



**COLLEGE OF HEALTH SCIENCE**

**SCHOOL OF NURSING AND MIDWIFERY**

**DEPARTMENT OF MIDWIFERY**

**SEXUAL VIOLENCE DURING CLINICAL PRACTICE: PREVALENCE AND ASSOCIATED FACTORS AMONG GRADUATING HEALTH SCIENCE STUDENTS, ADDIS ABABA, ETHIOPIA: A CROSS-SECTIONAL STUDY, 2025.**

**BY- MAHELET GIZAW (BSc MIDWIFERY) – GSR 3513/16**

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

**JUNE, 2025 G.C**

**ADDIS ABABA, ETHIOPIA**

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

<b>Principal investigator</b>	<p><b>MW. Mahlet Gizaw (BSc midwifery)</b></p> <p>Telephone Number +251910813527,</p> <p>Email- <a href="mailto:maheletgizaw4@gmail.com">maheletgizaw4@gmail.com</a></p> <p>Adress- Addis Ababa, Yeka Sub-City / Woreda 02</p>
<b>Full title</b>	<p><b>Sexual Violence During Clinical Practice: Prevalence and Associated Factors Among Graduating Health Science Students, Addis Ababa, Ethiopia, 2025</b></p>
<b>Study design</b>	<p><b>A Cross-Sectional Study</b></p>
<b>Duration of study</b>	<p><b>March 2025 - May 2025</b></p>
<b>Study Area</b>	<p><b>Governmental Teaching Hospitals.</b></p>
<b>Proposal Total cost</b>	<p><b>37,000 Ethiopian Birr</b></p>
<b>Name of Advisor(s)</b>	<p><b>Jembere Tesfaye, (MSc, Assistance prof.)</b></p> <p>Telephone Number +251912782147</p> <p>Email- <a href="mailto:jembere.tesfaye@aaau.edu.et">jembere.tesfaye@aaau.edu.et</a></p> <p><b>Yeshi Berhan, Lecturer (MSc, NN)</b></p> <p>Telephone Number +251993933411</p> <p>Email- <a href="mailto:yeshiworkberhan@gmail.com">yeshiworkberhan@gmail.com</a></p>

JUNE, 2025 GC

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

**APPROVAL BY THE BOARD OF EXAMINATION**

I, the undersigned MSc student, hereby declare that I have submitted my original thesis entitled: "Sexual Violence During Clinical Practice: Prevalence and Associated Factors Among Graduating Health Science Students, Addis Ababa, Ethiopia, 2025" for examination in partial fulfillment of the requirements for the degree of Master of Science.

Name of Student: Mahelet Gizaw (BSc in Midwifery)

Signature: \_\_\_\_\_

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

**Advisors' Approval:**

Name of Major Advisor: Mr. Jembere Tesfaye (MSc, Assistant Professor)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name of Co-Advisor: Mrs. Yeshe Berhan (MSc, NN, Lecturer)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Examiner's Approval:**

Name of Internal Examiner: Ms. Haweni Adugna (MSc, Assistant Professor)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Department Head of Nursing and Midwifery**

Name: Dr. Semariya Barihe (PhD, Assistant Professor)

Signature: \_\_\_\_\_

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

## **Statement of Declaration**

I, Mahelet Gizaw, hereby declare that this thesis, titled "Sexual Violence during Clinical Practice: Prevalence and Associated Factors among Graduating Health Science Students, Addis Ababa, Ethiopia, 2025," is my original work. It has been submitted in partial fulfillment of the requirements for the Master of Science in Maternity and Reproductive Health Nursing at Addis Ababa University.

This research was conducted following the academic and ethical standards established by Addis Ababa University. The data collection, analysis, and interpretation were carried out with diligence to ensure accuracy and reliability. All sources of information and references have been properly acknowledged, and any assistance received throughout this study has been duly credited.

I affirm that no portion of this thesis has been submitted for any academic qualification or degree at any institution. The findings and conclusions presented are based on rigorous investigation and genuine analysis of primary data. I take full responsibility for the content and uphold the highest standards of academic integrity and ethical research.

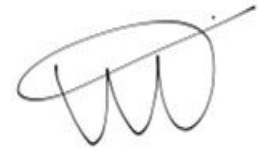
---

Mahelet Gizaw Miteke  
Reproductive Health Nursing  
Addis Ababa University Date  
June 2025

## **Statement of the Author**

I, Mahelet Gizaw, affirm that the research presented in this thesis, entitled: “Sexual Violence During Clinical Practice: Prevalence and Associated Factors Among Graduating Health Science Students, Addis Ababa, Ethiopia, 2025” is my own original work, carried out under the guidance of my supervisor. All sources of information and references have been properly acknowledged. This thesis has not been submitted, either in whole or in part, for any academic award or degree at any other institution.

I take full responsibility for the content, authenticity, and accuracy of this work.



---

Mahelet Gizaw Miteke

June 2025

## **Dedication**

First and foremost, I offer this work to Almighty God, for granting me the strength, health, and wisdom to complete this academic journey.

This thesis is respectfully devoted to my esteemed mother, Ms. Gulte Legesse, whose unwavering guidance and support have been invaluable throughout this process. I also honor my sister, Dagmawit Gizaw and her husband, Mengestu Kassahun, for their continuous encouragement and steadfast support.

I am profoundly grateful to my husband, Yosef Teshale, for his unwavering commitment and understanding, which have been essential to the successful completion of this work. To my strong and inspiring daughters, Rebecca and Marvel, I tribute this achievement as a symbol of perseverance and hope.

Finally, I express my sincere gratitude to Dr. Abdela Feyisa, Head of Administration at Ethio-Tebib General Hospital, and his family, for granting me the opportunity to learn and work simultaneously. Their support has been instrumental in facilitating this academic endeavour.

For all the women who work, get educated and be a mom.

## **Acknowledgments**

I would like to sincerely thank the following individuals and institutions for their invaluable support and contributions:

- Department of Midwifery, School of Nursing and Midwifery, Addis Ababa University for academic support beyond that for understanding me.
- Mr. Jembere Tesfaye (MSc, Assistant Professor) Academic Adviser
- Mrs. Yeshi Berhan (MSc, NN, Lecturer) Academic Adviser
- Yekatit Hospital Research Department for granting research permission
- Ms. Miraf Demise from Yekatit 12 Hospital data collectors
- Mr. Degafe Tsegaye from Yekatit 12 Hospital research department for fast response and advising me on how to track students.
- Black Lion Hospital Research Department for granting research permission
- Mr. Belachew and Beza from Tikur Anbessa (Black Lion) Hospital data collector
- All graduating health science students for participating in the study
- My classmates for believing in me and supporting me when I needed them most

Your support has been instrumental in the successful completion of this research. Thank you all.

## **Abbreviations and Acronyms**

**AA** – Addis Ababa

**AAU** – Addis Ababa University

**ANA** – American Nursing Association

**CAN** – Canadian Nursing Association

**CI** – Confidence Interval

**CSA** – Central Statistical Agency

**EDHS** – Ethiopian Demographic and Health Survey

**EHAIA** – Ethiopian Health and Institution Administrative Authority

**Epi Info** – Epidemiological Information

**ETB** – Ethiopian Birr

**FGD** – Focus Group Discussion

**GC** – Gregorian Calendar

**HIV** – Human Immunodeficiency Virus

**IRC** – Institutional Ethical Review Committee

**KM** – Kilometer

**MD** – Moral Distress

**MDS-R** – Moral Distress Revised Scale

**MoH** – Ministry of Health

**NGO** – Non-Governmental Organization

**OR** – Odds Ratio

**PI** – Principal Investigator

**PTSD** – Post-Traumatic Stress Disorder

**SD** – Standard Deviation

**SPSS** – Statistical Package for Social Science

**SViCPP** - Sexual Violence In Clinical Practice Place

**UNFPA** – United Nations Population Fund

**VCT** – Voluntary Counseling and Testing

**WHO** – World Health Organization

**WSV** – Sexual violence during clinical attachment

## **Table of content**

Approval Sheet.....	I
Statement of Declaration.....	II
Statement of the Author .....	III
Dedication .....	IV
Acknowledgments.....	V
Abbreviations and Acronyms.....	VI
List of Tables .....	I
List of Figures .....	II
Abstract .....	1
Chapter 1. Introduction .....	1
1.1 Background .....	1
1.2 Statement of the problem .....	2
Chapter 2. Literature Review .....	3
2.1 Conceptual Framework .....	10
2.2 Significance of the Study .....	11
Chapter 3. Objectives of the Study .....	12
3.1 General Objective.....	12
3.2 Specific Objectives.....	12
Chapter 4. Methodology .....	13
4.1 Study Area and Period.....	13
4.1.1 Study Sites .....	13
4.1.2 Study Period .....	14
4.2 Study Design .....	15

## **Table of content continued**

4.3 Sample Size Calculation.....	15
4.4 Source Population .....	16
4.5 Study Population.....	16
4.6 Inclusion and Exclusion Criteria.....	17
4.6.1 Inclusion Criteria .....	17
4.6.2 Exclusion Criteria.....	17
4.7 Sampling Technique.....	17
4.8 Study Variables .....	18
4.8.1 Dependent Variable Prevalence of Sexual Violence in Clinical Practice .....	18
4.8.2. Independent Variables (Associated Factors).....	19
4.9 Data Collection Procedure .....	20
4.9.1 Data Collection Tools.....	20
4.11 Data Analysis .....	25
4.12 Ethical Considerations.....	27
Chapter 5. Result.....	28
5.1. Demographic characteristics of respondents.....	28
5.2. Prevalence of work place sexual violence.....	29
5.3 Past experience about sexual violence in the practice area.....	31
Table 3 Past Experience about Sexual Violence Results .....	32
5.4 Factor associated with sexual violence during clinical attachment.....	33
5.5 Factors affecting reporting system .....	35
5.6 Bivariate Analysis.....	37
5.7 Multivariate Logistic Regression Analysis.....	39
Chapter 6. Discussion .....	41

## **Tabel of contenet continued**

6.1 Prevalence of Sexual Violence.....	41
6.2 Factors Associated with Sexual Violence .....	41
6.3 Strengths and limitation of the studey.....	45
6.3.1 Strengths .....	45
6.3.2 Limitations.....	46
Chapter 7. Conclusion and Recommendations .....	47
7.1 Conclusion.....	47
7.2 Recommendations .....	48
Chapter 8. Reference.....	50
Anix 1- Questioner sheet.....	i

## List of Tables

Table 1 Socio demographic characteristics of students participated in the study (n=276).....	28
Table 2 prevalence of WPSV results and method of sexual violence .....	31
Table 3 Past Experience about Sexual Violence Results.....	32
Table 4 Factors associated with sexual violence .....	35
Table 5 Factors affecting reporting to supervisors and Suggestions .....	37
Table 6 Chi-square test of variables associated with sexual violence in clinical practice.....	39
Table 8 Multivariate logistic regression analysis of factors associated with sexual violence ...	40

## List of Figures

Figure 1 Conceptual frame work based on (20).....	10
Figure 2 Prevalence of sexual violence results .....	29

## **Abstract**

**Background:** Sexual violence during clinical practice is a critical issue affecting the safety and professional development of health science students. Despite its impact, research in Addis Ababa remains limited, leaving a gap in evidence-based interventions.

**Objective:** This pioneering study examines the prevalence and associated factors of sexual violence among graduating health science students in Addis Ababa, providing essential insights for institutional reforms and policy development.

**Methods:** A cross-sectional study was conducted among 276 graduating health science students from two major governmental teaching hospitals in Addis Ababa. Participants were selected using a multi-stage sampling technique, ensuring representation from various health science disciplines. Data collection was carried out through a **structured, self-administered questionnaire**, adapted from internationally recognized frameworks. **Descriptive statistics** summarized key variables, while **chi-square tests** and **multivariate logistic regression** identified independent predictors of sexual violence.

