife is a person who has successfully completed a midwifery education program that is recognized in the country where it is located and that is based on the ICM Essential Competencies

for Basic Midwifery Practice and the framework of the Global Standards for Midwifery Education; who has acquired the requisite qualifications to be registered and/or legally licensed to practice midwifery and use the title ‘midwife’; and who demonstrates competency in the practice of midwifery.” (4)

Three types of undergraduate midwifery education programs were provided by Mekelle university midwifery department; undergraduate BSc (4 years’ generic program), post basic BSc and in-service programs. The department also provides two post graduate programs namely are masters in clinical midwifery and masters in midwifery education. (14)

The generic BSc midwifery program is 4 years’ full-time degree program in 251 ECTS or 152 credit hours. The program consists of 40% theory and 60% practice. Students are given opportunities to explore the physiological, pathological, social and psychological impact of pregnancy and child bearing, in conjunction with clinical placements. This allows students to apply theory to practice. The program is delivered through a mixture of clinical practice and academic study. (14)

The undergraduate BSc midwifery students are expected to complete the following activities during their clinical attachment before graduation under supervision: (5)

- Observe 10 and perform 50 Antenatal Care including history taking and physical examination
- Identify and care for 5 women with complications in the antenatal ward
- Observe 3 and provide 40 TT vaccines
- Observe 3 and conduct 5 ANC educations
- Observe 5 and perform 40 history taking of woman in labor
- Observe 5 and perform 40 physical examinations
- Observe 5 and perform 40 vaginal examinations
- Observe 5 and monitor 40 clients using partograph
- Observe 5 deliveries and conduct 40 normal deliveries
- Observe 3 and perform and repair 10 episiotomies

- Observe 3 and perform 5 vacuum extraction
- Observe 3 and perform 5 breech deliveries
- Observe 3 and perform 10 active managements of third stage of labor
- Observe 3 and perform 5 manual removal of retained placenta
- Observe 5 breech deliveries, manage 3 breech deliveries
- Assist at least 5 C/S
- Observe 3 and perform 10 New born resuscitation
- Perform 25 immediate new born care and examination
- Perform 25 post-natal care (Mother and Infant)
- Observe 2 and insert 4 IUCD
- Observe 2 implant and removal and 10 implant and removal of implants
- Observe 5 and perform 3 MVA
- Observe 5 and perform 5 ultrasound examination
- Observe 5 BCG, measles, and pentavalent of each & perform 20 BCG, 30 measles and 50 pentavalent
- Observe 5 and Counsel & provide 60 oral contraceptive pill
- Observe 5 and give 60 Injectable contraceptives
- Perform 5 Counseling about PMTCT

In order to have the above-mentioned skills and fulfill graduating criteria of the undergraduate midwifery curriculum, students should have placements in clinical settings where they can practice maternal and child health services. (6)

This study will examine the clinical teaching conditions and clinical placements of undergraduate midwifery students in order to identify factors contributing to students' clinical skill competency during their pre-service clinical attachment.

## **2. Literature Review**

Although an effective professional midwifery training program requires trainees to undergo a rigorous and comprehensive educational program with extensive time spent in clinical settings, the existing undergraduate midwifery program in Ethiopia places little emphasis on clinical skills development and clinical attachments. It has been shown that inadequacies in pre-service clinical education results in graduates with poor clinical competency and low confidence. (7)

From a study examining midwifery students' preservice competency assessment, the mean performance score was unsatisfactory. Most midwifery students at public training institutions in Ethiopia did not master the essential competencies for safe and effective practice.

A study conducted to assess how well pre-service education prepares midwives for practice looked at final year midwifery students from 25 public midwifery schools in Ethiopia. This study showed students' overall average competence scores to be only 51.8 %, and recommended the quality of preservice midwifery education needs improvement. (8)

Ghodsbin and Shafakhah described students' dissatisfaction with the staff- student rapport and the way of instructing the theoretical and practical courses as two obstacles in teaching clinical skills. They also highlighted some facilitating factors, such as instructors' practical and educational experience, the provision of an environment for students' to experience clinical skills, and a sense of responsibility among instructors. (9)

A study conducted by Rahmati Sharghi N, Alami A I showed that a lack of knowledgeable and professional educators, the use of traditional routine-oriented methods on the wards, insufficient time for performance based learning, and learnt theoretical subjects not coming into practice in clinical fields after graduation to be major problems in clinical placement. Based on this study, another important factor influencing the clinical competence was the educators' role. (10). A study also highlighted presence of interested and highly-experienced educators in the University of Medical Sciences as the most important strength of clinical teaching status. (11)

A study conducted at Monash University Victoria, Australia investigating theory-practice gap in undergraduate paramedic education, indicated that the clinical placement was not providing skills

practice appropriate for trainees' level of education or in consolidation with the theory they learned, while students were satisfied with the number of cases during placements and believed clinical placements sufficiently reinforced learning objectives. (12)

### **3. Problem Statement**

The midwifery training is a competency based training program, which requires ample clinical hands-on training in a clinical set-up. Many midwives graduate having attended limited number of laboring women (Fullerton et al., 2010) and some with minimal clinical experience in antepartum, family planning or newborn care. In addition, the assessment of student progress and readiness for practice may not be linked to the intended outcomes of learning and targeted clinical competencies (Lurie, 2012).

