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KNOWLEDGE, ATTITUDE AND PRACTICES OF POST EXPOSURE PROPHYLAXIS OF HIV/AIDS AMONG STUDENTS OF HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, TECHIMAN

DORIS ASAMOAH

2024

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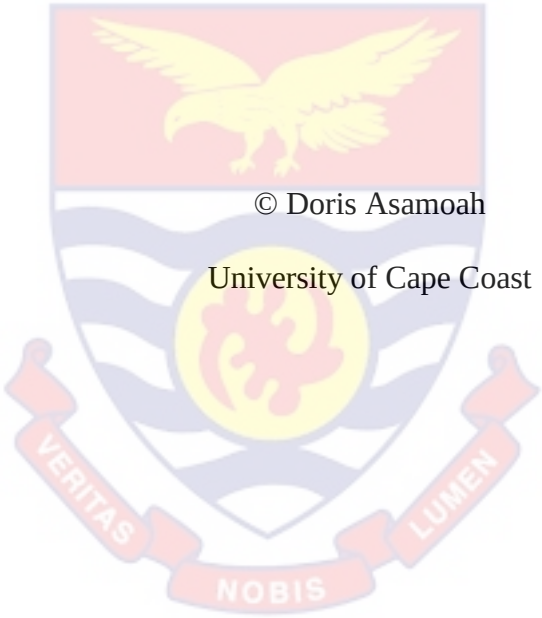

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KNOWLEDGE, ATTITUDE AND PRACTICES OF POST EXPOSURE PROPHYLAXIS OF HIV/AIDS AMONG STUDENTS OF HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, TECHIMAN

BY

DORIS ASAMOAH

Thesis submitted to the School of Nursing and Midwifery, College of Health and Allied Science, University of Cape Coast, in partial fulfilment of the requirements for the award of Master of Philosophy Degree in Nursing

SEPTEMBER 2024

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ABSTRACT

Post exposure prophylaxis (PEP) is any form of preventive healthcare that is commenced as soon as the person comes into contact with a specific pathogen and before necessarily developing the disease. According to a report, 2 million out of 35 million health care workers are estimated to have exposure to infectious disease every year. Such an infection is HIV/AIDS that is in dire straits in Health care workers and student nurses in Ghana. PEP is useful in preventing HIV virus after exposure to contaminated substances; however student nurses may lack adequate knowledge about it. The aim of this study was to determine the level of knowledge, attitude and practice of PEP for HIV among student nurses of Holy Family Nursing and Midwifery Training College in Techiman and how this could be enhanced. This paper used a descriptive cross-sectional quantitative research design and the data source was a structured questionnaire with closed ended questions to be answered by 220 respondents. Descriptive analysis was done SPSS version 23. The existing level of knowledge of student nurses was low in terms of PEP; although, several students had some level of knowledge with a positive attitude and practice towards PEP. Furthermore, this study also showed a relationship with the level of the programme in knowledge about PEP. The results show that students' knowledge of PEP in HIV is poor and short training before the pre-clinical attachment on PEP of HIV should be conducted to the students annually to improve their knowledge.

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KEY WORDS

Human Immunodeficiency Virus

Acquired Immune Deficiency Syndrome (HIV/AIDS)

Post Exposure Prophylaxis

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ACKNOWLEDGEMENTS

I am so much grateful to the Almighty God and for giving me the ability and knowledge to produce this research work. Also to my supervisors, Dr. Akwasi Anyanful of the School of Medical Sciences and Prof. Michael Adinortey of the Department of Biochemistry for their professional direction, counselling, motivation and encouragement that contributed immensely to this project. I also want to thank all the members of the Faculty of School of Nursing for their great support. I also equally convey my appreciation to the management team, tutors and the student populace of the Holy Family Nursing and Midwifery Training College, Techiman for their effort in the achievement of this work, and all those that took part in the research. Finally, I would like the authors and the publishers who were helpful in preparing this thesis by providing some of their works or publications.

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DEDICATION

To my dear husband, Mr. Emmanuel Gyimah, and my dear children, Samuella Ampomah Gyimah, Emmanuella Nyamekye Asamoah Gyimah and Emmanuel Korsah Gyimah.

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LIST OF ACRONYMS

AIDS	Acquired Immuno-Deficiency Syndrome
AEB	Accidental exposure to blood
ARV	Antiretroviral
cART	Combination Antiretroviral Therapy
CDC	Centre for Disease Control and Prevention
CPMBC	Cognitive Processes Mediating Behavioral Change
HCWs	Healthcare Workers
HFNMTC	Holy Family Nursing and Midwifery Training College
HIV	Human Immune Virus
ILO	International Labour Organization
IV	Intravenous
NSI	Needle Stick Injuries
PEP	Post Exposure Prophylaxis
PLWHIV	People Living With HIV
PMT	Protection Motivation Theory
PMTCT	Prevention of Mother-to-Child Transmission
PrEP	Pre-Exposure Prophylaxis
UCC	University of Cape Coast
UNAIDS	United Nations Program on AIDS
WHO	World Health Organization

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CHAPTER ONE

INTRODUCTION

Health care workers (HCWs) are assumed to make up the human resource strength of any nation's health care system. However, their performance is frequently characterized by exposure to a variety of risks like contact biohazards which cause diseases like HIV (Hussein et al., 2023). Across the world, thousands of HCWs are exposed accidentally to BBPs on a daily basis (Changraksa, et al., 2022; UNAIDS, 2016).

Accidental exposure to blood (AEB) refers to unintentional contact with blood or body fluids that contain blood during a medical procedure. This type of exposure poses a risk of infection from various bloodborne viruses. (Nouetchognou et al., 2016). According to World Health Organization (WHO), majority of exposures to blood or other body fluids occurred in health care settings and nurses as well as midwives are likely the most vulnerable among health care workers to occupational hazards due to their frequent exposure to high-risk situations (WHO, 2018). In Africa, healthcare workers are at risk of infection from blood-borne pathogens particularly HBV, HCV, and HIV (Belyhun, Maier, Mulu, Diro, Liebert, 2016).

Management and treatment of HIV patients is one way in which HCWs can accidentally be exposed to and infected with the HIV virus. PEP is one method to reduce the spread of infections in someone exposed to the virus. PEP uses antiretroviral (ARV) medications to help prevent HIV transmission. The reason is that ARVs given immediately after exposure can stop the virus from disseminating in the body and establishing infection and it prevents 81% of sero conversion (Robicsek, 2017).

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Background to the Study

PEP includes antiretroviral regimen given to individuals to lower the risk of contracting HIV after potential exposure, whether in occupational settings or through sexual contact.

This preventive measure consist of first aid, consultation, evaluation of contact risk with infection, HIV testing, administration of a 28-day course of antiretroviral drugs depending on the results of contact assessment, necessary consultations, and follow-up (WHO, 2022). The use of PEP for HIV is recommended by World Health Organization in preventing the occurrence of HIV infection resulting from occupational hazard (WHO, 2022).

Human Immunodeficiency Virus (HIV) is a virus, which attacks the T-cells (CD-4 cells) in the immune system. Acquired Immune Deficiency Syndrome (AIDS) is a syndrome, which appears in the advanced stage of HIV infection. Without treatment, HIV infection can progress and, eventually, develop into AIDS in the vast majority of cases. However, it is possible to be infected with HIV without having AIDS. The virus is transmitted through having unprotected sex, including vaginal, oral, and anal sex, or sharing sex toys with someone infected with HIV through the exchange of body fluid. Additionally, a mother may transmit it to her child through breastfeeding, childbirth, or pregnancy itself. Additionally, contaminated blood transfusions, injections, and intravenous (IV) drug users sharing and reusing needles contaminated with HIV-infected blood can all result in transmission. Fever, chills, joint pain, muscular pains, sore throat, sweats (especially at night), swollen glands, a red rash, weakness, exhaustion, and weight loss are some of the symptoms that define AIDS (Smeltzer et al., 2021).

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HIV remains a significant worldwide public health concern. An estimated 35 million individuals have died from AIDS-related illnesses since the HIV epidemic began, and 78 million people have contracted the virus. 30% of the estimated 36.7 million persons living with HIV in 2016 were unaware of their status. (UNAIDS, 2016; 2017).

An estimated 25.5 million people are living with HIV (PLWHIV) in Sub-Saharan Africa, and the majority of them reside in low- and middle-income nations. 19.4 million of these individuals reside in East and Southern Africa, where the number of new HIV infections increased by 44% worldwide in 2016 UNAIDS estimated that in 2014 about 150,000 individuals had HIV in Ghana and the incidence rate was 0.8% (UNAIDS, 2017).

HIV/AIDS infection is a major concern in various healthcare facilities especially in poor-resourced areas where health workers manage a significant number of patients with HIV, thereby making them more exposed to the HIV infection. This makes it necessary for preventive measures to be put in place (Koto & Maharaj, 2016).

Globally, numerous HCWs are unintentionally exposed to blood-borne infections at work every day (Changraksa et al., 2022; UNAIDS, 2017).The most affected groups of people are healthcare workers who experience over two million sharp injury exposures at work each year (WHO, 2019; Bouya et al., 2020). For example; hollow bore devices are responsible for around 61% of the 380,000 injuries from needle sticks that happen in hospitals annually according to the Centers for Disease Control (CDC),. Of all the healthcare professionals, nurses and midwives are most likely to be exposed to the occupational risk of infections, including HIV (CDC, 2019).

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To prevent HIV transmission, the following strategies can be used: HIV counseling and testing; prevention of mother-to-child transmission of HIV (PMTCT); combination antiretroviral therapy (cART); pre-exposure prophylaxis (PrEP); treatment of co-infections to lower HIV viral load and transmission risk; medical male circumcision to lower susceptibility; use of sterile injection needles and syringes; safe transfusion; and post-exposure prophylaxis (PEP) (Kebaya et al., 2021).

According to Robicsek (2017), 81% of sero-conversion is avoided using PEP. Needlestick injury, has been estimated have 0.3% probability spread of HIV and following fluid exposure, is 0.09% (Robicsek, 2017).

It has been revealed that, healthcare workers had poor knowledge about PEP as well as how to access it, and they under reported needle stick injuries because of lack of confidentiality, fear of knowing their HIV status and the feeling that PEP was ineffective (Devi, Kalia, & Sethi, 2016). Similarly, it has been shown that only 40% of employees (health workers) at a hospital in New Delhi knew about PEP (Muralidhar, Kumar, Jain, Malhotra, & Bala, 2010).

Student nurses in Zimbabwe were well-versed with PEP, including its components, work-related sources, and workplace hazards. They were also aware of the protocols to be followed in the event that an individual was exposed to HIV (Katsinde & Katsande, 2012). After being introduced, the majority of them also had favorable opinions regarding PEP but negative attitudes toward using it. Nursing students' requests for PEP decreased as a result of their fears of stigmatization, a lack of privacy and secrecy, and the

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unfavorable side effects of the medications used for PEP (Katsinde & Katsande, 2012).

A study on PEP is paramount with regards to health workers as well as student nurses who also go to the healthcare facilities for clinical experiences. The healthcare workers and the student nurses all undertake similar activities when it comes to equal risk of exposure. Therefore, there is the need to offer better practices for the healthcare workers as well as the student nurses. For this reason, this study focuses on the PEP precautionary practices for student nurses who are being initiated into better healthcare system.

Statement of the Problem

In recent years, Holy Family Hospital in Techiman has seen a rise in the number of student nurses and staff nurses who have been exposed to blood and other bodily fluids and have had needlestick injuries (Holy Family Hospital - Techiman annual reports, 2015; 2016) where these students are usually sent for clinical attachment. This is partly due to improper disposal of sharps, inadequate sharp containers and negligence. In 2015, the total number of employees who suffered injuries from needlesticks was 29 and in 2016, 34 cases of needle stick injuries were reported (Holy Family Hospital - Techiman annual reports, 2015; 2016).

Student nurses who are sent out to the hospital for clinical experience during their training accidentally get injured from sharp objects that have been used on patients or come into contact with blood, liquor, vomitus and urine. In most of these instances where student nurses have been injured with sharp objects or exposed to bodily fluids, they failed to report for the necessary action to be taken to prevent them from getting any infections. In one instance,

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a student went to the ward and sustained a needle stick injury but failed to report for an immediate action to be taken. She later tested positive for Human Immunodeficiency Virus (HIV) which might be related to the needle stick injury (Katsinde & Katsande, 2012).

A review carried out on PEP regarding HIV and Hepatitis B exposures at work in Shree Krishna Hospital in Western India revealed that; of the total 96 people who were exposed, 48 were to HIV and the other 48 to Hepatitis B. PEP was required for 39 of the 48 individuals exposed to HIV, however only 14 (35.9%) of them received it within 72 hours (Sheth, Leuva, & Mannari, 2016).

A study done in Ghana on PEP focused on adverse events and adherence to PEP among healthcare workers and healthcare students (Tetteh et al., 2015) but this current study focused on student nurses who do most of the basic procedures in the wards that expose them to infections. Sometimes they do these procedures without following the standard precaution for infection prevention or without any adequate protection.

Few studies have been conducted in Ghana evaluating student nurses' PEP knowledge, attitudes, and practices. This study evaluated PEP knowledge, attitudes, and behaviors of Holy Family Nursing and Midwifery Training College (HFNMTC), Techiman student nurses.

Purpose of the Study

The incidence of needle pricks and other exposures to infections including HIV is on the increase among health workers and student nurses at Holy Family Hospital, Techiman (Holy Family Hospital annual reports, 2015; 2016). Most of these needles might have been contaminated with an infectious

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agent including HIV since the hospital attends to a lot of HIV/AIDS patients. PEP is one of the ways that can prevent HIV alongside other illnesses following sexual contact with an infected individual or occupational exposure, however, student nurses might not be aware of this or may not know enough about it. The study seeked to evaluate PEP knowledge, attitudes, and practices among students in HFNMTC.