**Results:** Over 53.3% of students reported experiencing sexual violence during clinical attachments. The most common form was physical harassment (42.2%), followed by verbal harassment (32%). Female students faced a significantly higher risk (AOR = 5.00, 95% CI: 2.80–9.22,  $p < 0.001$ ), and single students were more vulnerable (AOR = 3.46, 95% CI: 1.40–8.20,  $p = 0.005$ ). Medical students were at greater risk compared to those in nursing, midwifery, pharmacy, and laboratory sciences. Institutional gaps—including limited training on sexual harassment (83.3%) and weak reporting systems—contributed to low reporting rates (16%), further exacerbating the issue.

**Conclusion:** This study highlights the urgent need for policy reforms to protect students in clinical environments. Strengthening anti-harassment measures, enforcing institutional reporting systems, and integrating mandatory awareness training are essential for ensuring safer learning conditions. Future research should explore long-term effects and test intervention strategies to support affected students and prevent workplace sexual violence in healthcare settings.

**Keywords:** Addis Ababa, Associated Factors, Clinical Attachment, Ethiopia, Health Science Students, Prevalence, Sexual Violence

# Chapter 1. Introduction

## 1.1 Background

Sexual violence in the clinical practice place is a serious and on-going problem. It often happens in healthcare settings, where people work closely together and where there is a clear chain of authority. Health science students are more at risk during clinical training because they are in a lower position, have limited experience, and work in high-pressure environments (1).

Many studies show that medical and nursing students often experience sexual harassment during their training. These incidents can include unwanted touching, inappropriate comments, and other forms of sexual behavior. Female students, in particular, are affected. These experiences can lead to mental stress, low academic performance, and sometimes even cause students to stop their training (2)(3)(4)

Educational settings are not always safe, especially when there are power imbalances between students and staff. Health science students face these risks in hospitals and clinics during clinical attachments. Unfortunately, many of these students do not report what they go through because they are afraid of being blamed or not taken seriously(5)(6).

Clinical attachments can increase the risk of sexual harassment because students are placed in real work environments with staff, patients, and supervisors. These students may not know how to respond to sexual harassment or where to report it. Without proper systems and support, they remain vulnerable (7)(8).

Even though the problem exists, there is limited research that focuses on health science students during their clinical practice. This means their experiences are often ignored, and their challenges remain hidden. As a result, institutions may not take the steps needed to protect students (9).

## **1.2 Statement of the problem**

Sexual violence during clinical attachments is a critical issue that significantly impedes the physical, emotional, and mental well-being of health science students (5) (6).

Despite the expectation that clinical attachments serve as a pivotal period for acquiring practical skills in hospitals and health centers, many students are subjected to unwanted sexual behaviors ranging from verbal harassment and inappropriate comments to physical abuse and coercion (1)(2)(3). Studies conducted in various international contexts consistently highlight that health science students, especially those in fields such as medicine and nursing, are particularly vulnerable due to inherent power imbalances and hierarchical clinical settings(10)(12). In these environments, graduating students, who typically possess lower power status relative to supervisors and other clinical staff, often lack the means to protect themselves or report abusive incidents (4) (14). This unequal power dynamic forces many students into silence, primarily out of fear of shame, judgment, or negative impacts on their education and future careers (5)(9).

The absence of effective, confidential reporting mechanisms and preventive training exacerbates the issue by allowing a culture of silence to persist and by extension, normalizing such behavior in clinical practice (6) (20) (22). Although global and regional evidence (from contexts such as the United States, Europe, and parts of Asia) underscores both the prevalence and harmful consequences of sexual violence in clinical settings (11) (13) (17), there remains a dearth of empirical data from Ethiopia. This absence of localized evidence makes it exceptionally challenging to understand the full scope of the problem or to develop informed, context-specific interventions (18) (21). Without robust data and systematic attention, these students continue to suffer in silence, and the learning environment remains unsafe and unsupportive. This study seeks to address these critical gaps by investigating the prevalence and associated factors of sexual violence during clinical attachments among graduating health science students in Addis Ababa. By identifying key risk factors and systemic shortcomings such as gender disparities, lack of formal training, and inadequate reporting channels this research aims to contribute to the development of targeted, evidence-based interventions and policy reforms that safeguard the well-being and professional development of future healthcare providers (15) (16)

## Chapter 2. Literature Review

Sexual violence during clinical attachment is widely recognized as a serious problem in the health sector. It includes verbal, non-verbal, and physical acts that are sexual in nature and unwanted by the victim. This sexual violence often happens in professional environments where there are power imbalances, making students and junior staff more vulnerable(1).

Health science students are especially at risk during clinical training. This is a time when they are gaining practical experience and often work under the supervision of senior professionals. Because of their lower status, they may become easy targets for sexual harassment and may not feel empowered to defend themselves or speak out (3).

Sexual violence in clinical settings can take many forms. It may include inappropriate comments, jokes, touching, and even threats. These experiences not only create discomfort but also negatively affect the student's focus, learning ability, and emotional well-being. Some students even avoid certain tasks or clinical areas out of fear(10).

Research shows that most victims do not report the incidents. Fear of blame, shame, or damage to their academic progress makes them remain silent. In some cases, students believe that reporting will not change anything because institutions do not take proper action or lack clear procedures to address complaints(11).

Another important finding is the lack of awareness about what counts as sexual violence. Many students do not receive proper orientation or training on how to identify and respond to inappropriate behavior. This makes them more vulnerable, as they may not even recognize when they are being harassed(9).

Clinical practice place culture also plays a big role in allowing sexual violence to continue. In some institutions, there is a culture of silence or tolerance around such behavior. Senior staff may ignore complaints, or worse, contribute to the problem. This creates an unsafe environment for learners and discourages them from taking action(2).

Some studies point out that sexual violence affects students differently based on gender and personal background. Female students often experience more frequent and more severe forms of sexual harassment. However, students of any gender can be affected. This makes it important to promote equality and respect in all learning environments(12).

Another issue is that many students are unsure of where to report or who to trust. Institutions may lack confidential and supportive systems for handling such cases. When students see that previous complaints have not been taken seriously, they may choose to stay silent, even when they feel unsafe(13).

In many cases, students try to cope with the situation on their own. Some may distance themselves from certain staff members or clinical departments, while others may suffer in silence. This has long-term effects on their motivation, mental health, and overall academic performance (4).

Sexual violence during clinical attachment is a critical issue in medical education in the United States. According to studies about **31% of medical students** in the U.S. reported experiencing some form of sexual misconduct during their training. This includes unwanted comments, touching, or sexually suggestive behavior from faculty, peers, or patients(12).

Study in US found that during internship years, **20% of interns** reported experiencing sexual harassment, and **only 8%** formally reported the incident. This gap between experience and reporting is concerning and points to institutional weaknesses in addressing the issue. The study also showed that recognition of sexual harassment has improved over time, but many still fail to identify inappropriate behavior due to unclear guidelines or fear of consequences(4).

Another U.S.-based survey indicated that the **prevalence of sexual harassment varied by institution**, ranging from **15% to 43%** among medical interns. The variation shows that institutional culture plays a large role in how safe or unsafe clinical learning environments are. Some institutions with better reporting systems and support saw lower cases, while others with weak policies had higher occurrences(4).

Patient-initiated sexual harassment is another significant concern in the U.S. Study conducted a cross-sectional study showing that **over 40% of medical students** experienced inappropriate sexual behavior from patients. Female students were most frequently affected. Despite the high rates, most incidents were unreported due to fear of retaliation or being blamed for misinterpreting patient behavior(14).

Sexual harassment from supervising staff also contributes to a hostile learning environment. A qualitative study reported that female medical students felt their experiences of sexism and sexual harassment were normalized in certain clinical rotations. Some students shared that they felt “tested” or “targeted” based on their gender, especially in male-dominated specialties like surgery or emergency medicine(10).

Sexual violence during clinical attachment among health science students in North America has become an increasingly visible issue. Clinical training exposes students to real-world healthcare settings, where they may face verbal, non-verbal, or physical sexual misconduct from patients, supervisors, or co-workers. According to study, **31% of medical students in the United States** reported experiencing sexual misconduct during their education(12).

Study conducted a large-scale study on medical interns and found that **20% experienced sexual harassment** during their first year of training. Despite this, only **8% of victims reported the incident**. This suggests that even when students are trained professionals, fear of career damage or lack of trust in institutional systems stops them from speaking up. The findings highlight how underreporting remains a major barrier to understanding and addressing the issue(4).

Institutional culture plays a major role in how sexual violence is addressed or ignored. Study found that the **prevalence of sexual harassment varied widely by institution**, ranging from **15% to 43%**. These differences suggest that while some universities and hospitals have clear anti-sexual harassment policies and support systems, others may have weak or inconsistent enforcement, leading to a culture of silence(15).

Another North American study focused on sexual harassment from patients. It revealed that **over 40% of medical students** had experienced inappropriate sexual comments, gestures, or physical contact from patients during clinical placements. Many students felt unprepared to handle such situations, and institutional responses were often lacking, especially when the harasser was a patient rather than a staff member(14).

The psychological effects of repeated exposure to sexual harassment are also evident. Study found that female medical students often described clinical placements as emotionally stressful, citing repeated experiences of sexism and sexual harassment. These experiences not

only affected their learning but also contributed to anxiety, fear, and reduced interest in certain specialties particularly in male-dominated fields like surgery(10).

Sexual violence in clinical training settings is a growing concern across Europe. Health science students, particularly women, are often exposed to inappropriate behavior while participating in clinical attachments. In Switzerland, a study reported that **over 30% of medical students** experienced sexual harassment during their education. These incidents ranged from verbal comments to non-consensual physical contact, and most students reported feeling psychologically affected(3).

In Germany, study conducted a pilot study and found that **nearly 1 in 3 medical students** reported facing sexual discrimination or sexual harassment. The study highlighted that female students were disproportionately affected, and many felt that reporting the incidents would lead to being ignored or blamed. The authors noted a lack of support structures within medical faculties for handling these issues(2).

Similarly studied both nurses and nursing students and found that **41% of respondents** had experienced sexual harassment from patients during clinical placements. The most common forms were unwanted touching and sexually suggestive comments. The study concluded that students were particularly vulnerable due to their inexperience and lower status in healthcare hierarchies(1).

In Belgium, study conducted a population survey among medical students and specialty registrars. The results showed that **more than 35%** had experienced sexual violence at some point during their training. The perpetrators were most often supervisors, patients, or senior staff. The study emphasized that students felt powerless to act due to fear of academic consequences or future career damage(11).

Findings from Italy also reflect similar patterns. Study reported that **over 25% of healthcare workers**, including students, were exposed to sexual or racial harassment. The study linked such experiences to work-related stress and decreased motivation. It also identified that institutions with clearer policies and better reporting systems had fewer incidents, suggesting a role for organizational culture in prevention(16).

Sexual violence in clinical training is a serious and underreported issue in many Asian countries. Health science students, especially female medical and nursing students, are frequently exposed to sexual harassment in hospital settings. According to a meta-analysis conducted in China, **about 48% of nurses and nursing students** reported experiencing some form of sexual harassment, showing the scale of the problem in healthcare education(17).

A study from Thailand highlighted that **over 30% of medical students** had experienced mistreatment, including sexual harassment, during their university-based clinical training. Many students said they did not report the sexual harassment because they feared not being believed or facing negative academic consequences. The study emphasized the need for institutions to build trust and establish confidential support systems(13).

Study conducted a comparative study among medical and nursing students in Asia and found that **38% of female students** had experienced sexual harassment during clinical practice. The most common forms included verbal comments and inappropriate touching by patients, fellow students, or clinical staff. Interestingly, nursing students reported higher rates of sexual harassment than medical students, possibly due to their more frequent and prolonged patient contact(12).