As a result, the overall average competency of graduating midwifery students' is found to be only 51.8 % (6). Since the undergraduate BSc program more focuses on practice/competency which is 40% theory and 60% practice (5), the assessment result doesn't seem satisfactory. In order to examine and identify factors that would contribute to the clinical skills competency of students, it is essential to study the educational process and practice of clinical teaching.

### **4. Theories**

Clinical teaching/practice will involve multiple theories.

- Skill acquisition takes place within the context in which it is to be applied is termed situated learning theory.
- Teachings/instructions systematically organized and coherently sequenced with well-defined objective and theoretical framework is related with cognitive load theory.
- The dynamics of interaction between students and teachers, students and staff, and students and patient /clients is going to be related with sociocultural theories.

## **5. Objective of the study**

### **General Objective:**

To study the educational process and practice of clinical teaching of undergraduate BSc. midwifery education at Mekelle university in 2018.

### **Specific Objectives**

- To assess the clinical teaching practice of undergraduate midwifery education.
- To explore the clinical teaching process of undergraduate midwifery education.

## **6. Study Area/setting**

Mekelle University health science college, department of Midwifery.

Mekelle University is found at the town of Mekelle in Tigray region of Northern Ethiopia, at a distance of 783 Kilometers from the Ethiopian capital Addis Ababa. The merger of the two former colleges: Mekelle Business College and Mekelle University College established the University in May 2000 by the Government of Ethiopia (Council of Ministers, Regulations No. 61/1999 of Article 3) as an autonomous higher education institution.

The university has 7 Colleges (with 43 departments), 9 Institutes (with 40 departments) and 10 Schools. Among the seven colleges is college of health sciences which has 2 schools, 5 departments and an institute. Midwifery department is one of the departments in Mekelle university college of health sciences which was launched since 2008 and it is one of the newly emerging departments in the university.

Three types of undergraduate midwifery education programs were provided by the department; undergraduate BSc (4 years' generic program), post basic BSc and in-service programs. The department also provides two post graduate programs namely are masters in clinical midwifery and masters in midwifery education.

The generic BSc midwifery program is 4 years' full-time degree program in 251 ECTS or 152 credit hours. The program consists of 40% theory and 60% practice. Students are given opportunities to explore the physiological, pathological, social and psychological impact of pregnancy and child bearing, in conjunction with clinical placements. This allows students to apply

theory to practice. The program is delivered through a mixture of clinical practice and academic study.

## **7. Study Design**

Institutional based cross sectional study is conducted. Mixed method (qualitative and quantitative) data collection is implemented using structured questionnaire and FGD. To validate the data collection tool, pretest has conducted.

## **8. Study Population**

Midwifery faculty who teaches core midwifery courses and undergraduate BSc midwifery final year students at Mekelle university are involved in the study. The study focuses on final year students because they have passed through different clinical assignments so that they have a lot of information about clinical teaching and clinical placement practice better than other students.

*Exclusion Criteria:* Faculty whose work experience is less than one year.

- The quantitative data is obtained from final year midwifery students through a structured questionnaire.
- FGDs is conducted to collect the qualitative data from the midwifery faculty members.

### **Sampling:**

- For the qualitative data collection, purposive sampling is used.
- For the quantitative data collection, all the final year undergraduate midwifery students who are volunteer has participated.

## **9. Data Collection**

Qualitative data is collected from midwifery faculty using FGD guide annexed in this document and the quantitative data is collected from final year undergraduate midwifery students using pretested structured questionnaire. The completed questionnaire is kept in safe and confidential place. The data collected is checked for completeness and consistency.

## **10. Data Analysis Procedures**

The quantitative data was collected using structured questioner computed using Statistical Package

for Social Sciences (SPSS) computer software. The quantitative data is tabulated for easy understanding and comparison. Qualitative data was collected using FGD conducted in English language, audio recorded and transcribed. The data was categorized into thematic areas manually and analyzed. Exemplary quotations were selected by the investigator. Descriptive analysis is made to describe the quantitative and qualitative data findings.

## **11.Variables**

### ***Independent Variables:***

- Age
- Sex
- number of students in the batch
- stay in the college (year of study)
- Clinical education objective
- Average number of patients for learning
- Clinical contact hour
- Availability and number of students from other disciplines
- Accompanying instructor type and clinical skill
- Distance of attachment site from the school
- Availability of transportation
- Availability of lodging
- Clinical staff readiness/willingness
- Students number attached per unit at a time
- Students clinical attendance
- Tutors attendance

### ***Dependent Variables:***

- Clinical teaching

## **12. Definition of Key Terms**

### **Midwifery student**

In this study midwifery student refers to a student who is undergoing a four-year integrated undergraduate BSc. program leading to registration as a midwife.

### **Midwifery**

Midwifery is the health science and health profession that deals with pregnancy, childbirth, and the postpartum period (including care of the newborn), besides sexual and reproductive health of women throughout their lives. (*Encyclopedia Britannica. Retrieved 5 February 2017*)

### **Midwife**

A midwife is a person who has successfully completed a midwifery education program that is duly recognized in the country where it is located and that is based on the ICM Essential Competencies for Basic Midwifery Practice and the framework of the ICM Global Standards for Midwifery Education; who has acquired the requisite qualifications to be registered and/or legally licensed to practice midwifery and use the title 'midwife'; and who demonstrates competency in the practice of midwifery. (ICM Definition of the Midwife - 2011.pdf)

### **Clinical teaching**

In this study clinical teaching is assumed to be any context in which the tutor/registered midwife, client/patient and student have face-to-face contact, and focuses on learning and teaching in order to produce competent professional midwives capable of providing midwifery care based on sound knowledge and decisions, practiced skills and professional values.

