

**ASSESSMENT OF KNOWLEDGE, ATTITUDES AND UTILISATION OF HIV  
POST-EXPOSURE PROPHYLAXIS AMONG ADULTS, ROMA, LESOTHO**

By

**MASELOBE ANNA LEBONA**

Submitted in accordance with the requirements for the degree of

**MASTER OF ARTS**

in the subject of

**NURSING SCIENCE**

at the

**UNIVERSITY OF SOUTH AFRICA**

**SUPERVISOR: PROFESSOR AZWIHANGWISI HELEN MAVHANDU-MUDZUSI**

**November 2016**

## **DEDICATION**

I dedicate this dissertation to all those who died of HIV related illnesses.

---

Student Number: 57585393

**DECLARATION**

I declare that **KNOWLEDGE, ATTITUDES AND UTILISATION OF HIV POST-EXPOSURE PROPHYLAXIS AMONG ADULTS, ROMA, LESOTHO** is my own work and all the sources that I have used, cited or quoted have been indicated and acknowledged by means of complete references, and that this work has not been submitted before for any other degree at any other institution.

Signature: M. Lebona

Date: 2016/10/25

Full name: Maselobe Anna Lebona

## **ACKNOWLEDGEMENTS**

I am most thankful to the Almighty God for the strength and determination that He gave me to follow through with my work and complete this dissertation, through Him nothing is impossible.

I would also like to acknowledge the following people for their respective contributions to this dissertation:

- My Supervisor, Prof Azwihangwisi Helen Mavhandu-Mudzusi, for her patient, guidance and support,
- My husband, Monne Ts'iu, for his unrelenting support and encouragement,
- St Joseph's hospital management for allowing me to conduct the study at the facility,
- St Joseph's hospital outpatients for their willingness to take part in the study,
- Ministry of Health for granting me permission to conduct this study,

# **ASSESSMENT OF KNOWLEDGE, ATTITUDES AND UTILISATION OF HIV POST-EXPOSURE PROPHYLAXIS AMONG BASOTHO ADULTS, ROMA, LESOTHO**

**Student number:** 57585393  
**Student:** Maselobe Anna Lebona  
**Degree:** Master of Arts in Nursing Science  
**Department:** Health Studies, University of South Africa  
**Supervisor:** Prof Azwihangwisi Helen Mavhandu-Mudzusi

## **ABSTRACT**

As the Human Immunodeficiency Virus (HIV) prevalence rises, uninfected Basotho face an increased risk of exposure. This necessitates strengthening of strategies that prevent exposure, and where exposure has occurred, measures that prevent infection. One such measure is Human Immunodeficiency Virus (HIV) Post-Exposure Prophylaxis (PEP). Awareness and knowledge of HIV PEP is therefore of paramount importance. The purpose of this study was to assess knowledge, attitudes and utilisation of HIV PEP among adults in Roma, Lesotho. A quantitative cross-sectional study was conducted among 96 adult outpatients at St Joseph's Hospital. Data were collected by means of structured questionnaire and analysed using SPSS version 23.0. Results were presented using charts and tables. Awareness of HIV PEP among the respondents was found to be very low and for most respondents' knowledge of HIV PEP was either non-existent or very poor. Utilisation was also found to be very low. Attitudes towards HIV PEP were, however, found to be favourable. More studies should be conducted throughout the country to further explore Basotho's knowledge, attitude and use of HIV PEP.

## **KEY CONCEPTS**

Adults, Attitudes; HIV; Knowledge; Post-Exposure Prophylaxis; utilisation;

## LIST OF ACRONYMS

<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>ART</b>	Antiretroviral therapy
<b>ARVs</b>	Antiretrovirals
<b>CDC</b>	Center for Disease Control
<b>CHS</b>	College of Human Sciences
<b>CINAHL</b>	Cumulative Index to Nursing and Allied Health Literature
<b>COSC</b>	Cambridge Overseas School Certificate
<b>EGPAF</b>	Elizabeth Glaser Pediatric AIDS Foundation
<b>GoL</b>	Government of Lesotho
<b>HCW</b>	Health Care Worker
<b>HINARI</b>	Health InterNetwork Access to Research Initiative
<b>HIV</b>	Human Immunodeficiency Virus
<b>HTC</b>	HIV Testing and Counselling
<b>JC</b>	Junior Certificate
<b>MoH</b>	Ministry of Health
<b>NGOs</b>	Non-Governmental Organizations
<b>nPEP</b>	Non-Occupational PEP
<b>PEP</b>	Post-Exposure Prophylaxis
<b>PMTCT</b>	Prevention of Mother to Child Transmission
<b>PrEP</b>	Pre-Exposure Prophylaxis
<b>PSLE</b>	Primary School Leaving Education
<b>SPSS</b>	Statistical Package for Social Sciences
<b>UNAIDS</b>	Joint United Nations Programme on HIV/AIDS
<b>UNISA</b>	University of South Africa
<b>USAID</b>	United States Agency for International Development
<b>WHO</b>	World Health Organization