Cultural norms in many Asian countries often discourage open discussions about sexual behavior, which may contribute to underreporting. For example, students may fear shame, dishonour, or being blamed for the incident. Study noted that in many Asian healthcare settings, sexual harassment from patients is common, but rarely reported or addressed. **More than 40% of students** in their study had faced inappropriate sexual advances from patients, especially in high-risk departments like emergency and psychiatry(14).

Lack of formal education and awareness about sexual harassment further increases vulnerability. Some students are unsure how to define or report inappropriate behavior, especially when it is disguised as a joke or compliment. Research shows that when students are trained to recognize sexual harassment and understand their rights, they are more likely to take action and seek help(12).

Sexual violence during clinical attachment among health science students is a widespread but under-discussed issue across several African countries. Students particularly women often experience sexual harassment during their clinical training, which negatively affects their

safety, education, and future careers. A systematic review by(1) found that **over 30% of female students** in African higher education institutions reported some form of sexual violence, including verbal abuse, unwanted touching, and coercion. Most cases occurred during internships or clinical practice, where students were under close supervision(9).

In South Africa and Nigeria, high rates of sexual harassment have been reported among students in medical and nursing programs. These students often described being victims of sexual advances from supervisors or senior staff. While the exact figures vary, some reports indicate that **up to 40%** of students experienced sexual harassment in clinical settings .However, reporting remains low due to fear of retaliation, cultural shame, or the belief that nothing will change(9).

A study from Uganda highlighted how night shifts and isolated clinical environments increased the risk of sexual violence. Female health science students working in hospitals reported exposure to inappropriate behavior from both staff and patients, especially when supervision was limited. The prevalence rate was found to be between **35–45%**, depending on department and location. These students were less likely to report sexual harassment, citing fears of not being believed or damaging their academic progress(7).

In Kenya and Tanzania, nursing students reported frequent incidents of sexual harassment from male patients. According to study, over 50% of nursing students had experienced patient-initiated sexual harassment during clinical rotations. These included inappropriate touching, sexual jokes, and repeated requests for personal attention. Many students were advised by staff to ignore such behavior, reinforcing a culture of silence and acceptance (1).

Cultural and institutional factors in Africa further complicate efforts to prevent and respond to sexual violence. In many regions, discussing sexual matters is taboo, and victims often face blame or stigma. Institutions lack formal reporting systems or fail to enforce them. Study emphasize that students in these settings feel unsupported and vulnerable, leading to underreporting and emotional distress(10).

Sexual violence during clinical attachments is a growing concern in Ethiopian health training institutions. Health science students, particularly women, are at risk of experiencing sexual harassment from supervisors, healthcare workers, or even patients during clinical practice. Study found that more than 50% of female university students surveyed had experienced

some form of sexual violence, with many of the cases happening in education or training settings(5).

A study on female nurses in Addis Ababa public hospitals revealed that 62.2% of respondents had experienced sexual harassment. The most common forms included unwanted touching, suggestive comments, and sexual jokes. Many of the affected women did not report the incidents due to fear of retaliation or being blamed. This shows that the problem is widespread and often unaddressed(6).

Research conducted at Jimma University among medical science students found that **46.3% of female students** experienced sexual violence. The study highlighted that students in clinical years were particularly vulnerable due to the power imbalance between students and clinical instructors. Most victims said the sexual harassment came from hospital staff or supervisors rather than fellow students(18).

Another study focusing on female night shift college students in Hawassa City showed that **41.2%** experienced sexual violence, with those working in dark or isolated areas being at higher risk. The lack of proper lighting, supervision, and support increased vulnerability. The study concluded that institutional factors and poor safety measures contribute significantly to the problem(7).

A systematic review covering several Ethiopian higher education institutions found that **around 49% of female students** had experienced some form of sexual violence. The study also showed that underreporting is common, as many victims fear being stigmatized or punished. The lack of effective reporting systems and support services makes it difficult for students to speak up or get help(9).

Overall, the literature from Ethiopia shows that sexual violence during clinical attachments is both common and underreported. Health science students, especially women, face sexual harassment that can affect their academic performance, emotional well-being, and professional growth. Despite increasing awareness, many institutions still lack clear policies, response mechanisms, and protective systems to ensure safe learning environments.

health science students in Addis Ababa, helping to inform policies and interventions aimed at reducing sexual violence in these contexts.

## 2.1 Conceptual Framework

### Conceptual Framework

The conceptual framework for this study is developed to explore the prevalence and its associated factors of sexual violence in clinical practice place among graduating health science students during clinical attachments in Addis Ababa, Ethiopia. It integrates elements from social ecological theory and health sector-specific dynamics to contextualize the factors influencing SViCPP within healthcare training environments. The conceptual diagram is adapted from Prevalence of Workplace Violence and Associated Factors Against Nurses Working in Public Hospitals in Northeastern Ethiopia

### Conceptual Diagram

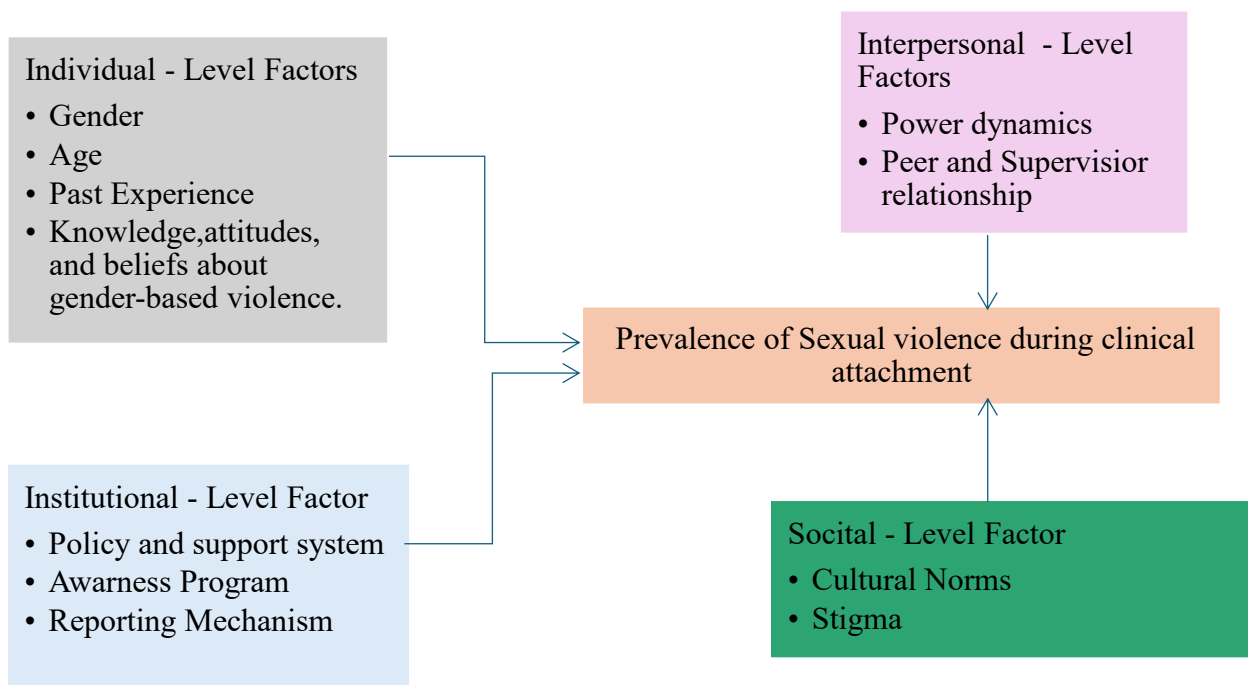


Figure 1 Conceptual frame work based on (20)

## **2.2 Significance of the Study**

This study addresses a critical yet understudied challenge sexual violence during clinical practice that directly undermines the safety, well-being and professional development of graduating health science students. As the future workforce of Ethiopia's health system, these students require a secure and respectful learning environment in which to acquire essential clinical competencies.

By documenting the prevalence and underlying factors of sexual violence in teaching hospitals, this research will raise awareness among educators, clinical supervisors and policymakers of the specific vulnerabilities faced by trainees. Such evidence is pivotal for the design and implementation of effective support mechanisms ranging from clear, confidential reporting procedures to institution-wide protective policies and mandatory training on professional boundaries.

A better-informed institutional response will foster a climate of trust and respect, enabling students to focus fully on their studies and clinical responsibilities. When trainees feel protected and valued, their academic engagement and clinical performance improve, reducing attrition and ensuring a steady pipeline of competent health professionals.

Furthermore, the findings will enrich the body of scholarship on gender-based violence and student welfare within health professions education. By serving as a reference point for future investigations, this study may inspire additional research and benchmarking across other training institutions in Ethiopia and beyond.

Ultimately, this work aims to catalyze evidence-based reforms that strengthen student welfare, elevate the quality of clinical education and embed a culture of dignity and safety throughout Ethiopia's healthcare training environments.

## **Chapter 3. Objectives of the Study**

### **3.1 General Objective**

To assess the prevalence and associated factors of sexual violence during clinical attachment among graduating health science students during clinical attachments in Addis Ababa, Ethiopia.

### **3.2 Specific Objectives**

1. To estimate the prevalence of sexual violence during clinical attachment among health science graduating students during clinical attachments.
2. To identify the factors associated with sexual violence among health science graduating students during clinical attachments.

## **Chapter 4. Methodology**

### **4.1 Study Area and Period**

#### **4.1.1 Study Sites**

The study will be conducted in three governmental teaching hospitals that are found in Addis Ababa Ethiopia.

##### **Tikur Anbessa Specialized Hospital (Black Lion Hospital)**

Tikur Anbessa is Ethiopia's largest teaching and referral hospital. Established in 1972 GC, It is affiliated with Addis Ababa University's College of Health Sciences and has served as the country's premier institution for specialized medical care since 1974GC. This hospital offers services in oncology, surgery, internal medicine, pediatrics, gynecology, psychiatry, and more. It also houses Ethiopia's first oncology unit and transplantation services. It also provides clinical training for thousands of students in medicine, nursing, pharmacy, and other health sciences annually.

##### **Yekatit 12 Hospital Medical College**

Established in commemoration of the 1937 massacre by Italian forces, this hospital is both a general hospital and a teaching institution since 2015 GC. It is known for its high standards of service and commitment to training. It offers services in general medicine, surgery, pediatrics, obstetrics and gynecology, and public health. The hospital is known for training health professionals, including doctors, nurses, and midwives. It also serves as a clinical practice site for students from universities in Ethiopia.

##### **Justification for Study Site Selection**

Addis Ababa, the capital city of Ethiopia, is home to over 5 million residents and serves as the nation's healthcare and educational hub. These hospitals are vital in Ethiopia's healthcare system, combining clinical service delivery, training, and research. They contribute significantly to addressing the country's health challenges while shaping the next generation of health professionals. This setting provides a suitable environment for studying sexual violence during clinical attachment among students during clinical attachments.

The original intention of this study was to include four major teaching hospitals in Addis Ababa: Tikur Anbessa Specialized Hospital, Yekatit 12 Hospital Medical College, St. Paul's Hospital Millennium Medical College, and Dagmawi Minilik Hospital. These institutions represent significant clinical training sites for health science students and offer diverse clinical exposure suitable for the objectives of this study.

However, despite multiple formal requests and follow-up communications, St. Paul's Hospital Millennium Medical College has not granted research approval. The hospital indicated that a backlog of previously approved but uncompleted research projects has resulted in a temporary suspension of new approvals. While the administration acknowledged the request, they have not provided a timeline for response or further communication despite repeated inquiries. Due to this administrative delay and the lack of a definite decision, it is not feasible to include this hospital within the scheduled data collection period.