Research Objectives

The objective of the study was to evalute the knowledge, attitudes and practices of student nurses on PEP at the HFNMTC, Techiman.

Specific Objectives

1) To assess the student nurses' level of knowledge on PEP.
2) To determine student nurses' attitude towards PEP
3) To ascertain whether student nurses practice PEP.
4) To establish the relationship between level of program and knowledge about PEP.

Research Questions

1) What do student nurses know about PEP?
2) What attitude do student nurses have towards PEP?
3) How do student nurses practice PEP?
4) What is the correlation between level of program and knowledge about PEP?

Significance of the Study

This study findings will be used improve hospital protocol and educate student nurses thereby increasing their awareness of PEP. It will also give them the assurance of confidentiality and the need to seek PEP without fear or

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scorn. The outcome of this study will also add to the existing literature on nurse education in Ghana.

Delimitation

The study focuses on student nurses' knowledge, attitudes, and practices about HIV post-exposure prophylaxis. The focus of the academic study is nursing education, especially at HFNMTC, and not elsewhere. The Holy Family Nursing and Midwifery Training College (HFNMTC) Techiman in the Bono East area served as the site for this work. The study included all students of HFNMTC - Techiman, who have had at least a clinical exposure (second and third years), and excluded all first-year students of the college.

Limitations

The design of this study does not permit the establishment of causal relationships between dependent and independent variables.

Also, it relied on self-report measures to analyze the problem which can introduce social bias and social desirability effect. This may not accurately reflect actual behaviors or outcomes, leading to overestimation or underestimation of the true associations.

Definition of terms

Attitudes –Is the beliefs and actions toward PEP

Exposure – Has been unprotected to HIV infection

Knowledge –Is an awareness, or understanding of PEP

Post – After being exposed to HIV infection

Practices – Actual implementation of PEP by student nurses

Prophylaxis – A form of treatment or medication

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Student nurse – A person enrolled in a nursing school, training to become a professional nurse

Organization of the Study

It is organised into five chapters, each of which has a distinct purpose. An overview of the study is given in the first chapter, which covers the issue statement, background, aims, significance, boundaries, restrictions, definitions of terms, and research layout. The second chapter discusses the theoretical and conceptual underpinnings as it dives into the literature review. In-depth analysis of the research methods is provided in Chapter 3, which also includes a synopsis of the chapter and covers the research design, study site, population, sampling strategy, data collecting instruments, protocols, data processing, analysis, and ethical considerations. The analysis of the results from the data collected in chapter three is the main topic of chapter four. Chapter five concludes by summarising the research, drawing conclusions, and offering suggestions in light of the findings.

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CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter's main goal was to analyse of the relevant empirical and theoretical literature. The theoretical construct considered Rogers Protection Motivation Theory (PMT). The empirical review concentrates on relevant literature which has been discussed under knowledge of PEP, attitude about PEP, practice and barriers to PEP. A literature search was conducted for this work using several databases. Keywords or phrases that were used in the search included: knowledge about PEP, attitude towards PEP, practicing PEP, improving PEP, and barriers to PEP.

Moreover, this chapter will critically analyze the existing literature to identify gaps in current knowledge, conflicting findings, and areas requiring further research. The review will also explore the results' implications for healthcare practice, policy, and education, with a particular focus on strategies to enhance PEP knowledge, improve attitudes, increase proper utilization, and overcome barriers to implementation. By providing this comprehensive overview, the literature review sets the stage for the current study, contextualizing its importance within the broader field of occupational health and safety in healthcare settings. It also serves to justify the research questions and methodological approach adopted in this investigation.

Theoretical Framework

This is the overall "blueprint" for the thesis. It is a roadmap for the investigation. An existing theory or theories in the literature that have been validated by other researchers and are regarded as commonly accepted

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theories in the academic literature serve as the basis for the theoretical framework (Grant & Osanloo, 2014). For this study, the Protection Motivation Theory (PMT) was used as a modified theoretical framework. This concept is relevant to the study since it addresses how people will handle and make choices during stressful or detrimental life events. One makes these choices in order to defend themselves against a perceived danger (Rogers, 1983).

Protection Motivation Theory (PMT)

The Protection Motivation Theory (PMT), gives meaning to fear, it is commonly utilized to predict and affect behavior (Rogers, 1975). The Cognitive Processes Mediating Behavioral Change (CPMBC) were emphasized in the updated theory of persuasive communication, which was more universal in scope (Rogers, 1983).

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Conceptual Model

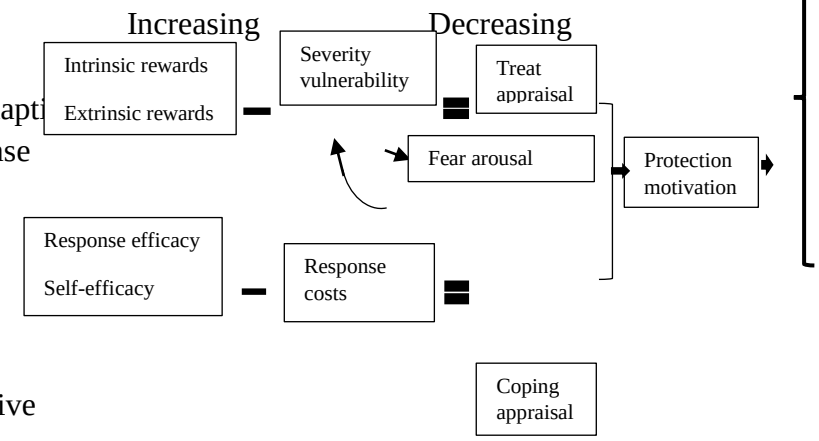
SOURCES OF INFORMATION	COGNITIVE MEDIATING PROCESSES	COPING MODES
ENVIRONMENTAL Verbal persuasion Observational learning INTRAPERSONAL Personality variables Prior experience	Factors affecting response probability  	ACTION OR INHIBITION OF ACTION. Single act Repeated acts Multiple acts Repeated multiple acts

Figure 1: Protection Motivation Theory
Source: Rogers, (1983).

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Core assumptions and statements

The Protection Motivation Theory (Rogers, 1983), drawing from the work of Lazarus (1966) and Leventhal (1970), explains how individuals adaptively or maladaptively cope with a health threat through threat appraisal and coping appraisal. In these processes, persons assess the threat and the behavioral choices that are open to them to reduce that threat (Boer & Seydel, 1996). Appraisal of the health threat along with the appraisal of coping plans leads to protection motivation or in more extreme decisions can lead to maladaptive responses. Self-destructive behaviors, which put a personl in danger, are behaviors that lead to an adverse effect or the lack of such behaviors is capable of preventing the adverse effect (an example is absence of precaution measures when handling CF needles …can lead to HIV).

According to the Protection Motivation Theory, four elements influence a person's intention to protect themselves:

1. The perceived severity of a threatened event or condition like HIV/AIDS.
2. The perceived likelihood of the event, or vulnerability (the person's estimated susceptibility to contracting HIV).
3. The effectiveness of the suggested preventive action, and consequently, the perceived effectiveness of the reaction.
4. The underlying idea that an individual's expectation of personal mastery and success impacts whether or not they would engage in a certain behavior is advanced by perceived self-efficacy (Bandura, 1982). That is the degree of assurance required to engage in the advised preventive behavior, such as PEP. Self-efficacy, derived from

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Social Learning Theory concept is rooted in PMT as a predictor of health behavior change and maintenance (Bandura, 1977).

Protection Motivation Theory (PMT) stems from both the threat evaluation as well as the coping evaluation. The threat assessment determines how dangerous the situation is and evaluates its severity. or the assessment of the likelihood of getting the illness (vulnerability) and the degree of the illness (severity). The way one reacts to the circumstance is known as the coping evaluation.

Here, one assesses the different elements that are likely to threaten one's health that one takes the suggested, preventative action. For instance, one assessing the necessity of PEP practice and reporting. Self-efficacy and response efficacy are also components of the coping appraisal. The person's belief that following advice will eliminate the threat is known as response efficacy. For instance, there is a belief that if one takes PEP, they won't contract HIV. Self-efficacy is the conviction that one can successfully carry out the suggested actions. Or the conviction that one possesses the necessary skills to adopt healthy behavior. For example, one says to herself that I can complete the four-week treatment plan. The perceived response cost, the final group of beliefs, addresses the expenses associated with engaging in health behavior. For example, one should feel comfortable with taking PEP medications. Experiencing so many side effects may deter her from taking it.One model that discusses the reasons for unhealthy behaviors and provides recommendations for altering them is PMT. Primary prevention refers to actions taken to reduce the likelihood of a health issue emerging. For instance, reporting a needle stick injury to the appropriate authority for the required

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action to be taken. Taking action to stop a condition from getting worse is known as secondary prevention. For instance, using HIV/AIDS prevention drugs as part of PEP. Defense According to Boer and Seydel (1996), motivation is a mediating component that elicits, maintains, and guides protective health behavior.

A person may occasionally prolong her unhealthy behaviors if she is persuaded that the benefits of not adopting a certain health benefit outweigh the benefits of adopting. Therefore, the theory states that for a person to adopt a health behavior, they must think that a serious threat is imminent and that they may effectively lessen the hazard by adopting a health behavior. Additionally, the person should be persuaded that she is capable of engaging in the behavior, which shouldn't come at a significant financial cost. The most widely used indicator of prevention motivation is a "measure of intention" to carry out the advised preventive behavior.

An estimated 39 million persons worldwide were HIV-positive in 2022 (UNAIDS, 2023). Since post-exposure prophylaxis is the method to reduce the likelihood of HIV infection in a person exposed to the virus, it is generally regarded as a good strategy to prevent HIV transmission (WHO, 2022). PEP for HIV infection is supported by compelling ethical considerations. Thousands of healthcare professionals worldwide are unintentionally exposed to bodily fluids or tissues, including blood, on a daily basis while carrying out their jobs (Aynalem et al., 2014).

Individuals who work in the healthcare industry who may come into contact with biohazards such as body fluids and equipments, are known as healthcare workers (HCWs). Common ways individuals are exposed to

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occupational hazards are; cuts from sharp objects, contact bodily fluids (Robicsek, 2017).

The Protection Motivation Theory (Rogers, 1983), drawing from the work of Lazarus (1966) and Leventhal (1970), explains how individuals adaptively or maladaptively cope with a health threat through two appraisal processes: Threat appraisal and coping appraisal. In these processes, persons assess the threat and the behavioral choices that are open to them to reduce that threat (Boer & Seydel, 1996). Appraisal of the health threat along with the appraisal of coping plans leads to protection motivation or in more extreme decisions can lead to maladaptive responses. Self-destructive behaviors, which put a person in danger, leads to an adverse effect or the lack of such behaviors is capable of preventing the adverse effect (an example is the absence of precaution measures when handling CF needles …can lead to HIV).

Most occupational exposures to bloodborne diseases occur in healthcare settings. The most critical bloodborne infections include HIV, Hepatitis B and C. The prospect of coming into contact with these agents is a major source of worry for healthcare professionals around the world. According to Amira and Awobusuyi (2014), exposure can have a varying negative health impacts on the person, from acute to chronic illness and death. It can also have a substantial impact on the persons society.

For both healthcare professionals and non-healthcare professionals, determining the actual level of occupational exposure is challenging. According to Katsinde and Katsande (2012), biohazard exposure is not likely to be reported, and the available records most likely underestimates the

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problem. This is partly because to stigma, low level of knowldege, and the absence of PEP services.

Although the main strategy to stop HIV transmission is still to rigidly implement standard (universal) measures, offering PEP gives persons exposed to sources of infection at work the chance to avoid contracting the virus. Additional benefits of providing occupational post exposure prophylaxis (PEP) services include increasing staff health and, in many situations, reducing or resolving issues with employee retention and morale (WHO, 2022).

PEP involves the use of antiretroviral medications to lower the risk of HIV transmission. Administering antiretroviral treatments (ARTs) promptly after accidental exposure can prevent the spread of the virus in the body and slow down the establishment of infection. (National Center for AIDS & STD Control, 2022).

Post-exposure prophylaxis (PEP) is commonly used to refer to the medical treatment administered to stop the spread of blood-borne infections after a possible exposure. To reduce the risk of infection after possible contact to blood-borne pathogens, it is a complete management procedure (WHO, 2022). As of right now, PEP is the only method to lower the risk of HIV infection for healthcare workers who are exposed to the virus.

PEP should only be given for exposures that have the potential to spread HIV. It should be given after non-intact skin (from abrasions or percutaneous sharps injuries) or bodily fluids (from sexual contact or splashes into the eyes, nose, or mouth) have come into contact with potentially infected bodily fluid from an HIV-positive or unknown HIV-status source. Blood,

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vaginal secretions, and bodily fluids such as cerebrospinal, amniotic, peritoneal, or pleural fluids can all spread HIV (WHO, 2022).

In relation to HIV, PEP is a range of services offered to address the particular features of HIV exposure and to assist prevent HIV infection in an individual who is at risk of contracting the virus. These services could include HIV testing, counseling to determine the risk of infection exposure, first aid, and exposure assessment, a prescription for a 28-days of antiretroviral medication with follow-up and support (WHO, 2022). PEP should be started following exposure, ideally during the first several hours and no later than 72 hours. PEP shouldn't be made available more than 72 hours following exposure (CDC, 2023).

The initial actions to take following an exposure are referred to as first aid. The main goals are to put in place preventive measures to reduce the infection rate. If the epidermis is punctured by a used needle or sharp object, it is advised not to press or rub the injured site. The wound should be cleaned immediately with soap or a gentle disinfectant that is non-irritating to the skin, with the WHO recommending chlorhexidine gluconate. If running water is unavailable, a gel or other hand-cleaning solution should be used to clean the area (WHO, 2022).