## TABLE OF CONTENTS

<b>DEDICATION .....</b>	<b>II</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>IV</b>
<b>ABSTRACT .....</b>	<b>V</b>
<b>LIST OF ACRONYMS .....</b>	<b>VI</b>
<b>TABLE OF CONTENTS .....</b>	<b>VII</b>
<b>LIST OF TABLES .....</b>	<b>XII</b>
<b>LIST OF FIGURES .....</b>	<b>XII</b>
<b>LIST OF ANNEXURES .....</b>	<b>XIII</b>
<b>CHAPTER 1: ORIENTATION TO THE STUDY .....</b>	<b>1</b>
<b>1.1 INTRODUCTION .....</b>	<b>1</b>
<b>1.2 BACKGROUND TO THE RESEARCH PROBLEM .....</b>	<b>1</b>
<b>1.3 STATEMENT OF THE RESEARCH PROBLEM.....</b>	<b>3</b>
<b>1.4 RESEARCH PURPOSE AND OBJECTIVES.....</b>	<b>4</b>
1.4.1 RESEARCH PURPOSE .....	.4
1.4.2 RESEARCH OBJECTIVES .....	.4
<b>1.5 RESEARCH QUESTIONS .....</b>	<b>4.</b>
<b>1.6 SIGNIFICANCE OF THE STUDY.....</b>	<b>4</b>
<b>1.7 DEFINITION OF TERMS.....</b>	<b>5</b>
1.7.1 DEFINITIONS OF KEY CONCEPTS .....	.5
1.7.2 OPERATIONAL DEFINITIONS .....	.6
<b>1.8 RESEARCH METHODOLOGY .....</b>	<b>6</b>
1.8.1 RESEARCH APPROACH .....	.6
1.8.2 RESEARCH DESIGN .....	.7
1.8.3 SETTING AND POPULATION .....	.7
1.8.4 SAMPLING METHOD AND TECHNIQUE .....	.7
<b>1.9 DATA COLLECTION .....</b>	<b>8</b>
<b>1.10 DATA MANAGEMENT AND ANALYSIS.....</b>	<b>8</b>
<b>1.11 ETHICAL CONSIDERATIONS.....</b>	<b>8</b>
<b>1.12 SCOPE OF THE STUDY.....</b>	<b>8</b>
<b>1.13 STRUCTURE OF THE DISSERTATION.....</b>	<b>9</b>
<b>1.14 CONCLUSION .....</b>	<b>9</b>
<b>CHAPTER 2: LITERATURE REVIEW .....</b>	<b>10</b>
<b>2.1 INTRODUCTION.....</b>	<b>10</b>

<b>2.2 SEARCH STRATEGY .....</b>	<b>11</b>
<b>2.3 APPRAISAL OF IDENTIFIED STUDIES.....</b>	<b>12</b>
2.4 EMERGENT THEMES	12
2.4.1 OVERVIEW OF HIV PEP	13
2.4.1.1 <i>What is HIV PEP?</i>	13
2.4.1.2 <i>History of HIV PEP</i>	13
2.4.1.3 <i>Indications for HIV PEP</i>	14
2.4.1.4 <i>Rationale for HIV PEP</i>	14
2.4.1.5 <i>Evidence of HIV PEP efficacy</i>	15
2.4.2 KNOWLEDGE, ATTITUDE AND UTILISATION/PRACTICE OF HIV PEP	16
2.4.2.1 <i>International perspective</i>	16
2.4.2.2 <i>African perspective</i>	18
2.4.3 IMPLICATION OF THE FINDINGS	22
<b>2.5 CONCLUSION .....</b>	<b>23</b>
<b>CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY .....</b>	<b>24</b>
<b>3.1 INTRODUCTION.....</b>	<b>24</b>
<b>3.2 RESEARCH APPROACH.....</b>	<b>24</b>
<b>3.3 RESEARCH DESIGN.....</b>	<b>24</b>
<b>3.4 RESEARCH METHOD.....</b>	<b>25</b>
3.4.1 SETTING AND POPULATION	25
3.4.1.1 <i>Setting</i>	25
3.4.1.2 <i>Population</i>	25
3.4.2 SAMPLING	26
3.4.2.1 <i>Inclusion criteria</i>	27
3.4.2.2 <i>Exclusion criteria</i>	27
3.4.3 ETHICAL CONSIDERATIONS	27
3.4.3.1 <i>Informed and non-coerced consent</i>	28
3.4.3.2 <i>Privacy and confidentiality</i>	28
3.4.3.3 <i>Acknowledgement of data sources</i>	28
3.4.3.4 <i>Permission from authorities and gatekeepers</i>	29
3.4.3.5 <i>Principle of respect for human dignity</i>	29
3.4.3.6 <i>Benefits from the study</i>	29
3.4.4 DATA COLLECTION	30
3.4.4.1 <i>Data collection instrument development</i>	30
3.4.4.2 <i>Validity and Reliability of the questionnaire</i>	31
3.4.4.2.1 <i>Validity .....</i>	31
3.4.4.2.2 <i>Reliability.....</i>	31
3.4.4.3 <i>Data collection approach and method</i>	32
3.4.5 DATA MANAGEMENT AND ANALYSIS	32