Similarly, Dagmawi Minilik Hospital was initially considered for its teaching hospital status. However, further inquiry revealed that the institution currently hosts only postgraduate (Master's level) nursing students and does not enroll undergraduate Bachelor of Science (BSc) students in nursing or related health science disciplines. Since the target population of this study is graduating BSc-level health science students, the inclusion of Dagmawi Minilik Hospital would not align with the study's eligibility criteria.

Therefore, the study has been limited to two institutions Tikur Anbessa Specialized Hospital and Yekatit 12 Hospital Medical College both of which are actively involved in the training of undergraduate health science students and have granted ethical and administrative clearance for this research. These hospitals provide a representative and relevant setting for investigating the prevalence and associated factors of sexual violence during clinical attachment among the intended study population.

#### **4.1.2 Study Period**

The study period will span three months, from March 2025 - May 2025, encompassing data collection, analysis, and report preparation.

## 4.2 Study Design

This research will employ a cross-sectional study design to assess the prevalence of sexual violence during clinical attachment and associated factors among graduating health science students during clinical attachments. The cross-sectional approach is appropriate for this study as it provides a snapshot of the prevalence of sexual violence during clinical practice and its determinants at a single point in time. By utilizing this design, the study will efficiently explore the relationships between exposure to sexual violence and contributing factors without requiring prolonged observation periods.

## 4.3 Sample Size Calculation

To determine an appropriate sample size for assessing the Sexual Violence During Clinical Practice: Prevalence and Associated Factors Among Graduating Health Science Students, Addis Ababa, Ethiopia we utilized prevalence data from the provided references. Perception and experiences of sexual harassment among women working in hospitality clinical practice place of Bahir Dar city, Northwest Ethiopia (21) that reported prevalence rate of 54.5%. With the 95% confidence level, a 5% margin of error. The calculated sample size for this study is 276 Graduating classes of health science students.

Parameters for Sample Size Calculation

- **Population Size (N): 1000 of** Graduating classes of health science students undergoing clinical attachments at
- **Confidence Level (Z):** We selected a **95% confidence level**, corresponding to a Z-score of **1.96**.
- **Margin of Error (E):** A **5% margin of error** is considered acceptable for this study.
- **Estimated Proportion (p):** Based on (Worke et.al, 2020) (21) we use **p = 0.545** (54.5%) to reflect the high prevalence observed in similar settings.

**Sample Size Formula**

$$n = \frac{Z^2 \cdot p \cdot (1-p)}{E^2}$$

For a finite population, the sample size (n) can be calculated using the following formula: Subsequently, we apply the Finite Population Correction (FPC) to adjust the sample size based on the population size:

Step-by-Step Calculation:

Initial Sample Size Calculation:

$$n = \frac{(1.96)^2 \times 0.545 \times (1-0.545)}{(0.05)^2} \quad n = \frac{3.8416 \times 0.545 \times 0.455}{0.0025}$$

$$n = \frac{3.8416 \times 0.247475}{0.0025} \quad n = \frac{0.9509}{0.0025}$$

$$n \approx 380.36$$

Applying Finite Population Correction (FPC):

$$n_{\text{adjusted}} = \frac{380.36 \times 995}{995 + 380.36 - 1} \quad n_{\text{adjusted}} = \frac{378458.2}{1374.36} = 275.370499724 \approx n_{\text{adjusted}} = 276$$

#### 4.4 Source Population

The source population for this study includes all graduating class health science students undertaking clinical at attachments in teaching governmental hospitals in Addis Ababa during the 2025 academic year. These students are enrolled in various health science disciplines, such as Medicine, Nursing, Pharmacy, Laboratory Sciences, and Midwifery, at universities and colleges.

#### 4.5 Study Population

The study population was specifically consists of graduating health science students who meet the inclusion criteria. This type of inclusion criteria is derivative from assessed reflection skills in 5th-year ENT interns using the Groningen Reflection Skills Scale. Participants displayed strong reflective thinking, which correlated significantly with improved clinical decision-making (19)

## **4.6 Inclusion and Exclusion Criteria**

### **4.6.1 Inclusion Criteria**

1. Graduating class health science students enrolled in clinical attachment programs.
2. Students who have completed at more than two clinical attachments in Addis Ababa public hospitals.
3. Participants willing to provide informed consent for participation and complete the structured questionnaire.

### **4.6.2 Exclusion Criteria**

1. Students who are graduating class to the final year with no clinical attachment experience in Addis Ababa hospitals before/ transferred students.
2. Students those are unavailable during the data collection period.
3. Students who decline to participate or submit incomplete survey responses.

## **4.7 Sampling Technique**

A multistage sampling technique was used:

### **Step 1: Selection of Hospitals**

Originally, the study intended to include four major teaching hospitals in Addis Ababa. However, due to administrative delays and eligibility issues, only **Tikur Anbessa Specialized Hospital** and **Yekatit 12 Hospital Medical College** were included. St. Paul's Hospital Millennium Medical College declined participation due to a suspension of new research approvals, and Dagmawi Minilik Hospital was excluded for enrolling only postgraduate students. There for two hospitals were selected by using Cluster sampling method.

- Tikur Anbessa Specialized Hospital (Black Lion Hospital)
- Yekatit 12 Hospital Medical College

### **Step 2: Stratification of Students**

Graduating health science students were stratified by field of study, including Medicine, Nursing, Midwifery, Pharmacy, and Medical Laboratory Science. To ensure adequate representation, proportional allocation was applied to determine the number of participants

from each stratum. Tikur Anbessa Specialized Hospital (Black Lion Hospital) n=218 students and Yekatit 12 Hospital Medical College n=58

### **Step 3: Selection of Participants**

Within each stratum, a non-probability quota sampling technique was employed. Participants were included using quota-based non-random selection until the required number for each group was achieved.

## **4.8 Study Variables**

### **4.8.1 Dependent Variable Prevalence of Sexual Violence in Clinical Practice**

**Measurement:** The prevalence of sexual violence during clinical practice was determined through self-reported data obtained using a structured, self-administered questionnaire.

For example, the questionnaire included the following items:

#### **1. Experience of Sexual Violence:**

- **Question:** “Have you experienced any form of sexual violence during your clinical attachment?”
- **Response Options:**
  - Yes
  - No

#### **2. Frequency of Incidents:**

- **For respondents who answered “Yes” to the previous question,** a follow-up question was asked:
- **Question:** “How many times have you experienced sexual violence during your clinical attachment?”
- **Response Options:**
  - Once
  - 2–3 times
  - More than 3 times

### 3. Nature of Sexual Violence:

- **Question:** “What was the nature of the sexual violence you experienced?”
- **Response Options (Multiple responses allowed):**
  - Verbal harassment (e.g., inappropriate comments, jokes)
  - Physical harassment (e.g., unwanted touching, groping)
  - Non-verbal harassment (e.g., offensive gestures, stares)
  - Coercion (e.g., pressure to engage in sexual activities)

#### 4.8.2. Independent Variables (Associated Factors)

##### A. Individual-Level Factors

- Sex (Gender)
- Age
- Marital status
- Attitudes and beliefs regarding sexual violence
- Past experiences of sexual harassment or violence

##### B. Interpersonal-Level Factors

- Power dynamics between students and clinical supervisors
- Peer relationships
- Faculty–student interactions
- Encounters with patients or other staff during practice

##### C. Institutional-Level Factors

- Presence or absence of sexual harassment reporting mechanisms
- Existence of anti-sexual violence policies and enforcement
- Quality of clinical supervision and mentorship
- Institutional response to reported cases (supportive vs. dismissive)
- Staff training and orientation on professional ethics and gender sensitivity

## D. Societal and Cultural-Level Factors

- Prevailing societal norms related to gender and power
- Cultural tolerance or normalization of sexual harassment
- Stigma associated with reporting sexual violence
- Patriarchal structures influencing power dynamics in clinical settings

### 4.9 Data Collection Procedure

#### 4.9.1 Data Collection Tools

##### 4.9.1.1 Instrument Details

A structured, self-administered questionnaire served as the primary instrument for data collection. This questionnaire was originally developed by the International Labour Office (ILO), International Council of Nurses (ICN), World Health Organization (WHO), and Public Services International (PSI) as part of their Joint Programme on Workplace Violence in the Health Sector (Geneva, 2002). It was later modified following the format and updates from WHO's Sexual Violence Against Health Workers questionnaire (2021) so that it captures the current manifestations of sexual violence in clinical settings.

The questionnaire is divided into three major sections designed to capture:

#### 1. Demographic Information:

**Purpose:** To gather detailed respondent characteristics that may influence or relate to experiences of sexual violence.

#### Items Included:

- **Age:** “What is your age?” with practical age categories (e.g., 20–24, 25–29, 30–39, etc.).
- **Gender:** “What is your gender?” with defined options “Male” and “Female.”
- **Marital Status:** “What is your marital status?” with options such as Single, Married, Divorced, or Widowed.
- **Academic Program:** Questions listing possible programs (Medicine, Nursing, Midwifery, Pharmacy, and Laboratory Sciences) and asking, “Which program are you enrolled in?”

- **Educational Background:** Further details about the respondent’s academic history if relevant.

## 2. Experiences of Sexual Violence during Clinical Attachments:

**Purpose:** To assess whether and how students have experienced sexual violence and the nature of these experiences.

### Items Included:

- **Occurrence:** “Have you experienced any form of sexual violence during your clinical attachment?” with response options “Yes” or “No.”
- **Frequency:** For those answering “Yes,” a follow-up item: “How many times have you experienced sexual violence during your clinical attachment?” with response options such as “Once,” “2–3 times,” or “More than 3 times.”

**Nature of Experience:** “What type of sexual violence did you experience?” Multiple responses are allowed. Options include:

- Verbal harassment (e.g., inappropriate comments or jokes)
- Physical harassment (e.g., unwanted touching or groping)
- Non-verbal harassment (e.g., offensive gestures, staring)
- Coercion (e.g., being pressured to engage in sexual activities)

**Context and Perpetrator:** “Who was the perpetrator of the incident?” with options including Patient, Patient’s Family, Supervisor/Clinical Instructor, Peer (fellow student), or Other Healthcare Workers. Additional probes such as, “Where did the incident occur?” (e.g., Ward, Operating Theatre, and Outpatient Department) help contextualize the setting.

## 3. Contributing Factors:

**Purpose:** To explore contextual, environmental, and interpersonal factors that may facilitate sexual violence in clinical placements.

### **Items Included:**

- **Reporting Mechanisms:** “Are there clear, confidential reporting mechanisms available at your clinical attachment?” with response options “Yes,” “No,” or “I am not aware” and additional follow-up on perceived effectiveness.
- **Power Dynamics and Culture:** “How do power imbalances between students and clinical supervisors affect your exposure to inappropriate behaviors?” with Likert-scale responses to measure agreement.
- **Preventive Training:** “Have you received any orientation or training on preventing sexual violence during your clinical attachment?” with options indicating frequency (Never, Once, Regularly).

#### **4.9.1.2 Instrument Development**

The questionnaire was carefully adapted to the Ethiopian context to ensure its relevance and clarity for the study population. Key steps in the development process included:

- **Review of Existing Instruments:** The original instrument was sourced from internationally recognized guidelines (ILO, ICN, WHO, PSI, 2002; WHO, 2021).
- **Contextual Adaptation:** Modifications were made to reflect local terminologies and socio-cultural contexts. For instance, the term “SEX” was explicitly divided into “Male” and “Female” to reduce ambiguity.
- **Integration of Local Studies:** Items and response formats were drawn from similar studies conducted in Ethiopia and Africa (Bekalu & Wudu, 2023; Worke et al., 2021).
- **Expert Consultation:** Academic and field experts reviewed the questionnaire to ensure content validity.
- **Pilot Testing:** A preliminary version was tested with a small group of graduate health science students to assess clarity, cultural appropriateness, and reliability. Feedback was obtained, and necessary revisions were implemented prior to full-scale data collection.