### **Clinical learning practice**

Clinical learning practice is the acquisition of knowledge, skills and values in the clinical practice setting or environments that stimulate clinical practice.

### **Mentorship**

Mentor is a qualified and experienced member of the practice placement staff who enters into a formal arrangement to provide education and personal support to a student throughout the period

of placement. This support may involve a range of functions including teaching, supervision, guidance, counselling, assessment and evaluation.

### **Clinical preceptor**

A preceptor is an experienced professional midwife within a clinical setting, who follows strict rules and protocol, and who acts as a role model and learning resource for students. The preceptor is there to ensure that students receive the maximum benefit from their clinical placement.

### **Affiliate sites**

A health facility that contracts with a university/college to provide clinical education for students.

## **13. Ethical Considerations**

Ethical clearance is obtained from AAU health professionals education office and the Mekelle university IRB. Purpose of the study is explained to the interviewee as well as the concerned officials. Informed consent is obtained from the study participants. The participants of the study are told they can refuse to continue or escape questions whenever they want, and confidentiality of the information that they give, is kept among the research assistant and the investigator. Privacy is maintained.

## **14. Dissemination of Results**

After the research report is produced and defended, the results will be availed to the Addis Ababa University School of health sciences, department of health professional education.

In order to increase its usability, abstracts will be sent to the Ethiopian Federal Ministry of Education and Federal Ministry of Health, Mekelle university and other universities who are currently providing undergraduate BSc midwifery program in Ethiopia

## 15.Result

### Quantitative Result

Thirty-three final year regular undergraduate BSc. midwifery students of Mekelle University were interviewed. Among the 33 students interviewed, 72.7% (24) are female and the rest are male.

The respondents were categorized into three age groups. The survey finding indicates that the majority of the respondents, 84.8 percent are aged 20-24 years, and the rest 15.2 percent are above 24 years of age.

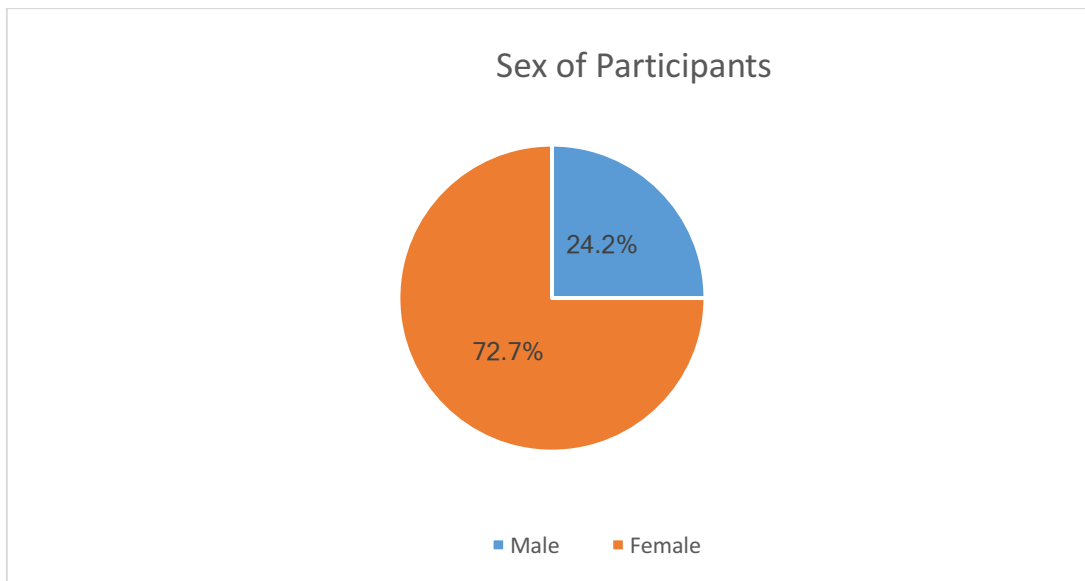


Fig 1: Proportion of student participants by sex

### **Course Syllabus**

The students were asked if they have been provided course syllabus of each course and if the course syllabus includes clinical teaching schedule. 66.7 percent of them replied they have provided course syllabus for all the courses they have learned and among them 66.7 percent said the time allocated for the clinical placement is clearly stated. Around 70 percent of the respondents said objectives are stated on the course syllabus. 67.9 percent of them also said the teaching learning process stick to the schedule provided.

### Clinical attachment sites

42.4 percent of the students said affiliate sites are better clinical sites to learn, 18.2 said it is the teaching hospital (the university hospital) and 21.2 percent of them rated both facilities are equally good. 48% of the students responded their attendance in the clinical attachment site is very good whereas 18.2% replied is not good. According to the students' response, among the clinical attachment sites, 75.8 % of them are out of the same city their college is located. For the question asked about adequacy of transportation service the college arranged to and from clinical teaching sites and the timeliness, 72.7 percent respond there is enough transportation service during their clinical attachment period and it takes and brings them back timely. During their stay in the clinical attachment sites 30.3% of the students bring lunch box, 9.1% travel back to their dormitory/home, 45.5% use pocket money for their lunch.