3.4.5.1 <i>Data management</i>	32
3.4.5.2 <i>Data analysis</i>	33
<b>3.5 CONCLUSION .....</b>	<b>33</b>
<b>CHAPTER 4: PRESENTATION OF RESULTS .....</b>	<b>34</b>
<b>4.1 INTRODUCTION .....</b>	<b>34</b>
<b>4.2 RESEARCH FINDINGS .....</b>	<b>34</b>
4.2.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS	34
4.2.1.1 <i>Gender of the respondents</i>	34
4.2.1.2 <i>Age of the respondents</i>	35
4.2.1.3 <i>Marital status of the respondents</i>	36
4.2.1.4 <i>Educational qualifications of the respondents</i>	36
4.2.1.5 <i>Religious background of the respondents</i>	37
4.2.1.6 <i>Occupations of the respondents</i>	38
4.2.2 KNOWLEDGE REGARDING HIV PEP	39
4.2.2.1 <i>HIV PEP awareness</i>	39
4.2.2.2 <i>Sources of HIV PEP information</i>	39
4.2.2.3 <i>Views related to the use of HIV PEP</i>	40
4.2.3 ATTITUDE TOWARDS HIV PEP	466
4.2.3.1 <i>Views related to HIV PEP</i>	46
4.2.3.2 <i>Consideration of use of HIV PEP</i>	47
4.2.3.2.1 <i>Reason for not considering use of HIV PEP.....</i>	48
4.2.3.3 <i>General feelings regarding HIV PEP</i>	48
4.2.3.4 <i>Influence on general feelings regarding HIV PEP</i>	49
4.2.4 UTILIZATION OF HIV PEP	50
4.2.4.1 <i>Previous HIV PEP use</i>	50
4.2.4.2 <i>Knowledge of person who has taken HIV PEP</i>	51
4.2.4.3 <i>Knowledge of anyone who had tried to access HIV PEP but was unable to</i>	52
4.2.4.4 <i>Previous exposure to HIV</i>	53
4.2.4.4.1 <i>Actions taken after exposure to HIV .....</i>	53
4.2.4.4.2 <i>Reasons for actions taken following the exposure.....</i>	54
<b>4.3 CONCLUSION .....</b>	<b>55</b>
<b>CHAPTER 5: DISCUSSION, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS .....</b>	<b>56</b>
<b>5.1 INTRODUCTION .....</b>	<b>56</b>
<b>5.2 DISCUSSION OF RESEARCH FINDINGS .....</b>	<b>56</b>
5.2.1 DEMOGRAPHIC DATA	56
5.2.2 KNOWLEDGE REGARDING HIV PEP	57
5.2.3 ATTITUDE TOWARDS HIV PEP	58

5.2.4 UTILIZATION OF HIV PEP	58
<b>5.3 CONCLUSIONS</b> .....	<b>59</b>
<b>5.4 LIMITATIONS OF THE STUDY</b> .....	<b>59</b>
<b>5.5 RECOMMENDATIONS</b> .....	<b>60</b>
<b>5.6 CONCLUDING REMARKS</b> .....	<b>60</b>
<b>REFERENCES</b> .....	<b>61</b>