#### 4.9.1.3 Language

The questionnaire was prepared in English. Given that the study participants are graduate health science students at Addis Ababa University, who are taught in English, this ensured that all participants could fully understand the questions. The decision to use English also aligns with the academic medium of instruction, minimizing misinterpretation and enhancing the comparability of results with other international studies.

#### 4.9.1.4 Data Quality Control

A comprehensive set of data quality control measures were implemented to ensure the precision, accuracy, and reliability of the collected data:

- **Pilot Testing and Validation:** Prior to the main study, the questionnaire was pilot-tested on a sample of students to identify any issues in question clarity, cultural relevance, and response options. Revisions were made based on pilot feedback.
- **Training of Data Collectors:** Data collectors were given thorough training on the standardized administration of the questionnaire, ethical considerations (including confidentiality and informed consent), and techniques to assist participants if questions arose.
- **Supervision and Monitoring:** Field supervisors regularly monitored the data collection process to ensure adherence to protocols. Any deviations or issues encountered were immediately addressed to maintain data integrity.
- **Review of Questionnaires:** Completed questionnaires were checked for completeness and consistency by the research team. Any questionnaires with significant missing data or inconsistencies were excluded from the analysis.
- **Data Entry Procedures:** Data was entered into EpiData 4.7.0 to minimize entry errors. A double entry system was used so that discrepancies could be identified and corrected. After initial entry, the dataset was exported to SPSS version 25 for further validation and analysis.

## 4.10 Operational Definitions

### 1. Sexual Violence

**Definition:** Unwelcome sexual advances, requests for sexual favors, or other verbal or physical sexual behavior occurring during clinical attachments that negatively affects a student's academic performance, mental health, or physical safety.

**Measurement:**

- Respondents answered “Have you experienced any form of sexual violence during your clinical attachment?” (Yes/No).
- Follow-up items then asked about the frequency (“How many times?” Once / 2–3 times / More than 3 times) and nature of the incident (verbal harassment, physical harassment, non-verbal harassment, coercion).

### 2. Clinical Attachment

**Definition:** A designated period when graduate health science students gain hands-on clinical experience under supervision in public hospitals.

**Measurement:** Captured by items asking “What is the duration of your clinical attachment?” and “How many clinical attachments have you completed?”

### 3. Graduate Health Science Students

**Definition:** Final-year students from health science programs such as Medicine, Nursing, Midwifery, Pharmacy, or Laboratory Sciences enrolled at Addis Ababa health science institutions.

**Measurement:** Identified through the “Field of study” question in the demographic section, ensuring that only final-year students participating in clinical attachments are included.

### 4. Perpetrator

**Definition:** Any individual involved in acts of sexual violence during clinical attachment (e.g., supervisors, patients, or peers).

**Measurement:** Measured via the question “Who was the perpetrator of the incident?” which offers options such as Patient, Patient’s Family, Supervisor/Clinical Instructor, Peer (fellow student), or Other Healthcare Workers.

## **5.Reporting**

**Definition:** The act of formally or informally notifying an authority about an incident of sexual violence.

**Measurement:** Determined by the question “Have you reported the violence?” (Yes/No), followed by “To whom did you report the violence?” for those who answered “Yes.”

## **6.Prevention Strategies**

**Definition:** Institutional measures, policies, and training sessions aimed at reducing sexual violence and supporting affected students.

**Measurement:** Assessed through responses to items such as “Have you received training or orientation on sexual violence prevention during your clinical attachment?” (Never / Once/ Regularly) and “Does your clinical attachment have a clear policy for reporting sexual violence?” (Yes/No/I don’t know).

## **4.11 Data Analysis**

### **4.11.1 Data Cleaning and Preparation**

After data collection, the questionnaires was reviewed for completeness and consistency. Incomplete or inconsistent data was excluded from the analysis.

Data was entered into **EpiData 4.7.0 Software** to minimize entry errors. The cleaned dataset was then being exported to both **SPSS version 25** for statistical analysis.

### **4.11.2 Descriptive Analysis**

Descriptive statistics were used to provide a comprehensive overview of the study sample and to summarize the key variables. Frequencies and percentages were calculated for categorical variables (e.g., gender, marital status, field of study, and types of sexual violence), while means and standard deviations were computed for continuous variables (e.g., age). These statistics enabled us to:

- **Characterize the Sample:** Provide detailed socio-demographic information that helps contextualize the study population (e.g., distribution by age, gender, and program).
- **Summarize Key Outcomes:** Present the prevalence of sexual violence during clinical attachments, including the frequency of incidents and types of sexual violence (verbal, physical, non-verbal, and coercion).
- **Visualize Data:** Use tables and graphs to illustrate differences in subgroups of the sample, such as comparing the affected groups and the distribution of contributing factors.

#### 4.11.3 Bivariate Analysis

To explore the unadjusted associations between potential predictor variables and the binary outcome (experience of sexual violence: Yes/No), a bivariate analysis was performed. For categorical independent variables, chi-square ( $\chi^2$ ) tests were used to examine whether differences in frequency distributions exist between those who experienced sexual violence and those who did not. The strength of these associations was expressed in terms of odds ratios (ORs) with their corresponding 95% confidence intervals (CIs).

Although our dependent variable is binary, several continuous independent variables (e.g., age) were also examined. For these variables, we compared mean values between the two outcome groups using independent sample t-tests. This comparison is important because it allows us to identify whether there are significant differences in continuous predictors across the groups, which may influence the risk of experiencing sexual violence.

A liberal significance threshold ( $p \leq 0.25$ ) was employed in this preliminary bivariate analysis to ensure that any variable showing a potential association was not excluded from the multivariate analysis. This screening process informs our subsequent logistic regression model, where all candidate predictors are entered simultaneously, yielding adjusted estimates for each variable.

#### 4.11.4 Multivariate Analysis

Logistic regression was applied to determine the independent factors associated with sexual violence. This was control for potential confounding variables.

Adjusted odds ratios (AOR) with 95% CIs was reported. A **p-value**  $\leq 0.05$  was considered statistically significant.

#### **4.11.5 Presentation of Results**

The findings was presented in text, tables, and figures. Key outcomes was include the overall prevalence of sexual violence, common perpetrators and locations of incidents

#### **4.12 Ethical Considerations**

Approval was sought from Addis Ababa University's Institutional Review Board. Participation was voluntary, and informed consent was obtained before questionnaire distribution. Data collection was adhering to strict ethical protocols to protect participants' privacy and confidentiality.

## Chapter 5. Result

### 5.1. Demographic characteristics of respondents

A total of 276 undergraduate students participated in the study. The study showed that, among the study participants, 145(52.4%) were female. From the total study participants, 225 (81.52%) were single. With regard to field of study, of the 276 students, 168 (60.87%) were medicine student.

<b>Label of variabeles</b>	<b>Variabele</b>	<b>Frequency</b>	<b>Percent</b>
<b>Age</b>	20-24	102	37.0
	25-29	150	54.3
	30-39	24	8.7
<b>Gender</b>	Male	131	47.5
	Female	145	52.5
<b>Marital status</b>	Single	225	81.5
	Married	50	18.1
	Divorced	1	0.4
<b>Field of study</b>	Medicine	168	60.9
	Nursing	33	12.0
	midwifery	14	5.1
	Pharmacy	40	14.5
	Laboratory	21	7.6

Table 1 Socio demographic characteristics of students participated in the study (n=276)

## 5.2. Prevalence of work place sexual violence

As it is presented in table to the proportion of work place sexual violence was found to be 147(53.26%).

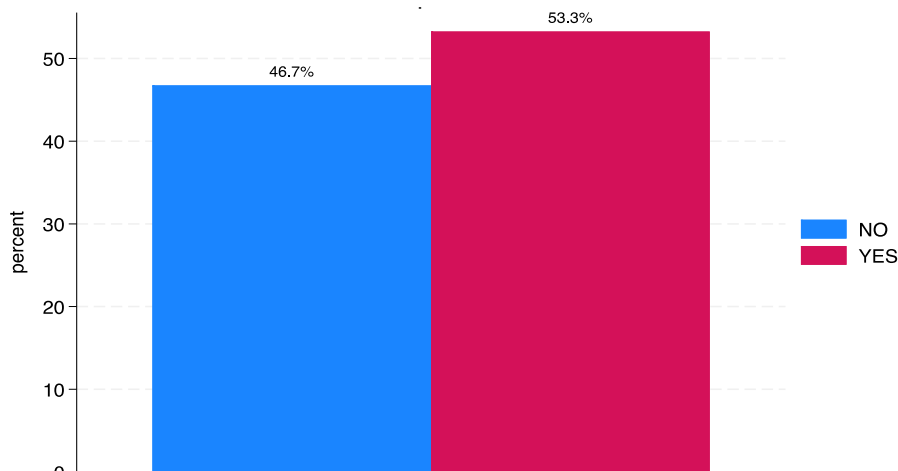


Figure 2 Prevalence of sexual violence results

Majority of the respondents reported that the sexual harassment they were faced physical sexual harassment with 62 (42%), face to face 119(81%), patient family 50(34%) are the highest perpetrator from other health professionals follow with 32.6% behind and ward is common place that such incidence occurs with 65 (44.2%)

Label of variables	Variable	Frequency (n)	Percent age (%)
Prevalence of sexual violence	Yes	147	53.26
	No	129	46.74
Frequency of incidents among affected students	Once	65	44.22
	Twice	53	36.05
	Greater than or equal to three	29	19.73
Nature of sexual	Verbal harassment (e.g.,	47	32

<b>violence</b>	inappropriate comments, jokes)		
	Physical harassment (e.g., unwanted touching, groping)	62	42.2
	Non-verbal harassment (e.g., gestures, stares)	23	15.6
	Coercion (e.g., pressure to engage in sexual activities)	15	10.2
<b>Location where incidents occurred</b>	Ward	65	44.2
	Operating theatre	10	6.8
	Outpatient department	49	33.4
	Emergency	12	8.2
	Pharmacy	4	2.6
	Hospital compound	2	1.4
	Laboratory	3	2.0
	Duty room	1	0.7
	Dimonstration	1	0.7
<b>Perpetrators</b>	Patient	23	15.6
	Patient's family	50	34
	Supervisor/clinical instructor	10	6.8
	Peer (fellow student)	16	11

	Other healthcare workers	48	32.6
<b>Method they use</b>	Face to face	119	81
	Phone call	16	11
	Text message	8	5
	Social media	4	3

Table 2 prevalence of WPSV results and method of sexual violence

### 5.3 Past experience about sexual violence in the practice area

From all students 164 (59.4%) have witnessed sexual violence and among them more 61(38%) have been witnessed one time. And 197 (71.38%) students heard about such incidence affecting other students from them they heard two – three times are 64(32.5%). 197(71.38%) accounts those students who had heard rumors about sexual violence that occurs in there institution. Before or at any time students heard rumors or read reports about sexual harassment and 150 (54.34%). Based on their past experience 109(39.49%) had opinions that its common and widely spread issue. 133(48.19%) think that SV is and the reverse only 7 (2.54) students think it never happen in there institution

<b>Label of variabeles</b>	<b>Variable</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Expiriance of witnessing Sexual violence in clinical practice area</b>	Yes	164	59.4
	No	112	40.6
<b>Expiriance of hearing about affected student about Sexual violence in clinical practice area</b>	Yes	197	71.38
	No	79	28.62

<b>Experiencing of other student reporting about Sexual violence in clinical practice area</b>	Yes	150	54.35
	No	126	45.65
<b>Opinion about how wide spread Sexual violence in clinical practice area</b>	Very common	109	39.49
	Somewhat common	100	36.23
	Rare	60	21.74
	Never occurs	7	2.54
<b>According to past information/ experience is in increase or decrease</b>	Increasing	133	48.19
	Decreasing	44	15.94
	Staying the same	62	22.46
	I don't know	37	13.41

Table 3 Past Experience about Sexual Violence Results

#### 5.4 Factor associated with sexual violence during clinical attachment

While individual factors like night shifts and supervisor gender show only weak statistical associations, combined with significant gaps in training and reporting, they contribute to an environment where sexual violence becomes normalized and underreported.