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Clinical attachment site</b>		
Teaching hospital	5	15.2
Other affiliation sites	9	27.3
Both	13	39.4
None	6	18.2
<b>Good practice site</b>		
The university hospital	6	18.2
Other affiliation sites	14	42.4
Both	7	21.2
None	6	18.2
<b>Enough transportation to clinical sites</b>		
Yes	24	72.7
No	9	27.3
<b>Transportation service available on time</b>		
Yes	24	72.7
No	8	24.2
<b>Cafeteria /Lunch service</b>		
Take a lunch box with us	10	30.3
Travel back	3	9.1
Pocket money	15	45.5
Other	5	15.2

Table 1: Clinical attachment site and logistics

Majority of the respondents (72.7%) said there are enough number of cases available in clinical attachment sites; and 75.8% of them responded those health facilities are well equipped so that they can practice well.

### Number of students per unit

For the question regarding the average number of students assigned in one unit, 57.6% responded 5-8, 27.3% responded 8-12 and 12.1% responded 1-4. The ideal number of students per unit suggested 5-8 is 51.5%, 1-4, 30.3%, 8-12 15.2%.

Variables	Frequency	Percentage
<b>Average # of students assigned per unit</b>		
1-4	4	12.1
5-8	19	57.6
8-12	9	27.3
>12	1	3.0
<b>Suggested ideal # of students per unit</b>		
1-4	10	30.3
5-8	17	51.5
8-12	5	15.2
>12	1	3.0

Table 2: Number of students per unit

### Clinical Instructors

The students rated their instructor's clinical skill as very good 21.2%, good 30.3%, fair 21.2%, and not good 27.3%. They also rated the instructors interest in clinical skill teaching; 42.4% good, 27.3% very good, whereas 15.2 % said their interest is not good.

Around 70% of the respondents' said instructors company during the clinical attachment would help acquire better skill. In addition, 60% of the respondents said, their tutors relate the clinical teaching with theory (knowledge) and simulation teaching.

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Tutors company during clinical practice</b>		
Yes	21	63.6
No	12	36.4
<b>Tutors attendance during clinical practice</b>		
Yes	12	36.4
No	12	36.4
Not always	8	24.2
Not all of them	1	3.0
<b>Tutors interest in clinical teaching</b>		
Very good	9	27.3
Good	14	42.4
Fair	5	15.2
Not good	5	15.2
<b>Tutors clinical skill</b>		
Very good	7	21.2
Good	10	30.3
Fair	7	21.2
Not good	9	27.3

Table 3: Tutors company during clinical attachment

The interaction between students and clinical tutors is expressed by the students in the following table.

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Student-clinical tutor interaction</b>		
Very good	12	36.4
good	14	42.4
Fair	3	9.1
Not good	4	12.1

Table 4: Student-clinical tutor interaction

They rated the general clinical learning as 51.5% very good, 30.3% good, 6.1% fair and 12.1 not good.

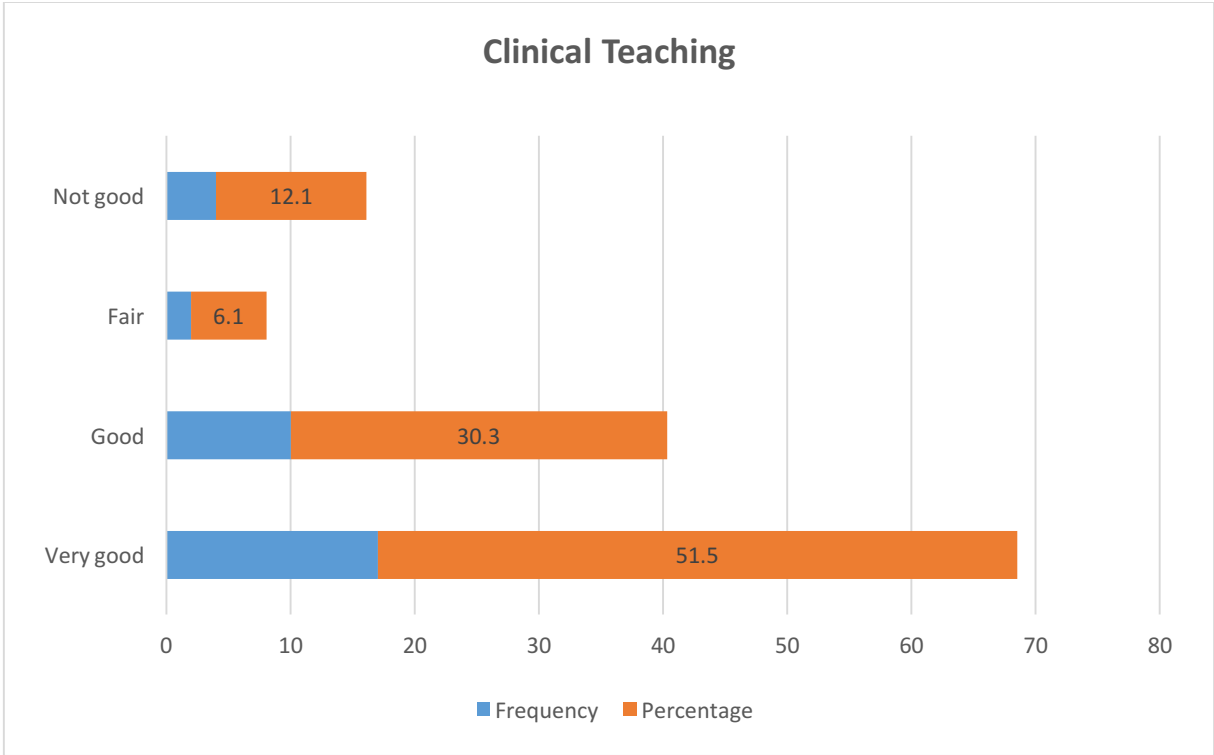


Fig 1: Students rating for the general clinical teaching

**Qualitative Result**

**Curriculum**

Most of the respondents say they only know part of the curriculum, which is the course they are teaching. They mentioned an example that the curriculum doesn't include all the competencies midwives have to know and it needs revision to include those competencies. Those who responded they know the curriculum very well said the curriculum has lots of gaps and highlighted that *“as the name of the curriculum implies it is harmonized modular curriculum but there is no module prepared for the courses and availed for our students”*.