The following actions are advised following a blood or bodily fluid splash: cleanse the area right away. In the absence of running water, alcohol based sanitizer is used to clean the region. The eye that has been splashed is quickly treated with water or regular saline. Immediately as a splash reaches the mouth, the fluid is spat out, followed by a thorough rinse with water or

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saline and another spat. There are multiple iterations of this procedure (WHO, 2022).

Risk assessment: After administering first aid, the exposed worker should notify the appropriate person, typically a manager or supervisor. The employee is then relieved of duty after reporting the occurrence, allowing for an instant risk assessment.

In addition to guaranteeing the best possible care for the worker's possible exposure, reporting exposure produces much-needed occupational exposure data to use in safety planning and PEP program evaluation. Regardless of the time of day, a skilled individual should evaluate risk as quickly as feasible following any occupational exposure incidence. Determining the extent of the exposure and whether any quick medical action (such giving PEP) is necessary are the goals of this assessment (WHO, 2022).

As quickly as feasible, the risk should be evaluated; if it is deemed significant, PEP should be intited within three days of the exposure. As a precaution, the first dosage of PEP medication may be administered if the risk assessment cannot be completed within the allotted 72 hours, for any reason. It ought to be stopped, nevertheless, if a later evaluation finds that the exposure was not substantial.

Certain exposures, like an injury that bleeds spontaneously from a needle just after it has been used to take blood from a vein or artery of a person known to have HIV, are definitely high risk. However, some are extremely low risk, such as splash exposures to non-mucous membranes, exposure to bodily fluids other than blood, or minor wounds that do not bleed.

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Certain bodily fluid or blood contact is typically not regarded as exposure, such as when it simply involves undamaged skin (WHO, 2022).

PEP is intended for HIV-negative individuals only. PEP should not be administered to those who have the HIV virus. However, testing should be encouraged and conducted if the exposure is significant. Before deciding to stop PEP, it is necessary to determine the likelihood that the source person is inside the window period, even if they were proven not to have the HIV virus at the time of the incidence (WHO, 2022).

When the status of the source person is uncertain at the time of exposure, the decision to use PEP should be evaluated on a case-by-case basis. This assessment should take into account the source of exposure and signs and symptoms that suggest the likelihood of the person being retro-positive. If the individual is positive, standard protocols indicate that such individuals should be considered potentially retro-positive, and PEP should be started (WHO, 2022).

Counseling: Ideally, those who have been exposed should get counseling regarding certain PEP components at the time of its presentation. Advice regarding the danger of transmission, the significance of adherence, and the potential for adverse effects should all be covered in the counseling. Counseling on risk reduction must to be provided at the first session and reinforced at subsequent ones. Until an HIV test is negative six months later, individuals must be encouraged to practice protective preventive measures (WHO, 2022).

The goal of testing for HIV as soon as possible following contact is to provide information against which test results in the future can be evaluated.

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Depending on when the infection occurred and other risks or exposure incidents are taken into account, a worker's subsequent infection discovered by follow-up testing may, in theory, be proven and confirmed to be related to the occupational exposure if the baseline test results for HIV are negative (WHO, 2022).

Testing as immediately after contact has some. Firstly, it reduces the use of PEP among retro- positive individuals, which lowers medication waste and potential adverse effects associated with PEP use. Second, individuals with HIV who receive two 28-day courses of treatment with nucleoside analogue reverse-transcriptase inhibitors may be susceptible to antiretroviral medication resistance, which would restrict their options for treatment when antiretroviral therapy is required (WHO, 2022).

Antiretroviral medications: for PEP, WHO often suggests a combination of antiretroviral medications. When drug resistance is expected, two medication should be employed. A three-drug regimen consisting of two nucleoside reverse-transcriptase inhibitors and a boosted protease inhibitor is advised if drug resistance is detected.

Preferred regimens	Alternative regimen
zidovudine + lamivudine	tenofovir + lamivudine
	stavudine + lamivudine

Follow-up: Clinical monitoring and follow-up should be made available to PEP users; the primary goals are to track adherence and detect and treat side effects. Every communication option should be taken into account; for instance, if face-to-face interaction is not feasible, a system of round-the-clock

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phone contact with service providers may provide a good substitute (WHO, 2022).

Knowledge about PEP

A study conducted by Adal, Abebe, and Ayele (2023) found out that, majority of respondents (51.6%) reported poor knowledge about PEP for HIV. In a related study conducted by Devi, Kalia, & Sethi (2016), it was revealed that, health workers had poor knowledge about PEP as well as how to access it. It also showed that, health workers under reported needle stick injuries because of lack of confidentiality, fear of knowing their HIV status and felt PEP was ineffective.

Similarly, a study conducted by Tshering et al.(2020), found that most of the respondents (80.1%) had low knowledge about PEP for HIV. In another study on Knowledge about Post Exposure Prophylaxis of HIV/AIDS among nursing students of selected Nursing Colleges of Distt. Mohali, it was found that; nursing students' knowledge about PEP was inadequate. The researchers subsequently recommended that, encouraging nursing students to attend seminars, workshops and conferences on PEP can help increase their knowledge level (Devi, Kalia, & Sethi, 2016).

Furthermore, A study carried out among healthcare workers at Government Health Institutions in the Jimma Zone of the Oromiya region in southwestern Ethiopia examined the use of HIV post-exposure prophylaxis (PEP). The results showed that 213 (83.9%) of the respondents lacked adequate knowledge about PEP for HIV, and 174 (68.5%) had been exposed to situations that put them at risk for HIV(Robicsek, 2017).

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A different study conducted by Ajibola, Akinbami, Elikwu, Odesanya, and Uche (2014) on the knowledge, attitudes, and practices regarding HIV post-exposure prophylaxis (PEP) among health workers at Lagos University Teaching Hospital found that while 83.3% of respondents had a high level of awareness about PEP, they still lacked adequate knowledge. Specifically, 54.0% of the respondents knew when to initiate PEP after occupational exposure to HIV, and only 32.0% mentioned at least two of the recommended medications for PEP(Ajibola et al., 2014).

Singh, Ahmad, Muneer, Sabah, Baig, and Khan (2015) also conducted a study on assessment of knowledge, attitude and practice towards post exposure prophylaxis for HIV among health care professionals in Lahore and it was found that, 53.4% of the respondents have heard about PEP. Significant numbers of health care professionals (27.6%) were of the belief that PEP must be initiated after any needle prick or injury, 27.3% suggested that PEP should be commenced after 12 hours of exposure, 28.1% recommended PEP to be given 48 hours after exposure. They made the conclusion that, most healthcare professionals at the general and government hospitals had inadequate knowledge regarding PEP for HIV (Singh et al., 2015).

According to a study by Okoh and Saheeb (2016), which evaluated dental surgeons at the University of Benin Teaching Hospital in Benin City, Nigeria, on their knowledge, attitudes, and practices regarding post-exposure prophylaxis (PEP) against blood-borne viral infections, 37 (68.5%) of the respondents lacked sufficient understanding of PEP. Of them, 48 (88.9%) were aware of when PEP should begin, and 10 (18.5%) were aware of the maximum PEP delay. Thirteen (33.3%) were aware of PEP's effectiveness,

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and thirty-four (61.0%) were aware of the recommended duration of PEP for an exposed person. However, the researchers came to the conclusion that dental surgeons' understanding and application of PEP against blood-borne viral infections was insufficient (Okoh & Saheeb, 2016).

In a study by Aminde, Takah, Dzudie, Bonko, Awungafac, Teno, Mbuagbaw, and Sliwa (2015) on occupational post-exposure prophylaxis (PEP) for HIV among nurses in the Tubah Health District, Cameroon, it was found that 73.7% of respondents had poor knowledge of PEP. However, 83.8% were familiar with PEP, though only 12.5% (10 respondents) had received formal training. Additionally, just 30% knew the correct drug regimen for PEP, and only 25% were aware of its proper duration. Conversely, Bareki and Tenego (2018) also found in their study done in Princess Marina Hospital in Gaborone, Bostwana, that, majority of health care workers (70.7%) had adequate knowledge about PEP with 191 (97.4%) being aware of it. It was also revealed that, most respondents, 163(84.5%) think that HIV PEP is effective. However, there was a knowledge gap among study respondents with regard to when to start PEP, 90(46.4%) knew when to initiate PEP, 108(54.5%) of the respondents knew the maximum delay time to take PEP and 187(97.4%) knew how long exposed healthcare workers should be put on PEP to prevent infection/seroconversion.

Similarly, a study on knowledge, attitude and practice of student nurses in Zimbabwe about PEP conducted by Katsinde and Katsande (2012) revealed that, most student nurses had high level of knowledge about PEP. In terms of workplace related sources of HIV transmission, 85% of the respondents knew the sources, 86% knew about the components of PEP and 94% knew about

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workplace risks that require PEP. The students were also mindful of the procedures to be followed when an individual is exposed to HIV.

Consequently, Aynalem et al. (2014).also found in their study conducted in Gondar, North West Ethiopia on assessment, attitude and practice towards post exposure prophylaxis for HIV among health care workers that majority, 123 (63.1%), of the health workers had adequate knowledge about PEP for HIV.

In a study on PEP knowledge and practice against HIV infection among healthcare providers, Owolabi, Alabi, Ajayi, Daniel, Ogundiran, Akande, and Onafowokan (2012) discovered that while the majority of respondents—745, or 97.0%—had heard of PEP, only a small percentage—30.9%—could correctly identify the drugs used and duration of PEP. They used 230 healthcare professionals in their cross-sectional survey study, with nurses making up the majority (55.2%). Three (3) respondents stated that PEP is for life, 53 indicated that it lasts for four weeks, 11 stated that it lasts for six months, and 161 respondents were unsure of the length of PEP. Owolabi et al. (2012) went on to conclude that medical staff at the University of Abuja Teaching Hospital had inadequate PEP understanding and practice.

Additionally, Agbulu, Udofia, Ekott, Peters, Imananagha, Oyo-Ita, Agbulu, and Chuku (2013) studied the knowledge, attitude, and PEP practice on HIV among physicians in a tertiary health facility in Nigeria. According to their research, 57% of the participants were aware of PEP, whilst 5% were not aware of its existence. Two (2.94%) respondents brought up preventing maternal-to-child transmission, rape, sexual relationships, organ donation, and the sharing of unsterilized needles among intravenous drug users, but the

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majority of respondents restricted the application of PEP to needle prick injuries (Agbulu et al., 2013).

According to a different study on nurses' awareness of post-exposure prophylaxis (PEP) for HIV at BP Koirala Memorial Cancer Hospital, the majority of respondents (66.0%) had prior knowledge of PEP. Forty-eight percent (48%) of respondents recognized what PEP was, 39.39% knew how to administer first aid after a needle prick injury, 60% knew when to begin HIV PEP, and 56% knew when to get an HIV test after exposure. Despite the fact that the majority of PEP questions were answered accurately, the researchers came to the conclusion that respondents lacked knowledge in a few specific areas (Dhital, Sharma, Poudel, & Dhital, 2017).

Attitude about PEP

In Adal, et al. (2023) study, attitude of respondents (54.2%) towards PEP was favorable. Eticha and Gemeda (2019) also found in their study that, attitude of healthcare workers towards PEP for HIV was inadequate.

Consequently, in Bareki and Tenego (2018) study, they also found that, 164 (82.2%) of the respondents, or the majority, expressed a favorable opinion of PEP. The majority of survey participants—184, or 93.9 percent—agreed that HIV PEP is crucial, and 167, or 85.6%, think that PEP training is crucial for changing HCWs' attitudes on PEP. When asked if PEP was necessary in the workplace, 186 (94.9%) of the respondents strongly agreed with this recommendation, demonstrating a generally positive attitude (Bareki & Tenego, 2018). Majority of respondent (84.3%) thought that PEP lowers the chance of eventually contracting HIV. Of those, 75, or 38.5%, thought that HIV PEP prevents other infections, such as Hepatitis B and C, while 104, or

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53.3%, did not agree. It was determined that 101 (53.2%) of respondents agreed with the statement that PEP is recommended for any kind of sharp object injury, while 89 (46.7%) disagreed (Bareki & Tenego, 2018).

The majority of nurses (92.3%) had a positive attitude toward PEP for HIV, a study found that the majority of respondents (147, 75.4%) had a positive attitude toward PEP and that a significant number of them (66, 33.8%) had been exposed to blood, bodily fluids, needles, or sharp objects at least once while caring for patients (Tshering et al., 2020; Aynalem et al. 2014). Additionally, Okoh and Saheeb (2016) discovered in their research that 44 (81.5%) of the dental surgeons had a positive attitude on PEP for HIV/HBV. Most respondents had a negative attitude of PEP (Singh et al., 2015)

Practice of PEP

Both Adal et al. (2023) and Tshering et al. (2020) discovered in their studies that a low percentage of respondents practiced PEP for HIV, and that 63.6% of respondents had inadequate PEP practices.

Similarly, Katsinde and Katsande (2012) found in their study that, student nurses had negative attitude about practicing PEP when they were exposed to needle pricks. Their reasons for refusing to practice PEP were; fear of stigmatization, a loss of privacy and confidentiality, and the adverse consequences of the medications used for PEP. Additionally, the study found that the rate decreased at which student nurses requested for PEP.

In their study, Aynalem et al. (2014) also reported that 49 (74.2%) of the exposed respondents took PEP, whereas the remaining 17 (25.7%) did not. Only 23 (46.9%) of the exposed respondents who took PEP began taking it at

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the precise initiation time; the remaining respondents began taking PEP after the suggested initiation time. Ten people (20.4%) did not finish the PEP regimen, while 39 people (79.5%) who took the medication did so (Aynalem et al., 2014).