**Night shifts and male supervisors:** although working night shifts (72.46%) and having male supervisors (64.86%) showed only weak statistical ties with sexual violence, these factors may still create conditions that facilitate or normalize such behavior.

**Student categories:** variations in student performance (except “always asking someone helps”) play only a modest role in exposure, as reflected by low uncertainty coefficients (approximately 0.039–0.049).

**Contributing factors:** respondents cited a lack of awareness (39%), prevailing sexual dominance (64.4%) and normalization of inappropriate behaviors (47.8%), cultural norms (27.5%), and inadequate reporting mechanisms (25.4%) as key contributors.

**Institutional deficiencies:** a striking 83.3% of students had not received formal orientation on sexual violence, and only 16% of victims formally reported incidents.

Name of variables	Variable	Frequency (n)	Percentage (%)
<b>Working at night shift</b>	Yes	200	72.46
	No	76	27.54
<b>Immediate supervisors Sex</b>	Male	179	64.86
	Female	97	35.14
<b>Student educational educational character</b>	Excellent/ Very good	140	50.72

	Average	125	45.29
	Always asking someone helps	11	3.99
	Poor	0	0
<b>Opinion about contributing factors</b>	Power imbalance	43	15.6
	Lack of awareness about clinical practice place rights	36	13.0
	Cultural norms tolerating sexual harassment	76	27.5
	Inadequate policies or reporting mechanisms	70	25.4
	Stressful work environment	51	18.5
<b>Sexual harassment and rights training or orientation</b>	Never	230	83.33
	Once during my study	44	15.94
	Regularly	2	0.72
<b>Effective reporting mechanisms in your clinical attachment institution</b>	Yes	70	25.36
	No+ I am not aware	206	74.64

<b>Normalized inappropriate behaviors (e.g., sexual jokes) during clinical attachment.</b>	Strongly Agree	68	24.6
	Agree	64	23.2
	Neutral	69	25.0
	Disagree	68	24.6
	Strongly Disagree	7	2.5

Table 4 Factors associated with sexual violence

### 5.5 Factors affecting reporting system

Over 75% did not report, mainly due to beliefs that reporting would not lead to change (30.5%) and due to shame/stigma (30%), with cultural norms discouraging reporting (80.8%).

<b>Name of variabeles</b>	<b>Variable</b>	<b>Frequen cy (n)</b>	<b>Percentag e (%)</b>
<b>Factor that discourage repotting of sexual violence</b>	Fear of retaliation	44	16
	Lack of trust in the system	65	23.5
	Stigma/shame	83	30
	Perception that it won't change anything	84	30.5
<b>In clinical attachment place cultural norms</b>	Strongly Agree	145	52.5
	Agree	78	28.3

<b>discourage reporting incidence of SV</b>	Neutral	34	12.3
	Disagree	16	5.8
	Strongly Disagree	3	1.1
<b>Gender inequalities contribute to sexual violence in your clinical attachment place</b>	Strongly Agree	97	35.1
	Agree	81	29.3
	Neutral	49	17.8
	Disagree	42	15.2
	Strongly Disagree	7	2.5
<b>Feel safe in your clinical attachment place.</b>	Always	51	18.5
	Sometimes	145	52.5
	Rarely	53	19.2
	Never	27	9.8
<b>Suggestions to prevent sexual violence in clinical attachments</b>	Strict policy enforcement	54	19.6
	Training and awareness	182	65.9
	Strengthen report	31	11.2
	Peer support group	9	3.3

<b>Participating in future advocacy or training programs about sexual violence</b>	Yes	256	92.8
	No	20	7.2
	Total	276	100.0

Table 5 Factors affecting reporting to supervisors and Suggestions

### 5.6 Bivariate Analysis

Bivariate analysis using chi-square tests identified statistically significant associations ( $p \leq 0.25$ ) between sexual violence in clinical practice and several variables:

- **Age:** Mean age of those affected was  $26.3 \pm 2.4$  years compared to  $25.6 \pm 2.9$  years for those not affected ( $p = 0.018$ ).
- **Gender:** A significant association was observed ( $p < 0.001$ ).
- **Marital Status:** Single students were more affected ( $p = 0.022$ ).
- **Field of Study:** Significant association observed ( $\chi^2 = 35.70, p < 0.001$ ).
- **Night Shift Work:** Strong association observed ( $p < 0.001$ ).

	<b>SV in Clinical Practice (Yes)</b>	<b>No</b>	$\chi^2$	<b>P-value</b>
<b>Night shift practice</b>			15.290	<0.001
Yes	121	79		
No	26	50		
<b>Student academic performance</b>			2.144	0.342
Very good	76	64		
Average	63	62		

Always asking others	8	3		
<b>Reporting mechanism</b>			4.674	0.097
Yes	32	38		
No	27	46		
Not aware	70	63		
<b>Sex</b>			18.434	<0.001
Male	52	79		
Female	95	50		
<b>Marital status</b>				0.022
Single	110	115		
Married	36	14		
Divorced	1	0		
<b>Field of study</b>			35.699	<0.001
Medicine	111	57		
Nursing	10	23		
Midwifery	1	13		
Pharmacy	19	21		
Laboratory	6	15		

<b>Age (Mean ± SD)</b>	26.3 ± 2.4	25.6 ± 2.9	2.770	0.018
<b>Supervisor's sex</b>			0.348	0.555
Male	93	86		

**Table 6** Chi-square test of variables associated with sexual violence in clinical practice

### 5.7 Multivariate Logistic Regression Analysis

Multivariate logistic regression identified the following independent predictors of experiencing sexual violence in clinical practice:

- **Gender:** Female students were five times more likely to be affected (AOR = 5.00, 95% CI: 2.80–9.22,  $p < 0.001$ ).
- **Marital Status:** Single students were more likely to experience sexual violence (AOR = 3.46, 95% CI: 1.40–8.20,  $p = 0.005$ ).
- **Field of Study:** Compared to medical students, students from other fields were significantly less likely to experience sexual violence.
- **Night Shift:** Not statistically significant in the multivariate model ( $p = 0.319$ ).
- **Other Variables:** Age, sex of supervisor, and academic performance were not significant predictors.

<b>Variable</b>	<b>AOR (95% CI)</b>	<b>P-value</b>
<b>Sex</b>		
Male (Ref)		
Female	5.00 (2.80–9.22)	<0.001
<b>Marital Status</b>		
Married (Ref)		

Single	3.46 (1.40–8.20)	0.005
<b>Field of Study</b>		
Medicine (Ref)		
Nursing	0.122 (0.045–0.328)	<0.001
Midwifery	0.015 (0.001–0.135)	<0.001
Pharmacy	0.342 (0.138–0.847)	0.020
Laboratory	0.248 (0.076–0.801)	0.020
<b>Age</b>	0.950 (0.841–1.072)	0.410
<b>Night shift work</b>		
No (Ref)		
Yes	0.705 (0.354–1.401)	0.319

**Table 8** Multivariate logistic regression analysis of factors associated with sexual violence

### Summary of Findings

- **Strong, independent predictors:** Gender, marital status, field of study.
- **Not significant in final model:** Night shift work, age, sex of supervisor, academic standing.
- **Implication:** Gender and educational context strongly influence the risk of experiencing sexual violence during clinical attachment.

## Chapter 6. Discussion

This study assessed the prevalence and associated factors of sexual violence during clinical attachments among graduating health science students in Addis Ababa, Ethiopia. The high overall prevalence (53.3%) indicates that more than half of the clinical trainees endure some form of sexual violence during their training. This finding is consistent with previous studies in Ethiopia and other low- to middle-income countries where power imbalances and hierarchical structures in healthcare contribute to significant exposure to sexual violence (5)(6).

### 6.1 Prevalence of Sexual Violence

Our findings show that 53.3% of students experienced sexual violence during their clinical attachments. The predominant modes of harassment ranged from physical abuse (42.2%) to verbal and non-verbal behaviors, with face-to-face encounters constituting 81% of incidents. These results support the assertion that clinical environments where close interpersonal interactions and power differentials are common tend to expose students to a higher risk of harassment (5). In comparison, systematic reviews indicate that similar settings in Ethiopia report prevalence figures ranging from 46% to nearly 62% among female students (10).

### 6.2 Factors Associated with Sexual Violence

**Gender:** Female students were significantly more vulnerable, with an adjusted odds ratio (AOR) of 5.00 (95% CI: 2.80–9.22) compared to male students. This pronounced gender effect aligns with the literature, which repeatedly demonstrates that women are disproportionately burdened by sexual violence in settings that maintain rigid gender hierarchies(1). In the present setting, the predominance of male supervisors (64.86%) likely reinforces these imbalances, contributing to an environment where female students face increased risk and may feel less empowered to report incidents.

**Marital Status:** Single students were 3.46 times more likely to experience sexual violence than their married peers. This relationship may be explained by the perception that unmarried students have fewer social protections and less authority, rendering them more accessible targets for harassment (5). The cultural context in Ethiopia, which often associates marital

status with social security, supports this finding and underscores the need for institutions to provide focused support to single students.

**Field of Study:** Significantly higher odds of sexual violence were evident among medical students compared to students in nursing, midwifery, pharmacy, and laboratory sciences. Medical students' prolonged, unsupervised clinical placements in high-risk areas (e.g., emergency or surgical wards) likely enhance their exposure to unwanted sexual behaviors. In contrast, allied health students generally benefit from more structured and supervised placements, which appear to offer a protective effect. This difference in clinical exposure and supervision has been noted in previous research conducted in the region (6)

**Night Shift Work:** Although night shift work showed a strong association with sexual violence in the bivariate analysis ( $p < .001$ ), it did not retain independent significance in the multivariable model (AOR = 0.705;  $p = .319$ ). Nevertheless, the fact that nearly 73% of the students reported working night shifts indicates that these unsupervised, isolated conditions may still act as a situational risk factor. Even if confounded by other factors, the environmental risks of night shifts highlight the essential need for enhanced supervision and safety protocols during these hours (7). The key findings related to the factors that contribute to and normalize sexual violence during clinical attachments:

**Environmental Factors:** A large proportion of students (72.46%) worked night shifts, and most had male supervisors (64.86%). While these factors showed only a weak statistical association with sexual violence, they may nevertheless foster an environment that facilitates or normalizes such behavior.

**Student Categories:** Uncertainty coefficient (UC) values for student performance categories ("Excellent/Very Good" and "Average") were low (approximately 0.039–0.049,  $p < 0.01$ ), indicating that although the type of student plays a modest role in determining exposure to sexual violence and night shift assignments, its overall effect remains limited. The category "Always asking someone helps" did not show a significant correlation.

**Contributing Factors (as Reported by Respondents):**

- **Lack of Awareness:** 39% of respondents identified a lack of awareness about sexual violence as a contributing factor.

- **Sexual Dominance:** 64.4% attributed violence to power imbalances or sexual dominance within their departments.
- **Normalization of Inappropriate Behaviors:** 47.8% believed that such behaviors have become normalized.
- Additionally, factors such as cultural norms (27.5%) and inadequate reporting mechanisms (25.4%) were also highlighted.

**Institutional Deficiencies:** A striking 83.3% of students had not received formal training or orientation on sexual violence during clinical attachments, and only 16% of those who experienced sexual violence reported the incident. More than 75% did not report at all, with reasons including the belief that reporting “won’t change anything” (30.5%) and fear driven by shame or stigma (30%). Furthermore, 80.8% of students felt that prevailing cultural norms discourage reporting.

**Overall Statistical Implication:** The total uncertainty coefficients were 0.040 for sexual violence and 0.047 for night shift work ( $p < 0.001$ ), reinforcing a statistically significant, though constrained, association between these factors and the occurrence of sexual violence.