They said majority of the time of the first and second year of the study is allocated for common course rather than midwifery core courses. So the curriculum needs revision to amend the time for core courses.

According to the information obtained from the instructors, it is clearly stated in the curriculum 70% of the time should be allocated for the skill teaching whereas 30% should be the theory. Practically due to different factors like overcrowding of simulation center or overlapping of schedule and other factors, it is not well organized and well done, they mostly focus on theory. Additionally, the curriculum being semester based rather than being year based is mentioned another challenge for practice. The curriculum is semester based except the fourth year; but the second and third years are the most intensive period for the midwifery students to take their major courses or professional courses.

Then for example, they start their clinical practice at the end of the first semester. Most of the time there is rescheduling of the final exam in the first semester or in the second semester then always it becomes compromised.

*“If it is year based the students might stay up to June July until the department or course instructor believes all the students completed the theoretical as well as practical teachings. But the semester based academic calendar is prepared by the university Senat which is one calendar for all you should have to obey, regardless the course is completed or not, you cannot compromise the calendar even for one day.”*

The other challenge mentioned regarding the curriculum is there are some missed clinical teaching parts.

*“For example, there is family planning course which is a three credit hour course, one of the core competencies for midwives; but the curriculum considers only the theoretical part. Clinical attachment for family planning is not considered in the curriculum. The students will get the chance to practice FP only during their internship. Even during internship, the students will be attached in five MCH for two weeks which is a very short period for students to exercise on all of those.”*

### **Course syllabus**

They said, since this two year they prepare course syllabus which contains objective, list of topics, allocated time for theory as well as skill teaching, and the assessment methods and schedule. We made each instructor submit her/his course syllabus to the unit leader or department.

*“The course teacher will dedicate some time for the skill demonstration on the course syllabus, which is not specified in the curriculum, that varies from instructor to instructor, and if possible time will be allocated for remonstrations. Most of the time students do the re-demonstration during weekends and sometimes evening by themselves and with the help of skill lab assistants”.*

### **Process of clinical teaching**

Depending on the type of course whether it needs demonstration and simulation teaching or not, it is the teacher who will assign time based on the time he/she finishes the theoretical teaching and his judgment for the amount of time needed for the demonstration and skill lab teaching. Usually, the time allocated for demonstration and skill teaching is very small. Then after finishing the classroom teaching they will go out for clinical attachment.

While they describe the process they follow in clinical teaching, most of the time immediately following completion of theoretical part of the course, students will start their clinical attachment. What they said they are doing is, prepare schedule for the clinical practice, group students based on their theoretical/class room participation so that each group will contain active (high performing), average and inactive (low performing) students because they are going to apply the theoretical knowledge to practice and need to learn and help each other. But as the time allocated for theory and skill lab teaching is small and doesn't much with the content to be covered, they explained it as

*“we assign students to practical attachment sites may be for two or three days because of shortage of time; according to the curriculum we have to assign them for one or two weeks for practice for particular course or competency”.*

They mentioned they will give orientation for the students on what is expected of them practically and ethically.

They said they do site assessment once before site selection, and signed MOU between the university and the facility if chosen. Two weeks before sending students they will notify the health facility management and staff to be prepared, secure their lodging and the necessary logistics and assure safety as much as possible. They also mentioned the facilities are well equipped to teach their students.

*“During the site selection we explain every detail on the purpose of the clinical attachment, the level of students we are going to send, what do we need from the facility and what we will contribute to the facility and to the staff.”*

### **Clinical Attachment sites**

There is teaching hospital and four health centers in Mekelle town where midwifery students go for clinical attachment. They said it is long time practice of the university to use the university/teaching hospital and the other hospital (Mekelle Hospital) in the town, but from time to time number of students who use the hospitals increases and now it is becoming very difficult for the students to practice in these facilities even to observe any procedure from distance.

The department of midwifery education made survey on graduating students using simple questionnaire to assess whether they perform basic midwifery procedures, like manual removal of placenta, vacuum extraction, neonatal resuscitation, etc during their attachments or not. The questions were simple yes/no questions and majority of them answered “No”. That means they are graduating without performing such procedures. They present the survey result to the college dean to realize the students are not getting the chance to observe and perform procedures because there are huge number students come to the hospitals from different disciplines to practice. They recommend to allow them use health facilities (hospitals) out of the city which have adequate number of cases to teach their students.

Starting from last year, they said they start assigning students to four affiliate hospitals out of Mekelle town, which they mentioned are very much effective.

*“If you have the chance to talk to the students, they are very happy about their clinical practice in the affiliate sites out of Mekelle. For example, we have witnessed that one student conducted 23 deliveries independently while attaching in these sites.”*

They said, before they start assigning their students to those affiliate sites out of Mekelle town, there were difficult instances for a student to get a chance to conduct a single delivery.