Out of 174 healthcare professionals who were exposed to needle pricks, wounds, blood, and body fluids, 142 (81.6%) did not take PEP. The following were the reasons given by respondents for not taking PEP following HIV exposure: 48 (33.8%) said they were unaware that PEP services existed, 46 (32.4%) said they were afraid of stigma and discrimination, 33 (23.2%) said they did not understand the importance of reporting, and 29 (20.4%) said they were not supported or encouraged to report. Additionally, it was observed that the research locations lacked a formal HIV post-exposure prophylaxis clinic with appropriate guidelines (Robicsek, 2017).

Seventy-one of the participants in the study by Owolabi et al. (2012) had been exposed to bodily fluids and needle pricks. Forty of the exposed respondents did not have any HIV screening following the exposure, whereas thirty-one had post-exposure HIV screening. According to Owolabi et al. (2012), 40 respondents cited ignorance of the necessity of post-exposure HIV screening and the belief that the source was not positive as reasons for not getting screened for HIV. PEP was not administered to sixty-seven of the respondents who had come into contact with bodily fluids from patients. PEP was not required, the source of exposure was negative, and antiretroviral drugs were unavailable, according to the 67 responders who gave these explanations for not receiving PEP following exposure. According to Owolabi et al. (2012), respondents also cited ignorance about the necessity of receiving PEP,

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ignorance of the hospital's PEP protocol at the time, and the belief that they could never contract HIV.

Furthermore, despite being exposed to needle stick injuries, only 6.3% of respondents received PEP, indicating a poor level of PEP practice (Ajibola et al., 2014). Also, 158 respondents had never experienced a needle stick injury, whereas 142 respondents had experienced one during the course of their medical profession. Out of the 142 respondents, only 123 reported needle stick injuries to the proper authorities, and 19 did not report the incident (Ajibola et al., 2014). The reasons for refusal to report were; unawareness of whom to report the incident to and because respondents felt they were using a new needle. While 115 responders who reported needle stick injuries received no treatment at all, eight of them received HIV PEP. Five respondents did not finish the four weeks of HIV PEP, whereas three respondents finished it (Ajibola et al. 2015).

In their investigation, Okoh and Saheeb (2016) also discovered that 16 of the 25 dental surgeons who were exposed did not take PEP. Of those who did not take PEP, 15 (93.6%) said they did so because they were afraid of being stigmatized and subjected to prejudice (Okoh & Saheeb, 2016). According to van der Maaten, Nyirenda, Beadsworth, Chitani, Allain, and Osterhout (2010), of the 168 clients who began PEP, five stopped within 10 days due to the source's HIV-negative test results, two did not show up for follow-up medication after receiving a starter pack supply, and one tested positive for HIV. Due to side effects, two (2) further customers discontinued PEP, and one concluded that there had been no actual occupational damage.

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In their research, Bekele, Gebremariam, Kaso, and Ahmed (2015) discovered that the majority of healthcare workers—107, or 84.9%—took self-based actions after suffering a needlestick or sharp injury. Of the respondents, 53.3% cleaned the damaged area with soap and water, 42.1% used an iodine or alcohol solution, and 40.2% tested for HIV. In addition to taking self-based action, half of the HCWs who were hurt had sought medical attention. 39.7% of those who sought medical attention took PEP, which includes antiretroviral drugs. Nevertheless, 19 (15.1%) of the healthcare workers did nothing about their injuries. According to Bekele et al. (2015), nearly 58.7% of respondents did not report the injury to the relevant body. The primary reasons for this were time constraints (35.1%), the use of sharps that caused the injury on a patient who did not have a disease of concern (27.0%), and ignorance of the need to report the injury (14.9%).

Similarly, Aminde and colleagues did a study and found that, 54 (67.5%) of the respondents have had an exposure before. Fifty-seven-point four percent (57.4%) was mainly due to setting up intravenous lines, 37.0% was recapping of needles and 24.1% was during delivery. Out of the respondents who were exposed, 10 (18.9%) received PEP (Aminde, et al., 2015).

Chapter Summary

This chapter's objective was to ascertain whether the research questions are supported by the body of current information. PEP was widely known to refer to the medical treatment administered after a possible exposure to stop the spread of blood-borne infections. It is a thorough management

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process designed to reduce the chance of infection after possible blood-borne pathogen contact.

The literature review also showed that, majority of health providers and students who go for clinical attachment at health facilities do not have adequate knowledge of PEP. It also revealed that their attitudes and practices toward PEP were not adequate as well.

The chapter also looked at the Roger's Protection Motivation Theory served as the study's main supporting theory. It explains how two evaluation processes might lead to both adaptive and maladaptive coping with a health hazard. a threat assessment and a coping assessment, wherein the behavioral alternatives to reduce the threat are assessed (Boer & Seydel, 1996).

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CHAPTER THREE

RESEARCH METHODS

Introduction

The study's aim was to evaluate HFNMTC, Techiman student nurses' PEP knowledge, attitudes, and practices. Information about the methodology and procedures utilized to carry out the study is presented in this chapter. Research design, population, sample and sampling technique, instrument, instrument pretesting, data collection procedure, ethical considerations, and data analysis are the sections that make up this chapter.

Study design

The study employed a quantitative descriptive cross-sectional research design. In order to describe a phenomenon at a certain moment in time as it occurs in a natural setting, this type was chosen (Ogah, 2013). According to O'Gorman and Macintosh (2014), the study supported the positivist worldview, which maintains that reality is objective. Therefore, positivism is the driving force behind having trustworthy information, attitude, and practice of PEP of HIV/AIDS. Positivist believe that all phenomena are invariably subjected to natural laws and for that matter, all behaviour is naturally determined (Bryman, 2021). They also believe that knowledge comes from experience and knowledge from the human senses needs to be demonstrated objectively and all objective phenomena are eventually knowable. This paradigm aligned themselves with this research; hence the study employes quantitative methodology. A similar study by (Adal et al., 2017) on Knowledge, attitude, and practice of human immune-deficiency virus (HIV) post-exposure prophylaxis among healthcare workers employed a descriptive cross sectional

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quantitative research design which also aligns with this study. The cross-sectional design is well-suited for this study as it allows the researchers to examine the current knowledge, attitudes, and practices (KAP) of student nurses.

The use of Quantitative research is the process of collecting and analyzing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations (Mohajan, 2023). It is a research design which allows for the use of relatively large sample size which is statistically determined, and facilitates inductive generalization (Grove et al., 2014). This design enabled the researcher to collect precise data on student nurses concerning PEP at Holy Family Nursing and Midwifery Training College, Techiman. This quantitative approach is well-suited for the positivist paradigm, which seeks to objectively measure and understand the phenomena under investigation.

The descriptive cross-sectional research design was deemed best for the study because it is a design in which data on sample or "cross section" of respondents are chosen to represent a particular target population at essentially one point in time. This design is efficient in capturing the snapshot of the phenomenon of interest without the need for longitudinal data collection.

Study Area

The study was done at HFNMTC, Techiman in Bono East region. HFNMTC is located in Kenten, a suburb of Techiman on the Techiman-Wa highway. It is located at the western part of Techiman, about one kilometer from the Techiman Market. The school is found at the same premises of Holy Family Hospital, Techiman. It is owned by the Catholic Diocese of Techiman,

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headed by the Catholic Bishop. The school was established in 2013. It is the first nursing training college established in Techiman Municipality, with the aim of training nurses and midwives. This school was chosen for the study because of accessibility to the area. Again, it is attached to the largest hospital in the region, which is the main referral hospital for all the hospitals in the region. As such, student nurses from all parts of the country are sent there for clinical attachment of which HFNMTC is not an exception. The college offers registered general nursing (RGN) and registered midwifery (RM).

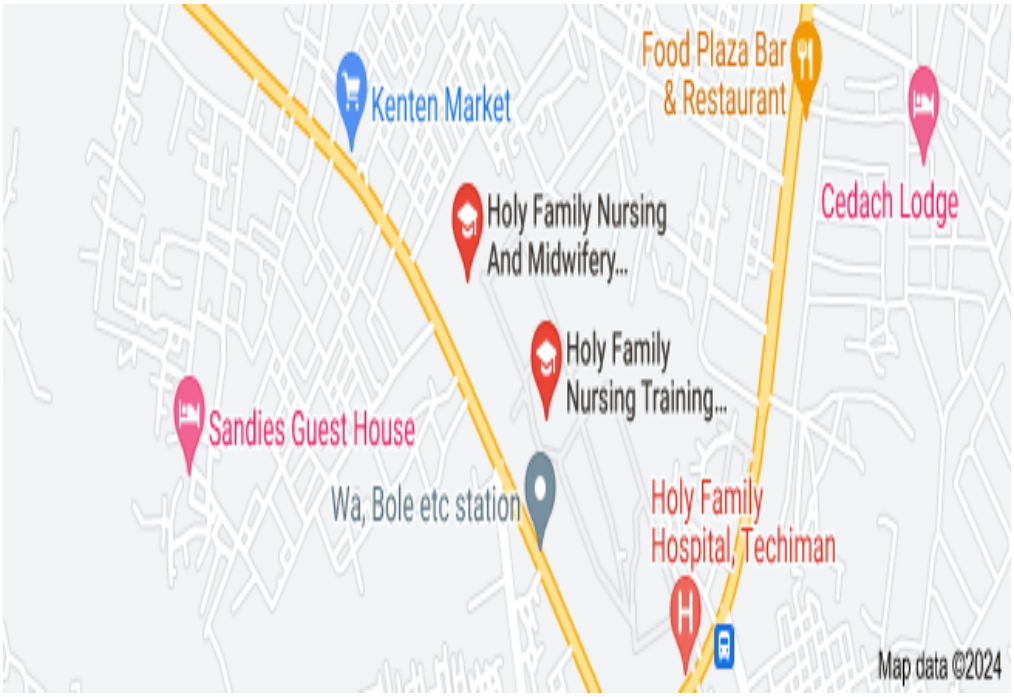

Figure 2: Map of the study area

Study population

Creswell (2019) described population as a group of people who are the focus of a research study and to which the results would be applied. It is also the group on which the researcher would like to make inferences to.

For this study, all student nurses at the HFNMTC, Techiman, were the target population since they were the respondent to various research questions. Moreover, they go for clinical attachment at the hospital for not less than six

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(6) weeks per semester. The college has a total of 490 students for the two programs; general nursing and midwifery. First year students were 270; with 100 registered midwifery students and 170 general nursing students. Out of the 170 general nursing students, 50 were males and 120 females. All the registered midwifery students were females. Second year students were 114; with 48 registered midwifery students, all females, and 69 registered general nursing students. Out of the 69 registered general nursing students, 36 were males and 30 were females. The third year students were 106; with 42 registered midwifery students, all females, and 66 registered general nursing students. Out of the 64 registered general nursing students, 34 were males and 30 were females. The female students were 369 in number, representing 75.3% and the male students 121 in number representing 24.7%.

Inclusion and Exclusion Criteria

Inclusion criteria

Inclusion criteria were all student nurses who have had at least two clinical attachments in the course of their training.

Exclusion criteria

Exclusion criteria were all student nurses who have not attended two clinical attachments in their training.

Sampling Procedure

A sample is a subset of a population. A well-chosen sample can yield data that is representative of the larger population it is taken from (Polit et al.; 2012),. Thus, a carefully selected sample from the target population was utilized to represent the study population.

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A census sampling was used to select all 220 student in the second and third year. Census sampling is a quantitative research method, in which all the members of the population are enumerated. This method was used for this study due to its appropriateness. Researchers often believe that they can obtain a representative sample by using a sound judgment, which will result in saving time and money (Black, 2023).

In view of this, all the 220 student nurses in second year and third year served as the sample size for the study. This helped in studying the data in a more accurate manner. The second-year students were 114 (36 males and 78 females) and third year students were 106 (34 males and 72 females).

Data collection instrument

Data is collected for research with the use of an appropriate instrument. The questionnaire was particularly developed for this study. The instrument was however adapted using the objectives of this study of the literature review. A structured questionnaire with close ended questions and Likert scale options (strongly disagree = 1, disagree = 2, neutral = 3, agree = 4 and strongly agree =5) was developed by the researcher after thorough review of literature and used for data collection for this study. The questionnaire was developed to unravel the knowledge, attitude and practice of student nurses about PEP at the HFNMTC, Techiman.

The questionnaire had four sections; section one was the demographics of respondents with four items; such as age, sex, level of programme, and number of clinical practice. Section two dealt with the knowledge about PEP with seven items, section three was on attitude towards PEP with seven items,

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and section four had four items on practice of PEP. The scales for the variables are as shown:

Section One: Background Information of Respondents

This section focuses on the demographic and educational background of the respondents. It includes the age of the students, which is measured on an ordinal scale, categorizing them into different age groups. The sex of the respondents is assessed using a nominal scale, identifying them as either male or female. The level of the program in which the students are enrolled is measured on an ordinal scale, indicating whether they are in their first, second, or third year of study. Additionally, the number of clinical practices the respondents have participated in is measured on an ordinal scale, reflecting their practical experience in the clinical environment.

Section Two: Knowledge about PEP

This section examines the respondents' knowledge regarding Post-Exposure Prophylaxis (PEP) for HIV. It starts by assessing their awareness of PEP using a nominal scale to determine whether they have heard of PEP or not. The timing of PEP initiation is measured on an ordinal scale, evaluating their understanding of how soon PEP should be started after potential exposure. The section also explores the respondents' beliefs about the preventive abilities of PEP using an ordinal scale to gauge the level of confidence they have in PEP's effectiveness. Awareness of official PEP guidelines is assessed on a nominal scale, identifying whether the respondents are familiar with the protocols. The section further investigates any misconceptions about PEP through an ordinal scale, highlighting areas of misunderstanding. Lastly, it determines whether

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the respondents are aware of the specific situations that require PEP using a nominal scale.