This summary emphasizes that although some factors show only weak direct associations, they collectively contribute to an environment where sexual violence is more likely to be normalized and underreported.

**Institutional Barriers:** In terms of contributing factors, respondents identified several key issues that foster a vulnerable environment in clinical attachments. Specifically, 13.0% of participants noted a lack of awareness regarding workplace rights as a contributing factor. Additionally, 27.5% indicated that prevailing cultural norms tend to tolerate harassment, while 25.4% attributed the problem to inadequate policies or reporting mechanisms. When combined with power imbalances and stressful work environments which together account for nearly 34% these factors collectively create an atmosphere in which inappropriate behavior can become normalized.

Regarding reporting practices, the study revealed concerning trends in how incidents of sexual violence are handled. Out of the 147 students who reported experiencing sexual violence, only 23 (16%) formally reported the incident. Among those who did not report, over

75% believed that reporting “would not change anything.” The primary reasons for underreporting included fear of retaliation (16%), feelings of stigma or shame (30%), and a lack of trust in the institutional reporting system (23.5%). These findings highlight significant gaps in institutional support, which further discourage victims from coming forward and perpetuate a cycle of silence and inaction.

A glaring institutional shortfall emerged with only 16% of affected students reporting incidents, while 83.3% had not received any formal orientation on sexual violence during clinical attachments. This lack of training and clear reporting mechanisms likely contributes to the normalization of such behaviors. Similar studies have discussed how inadequate policies and the absence of confidential, accessible reporting channels hinder early intervention and discourage victims from coming forward (20). The resulting institutional inertia further perpetuates the cycle of sexual violence.

#### Implications for Policy and Practice

The clear implications of these findings are threefold:

1. **Gender-Sensitive Interventions:** The pronounced risk faced by female students necessitates the implementation of comprehensive anti-harassment policies and gender-specific training sessions.
2. **Strengthened Clinical Supervision:** Given the higher risk associated with prolonged unsupervised clinical placements, particularly for medical students, institutions should standardize supervisory practices across all departments and ensure adequate oversight during high-risk scenarios, especially night shifts.
3. **Improved Reporting and Training Systems:** Establishing robust, confidential reporting channels and mandatory orientation programs on sexual violence is critical to empower students, ensure accountability, and foster a safer learning environment.

#### Conclusion

In summary, this study confirms that sexual violence during clinical attachments is a pervasive and systemic problem in Addis Ababa’s teaching hospitals. The significant associations observed with gender, marital status, and field of study underscore the urgent need for targeted, evidence-informed interventions. By addressing these factors through

institutional policy reform, enhanced clinical supervision, and improved reporting systems, educational institutions can help create a safer and more supportive clinical learning environment for all students.

### **6.3 Strengths and limitation of the study**

#### **6.3.1 Strengths**

1. **Context-Specific Focus:** The study uniquely targets sexual violence during clinical attachment among graduating health science students in Addis Ababa. By focusing on this specific and understudied population, it generates contextually relevant data that can inform local policy and tailored interventions.
2. **Robust Methodology:** Employing a cross-sectional design with multistage sampling and quota-based stratification ensures a representative sample across diverse health disciplines (medicine, nursing, midwifery, pharmacy, and laboratory sciences). This design enables efficient analysis of prevalence and associated factors in a relatively short duration during the study period.
3. **Use of Validated Instruments:** The data collection tools were adapted from established guidelines by the WHO, ILO, and related organizations. This enhances the validity and reliability of the information gathered on sensitive topics like sexual violence.
4. **Compliance with Ethical Standards:** The study was conducted under strict ethical protocols, with informed consent obtained from all participants and privacy maintained throughout data collection. This ethical rigor adds credibility to the research findings.
5. **Comprehensive Analysis:** The use of both bivariate and multivariate logistic regression analyses allows for the identification of independent predictors (e.g., gender, marital status, field of study) while controlling for confounding factors. This analytical depth provides a clearer picture of how specific factors contribute to the prevalence of sexual violence.

### 6.3.2 Limitations

1. **Cross-Sectional Design:** As the study is cross-sectional, it captures data at a single point in time. This design limits the ability to establish causal relationships between the identified factors (e.g., gender, marital status) and the experience of sexual violence during clinical attachments.
2. **Self-Reporting Bias:** The reliance on self-administered questionnaires may lead to underreporting or overreporting of sexual violence incidents due to recall bias or social desirability. Given the sensitive nature of the topic, some students might not have fully disclosed their experiences.
3. **Limited Generalizability:** Since the study was conducted in two selected governmental teaching hospitals in Addis Ababa, the findings may not be generalizable to all health science students in Ethiopia, particularly those in private institutions or different regions.
4. **Non-Probability Sampling:** The use of quota-based non-random sampling within strata, while useful for ensuring representation from different fields, may introduce selection bias. This may affect the external validity of the study, as some groups might be over- or under-represented relative to the entire student population.
5. **Potential Underreporting:** The extremely low formal reporting rate (16%) suggests that many cases may be unreported. Thus, the true prevalence of sexual violence might be underestimated. In addition, the lack of formal orientation on sexual violence likely affects the recognition and reporting of such incidents.

## Chapter 7. Conclusion and Recommendations

### 7.1 Conclusion

This study was designed to assess the prevalence of sexual violence during clinical attachments and to identify its associated factors among graduating health science students in Addis Ababa. Using a cross-sectional design, we sampled 276 students from selected governmental teaching hospitals. Through a structured, self-administered questionnaire—adapted from internationally recognized guidelines we gathered detailed information on demographics, clinical exposure, and experiences of sexual violence, as well as perceptions regarding reporting practices and contributing institutional factors.

Our findings revealed that 53.3% of students encountered sexual violence during their clinical attachments, with female students, single individuals, and those enrolled in medicine bearing significantly higher risks. The multivariate logistic regression demonstrated that female gender (AOR = 5.00, 95% CI: 2.80–9.22) and single marital status (AOR = 3.46, 95% CI: 1.40–8.20) were strong independent predictors of sexual violence, while medical students were more vulnerable than peers in nursing, midwifery, pharmacy, and laboratory sciences. Although factors such as working night shifts and having male supervisors showed some association in bivariate analysis, they did not emerge as independent predictors after adjusting for other variables. These results underscore the influence of both individual characteristics and contextual factors—such as the lack of formal training and underdeveloped reporting mechanisms—in perpetuating an environment prone to sexual violence.

In addressing our study objectives, the methodology and materials employed enabled a comprehensive narrative of both the prevalence and the multifactorial nature of sexual violence in clinical settings. This research not only fills an important gap in the literature concerning the safety of clinical attachments in Addis Ababa but also provides an evidence base for recommendations aimed at developing gender-sensitive policies, enhancing clinical supervision, and establishing robust reporting systems. Ultimately, our study calls for concerted institutional and policy efforts to create safe and supportive learning environments for all health science students.

## 7.2 Recommendations

These recommendations are intended to guide institutional reforms and policy interventions aimed at reducing sexual violence during clinical attachments, ultimately contributing to a safer and more supportive learning environment for all health science students. Based on the findings of this study, the following recommendations are proposed for key stakeholders to mitigate sexual violence during clinical attachments and to foster safer clinical learning environments:

### 1. For Educational Institutions and Teaching Hospitals

- ✓ **Develop and Implement Comprehensive, Gender-Sensitive Policies:** Establish clear anti-sexual violence policies that explicitly prohibit all forms of sexual harassment and abuse in clinical settings. Policies should be developed in consultation with students, faculty, and clinical staff to ensure relevance and practicality (Bekalu & Wudu, 2023).
- ✓ **Mandatory Orientation and Regular Training:** Integrate training sessions on sexual violence prevention, professional boundaries, and reporting procedures into the clinical curriculum. Regular orientation will raise awareness regarding students' rights and the available support channels.
- ✓ **Establish Confidential and Accessible Reporting Systems:** Create and publicize anonymous reporting channels with clear procedures for prompt investigation. Such systems should guarantee confidentiality and protection against retaliation, thereby encouraging more students to come forward.
- ✓ **Enhance Clinical Supervision:** Strengthen supervisory practices—particularly in high-risk settings such as emergency and surgical wards, and during night shifts—by increasing staffing levels and implementing periodic monitoring. This will help reduce unsupervised interactions and discourage inappropriate behavior.
- ✓ **Institutional Support Services:** Establish on-campus counseling services and peer-support groups to provide emotional, legal, and academic support for those affected by sexual violence.

### 2. For Policymakers and Regulatory Bodies

- ✓ **Standardize National Guidelines:** Develop and enforce national guidelines on the prevention and management of sexual violence across all health training institutions.

Guidelines should include mandatory training, structured reporting protocols, and regular auditing of compliance.

- ✓ **Strengthen Legal Protections:** Advocate for legal reforms that protect student victims and hold perpetrators accountable. These reforms should ensure that institutions are legally required to respond effectively to reported cases.
- ✓ **Monitor and Evaluate Institutional Practices:** Establish regular monitoring and evaluation frameworks to assess the implementation of anti-sexual violence policies. This includes collecting anonymized feedback from students to ensure that measures are effectively reducing incident rates.

### **3. For Health Science Students and Peer Groups**

- ✓ **Promote Awareness and Peer Education:** Encourage the formation of student-led peer education initiatives where students can share experiences and strategies to cope with and report harassment. Workshops and discussion forums can help build a culture that challenges the normalization of sexual violence.
- ✓ **Foster a Reporting Culture:** Empower students to speak up about harassment by disseminating clear information on reporting channels and the protections afforded by institutional policies. Peer support groups should also work to reduce the stigma attached to reporting incidents.

### **4. For Future Research**

- ✓ **Longitudinal Studies:** Recommend conducting follow-up studies over time to understand the long-term psychological, academic, and career impacts of sexual violence in clinical settings.
- ✓ **Qualitative Research:** Encourage in-depth qualitative studies (e.g., focus groups, interviews) to capture students' lived experiences. Such research can uncover nuanced institutional barriers or cultural factors that quantitative studies might miss.
- ✓ **Intervention Studies:** Future research should test the effectiveness of various interventions (e.g., training programs, enhanced supervision) in reducing sexual violence in clinical settings.