### **Clinical teachers**

The faculty members do not stay the whole clinical attachment period with the students due to budget shortage for their lodging and periderm. They assign two faculty members as a supervisor to visit each site every two weeks with the assumption the students will present cases, discuss their difficulties and challenges to the supervisors, and they will teach/clarify from their experience, knowledge, skill and relating to their theory class.

*“Let alone to assign our faculty to stay with the students for the whole attachment period, due to budget issues for fuel and shortage of vehicles, the college will not allow us to use vehicles every two weeks and we will be obliged to make our supervision every month”.*

For the clinical teaching, since the faculty will not stay all the time with the students, they said they will assign preceptor who will strictly follow their performance, assist their learning, do every supervisory activity and will report to the responsible faculty. They said there is an agreement, in the signed MOU, to assign appropriate preceptor to teach and follow the students. They will discuss with the identified preceptor on their role.

*“The facility management will identify potential preceptors. Most of them have good clinical skill but they have gaps in the mentoring and evaluation. So, we give them some orientation on how they mentor and evaluate students’ performance”.*

They mentioned their department is planning to conduct on site mentoring and, skill and knowledge update workshop for potential preceptor of those health facilities which will improve their mentorship and evaluation capacity.

*“The budget issue arises due to no enough budget is allocated for clinical practice I think it may arise from the perception of the management. Using affiliate site for clinical attachment is new for our university which started last year; so they don't have the experience and they don't know the challenge we have facing. We will try to convince the management to assign budget for next years”.*

### **Clinical Site Challenges**

Most of the challenges we faced are in the teaching hospitals. Even if there is enough case load for students to lean, the teaching hospitals are overcrowded by lots of undergraduate and postgraduate students.

Most of the clinical skills will be practiced during their internship time. For each course which needs clinical practice the average attachment time will be two weeks. During this two weeks, all of the students should practice each procedure and so, each student stay per unit will be 2-3 days.

*“Since we started to use the affiliate sites for our students, we able our students get the chance to observe and practice much better. But, still it is not enough.”*

*“In Ayder hospital (our teaching hospital), we are facing great challenges to teach our students due to inter professional competition on patients. Priority is given to medical students and residents. Let alone our students we ourselves don't have equal right to claim to teach our students in the wards like the medical students. The other big problem is also because we don't practice as service providers in the hospitals.”*

The number of students assigned in a unit depends on the unit they are going. In some units the number will be higher for example, there may be only one room/unit that actual procedure will be provided/done. In the new affiliate sites, since there are no other students competing for cases and the number of students is not that high, on average three to our students per unit will be assigned. But in the teaching hospitals the number of students per unit they assign will be as high as 8; there may also are another students from other schools or departments assigned there.

### **Recommendation to improve clinical teaching**

In order to solve the clinical teaching problem to the maximum, they suggested integration of service and teaching will be one of the solutions;

*“we can be good role models for our students and can teach skill relating to the theory we have taught them. When students see you practice as service provider, their attitude towards the profession will also be very positive. If our faculty can be service provider in the teaching hospitals, we can better teach our students in those facilities with full right too”.*

They gave more emphases on the need for curriculum revision. They suggested if the curriculum be year based for all batches, improve the time allocated for core courses and skill teaching, prepare module for each course and if the assessment concentrates on competency assessment.

*“To improve the clinical teaching, the other perspective is before we send our students to clinical practice, they have to be thought skills in a simulation centers and at least know the procedures. So we need also have to give emphasis to demonstration and skill lab teaching. Here also the curriculum must be revised and it must consider skill teaching and allocate enough time”.*

To continue using existing affiliation site and probably add some, by solving the existing budgetary challenge will improve clinical teaching.

*“If we compare the exposure of students in teaching hospitals and other hospitals, their exposure to even see a single procedure has a great variation. In affiliate hospitals our students are getting very well exposed and can practice better”.*

## **16. Discussion**

Midwifery instructors highlighted that, it is clearly stated in the curriculum that 70% of the time should be allocated for the skill teaching whereas 30% should be the theory. A study made by Sharon Kibwana, 2107, also mentioned that several instructors specified that the ideal time ratio of theoretical to practical learning was 70%:30%, but most felt that there was insufficient time for practical skill building. (14)

In a previous study (Sharon Kibwana, 2107) midwifery informants were concerned that core

coursework was delayed until the third and fourth year of training, too late to build competence during clinical rotations. In the same manner this study also prevailed, the time of the first and second year of the study is allocated for common course rather than midwifery core courses. It is also highlighted curriculum needs revision to amend the time for core courses. (14)

In this study it is mentioned that the national curriculum they are using as the name of the curriculum implies it is harmonized modular curriculum but there is no module prepared for the courses and availed for students. Similar idea was reflected from a study that Numerous instructors (12 of 29, 41%) stated doubt about the new modular curriculum gradually being adopted nationwide, saying it lacks clear guidelines, overlooks important skills, requires additional time, and is not supported with appropriate materials, (14)

66.7 percent of students replied they have provided course syllabus for all the courses they have learned and among them 66.7 percent said the time allocated for the clinical placement is clearly stated. Around 70 percent of the them said objectives are stated on the course syllabus. 67.9 percent of them also said the teaching learning process stick to the schedule provided. Unlike this study, on a study made in South Africa, learning objectives were available in the units but were not being effectively utilized as indicated by 46 %( n=23) respondents. (15)

Adequate skills lab experience prior to clinical rotations builds student confidence and capacity to handle difficult cases (16). Multiple complaints were obtained from study informants about deficient infrastructure, equipment and skills labs highlight a priority area for improvement. Access to existing skills labs could be expanded either by hiring more skills lab assistants or appointing student volunteers to provide supervision during evenings or weekends (14). This study also identified similar concept and experience. In the study, since the time allocated for skill teaching is not adequate, simulation teaching and remonstration becomes compromised. As a solution, the made an arrangement so that students do the re-demonstration in in a simulation lab during weekends and sometimes evening by themselves and with the help of skill assistants.