Section Three: Attitude towards PEP

This section delves into the respondents' attitudes towards PEP. It begins by evaluating their perceived effectiveness of PEP using an ordinal scale, which measures the degree of confidence they have in PEP as an effective preventive measure. The importance they place on PEP is also assessed using an ordinal scale, which reflects how essential they consider PEP in preventing HIV after exposure. The section examines whether the respondents have experienced a needle stick injury, using a nominal scale to determine the occurrence of such incidents. It also looks into whether these injuries were reported, using a nominal scale to capture the reporting behavior. The availability of PEP guidelines within the clinical setting is measured using an ordinal scale, determining how accessible these guidelines are to the respondents. Lastly, the section assesses the willingness of the respondents to request PEP following exposure, using a nominal scale to gauge their likelihood of taking action.

Section Four: Practice of PEP

This section focuses on the respondents' real-world practices concerning PEP. It first investigates whether the respondents have ever been on PEP, using a nominal scale to record past experiences. The completion of the PEP regimen is also assessed on a nominal scale, identifying whether the respondents adhered to the full course of treatment. Proper disposal of sharp instruments, which is crucial in preventing needle stick injuries, is measured on an ordinal scale, evaluating the consistency and correctness of this practice among the respondents. Finally, the section examines the availability of written policies

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for occupational exposure within the clinical setting using an ordinal scale, determining the extent to which these policies are present and accessible to the students.

The questionnaire was created after a careful analysis of pertinent literature, and it was further verified by a group of PEP and nursing education specialists to guarantee the instrument's validity and reliability. The validity of the various questions were assessed, and necessary modifications were made based on the feedback received.

Pre-Testing of Instrument

To verify the questionnaire's dependability, a small sample of student nurses participated in a pilot research. Cronbach's alpha was used to assess the instrument's internal consistency, and the scale as a whole showed a high degree of reliability (Cronbach's $\alpha = 0.8$), suggesting that the questionnaire's components were consistently measuring the intended constructs. According to Arain, Campbell, Cooper, and Lancaster (2010), a pilot research is a tiny feasibility study intended to evaluate several facets of the procedures intended for a bigger, more thorough, or confirmatory investigation. Essentially, it is carried out to avoid the occurrence of a fatal fault in a study that is expensive in terms of both time and money. It stops researchers from starting a large-scale study without sufficient knowledge of the methodologies proposed (Polit & Beck, 2017). The validity and reliability of the data collection tool play a major role in the success of any research project. To ascertain item reliability and instrument clarity, forty second and third-year students at Krobo Nursing Training College in Techiman participated in a pre-test of the study's instrument. Since these kids share traits with those of HFNMTC, Techiman

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students, pre-testing was conducted on them. Some questions were modified after the pre-test in consultation with the supervisors due to ambiguity and improper wording.

The SPSS version 23 was also used to find Cronbach's alpha for the items in the questionnaire, which was 0.8 indicating a good or strong reliability and consistency.

Data collection Procedure

Holy Family Nursing and Midwifery Training College (see appendix B)-Techiman was approached and given an introductory letter. The University of Cape Coast Ethical Review Board was consulted in order to obtain ethical approval for the project. In order to prevent data from being linked to specific respondents, coded questionnaires were used to collect data, and respondents were not permitted to put their names on the surveys. The goal and advantages of the study were explained to the respondents, who were also assured that they could withdraw or continue the study at any time without being forced to do so. To prevent missing questionnaires, they were administered from class to class during their break periods to all the 220 respondents over a period of two weeks, spanning from 16th to 30th May 2018. Two research assistants received training on the proper way to gather data. They also thoroughly explained the study's goal during the training. In each class, respondents used between 15 and 20 minutes to complete the questions and all completed questionnaires were collected.

The respondents for the study were not given anything after submission of the completed questionnaires to avoid inducement. However, a pen each was given to respondents to fill the questionnaire. The questionnaires

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for the study were kept under lock and key system in the researcher's cupboard for future reviews and soft copy of the final thesis is stored on digital devices with password.

Data Processing and Analysis

The questionnaires were reviewed for any incomplete responses, and all such questionnaires were removed from the data set prior to analysis. The gathered data was subsequently organized and assigned numerical codes to ensure easy identification and allow for the tracking of any potential errors during the data entry process. The filled-out questionnaires was analyzed using SPSS version 23. SPSS generated tables and charts to illustrate the primary results. Descriptive statistics, including frequencies and percentages, were employed to analyze categorical data and to address objectives one, two, and three. Pearson's product moment correlation coefficient (r) was used to analyze the fourth objective which was to determine the correlation between the level of program and knowledge of students on PEP. For research question 1,2, and 3; What do student nurses know about PEP?, What attitude do student nurses have towards PEP? How do student nurses practice PEP? respectively were analyzed using descriptive statistics, including frequencies, percentages, and measures of central tendency (mean score). For question 4; What is the relationship between level of program and knowledge about PEP? The analytical tool that was used was inferential statistics; correlation analysis.

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Table 1: Data Processing and Analysis

Research Question	Type of Analysis Conducted
1) What do student nurses know about PEP?	Descriptive analysis was used to assess the knowledge of PEP among student nurses. Frequencies and percentages
2) What attitude do student nurses have towards PEP?	Descriptive statistics, including frequencies and percentages
3) How do student nurses practice PEP?	Descriptive analysis, including frequencies and percentages
4) What is the correlation between level of program and knowledge about PEP?	Chi-square test were used to explore the relationship between the level of the program and the knowledge about PEP among student nurses.

Ethical Considerations

Ethical clearance for the study was obtained from the University of Cape Coast Institutional Review Board (I.R.B.) and the Ghana Health Service Ethics Review Committee. The researcher followed all necessary ethical standards and conducted the study within the guidelines established by the review boards. Initially, the researcher explained the purpose of the research and secured the verbal consent of each participant who agreed to participate in the study. The participants further signed an anonymous consent form before commencing to answer the questionnaires. Respondents were well informed about their willingness to participation or refusal in the study, and that they could withdraw from the study at any time. They were also assured that their

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names will not be mentioned anywhere in this research but the numbers on the questionnaires and their signatures would be used to protect their identities.

Chapter Summary

Chapter three focused on the methods used to conduct this study. Sections under this chapter included the research design, specifically the descriptive cross-sectional design. The study utilized the Yamane formula to determine a sample size of 220 respondents from a total of 490. Additionally, the chapter highlighted the methods of data analysis, which primarily involved descriptive statistics and various inferential statistical techniques applied to the data.

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CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The study aimed to investigate the knowledge, attitude, and practice of PEP among student nurses at Holy Family Nursing and Midwifery Training College – Techiman. This chapter initially discussed the demographic characteristics of the respondents. It then delved into the students' knowledge, attitude, and practices regarding PEP. Finally, barriers to the implementation of PEP were identified.

Presentation of Results

This part of the study provides findings related to the participants' demographic characteristics. The researchers analyzed demographic data such as age range, gender, program level, and number of clinical sessions attended by the participants. Results from the data collected have been computed in Table 2. Out of 220 respondents, majority were within the ages of 20 – 24 (n=170, 77.3%). This is not surprising because majority of the labor force falls between 18 and 45 [GSS], 2021). Most of the participants were females (n=150, 68.2%). By implication, a lot of the participants were females which suggests that more females are in the nursing profession as compared to males. Analyzing the level of program the respondents, it was noted that more than half (n=114, 51.8%) of the participants were in year 2. Finally, for number of clinical attended, the majority (n=97,44.1%) had attended clinicals 5 and above times.

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Table 2: Demographic Data of Respondents (n=220)

	Frequency=220	Percentage (%)
Age		
20 – 24	**170**	77.3
25 – 29	47	21.4
30 and above	3	1.4
Sex		
Male	70	31.8
Female	**150**	68.2
Level of program		
Year 2	**114**	51.8
Year 3	106	48.2
Number of clinical attended		
2	85	38.6
3	20	9.1
4	18	8.2
5 and above	**97**	44.1

Source: Field data (2018)

Knowledge about PEP

1) Research Question One: What do student nurses know about PEP?

The research question determined the respondent's knowledge about PEP. Respondents were asked to respond to a series of statements that indicate their level of knowledge about PEP. The scale was a five-point Likert response type with 1 as the lowest score and 5 as the highest score. Since a five-point Likert response scale was used, a mean score of less than 2.4 represented poor knowledge, a mean score between 2.5 – 3.4 represented moderate knowledge and 3.5 – 5.0 represented high knowledge. The standard mean shows the average level or moderate level of knowledge about PEP. The overall mean on the level of knowledge about PEP as shown in Table 3, is 2.51. This shows that generally, the respondents' level of knowledge about PEP was above average, which is considered low. This is obvious because the respondents affirmed (M= 3.18,) that they have heard about PEP. This was further affirmed

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(M= 1.65) by respondents when they said they knew about Post exposure prophylaxis guidelines. The respondents again admitted (M= 3.43) that Post Exposure Prophylaxis can prevent HIV infection. Respondents indicated (M= 2.06) that Post Exposure Prophylaxis is the treatment for AIDS. The respondents again mentioned (M= 2.25) that Post Exposure Prophylaxis is a vaccine for HIV. Generally, the respondents indicated that they had a low level of knowledge of PEP. The result is presented in Table 3 below.

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Table 3: Knowledge about PEP(n=220)

Statements	1		2		3		4		5		Mean	knowledge
	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)	score	
I have heard about PEP	80	36.4	-	-	-	-	-	-	140	63.6	3.18	Low
I know about Post exposure prophylaxis guidelines	176	80	-	-	-	-	-	-	34	15.5	1.65	Poor
Post Exposure Prophylaxis can prevent HIV infection.	75	34.1	-	-	23	10.5	-	-	122	55.5	3.43	Low
Post Exposure Prophylaxis is the treatment for AIDS.	149	67.7	-	-	25	11.4	-	-	46	20.9	2.06	Poor
Post Exposure Prophylaxis is a vaccine for HIV.	136	61.8	-	-	30	13.6	-	-	54	24.5	2.25	Poor
Overall mean score											2.51	Low

Source: Field data (2018).
*Multiple responses

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Table 4 Commencement of PEP guideline

Table 4 represents information on time of commencement of PEP after an exposure. More than half (n=119,54.1%) did not know the time to commence treatment after an exposure. As illustrated in Table 3.

Table 4: Commencement of PEP

	Frequency	Percent
5 hours	24	10.9
24 hours	51	23.2
After 72 hours	14	6.4
Don't know	**119**	**54.1**
No response	12	5.5

Source: Field data, Asamoah, (2018).

Situation of utilization of PEP

When the respondents were asked to select from options that will require PEP, one hundred and seventy-four respondents (79.1%) indicated needle stick injury, 160 (72.7%) selected sharp object injury, 144 (65.5%) chose exposure to blood, 111 (50.5%) indicated sexual assault and 5 (2.3%) selected sharing food as shown in Figure 3.

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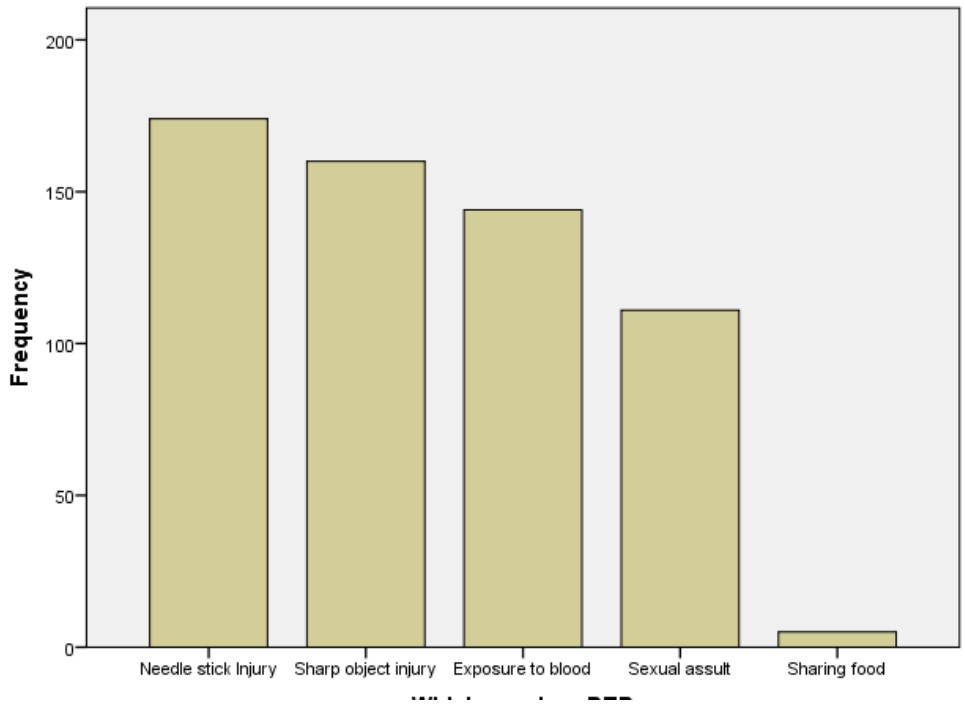

Figure 3: Situation of utilization of PEP
Source: Field data, Asamoah, (2018).

Attitude Towards PEP

2) Research Question Two: What attitude do student nurses have towards PEP?