## Chapter 8. Reference

1. Bruschini, M. M., Hediger, H., & Busch, A. (2023). Patients' sexual harassment of nurses and nursing students: A cross-sectional study. *International Journal of Nursing Studies Advances*, 5, 100121. <https://doi.org/10.1016/j.ijnsa.2023.100121>
2. Jendretzky, K., Boll, L., Steffens, S., & Paulmann, V. (2020). Medical students' experiences with sexual discrimination and perceptions of equal opportunity: A pilot study in Germany. *GMS Journal for Medical Education*, 37(5), Doc51.
3. Barbier, J. M., Carrard, V., Schwarz, J., Berney, S., Clair, C., & Berney, A. (2023). Exposure of medical students to sexism and sexual harassment and their association with mental health: A cross-sectional study at a Swiss medical school. *BMC Medical Education*, 23, 1–9.
4. Frank, E., Zhao, Z., Fang, Y., Cleary, J. L., Viglianti, E. M., Sen, S., et al. (2024). Trends in sexual harassment prevalence and recognition during intern year. *JAMA Network Open*, 7(5), e241234.
5. Adinew, Y. M., & Hagos, M. A. (2017). Sexual violence against female university students in Ethiopia. *BMC Public Health*, 17, 1–7.
6. Weldesenbet, H., Yibeltie, J., & Hagos, T. (2022). Sexual harassment and associated factors among female nurses: The case of Addis Ababa public hospitals. *Ethiopian Journal of Health Sciences*, 32(4), 3053–3068.
7. Esayas, H. L., Gemed, H., Melese, T., Birgoda, G. T., Terefe, B., Abebe, S., et al. (2023). Sexual violence and risk factors among night shift female college students in Hawassa city. *BMC Women's Health*, 23, 1–10. <https://doi.org/10.1186/s12905-022-02150-w>
8. Admas, M., Talie, A., Bewket, L., Temesgen, B., Tadesse, K., & Melaku, T. (2020). Sexual violence and its associated factors among regular female students in College of Medical Sciences, Jimma University, Southwest Ethiopia, 2017. *Journal of Women's Health Care*, 4(1), 144–151.
9. Kebede, B., Yirgu, M., Damtie, Y., & Asmamaw, M. (2021). Predictors of sexual violence among female students in higher education institutions in Ethiopia: A systematic

- review and meta-analysis. PLoS ONE, 16(3), e0247386. <https://doi.org/10.1371/journal.pone.0247386>
10. Ibrahim, D., & Riley, R. (2023). Female medical students' experiences of sexism during clinical placements: A qualitative study. *Medical Education*, 57, 1–16.
  11. Geldolf, M., Tijtgat, J., Dewulf, L., Haezeleer, M., Degryse, N., Pouliart, N., et al. (2021). Sexual violence in medical students and specialty registrars in Flanders, Belgium: A population survey. *BMC Medical Education*, 21, 1–9.
  12. Traylor, D. O., Anderson, E., Allenbrand, C. K., Kaur, T., Gill, H., & Singh, H. (2024). The prevalence of sexual misconduct in US medical education: Examining the intersecting vulnerabilities of gender and sexual orientation. *Academic Medicine*, 16(7).
  13. Naothavorn, W., Puranitee, P., Kaewpila, W., Sumrithe, S., & Heeneman, S. (2023). An exploratory university-based cross-sectional study of the prevalence and reporting of mistreatment and student-related factors among Thai medical students. *BMC Medical Education*, 23, 1–13. <https://doi.org/10.1186/s12909-023-04462-3>
  14. Mahurin, H. M., Garrett, J., Notaro, E., Pascoe, V., Stevenson, P. A., Deniro, K. L., et al. (2022). Sexual harassment from patient to medical student: A cross-sectional survey. *BMC Medical Education*, 22, 1–7. <https://doi.org/10.1186/s12909-022-03914-6>
  15. Viglianti, E. M., Oliverio, A. L., Pereira-Lima, K., & Frank, E. (2023). Variation by institution in sexual harassment experiences among US medical interns. *JAMA Internal Medicine*, 183(12), 2023–2026.
  16. La Torre, G., Firenze, A., Colaprico, C., Ricci, E., Pio, L., Gioia, D., et al. (2022). Prevalence and risk factors of bullying and sexual and racial harassment in healthcare workers: A cross-sectional study in Italy. *BMC Public Health*, 22, 1–10.
  17. Zeng, L., Zong, Q., Zhang, J., Lu, L., An, F., Ng, C. H., et al. (2019). Prevalence of sexual harassment of nurses and nursing students in China: A meta-analysis of observational studies. *International Journal of Nursing Studies*, 96, 15.
  18. Adane, B., Kefale, B., Addisu, E., Arefaynie, M., Mitiku, K., Damtie, Y., et al. (2025). Spatial and multi-level analysis of factors associated with long-acting reversible modern contraceptive use among married women in Ethiopia. *PLoS ONE*, 20(5), 1–19. <https://doi.org/10.1371/journal.pone.0313511>

19. Hafiz, A. M., Senturk, E., Teker, C., & Sarikaya, O. (2023). Factors affecting the level of reflective thinking and clinical decision-making skills in medical faculty students. *Sisli Etfal Hastanesi Tip Bulteni*, 57(4), 543–551. <https://doi.org/10.14744/SE>
20. Bekalu, Y. E., & Wudu, M. A. (2023). Prevalence of workplace violence and associated factors against nurses working in public hospitals in northeastern Ethiopia, 2022. *SAGE Open Nursing*, 9, 23779608231171776.
21. Worke, M. D., Koricha, Z. B., & Debelew, G. T. (2021). Perception and experiences of sexual harassment among women working in hospitality workplaces of Bahir Dar city, Northwest Ethiopia: A qualitative study. *BMC Public Health*, 21(1).
22. International Labour Office (ILO), International Council of Nurses (ICN), World Health Organization (WHO), & Public Services International (PSI). (2002). Joint programme on workplace violence in the health sector. Geneva: ILO.

## **Appendix 1- Informed Consent Form**

### **Study Title**

Sexual Violence during Clinical Practice: Prevalence and Associated Factors Among Graduating Health Science Students, Addis Ababa: A Cross-Sectional Study, 2025.

### **Introduction**

You are invited to participate in a research study conducted by Ms. Mahelet Gizaw, an MSc student specializing in Maternity and Reproductive Health at Addis Ababa University, Department of Nursing and Midwifery. This study aims to assess the prevalence of sexual violence during clinical attachment and its associated factors among graduating health science students during their clinical attachments. Your participation is entirely voluntary, and you may withdraw at any time without any consequences.

### **Purpose of the Study:**

The purpose of this study is to evaluate the prevalence of sexual violence during clinical attachment, identify its associated factors, and understand its potential impacts on graduating health science students in Addis Ababa. The findings will provide insights to inform policies and interventions aimed at creating safer clinical environments for students.

### **What Your Participation Involves:**

- ✓ If you agree to participate:
- ✓ You will be asked to complete a questionnaire that will take approximately 20–30 minutes.
- ✓ The questionnaire includes questions about your experiences, awareness, and perceptions of sexual violence during clinical attachment during your clinical attachment.
- ✓ Some questions may address sensitive topics. You may choose to skip any question that makes you uncomfortable.

### **Risks and Benefits:**

**Risks:** The study involves discussing sensitive topics, which may cause emotional discomfort. If you feel distressed, you are encouraged to stop participating or seek support from available counseling services.

**Benefits:** While there are no direct benefits to you, your participation will contribute to a better understanding of sexual violence during clinical attachment and help in creating safer educational and clinical environments.

**Confidentiality and Voluntary Participation:**

- ✓ All information you provide will remain strictly confidential.
- ✓ Your responses will be anonymous and securely stored.
- ✓ No identifying information will appear in the final report or be shared with others.
- ✓ Your participation in this study is completely voluntary.
- ✓ You are free to decline participation or withdraw from the study at any point, even after starting the questionnaire, without any repercussions.

Contact Information:

If you have any questions about this study or your participation, please contact:

**Ms. Mahelet Gizaw** – Phone: +251910813527

Consent Declaration:

By signing this form, you confirm that:

- ✓ You have read and understood the purpose and details of this study.
- ✓ You understand that your participation is voluntary and that you may withdraw at any time.
- ✓ You agree to participate in this study.

**Participant's Signature:** \_\_\_\_\_

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

**Researcher's Name:** Ms. Mahelet Gizaw

**Researcher's Signature:**  \_\_\_\_\_

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

## Appendix 2 The Questioner

### Section 1: Demographic Information

1. How old are you? \_\_\_\_\_ (By year only)
2. Gender:
  - Male
  - Female
3. Marital status:
  - Single
  - Married
  - Divorced
  - Widowed
4. Field of study:
  - Medicine
  - Nursing
  - Midwifery
  - Pharmacy
  - Laboratory
  - Other (please specify): \_\_\_\_\_

### Section 2: Prevalence of Sexual violence during clinical attachment

5. Have you experienced any form of sexual violence during your clinical attachment?
  - Yes
  - No (Go to Q. 18)
6. How many times have you experienced sexual violence during your clinical attachment?
  - Once
  - 2–3 times
  - More than 3 times
7. What was the nature of the sexual violence?
  - Verbal harassment (e.g., inappropriate comments, jokes)
  - Physical harassment (e.g., unwanted touching, groping)

- Non-verbal harassment (e.g., gestures, stares)
  - Coercion (e.g., pressure to engage in sexual activities)
  - Other (please specify): \_\_\_\_\_
- 8.** Where did the incident(s) occur?
- Ward
  - Operating theater
  - Outpatient department
  - Other (please specify): \_\_\_\_\_
- 9.** Who was the perpetrator(s)?
- Patient
  - Patient's family
  - Supervisor/clinical instructor
  - Peer (fellow student)
  - Other healthcare workers
  - Other health professional assistance staffs(Cleaner, Security, Runner or Porter)
- 10.** Method of sexual violence
- Face to face
  - Phone call
  - Text message
  - Social media
- 11.** Time of violence occurrence
- Day
  - Night
  - Between( 6:30–7:30 PM o'clock)
- 12.** Have you reported the violence?
- Yes
  - No (Go to Q 17)
- 13.** To whom you reported the violence?
- My Supervisor
  - Colleagues/peers
  - Family members

14. Was the incident ever investigated?
- Yes
  - No
15. What were the consequences for the abuser?
- None
  - Verbal warning issued
  - Fired from work/ Responsibility
16. Are you satisfied with the manner in which the incident was handled?
- Yes
  - No
17. Why did not report incident to others?
- No reporting system and guideline
  - Felt ashamed
  - Afraid of negative consequences
18. Have you personally witnessed sexual violence occurring to others during your clinical attachment?
- Yes
  - No (Go to Q.21)
19. Have you heard about incidents of sexual violence affecting other students in your clinical attachment setting?
- Yes
  - No
20. If yes to the above, how many such incidents have you witnessed or heard about?
- One
  - 2–3 incidents
  - More than 3 incidents
21. Have you ever heard rumors or reports about sexual harassment being a common issue at clinical attachment sites in Addis Ababa?
- Yes
  - No
  - I am not sure

22. In your opinion, how widespread is sexual violence in clinical attachments at your institution?
- Very common
  - Somewhat common
  - Rare
  - Never occurs
23. Do you believe sexual violence in clinical attachment settings is increasing, decreasing, or staying the same over time?
- Increasing
  - Decreasing
  - Staying the same
  - I don't know

**Section 3: Factors Associated with Sexual violence during clinical attachment**

24. Did you work at night shift?
- Yes
  - No
25. Sex of most immediate supervisors?
- Male
  - Female
26. What kind of student you are?
- Excellent/ Very good
  - Average
  - Always asking someone helps
  - Poor
27. Does your clinical attachment have a **clear policy for reporting sexual violence**?
- Yes
  - No
  - I don't know

- 28. How would you rate the quality of supervision in your clinical attachments?**
- Poor
  - Fair
  - Good
  - Excellent
- 29. What do you think contributes to sexual violence in clinical attachments?**
- Power imbalance
  - Lack of awareness about clinical practice place rights
  - Cultural norms tolerating sexual harassment
  - Inadequate policies or reporting mechanisms
  - Stressful work environment
  - Other (please specify): \_\_\_\_\_
- 30. How often do you receive training or orientation on clinical attachments place sexual harassment and rights?**
- Never
  - Once during my study
  - Regularly
- 31. Are there effective reporting mechanisms in your clinical attachment institution?**
- Yes
  - No
  - I am not aware
- 32. What do you think factors(s) that discourages reporting of sexual violence?**
- Fear of retaliation
  - Lack of trust in the system
  - Stigma/shame
  - Perception that it won't change anything
  - Other (please specify): \_\_\_\_\_

**33. Do you believe cultural norms in your clinical attachment place discourage reporting sexual violence?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**34. Do gender inequalities (e.g., male dominance) contribute to sexual violence in your clinical attachment place?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**35. Are inappropriate behaviors (e.g., sexual jokes) normalized in your clinical attachment?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**36. Do you feel safe in your clinical attachment place?**

- Always
- Sometimes
- Rarely

- Never

**Section 4: Recommendations and Suggestions**

37. What measures do you suggest to prevent sexual violence in clinical attachments?

- Stricter enforcement of policies
- Training and awareness programs
- Strengthened reporting mechanisms
- Peer support groups
- Other (please specify): \_\_\_\_\_

38. Would you like to participating in future advocacy or training programs about clinical practice place violence?

- Yes
- No