Simulation training has been associated with marked improvements in knowledge, skills, and

clinical performance of health workers, as well as moderate improvement in patient-related outcomes (15). The midwife instructors participated in this study also highlighted students have to be thought skills in a simulation centers and at least know the procedures, emphasis should be given to demonstration and skill lab teaching by allocate enough time.

A study indicated that welcome and orientation programs were available in the unit, but the actual orientation was only partially done, as 34% of the respondents agreed that it was being done and 54% said it was not being done. In this study, even if the response was obtained from the tutors, not from the students, they mentioned they will give orientation for the students on what is expected of them practically and ethically during their stay in the clinical attachment site. (15)

A study revealed that the tutors visited the students in the clinical area mainly during formative assessment as compared to clinical accompaniment. Likewise, participants of this study have forwarded their challenge that faculty members do not stay the whole clinical attachment period with the students due to budget shortage for their lodging and expense. They assign two faculty members as a supervisor to visit each site every two weeks with the assumption the students will present cases, discuss their difficulties and challenges to the supervisors, and they will teach/clarify from their experience, knowledge, skill and relating to their theory class. (15)

The working relationship between the students and the registered nurses in midwifery units is imprecise as 54% (n=27) disagreed that there was a good working relationship between the RN and the students. In this study, interaction of clinical tutors with the students is expressed by the students as good (42.4%), very good (36.4%), 12.1% rated it as not good. This study implies there is better interaction of students and clinical tutors. (15)

In a previous study done by Lekhuleni et al. (2004:80), a discrepancy was observed with regard to theory and practice integration – because the tutors were not doing accompaniment the situation appeared to be improved. This study obtained somehow similar impression from midwifery instructors. In order to solve the clinical teaching problem to the maximum, they suggested integration of service and teaching will be one of the solutions. In Ethiopia, the midwifery instructors (faculty members) are not providing service. (17)

Half of the programs (14 of 29 programs, 48%) reported transportation challenges (cost and logistics) in assigning students to institutions where there are adequate cases (14). In this study transportation is not mentioned as a challenge for students. 72.7% of the students said there is enough transportation service. The transportation challenge they have is for the tutors.

## **16. Conclusion**

This study tries to explore the process and practice of clinical teaching in undergraduate midwifery education and making recommendations to improve clinical teaching.

- Affiliate clinical attachment sites which are out of town are better clinical teaching sites since there are enough number of cases available and the facilities are not crowded by students and are well equipped so that they can practice well.
- Instructors company during the clinical attachment would help acquire better skill, their tutors relate the clinical teaching with theory (knowledge) and simulation teaching.
- The curriculum has gap in allocating appropriate time for skill teaching.
- Emphasis is not given for simulation teaching

## **17. Recommendation**

- Solve the logistic and finance problem which hinder to use better clinical sites and teachers company
- Maximizing the number of clinical attachment sites for students' attachment.
- Curriculum revision is needed to allocate adequate time to clinical skill practice and core courses.
- Emphasis should be given to simulation teaching. To improve the clinical teaching, students should be taught skill in a simulation centers before going to clinical practice

### **18.Limitation of the study**

The study was conducted to one university, and therefore the findings may not be generalized to the other university. The study focused on the experiences of the students and tutors (faculty) only. It would have been better to include clinical mentors/preceptors to get their views.

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ANNEX

I. Self-administered questioner for the final year midwifery students

Q. No	Questions	Response	Skip
<b>Demographic Data</b>			
1.	Age	1. <18 yrs. 2. 18-22 yrs. 3. 22-25 yrs. 4. >25 yrs.	
2.	Sex	1. Male 2. Female	
<b>Curriculum/lesion plan/course syllabus questions</b>			
3.	Have you been provided course syllabus of each course you have learned so far which includes clinical placement schedule?	1. Yes 2. No	
4.	If yes, is the time allocated for clinical practice stated clearly?	1. Yes 2. No	
5.	Do you stick to the schedule?	1. Yes 2. No	
6.	Have you been provided with the objective/what is expected from you/ of each attachment?	1. Yes 2. No	
<b>Infrastructure and logistics</b>			
7.	Where do you go/attach for the clinical practice?	1. The university hospital 2. Other affiliation sites 3. Both 4. None	
8.	Which attachment site is good learning site?	1. The university hospital 2. Other affiliation sites 3. Both	
4.	How do you rate your attendance to the clinical/ practice site?	1. Very good 2. Good 3. Fair 4. Not good	
5.	Are clinical attachments sites with in the city?	1. Yes 2. No	
6.	Do you use transportation service to go to those facilities?	3. Yes 4. No	If no, skip to Q # 11
7.	If yes, does the institute avail transportation service for the students?	1. Yes 2. No	