The research question sought to find out from participants their attitudes towards the use of PEP. The scale was a five-point Likert response which consisted of responses such as; strongly disagree, disagree, neutral, agree and strongly agree. Never being the least on the scale with 1 and the highest of 5 with always as the corresponding answer. The range for interpreting the mean score was 1.0 – 2.4 (poor), 2.5 – 3.4 (low), and 3.5 – 5.0 (good). The standard mean score shows the average attitude toward PEP by the respondents. Any mean score above 3.5 was deemed as high. The grand mean on the attitude towards PEP within Holy Family NMTC as shown in Table 4 below is 4.45. This demonstrates that in general terms, the respondents' attitude towards PEP

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is above average, which is deemed as high. This is clearly shown as respondents agreed (M= 3.94) that HIV PEP reduces the likelihood of HIV transmission after exposure. This was followed by their confirmation (M= 4.54) that PEP is important. The respondents further admitted (M= 4.58) that receiving positive feedback from their superiors motivates them to put in all their effort when working, and that makes them contribute their best to the profession. The respondents affirmed (M=4.62, SD= 0.581) that PEP guidelines are provided in the health facility. Respondents confirmed (M=4.44) that PEP is effective in order for respondents to protect themselves they admitted (M=4.76) requesting for PEP when exposed to HIV was very necessary. It could be deduced from the analysis that the respondents' attitude towards the use of PEP was good. The result is presented in Table 5 on the next page.

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Table 5: Attitude towards PEP(n=220)

Statements	1		2		3		4		5		Total score	Mean score	Attitude
	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)			
HIV PEP reduces the likelihood of HIV transmission after exposure.	48	21.8	-	-	21	9.5	-	-	151	68.6	866	3.94	Good
PEP is important.	13	5.9	-	-	20	9.1	-	-	166	75.5	903	4.54	Good
PEP guidelines are provided in the health facility.	5	2.3	3	1.4	-	-	56	25.5	138	62.7	925	4.58	Good
PEP is effective.	27	12.3	-	-	-	-	-	-	167	75.9	862	4.44	Good
I will request for PEP when exposed.	12	5.5	-	-	-	-	-	-	184	83.6	932	4.76	Good
Overall mean score												4.45	Good

Source: Field data, Asamoah, (2018).
*Multiple response

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Exposure to needle injury

Table 6 shows participants who have been exposed to needle stick injury. Total number of responses were (n=211,95.9%). The results showed that, the respondents of the study who have not sustained needle stick injury were (n=167 75.9%) and (n=44, 20%) and had sustained any needle stick injury. Out of the 44 (20%) respondents who sustained needle stick injury, 29 of them representing 13.2% reported the injury whiles 15 (6.8%) refused to report the injury as shown in Table 6.

Table 6: Exposure to needle injury(n=220)

	Frequency	Percent
Needle stick injury		
Yes	44	20.0
No	**167**	**75.9**
No response	9	4.1
Reporting needle stick injury		
Yes	29	13.2
No	15	6.8
No response	**176**	**80.0**

Source: Field data, Asamoah, (2018).

Practice of PEP

3) Research Question Three: How do student nurses practice PEP?

The research question sought to find out from participants how they practice the use of PEP. The scale was a five-point Likert response which consisted of responses such as; strongly disagree, disagree, neutral, agree and strongly agree. Never being the least on the scale with 1 and the highest of 5 with always as the corresponding answer. The range for interpreting the mean score was 1.0 – 2.4 (poor practice), 2.5 – 3.4 (low practice), and 3.5 – 5.0 (good practice). The standard mean score shows the average attitude toward PEP by

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the respondents. Any mean score above 3.5 was deemed as good practice. The grand mean on the practice of PEP within Holy Family NMTC as shown in Table 6 below is 3.60. This demonstrates that in general terms, the respondents' practice of PEP is above average, which is deemed as a good practice. This is clearly shown as respondents agreed (M= 4.64) that they had completed the PEP regimen after the exposure. This was followed by their confirmation (M= 3.85) that the hospital has written policies for the management of occupational exposure. The respondents further admitted (M= 4.70) that there is proper disposal of sharp instruments in the hospital after use. It could be deduced from the analysis that the respondents' practice of PEP was good. The result is presented in Table 7 on the next page.

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Table 7: Practice of PEP(n=220)

Statements	1		2		3		4		5		Total score	Mean score	Practice
	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)			
I have ever been placed on HIV PEP after an exposure.	190	86.4	-	-	-	-	-	-	11	5.0	245	1.22	Poor
I completed the PEP regimen after the exposure	1	0.5	-	-	-	-	-	-	10	4.5	51	4.64	Good
The hospital has written policies for the management of occupational exposure.	57	25.9	-	-	-	-	-	-	142	64.5	767	3.85	Good
There is proper disposal of sharp instruments in the hospital after use.	16	7.3	-	-	-	-	-	-	196	89.1	996	4.70	Good
Overall mean score												**3.60**	Good

Source: Field data, Asamoah, (2018).

*Multiple response

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4) ***Research Question four: What is the relationship between level of program and knowledge about PEP?***

Relationship between level of programme and knowledge about PEP

The study sought to establish the relationship between level of programme and knowledge about PEP. The table below presents the results of a Pearson correlation analysis examining the relationship between students' level of programme and their knowledge about Post-Exposure Prophylaxis (PEP). The Pearson correlation coefficient (r) between "Knowledge about PEP" and "Level of programme" is 0.400. This indicates a moderate positive correlation between the two variables. As the level of programme increases, knowledge about PEP tends to increase as well. The significance level (p-value) is reported as .000, which is less than 0.01. Thus the correlation between level of programme on knowledge about PEP was statistically significant with p-value less than 0.05 (P = 0.000 or p < .05) this means there's a 99% confidence that the relationship between these variables is not due to chance. As students progress through their programme, their knowledge about PEP tends to increase as shown in Table 8.

Table 8: Relationship between level of programme and knowledge about PEP

Pearson Correlations			
		Knowledge about PEP	Level of programme
Knowledge about PEP	Pearson Correlation	1	.400**
	Sig. (2-tailed)		.000
	N	220	220
Level of programme	Pearson Correlation	.400**	1
	Sig. (2-tailed)	.000	
	N	220	220

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Field data, Asamoah, (2018).

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Discussion

Table 2 revealed that, out of 220 respondents for the study, majority (n=170, 77.3%) were aged 20 – 24 years and (n=47, 21.4%) were 25 – 29 years The age distribution in this study, with the majority 77.3% of respondents between 20-24 years old, aligns with several recent studies on nursing demographics. For instance, a study found that 72% of nursing students in their sample were between 18-25 years old. This trend reflects the typical age range for undergraduate nursing programs(Prosen et al.,2022). Female student nurses were also the majority among the respondents and numbered 150 (68.2%) followed by males who were 70 (31.8%). This is suggestive of nursing as a profession being female dominated. This is consistent with the global trend in nursing. A global survey by the World Health Organization (WHO, 2020) reported that approximately 70% of the health workforce, including nurses, are women. Terry et al. (2019) conducted a systematic review of factors influencing gender imbalance in nursing. They found that societal perceptions, cultural norms, and historical precedents continue to play significant roles in maintaining nursing as a female-dominated profession. Furthermore, the study explored the experiences of male nursing students and found that while the number of men entering nursing is slowly increasing, they still face challenges such as gender stereotypes and feelings of isolation in predominantly female cohorts.

Interestingly, Prosen, (2022) projected that the percentage of men in nursing would continue to rise, potentially reaching 25-30% by 2030 in some countries, driven by factors such as job stability, competitive salaries, and changing societal attitudes. However, they also noted increasing efforts to

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recruit more men into nursing to address workforce shortages and promote diversity. However, it's worth noting that some recent studies have shown a slight increase in male participation. A comprehensive review by Johnson et al. (2020) found that while nursing remains a female-dominated profession, male representation has increased from about 10% in 2010 to 15-20% in 2020 across various countries. The study respondents in second year were more than those in the third or final year. Zhang and Li (2019) conducted a longitudinal study on nursing students' participation in research studies. They found that second-year students were more likely to participate in research compared to first-year or final-year students. The authors attributed this to second-year students having become more familiar with the academic environment than first-years, while not yet experiencing the increased clinical and academic pressures of final-year students. A study identified the second year of nursing programs as a critical period for student engagement and retention. They found that second-year students often experience a transition phase where theoretical knowledge begins to integrate more deeply with practical skills, potentially making them more interested in participating in studies related to their field(Salamonson et al.,2016). Majority of the respondents 97 (44.1%) had attended five or more clinical practice which gave them some level of clinical experience whereas 85 (38.6%) of them had attended clinical practice twice thereby making them inexperience in the clinical setting. The clinical experience of your participants, with 44.1% having attended clinic 5 or more times, suggests a good level of practical exposure. This can be compared to a study which found that nursing students with more clinical experience (defined as 4 or more placements) showed higher levels of clinical

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competence and confidence (Brown et al.,2021). Clinical exposure is crucial for developing nursing competence. Attending clinic 5 or more times provides students with repeated opportunities to apply theoretical knowledge in real-world settings, which is essential for skill development. Benner et al. (2015) argue that repeated clinical experiences are necessary for nursing students to progress from novice to competent practitioners. They suggest that a minimum of 4-6 clinical exposures in a specific area can help students begin to recognize patterns and develop a sense of salience in patient care situations.

Jarvinen et al. (2018) conducted a study on the impact of clinical placements on nursing students' competence development. They found that students who had participated in 5 or more clinical rotations demonstrated significantly higher levels of clinical competence compared to those with fewer exposures. This increased competence was particularly notable in areas such as patient assessment, clinical decision-making, and communication skills. Furthermore, repeated clinical experiences contribute to the development of critical thinking skills. A study by Lee and Quinn (2019) found that nursing students who had participated in 5 or more clinical rotations showed improved clinical reasoning abilities compared to those with fewer clinical experiences. They attributed this to the students' increased exposure to diverse patient populations and healthcare settings. Lastly, Brown et al. (2021) conducted a comprehensive review of clinical education in nursing. They concluded that students who had participated in 5 or more clinical placements demonstrated better integration of theory and practice, improved time management skills, and enhanced professional socialization compared to those with fewer clinical experiences. Twenty of the respondents representing

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(9.1%) as well as 18 (8.2%) had also attended three and four clinical practices respectively.

Knowledge about PEP

It was observed in the study that, 140 respondents with a mean score of (3.18) have heard some information about PEP thereby giving them some fair idea about what PEP meant. These respondents therefore knew that, an exposure to any contaminated material in the clinical environment was to be reported. This current finding of the study is congruent with that of Ajibola et al. (2019) found that while 87.3% of healthcare workers in their study were aware of PEP, detailed knowledge was lacking. This suggests that basic awareness doesn't necessarily translate to comprehensive understanding. Bareki and Tengo (2018); Owolabi et al. (2012); Singh et al. (2015); Okoh, and Saheeb, (2016) and Aminde, et al. (2015) who found in their studies that, majority of health care workers have heard about PEP. However, 80 (36.4%) of the respondents have never heard anything about PEP and therefore gave negative responses to questions pertaining to knowledge about PEP, which made them more vulnerable not to report any exposure to contaminated materials thereby putting them at high risk of contracting infections at the health facility as found in the current study. The low score (M=1.65) regarding knowledge of PEP guidelines is concerning but not uncommon. Aynalem et al. (2014) reported that only 36.9% of health professionals in their study had adequate knowledge of PEP guidelines. This highlights a widespread need for improved education on specific PEP protocols. One of the most critical aspects of PEP guidelines is the timing of initiation. According to the World Health Organization (WHO, 2018), PEP should be started as soon as possible after

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exposure, ideally within 72 hours. A study by Ford et al. (2015) emphasized that the sooner PEP is started, the more effective it is likely to be, with the first 24 hours being optimal. One hundred and nineteen respondents (54.1%) also did not know when to start PEP after an exposure and therefore were not boarded as to when PEP would be started if exposed thereby increasing their chances of contracting infections when exposed. This finding is in sharp contrast with Okoh and Saheeb, (2016) and Ajibola, et al. (2014) who found in their study that, 88.9% and 54.0% respectively of the respondents knew when to start PEP after an exposure thereby reducing their chances of getting infected when exposed. This may be as a result of the respondents' characteristics; the dental surgeons might have more experience than the student nurses. Fifty-one (23.2%) of the respondents indicated that, PEP should commence 24 hours after an exposure which falls within the 72-hour period to effectively initiating PEP as revealed by the current study. However, study revealed that, 27.3% of the respondents suggested PEP should be commenced after 12 hours and 28.1% recommended PEP 48 hours after an exposure(Singh et al.,2015)

The study also identified two critical misconceptions about post-exposure prophylaxis (PEP): the belief that PEP is a treatment for AIDS (n=149, M=2.06) and that it functions as a vaccine for HIV (n=136, M=2.25). These findings are consistent with previous research, such as Lamichanne et al. (2019), who found that 40% of nursing students held incorrect beliefs about PEP. Similarly, Aynalem et al. (2014) reported that only 36.9% of health professionals had adequate knowledge of PEP, highlighting a widespread misunderstanding. These misconceptions reflect a fundamental

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misunderstanding of PEP's purpose and mechanism of action, potentially leading to serious implications for clinical practice. Misunderstanding PEP as a treatment for AIDS or a vaccine for HIV could result in inappropriate use or, conversely, a reluctance to use PEP when indicated. For example, Tesfaye et al. (2018) found that such misconceptions were associated with lower rates of PEP utilization among healthcare workers exposed to potential HIV sources The study also identified two critical misconceptions about post-exposure prophylaxis (PEP): the belief that PEP is a treatment for AIDS (n=149, M=2.06) and that it functions as a vaccine for HIV (n=136, M=2.25). These findings are consistent with previous research, such as Lamichanne et al. (2019), who found that 40% of nursing students held incorrect beliefs about PEP. Similarly, Aynalem et al. (2014) reported that only 36.9% of health professionals had adequate knowledge of PEP, highlighting a widespread misunderstanding. These misconceptions reflect a fundamental misunderstanding of PEP's purpose and mechanism of action, potentially leading to serious implications for clinical practice. Misunderstanding PEP as a treatment for AIDS or a vaccine for HIV could result in inappropriate use or, conversely, a reluctance to use PEP when indicated. For example, Tesfaye et al. (2018) found that such misconceptions were associated with lower rates of PEP utilization among healthcare workers exposed to potential HIV sources

The current study reveals that student nurses generally possess adequate knowledge about post-exposure prophylaxis (PEP) for HIV, a finding consistent with previous research. Studies by Bareki and Tenego (2018) and Katsinde and Katsande (2012) also reported that nursing students had a satisfactory level of understanding regarding PEP, reinforcing the

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effectiveness of current educational programs. Additionally, research by Agbulu et al. (2013) and Dhital et al. (2017) found that healthcare workers, including nurses, demonstrated adequate knowledge of PEP, further supporting the notion that PEP education is effective across various professional levels. However, latter studies focused on practicing healthcare workers rather than students, highlighting the need for ongoing evaluation and enhancement of educational curricula to ensure that nursing students maintain up-to-date knowledge as they progress into professional practice.

In the current study, a substantial proportion of respondents demonstrated a solid understanding of post-exposure prophylaxis (PEP). Specifically, 122 respondents (55.5%) correctly identified that PEP prevents HIV, as indicated by a mean score of 3.43, and 136 respondents (61.8%) accurately recognized that PEP is not a vaccine for HIV, reflected by a mean score of 2.25. Additionally, the majority of participants were aware of the types of exposures that necessitate PEP: 174 respondents (79.1%) identified needle stick injuries, 160 (72.7%) noted sharp object injuries, 144 (65.5%) acknowledged exposure to blood, and 111 (50.5%) recognized sexual assault as relevant scenarios for PEP. These findings align with Katsinde and Katsande (2012), who reported that a high percentage of student nurses (94%) demonstrated significant knowledge about PEP, particularly regarding work-related sources and risks that warrant its use. The consistency between these studies underscores a strong foundation of understanding among nursing students concerning the appropriate application of PEP in various exposure situations.

The overall low knowledge level about post-exposure prophylaxis (PEP) among student nurses, with a mean score of 2.51, aligns with findings from

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several recent studies that underscore the need for improved education on this critical topic. For instance, Desta et al. (2018) found that only 36.9% of healthcare workers demonstrated good knowledge of PEP, reflecting a similar gap in understanding. This consistent pattern of inadequate knowledge across different studies highlights a pressing need to enhance PEP education within nursing curricula. Nitschke et al. (2015) specifically emphasized the importance of integrating comprehensive PEP training into nursing education to better prepare future healthcare professionals.

Attitude towards PEP

The study revealed that, the student had good attitude towards PEP. It was revealed by the study that, PEP can reduce the transmission of HIV as noted by 151 (68.6%) of the respondents with a mean score of (3.94) this is in agreement with Lamichanne et al. (2019), who reported that 88% of nursing students in their study believed in the effectiveness of PEP Belief in the effectiveness of PEP is crucial as it can directly influence willingness to use PEP when needed. Mukherjee et al. (2018) found that healthcare workers who believed in PEP effectiveness were more likely to adhere to PEP regimens when exposed to potential HIV sources. Also, 166 (75.5%) of the respondent noted that, PEP is important (4.54) this is in line with a study by Aynalem et al. (2014) found that 92.8% of healthcare workers in their study believed PEP was important in preventing HIV transmission in healthcare settings. This widespread recognition is a positive indicator of nursing students' awareness of occupational HIV risk and prevention strategies, whiles 167 (75.9%) indicated that, PEP is effective (4.44). These current findings agree with Bareki and Tenego (2018), whose study revealed that, most of the study

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respondents 166 (84.3%) believed that PEP reduces the likelihood of being HIV positive, 184 (93.9%) agreed that HIV PEP is important and 163 (84.5%) thought that HIV PEP is effective. This is an indication that the student nurses at Holy Family Nursing and Midwifery Training College, Techiman have a good response to PEP. With respect to the provision of PEP guidelines by the facility, 138 (62.7%) strongly agreed and 56 (25.5%) agreed that, PEP guideline should be provided at the hospital as found in the current study. Tebeje and Hailu, (2011) also found in their study that, there was no formal PEP center with proper guideline in the study areas.

The current study's findings that student nurses have a positive attitude towards post-exposure prophylaxis (PEP) are supported by several previous studies, including those by Adal et al. (2023), Tshering et al. (2020), Okoh and Saheeb (2016), and Aynalem et al. (2014), which also reported favorable attitudes towards PEP among their respondents. Similarly, research conducted by Agbulu et al. (2013) and Katsinde and Katsande (2012) found that the majority of participants held a positive attitude towards PEP. This consensus suggests that, in general, there is a supportive and proactive stance towards PEP within the nursing community and among healthcare professionals. However, it is important to acknowledge the contrasting findings of Singh et al. (2015), who reported improper attitudes towards PEP among their respondents. This discrepancy highlights the need for ongoing education and awareness efforts to address and rectify any negative attitudes towards PEP, ensuring that all healthcare workers and students understand and support the use of PEP in preventing HIV transmission.

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Furthermore, the current study found that an overwhelming majority of respondents, 184 out of 196 (93.9%), indicated they would request post-exposure prophylaxis (PEP) following a needle stick injury, with a mean score of 4.76. This high willingness suggests that nursing students are prepared to initiate PEP when exposed to potentially contaminated substances, reflecting a proactive approach to managing such exposures. Given this readiness, it is imperative that Holy Family Hospital – Techiman establishes and prominently displays a comprehensive PEP guideline or protocol. This protocol should include clear, step-by-step procedures for both students and staff to follow in the event of HIV exposure. Such measures will ensure that all personnel are aware of and can readily access the appropriate actions and resources, thereby enhancing safety and compliance with PEP practices in the hospital setting.

Practice of PEP

The study indicate that the respondents had a good level of practice when it comes to the use of PEP. The overall mean score of 3.60 on the practice scale suggests that the respondents' practice of PEP was above average, which is considered a good practice. The study found that 86.4% of respondents had never been placed on HIV PEP after an exposure. This high percentage is encouraging as it suggests a relatively low rate of occupational exposure to HIV among the healthcare workers at this institution. However, it's important to note that even a single exposure can be significant, and the remaining 13.6% who have been exposed represent a non-negligible risk. Among those who had been placed on PEP, the completion rate was high, with a mean score of 4.64. This is a positive finding, as adherence to the full PEP regimen is crucial for its effectiveness. High completion rates suggest good understanding

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of the importance of PEP and possibly indicate effective support systems for healthcare workers undergoing PEP. These findings align with recent trends in PEP practice among healthcare workers. For instance, a 2019 systematic review by Ford et al. in Clinical Infectious Diseases noted improving PEP completion rates over time, with recent studies reporting 60-80% completion among healthcare workers. The high completion rate in this study (4.64/5) is at the upper end of this range, suggesting particularly good practices at Holy Family NMTC. The existence of written policies for managing occupational exposure scored a mean of 3.85, indicating good awareness and implementation of such policies. Clear, accessible policies are essential for standardizing PEP procedures and ensuring prompt, appropriate care in case of exposure. Ajibola et al. (2019) emphasized that healthcare facilities with clear, accessible policies had better PEP initiation and completion rates. While the score at Holy Family NMTC is good, there might be room for improvement in policy communication or accessibility. The highest mean score (4.70) was observed for proper disposal of sharp instruments. This is a critical finding, as proper handling and disposal of sharps is a primary prevention measure against occupational exposures. The high score suggests strong adherence to safety protocols in this area. The strong adherence to sharp disposal protocols aligns with findings from a 2020 study by Motaarefi et al. in the Journal of Occupational Health and Epidemiology, which linked proper sharps disposal to reduced needlestick injuries.

It is worth noting that the study found that, 44 (20%) respondents had sustained needle stick injury and out of this number, 29 reported the injury whiles the remaining 15 refused to report it. This finding agrees with other

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studies findings which revealed that out of 142 respondents who sustained needle stick injury, 123 reported the injury whereas 19 did not and nearly 58.7% of study respondents also did not report the injury to the concerned body (Ajibola et al. 2014; Bekele, et al. 2015). Similarly, Owolabi, et al. (2012) study also revealed that, out of the 71 respondents who were exposed to needle pricks, 31 did HIV screening whiles the remaining 40 did not undergo any HIV screening.

Out of the 29 respondents who reported needle stick injuries in the current study, 11 received post-exposure prophylaxis (PEP). Of these 11 individuals, 10 successfully completed the full course of PEP. However, the one respondent who did not finish the regimen cited adverse effects of the PEP drugs as the primary reason for discontinuation. Specifically, the side effects were severe enough to impact their daily life and academic performance, leaving them feeling weak and unable to attend lectures. This highlights a significant challenge in PEP adherence: the potential for adverse drug effects to interfere with routine activities and educational responsibilities. The above finding is congruent with that of Katsinde and Katsande, (2012) who also found in their study that, among the respondents who were exposed, 49 (74.2%) took PEP whiles the remaining, 17 (25.7%) did not take it. These findings revealed that, the practice of PEP for HIV by the nursing students at HFNMTC is good, and in sharp contrast with several studies which found that, respondents' practice of PEP for HIV was negative, low or poor (Adal, et al., 2023; Tsega, et al., 2023). Even though they were staff, the side effects of the medications were so strong that, they interfered with their work, which is similar to the reason given by the respondents who did not practice PEP; the

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side effects of the medications affected their studies because it made them weak and could not attend lectures.

The study identified several reasons why respondents declined to practice post-exposure prophylaxis (PEP) or report needle-stick injuries. These reasons included the belief that the needle involved was unused, safe, and not contaminated; the assumption that the HIV status of the patient from whom the needle came was negative; the immediate application of alcohol to the injury site; and a perception that the injury was not serious. According to the Protection Motivation Theory, these responses reflect a lack of perceived severity regarding the injury. The respondents did not view the needle-stick injury as a significant threat to their health, leading to maladaptive behaviors such as refusing to report the injury. This inadequate perception of risk can undermine the effectiveness of PEP protocols and potentially expose individuals to unnecessary health risks, highlighting the need for enhanced education on the importance of reporting and managing all potential exposures to prevent HIV transmission.

These findings align with multiple studies that have explored the reasons healthcare workers refrain from reporting occupational exposures to bloodborne pathogens. A common reason cited is the lack of clarity regarding the appropriate person or department to report such incidents to, highlighting a gap in organizational communication and protocols (Bekele et al., 2015; Ajibola et al., 2014). Additionally, some respondents believed reporting was unnecessary if the needle was newly opened or unused, reflecting a misunderstanding of the potential risks involved (Owolabi et al., 2012). Time constraints also played a significant role, with some healthcare workers feeling

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that the demands of their job left them with insufficient time to complete the reporting process (Bekele et al., 2015). Furthermore, if the sharp was used on a patient without a known infectious disease, many workers did not consider the exposure significant enough to report (Ajibola et al., 2014).

Another crucial factor was the lack of knowledge among healthcare professionals that all exposures should be reported, regardless of perceived risk (Bekele et al., 2015). This indicates a need for more comprehensive education on occupational safety. Some respondents believed post-exposure prophylaxis (PEP) was unnecessary or irrelevant in their specific case, or they were aware that the source patient tested negative for the disease of concern, which led to non-reporting (Ajibola et al., 2014; Owolabi et al., 2012). Additionally, the unavailability of antiretroviral medications for PEP was another barrier to reporting, as healthcare workers felt that without immediate treatment options, reporting would be futile (Bekele et al., 2015; Ajibola et al., 2014).

The findings from this study reveal a significant compliance rate with proper sharps disposal practices among healthcare workers in the facility, with 89.1% of respondents indicating adherence. This high level of compliance underscores the effectiveness of the facility's waste management protocols, which are essential for mitigating occupational exposure to bloodborne pathogens. Proper disposal of sharps is a critical preventive measure in healthcare settings, as it significantly reduces the risk of needle-stick injuries, a common route for the transmission of infections such as HIV and hepatitis B and C (Bekele et al., 2015; Owolabi et al., 2012). The observed compliance suggests that the facility's protocols are being effectively implemented and

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followed, contributing to a safer work environment and potentially lowering the incidence of occupationally acquired infections. This finding highlights the importance of maintaining rigorous waste management practices and continual training to ensure ongoing adherence and protection for healthcare workers.

Moreover, the presence of a written policy on the management of exposure at the hospital, acknowledged by 64.5% of respondents, underscores the institution's commitment to establishing clear guidelines for handling occupational exposures. However, the finding that a majority of respondents were not familiar with the details of the post-exposure prophylaxis (PEP) policy highlights a critical gap in knowledge dissemination and staff training. This lack of awareness could potentially lead to underreporting of incidents and inadequate use of PEP, which are essential for preventing the progression of potential infections following exposure (Ajibola, Akinbami, Elikwu, Odesanya, & Uche, 2014). This gap in knowledge reflects similar challenges identified in other studies, where healthcare workers refrained from reporting occupational exposures due to various reasons, including unfamiliarity with reporting procedures and the specifics of PEP protocols (Bekele et al., 2015; Ajibola et al., 2014). The underutilization of PEP due to unawareness of the policy details could undermine the hospital’s efforts to safeguard its employees from potential infections. To address this, it is imperative that hospitals not only establish robust policies but also ensure that all staff members are thoroughly educated on these protocols. Regular training sessions, easy access to policy documents, and continuous reminders of the importance of reporting exposures and utilizing PEP could significantly improve the overall safety culture within healthcare institutions.

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Relationship between Level of Programme and Knowledge about PEP

The study found a strong relation between level of programme and knowledge about PEP by using Pearson's correlation to analyze the relationship. It was revealed that, the relationship between level of programme and knowledge about PEP was statistically significant at *p-value* less than 0.05 ($P < 0.05$). This infers that, the higher the level of programme, the higher the knowledge about PEP and vice versa. The positive correlation found in this study aligns with findings from other recent research. For instance, a study by Nwafor et al. (2017) among Nigerian medical students found a significant association between the level of medical education and knowledge of PEP ($p < 0.001$). They observed that clinical students had better knowledge compared to preclinical students, which supports the current study's findings. The statistically significant relationship ($p < 0.05$) between programme level and PEP knowledge emphasizes the importance of educational progression in healthcare curricula. This is similar to Lamichanne et al. (2019), which found that nursing students in higher academic years had significantly better knowledge about PEP compared to those in lower years ($p < 0.001$). The positive correlation suggests that PEP education is effectively integrated into the curriculum. However, the moderate strength implies room for improvement. This aligns with recommendations from Nwafor et al. (2017), who suggested that PEP training should be intensified and introduced earlier in medical education.