8.	Is the available transport service enough?	1. Yes 2. No	
9.	Is the available transport come on time ?	1. Yes 2. No	
10.	How do you manage the cafeteria service while you are assigned to clinical places outside your campus?	1. Take a lunch box with us 2. Travel back 3. Pocket money 4. Other	
<b>Clinical Attachment</b>			
11.	What is the average number of students assigned in a single unit?	1. 1-4 2. 5-8 3. 8-12 4. >12	
12.	Do most the units accommodate the assigned number of students?	1. Yes 2. No	
13.	What do you think is the ideal number of students per unit?	1. 1-4 2. 5-8 3. 8-12 4. >12	
14.	Do your tutors accompany you during the clinical placement?	1. Yes 2. No	
15.	If yes, do they stay with you all the time and teach you?	1. Yes 2. No 3. Not always 4. Not all of them	
16.	If yes, how do you rate your tutors clinical skill?	1. Very good 2. Good 3. Fair 4. Not good	
17.	How do you rate the instructors interest to teach you in the clinical site?	1. Very good 2. Good 3. Fair 4. Not good	
18.	Do you think it is helpful if your tutors accompany you during your clinical practice?	1. Yes 2. No 3. Has no difference	
19.	If no, who will be responsible to teach you there?	1. Preceptors 2. Clinical Staff 3. No body	
20.	If your answer is 1 or 2, do they teach you as you have taught in theory and skills lab?	1. Yes 2. No	
21.	How is the interaction between you and your clinical tutors?	1. Very good 2. Good 3. Fair	

		4. Not good	
22.	Do you get enough number of cases to learn during your attachment?	1. Yes 2. No	
23.	If no, what action has been taken?	1. Assigned in other place where case load is high 2. Reduce number of students per attachment 3. None	
24.	Are the attachment places well equipped so that students can learn enough?	1. Yes 2. No	
25.	How do you rate your learning from the clinical placement?	1. Very good 2. Good 3. Fair 4. Not good	

**Thank you for your cooperation!**

## II. Focus group discussion guide for midwifery faculty

Greetings! I am \_\_\_\_\_. I am going to lead this discussion to look at current situation of undergraduate midwifery skill teaching in your institution with emphasis on the clinical placement. I will request for your experience and what should be done to provide a better midwifery clinical skill training. The information we get will be used to improve midwifery training in this institution.

Please be informed that there are no right or wrong responses or answers to the questions I will raise. Feel free to give any response to any of the issues/questions during our discussion.

Please do not feel offended when I interrupt or ask for any clarification or more information when you are responding.

I will also be audio-recording this conversation so I can capture every point we discuss.

Date: \_\_\_/\_\_\_/\_\_\_\_\_ Participant # \_\_\_\_\_

Year of Service in the institute as a faculty:

Educational Background:

University where discussion occurred: \_\_\_\_\_

1. How well do you know the undergraduate midwifery curriculum?
2. How much time is allocated for skill teaching in the curriculum?
3. What do they think about the amount of time allocated for clinical placement?
4. Can you describe the elements of your course syllabus? (Discuss if it contains the period and time allocated for clinical placement)
5. Can you tell the process/procedure of clinical assignment? How do you prepare the schedule?
6. When does (time and year) your students start to be assigned to clinical areas? Why? Who make that decision?
7. Where do you send your students for the clinical practice?
  - a. How far are the facilities?
  - b. How do you manage the logistic issue if it is far or out of the university hospital?
8. Do you do regular assessment of the attachment sites before you send your students?
9. How many students will be assigned to one unit at a time? Do you have any standard?
10. Do you have an orientation for the students before assignment?
11. Do you accompany them during their clinical placement?
12. What is your role? (Clarify if tutors teach students by giving service/ doing procedures in the clinical area)

13. How do you monitor the students learning from the clinical placement? Who will be in charge to monitor?
14. How is your interaction with the students and the clinical staff?
15. Is there any challenge regarding the clinical placement you have faced?
16. Do the students get enough cases to learn? What is your action if the number of cases is low?
17. What do you suggest is best for the maximum utilization of clinical placement and teaching?

### III. CONSENT STATEMENT

#### **Introduction:**

This study will be conducted as partial fulfillment of MSc in Health science education.

I am very grateful for your willingness and cooperation to participate on the study; will appreciate your giving genuine data. No need to write name, so that we will not be identified. Confidentiality will be guaranteed.

Thank you for agreeing to talk to me today. As part of a research study, we're interviewing clients at this Health Center to learn more about your background characteristics, knowledge of family planning methods, whether you use a family planning method and how you make your contraceptive preferences. The information you share with us will be helpful to increase and sustain access, demand and utilization of high quality post abortion contraceptive services offered by the Public Health Facilities.

Confidentiality and consent: "I'm going to ask you some personal questions related to contraceptive use and abortion. There is not necessarily any right or wrong answer. I would like to ask you share your views as freely and completely as possible.

We will protect the confidentiality of your responses to the best of our ability. Your name will not be written on this form and will never be used in connection with any of the information you tell me.

This interview is voluntary. Your decision on whether or not to participate in the interview will not affect the health care you receive at this facility. You do not have to answer any questions that you do not want to answer, and you may end this interview at any time you want to.

However, your honest answers to these questions will help us improve our understanding of the problem/gap on the services. We would greatly appreciate your participation in this interview. It will take about 10-15 minutes.

Would you be willing to participate in this interview? If yes, continue with the interview otherwise stop here.

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(Signature of interviewer certifying that informed consent had been given verbally by respondent).