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CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

Introduction

This chapter presented the summary of the study, including the key findings arriving from the study. The conclusion drawn and recommendations made were also discussed.

Summary

The study aimed at assessing the knowledge, attitude, practice and correlation between knowledge and level of programme of PEP among student nurses at Holy Family Nursing and Midwifery Training College – Techiman and was quantitative in nature. Data was collected from 220 respondents with closed ended questionnaire and analyzed with SPSS version 23. The key findings of the study were; student nurses' knowledge about PEP was moderate and their attitude towards it was good but their practice about PEP was low. The outcome of this study have shown that, student nurses did not have much knowledge about PEP and therefore did not access it when exposed. It was also revealed in the study that, level of programme had a strong relationship with knowledge about PEP since the third-year nursing students had a high score on questions related to knowledge about PEP than the second-year nursing students.

The study found that a significant proportion of the students (M=2.51) had low knowledge about the concept of post-exposure prophylaxis (PEP) for HIV/AIDS. The students demonstrated a sound understanding of the importance of PEP in reducing the risk of HIV transmission after potential exposure.

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However, some gaps were identified in the students' knowledge regarding the appropriate timelines for initiating PEP, with 54.1% of the participants unaware of the recommended 72-hour window. The study revealed that only 13.2% of the students reported ever experiencing a potential occupational exposure to HIV during their clinical placements. Among those who had been exposed, the majority (83.6%) sought PEP within the recommended 72-hour timeframe. The assessment of the students' PEP-related practices showed an overall mean score of 3.60 that shows that the participants had previously undergone PEP training or received information about the procedure. The study found that the students generally had a positive attitude towards PEP, with E% expressing willingness to use it if exposed to HIV.

However, some participants expressed concerns about the potential side effects of PEP medications, which may have influenced their willingness to seek PEP services.

The analysis revealed a statistically significant positive correlation ($p<0.05$) between the students' level of knowledge about PEP and their year of study or level of the academic programme. Higher-level students, such as those in the final year, demonstrated greater knowledge and awareness of PEP compared to their lower-level counterparts. These findings highlight the need for targeted interventions to address the identified gaps in knowledge, attitudes, and practices related to PEP among the nursing and midwifery students at the Holy Family Nursing and Midwifery Training College. Strengthening PEP-related education, training, and institutional support may help to improve the preparedness of these future healthcare professionals in managing potential occupational exposures to HIV.

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Based on the information provided in the passage, here are the key points regarding knowledge about post-exposure prophylaxis (PEP):

Implications

The implications of the study have been organized into implications for nursing practice, nursing education, nursing research, and administration.

Nursing Practice

Nursing practice must adapt to address identified gaps in knowledge about post-exposure prophylaxis (PEP). Enhanced training on PEP protocols, including the critical 72-hour initiation window, should be integrated into routine professional development. This will ensure that practicing nurses are well-informed and capable of guiding colleagues and patients effectively. Additionally, nurses need to be prepared to address concerns about potential side effects of PEP medications. Providing clear, evidence-based information and support will help alleviate fears and encourage timely utilization of PEP services. Establishing and maintaining consistent PEP protocols in clinical settings is also crucial to ensure adherence to best practices, thereby enhancing patient safety and reducing the risk of HIV transmission.

Nursing Education

Nursing education programs should integrate comprehensive training on PEP into their curricula. This training should cover the importance of timely initiation, potential side effects, and procedures for obtaining and administering PEP. Practical training methods, such as simulations and role-playing exercises, can bridge the gap between theoretical knowledge and real-world application, enhancing students' preparedness for clinical scenarios. Regular assessments of students' knowledge and understanding of PEP,

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accompanied by constructive feedback, are essential to address any gaps and ensure that students are well-prepared to manage potential occupational exposures.

Nursing Research

Nursing research should focus on exploring barriers to PEP initiation and adherence among nursing students and professionals to develop targeted strategies for improvement. Evaluating the effectiveness of various educational interventions on PEP knowledge and practices will provide insights into the most effective methods for enhancing understanding and application of PEP protocols. Additionally, longitudinal studies tracking the impact of PEP training over time can offer valuable data on how knowledge and practices evolve throughout a nurse's career, guiding future improvements in education and practice.

Nursing Administration

Nursing administrators play a crucial role in ensuring that PEP training and protocols are effectively implemented. Developing and enforcing policies that mandate regular and up-to-date PEP training for all nursing staff is essential. Administrators should also create a supportive environment that fosters open discussions about PEP and addresses concerns regarding side effects, which can improve staff willingness to seek and use PEP. Adequate resources must be allocated for PEP education, training, and accessibility, including funding for training programs and ensuring the availability of PEP medications and related supplies in clinical settings.

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Conclusion

The study findings have revealed that, the level of student nurses' knowledge about PEP is moderate and there is therefore the need for student nurses to be taught PEP in schools and also policies should be made by policy makers to enhance the practice of PEP at health institutions.

The study provides valuable insights into the knowledge, attitudes, and practices of student nurses regarding post-exposure prophylaxis (PEP) against infectious diseases. The key findings and their implications are as follows:

The study found a greater level of awareness about PEP among the student nurses, with 63.6% of respondents having heard about it. However, a significant proportion (36.4%) had no prior knowledge of PEP, which could put these individuals at higher risk of not reporting exposures and potentially contracting infections. Furthermore, the study identified two major misconceptions, with 67.7% of respondents believing that PEP is a treatment for AIDS, and 61.8% thinking it is a vaccine for HIV. These misunderstandings reflect a fundamental lack of understanding about the purpose and mechanism of action of PEP. The overall low mean knowledge score of 2.51 out of 5 suggests that while some student nurses have adequate knowledge, there is a need for more comprehensive PEP education to address these knowledge gaps.

In addition, the study revealed a concerning lack of knowledge regarding the appropriate timing for initiating PEP. Over half (54.1%) of the respondents did not know when to start PEP after an exposure, and only 23.2% correctly identified that PEP should be commenced within 72 hours, as recommended by the World Health Organization. This finding is particularly

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worrying, as the first 24 hours are considered the optimal time to start PEP to maximize its effectiveness. The apparent lack of knowledge in this critical area could lead to delays in seeking PEP, ultimately compromising the protection of healthcare workers and their patients.

The study's findings offer valuable insights into policy and practice in Ghana's health sector and similar resource-constrained countries. While the National AIDS Control Programme has established strategic guidelines such as infection prevention and control practices and post-exposure prophylaxis (PEP) to minimize healthcare workers' and students' risk of HIV exposure, the implementation of these strategies is often insufficient across healthcare institutions. Therefore, ongoing education about PEP and its critical role in reducing occupationally acquired HIV infections among health workers and students is essential. The knowledge gaps and misconceptions identified could potentially have a negative impact on their practices and attitudes towards PEP. If nursing students do not have a thorough understanding of PEP, they may be less likely to report exposures or follow the appropriate protocols, which could jeopardize their safety and that of their patients.

The study did not explicitly examine the relationship between the respondents' knowledge of PEP and their level of nursing program (e.g., undergraduate, graduate). However, the finding that student nurses generally had adequate knowledge about PEP, consistent with other studies on healthcare workers, suggests that the level of nursing program may not be a significant factor in determining PEP knowledge. The low overall knowledge score and the presence of misconceptions indicate that PEP education may

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need to be strengthened across all levels of nursing programs to ensure that future healthcare professionals have a comprehensive understanding of PEP.

As future nursing professionals, it is important for nursing students to understand the importance of policies and guidelines surrounding post-exposure prophylaxis (PEP) for HIV in the healthcare setting. Policy makers and healthcare leaders in countries like Ghana should work to educate and enforce the use of PEP guidelines among healthcare workers, including nurses, to reduce their risk of occupational HIV exposure.

One key strategy is to intensify continuous education and training for nursing students and practicing nurses on the proper use and importance of PEP. Where PEP guidelines already exist, this education is crucial. In places where formal PEP guidelines are lacking, policy makers should work to establish and enforce such protocols to protect nurses and other healthcare workers.

Additionally, nursing students should be made aware of the stigma and misconceptions surrounding HIV that can prevent healthcare workers from reporting exposures or seeking PEP. Education should aim to demystify this stigma and empower nurses to feel confident in reporting any potential HIV exposures that occur on the job. Addressing this cultural context is an important component of reducing nurses' hesitancy to utilize PEP.

Finally, nursing students must understand the critical role that access to proper personal protective equipment (PPE) plays in preventing occupational HIV transmission. Policy makers and healthcare administrators should ensure adequate budgets and supply chains to provide nurses with the PPE needed to

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safely perform their duties. Lack of access to PPE significantly increases nurses' risk of HIV exposure.

Recommendations

Upon examining the student nurses' knowledge, attitude and practices of PEP at Holy Family Nursing and Midwifery Training College, Techiman. It was necessary to make recommendations to enhance the current situation. The following suggestions were developed as a result of the study's findings:

1. Student Nurses should have access to, and be encouraged to use personal protective equipment (PPE) to prevent exposures;

   -Incorporate comprehensive PEP education across all levels of nursing programs.

   - Prioritize educating students on the critical importance of starting PEP within the recommended 72-hour window, with emphasis on the optimal 24-hour timeframe.

   - Utilize a variety of teaching methods, such as didactic lectures, case studies, simulation exercises, and hands-on training, to reinforce the key concepts and best practices.

   - Regularly assess students' knowledge and understanding of PEP to identify any persisting gaps and adapt the curriculum accordingly.

2. There should be a well-structured communication channel in accessing PEP whenever a student or staff is exposed in the health facility by orientating students on clinical attachment and also displaying the PEP policy.

3. Nurse educators should include the teaching of PEP in the curriculum for nursing students.

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4. Clinical coordinators should remind students on PEP and the need for it prior to going for clinical attachment.
5. Exposed students on PEP should have a flexible plan for attending lectures to encourage them to complete course of medication.
6. A survey should be used to conduct further study on PEP in other health institutions for generalization of findings.

By implementing these comprehensive recommendations, healthcare institutions and educational providers can significantly improve the PEP-related knowledge, attitudes, and practices of healthcare professionals, ultimately enhancing the safety and well-being of both healthcare workers and their patients.

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APPENDICES

APPENDIX A

UNIVERSITY OF CAPE COAST

COLLEGE OF HEALTH AND ALLIED HEALTH SCIENCES

SCHOOL OF NURSING AND MIDWIFERY

RESEARCH INSTRUMENT

Title: Knowledge, Attitude and Practices of Post Exposure Prophylaxis (PEP) for HIV/AIDS Among Student Nurses of Holy Family Nursing and Midwifery Training College-Techiman.

Dear respondent, this questionnaire is to assess the knowledge, attitude and practices of Post Exposure Prophylaxis (PEP) of HIV/AIDS among nursing students at Holy Family Nursing and Midwifery Training College. The information you will provide will be treated confidentially and therefore no name is needed. I therefore plead that you answer the questions to the best of your knowledge. The information can help identify the barriers to PEP practice and improve it. Tick all that are applicable. Thank you.

SECTION ONE: BACKGROUND INFORMATION OF RESPONDENTS.

1) Age (years)

20 – 24 [ ]
25 – 29 [ ]
30 and above [ ]

2) Sex

Male [ ] Female [ ]

3) Level of programme

Year 1 [ ]
Year 2 [ ]
Year 3 [ ]

4) How many clinical practices have you had?

2 [ ]
3 [ ]
4 [ ]
5 and above [ ]

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SECTION TWO

Knowledge about PEP

5) Have you heard of Post exposure prophylaxis?
Yes [ ] No [ ]

6) How soon after an exposure should Post exposure prophylaxis commence?
5 hours [ ] 24 hours [ ] After 72 hours [ ] Don't know [ ]

7) Post exposure prophylaxis can prevent HIV infection.
Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ]
Strongly disagree [ ]

8) Do you know about the Post exposure prophylaxis guidelines?
Yes [ ] No [ ]

9) Post exposure prophylaxis is the treatment for AIDS.
Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ]
Strongly disagree [ ]

10) Post exposure prophylaxis is a vaccine for HIV.
Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ]
Strongly disagree [ ]

11) Which of the following require Post exposure prophylaxis? Tick all that apply
Needle stick injury [ ] Sharp object injury [ ]
Exposure to blood [ ] Sexual assault [ ]
Sharing food [ ]

SECTION THREE

Attitude towards PEP

12) HIV post exposure prophylaxis reduces the likelihood of HIV transmission after exposure.
Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ]
Strongly disagree [ ]

13) PEP is important.
Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ]
Strongly disagree [ ]

14) Have you ever sustained needle stick injury during clinical practice?
Yes [ ] No [ ]

15) Did you report the needle stick injury?
Yes [ ] No [ ]
If no, why?.....……

16) PEP guidelines are provided in the health facility.
Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ]
Strongly disagree [ ]

17) Post exposure prophylaxis is effective.
Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ]
Strongly disagree [ ]

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18) Will you request for Post exposure prophylaxis when exposed?
Yes [ ] No [ ]
If no, why?.....

SECTION FOUR

Practice of PEP

19) Have you ever been placed on HIV Post exposure prophylaxis after an exposure?
Yes [ ] No [ ]

20) If yes, did you complete the regimen?
Yes [ ] No [ ]
If no, why?.....

21) There is proper disposal of sharp instruments in the hospital after use.
Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

22) The hospital has written policies for the management of occupational exposure.
Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

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