## LIST OF TABLES

TABLE 2.1: EMERGED THEMES	12
TABLE 4.1: VIEWS RELATED TO THE USE OF HIV PEP (N=96)	41
TABLE 4.2: VIEWS RELATED TO HIV PEP (ATTITUDE) (N=96)	46
TABLE 4.3: REASON FOR NOT CONSIDERING USE OF HIV PEP(N=8)	48
TABLE 4.4: INFLUENCE ON GENERAL FEELINGS REGARDING HIV PEP(N=96)	50
TABLE 4.5: PREVIOUS HIV PEP USE(N=96)	50
TABLE 4.6: REASON FOR TAKING HIV PEP(N=9)	52
TABLE 4.7: REASONS FOR ACTIONS TAKEN FOLLOWING HIV EXPOSURE(N=10)	55
TABLE 4.8: THOUGHTS ON ACTIONS TAKEN FOLLOWING THE EXPOSURE (N=10)	55

## LIST OF FIGURES

FIGURE 4.1: GENDER OF THE RESPONDENTS (N=96)	35
FIGURE 4.2: AGES OF THE RESPONDENTS (N=96)	35
FIGURE 4.3: MARITAL STATUS OF THE RESPONDENTS (N=96)	36
FIGURE 4.4: EDUCATIONAL QUALIFICATIONS OF THE RESPONDENTS(N=96)	37
FIGURE 4.5: RELIGIOUS BACKGROUND OF THE RESPONDENTS (N=96)	37
FIGURE 4.6: OCCUPATIONS OF THE RESPONDENTS (N=96)	38
FIGURE 4.7: HIV PEP AWARENESS(N=96)	39
FIGURE 4.8: SOURCE OF INFORMATION ON HIV PEP(N=34)	40
FIGURE 4.9: CONSIDERATION OF USE OF HIV PEP(N=96)	47
FIGURE 4.10: GENERAL FEELINGS REGARDING HIV PEP(N=96)	49
FIGURE 4.11: KNOWLEDGE OF PERSON WHO HAS TAKEN HIV PEP(N=96)	51
FIGURE 4.12: KNOWLEDGE OF ANYONE WHO HAD TRIED TO ACCESS HIV PEP BUT WAS UNABLE TO(N=96)	52
FIGURE 4.13:PREVIOUS EXPOSURE TO HIV (N=96)	53
FIGURE 4.14: ACTIONS TAKEN FOLLOWING HIV EXPOSURE(N=10)	54

## LIST OF ANNEXURES

ANNEXURE 1: ETHICAL CLEARANCE CERTIFICATE FROM HEALTH STUDIES HIGHER DEGREES COMMITTEE AT THE UNIVERSITY OF SOUTH AFRICA	70
ANNEXURE 2: LETTER OF PERMISSION FROM THE NATIONAL HEALTH RESEARCH AND ETHICS COMMITTEE (MINISTRY OF HEALTH LESOTHO)	71
ANNEXURE 3: LETTER OF PERMISSION FROM ST JOSEPH'S HOSPITAL	72
ANNEXURE 4A: CONSENT FORM (ENGLISH)	73
ANNEXURE 4B: CONSENT FORM (SESOTHO)	78
ANNEXURE 5A: QUESTIONNAIRE (ENGLISH)	83
ANNEXURE 5B: QUESTIONNAIRE (SESOTHO)	90

## **CHAPTER 1: ORIENTATION TO THE STUDY**

### **1.1 INTRODUCTION**

The purpose of the study was to assess knowledge, attitudes and utilisation of HIV Post-Exposure Prophylaxis among adults in Roma, Lesotho in order to make recommendations for promoting awareness and the use of HIV PEP among adults in Roma, Lesotho. The HIV pandemic has a devastating impact in Lesotho (Ministry of Health [MoH] 2014: viii). It is affecting the population, the economy and the country's health care system (MoH 2013:v). More than 23% of Basotho are living with HIV, this approximates to 380000 people, of which 342000 are adults (MoH 2014: viii). According to the MoH (2014:viii), HIV prevalence is highest (44.0%) in the age group 35-39, followed by 40.8%, 22.4% and 10.9% in the age groups 30-34, 20-24 and 15 -19 respectively.

In 2012, Lesotho had the third highest HIV prevalence in the world (Lesotho Times 2012:1) and in just two years, the prevalence has risen, and the country now ranks second highest in the world. More people in Lesotho have died of HIV/AIDS related conditions than any other disease (Elizabeth Glaser Pediatric AIDS Foundation (EGPAF 2014:1).

This chapter provides a background to the study, problem statement, purpose and objectives of the study, significance of the study, research questions, definitions of key concepts used in the study. The chapter also provides the synopsis of research design and methods used in the study and the layout of the entire dissertation

### **1.2 BACKGROUND TO THE RESEARCH PROBLEM**

Human Immunodeficiency Virus (HIV) is still a global health issue. It is estimated that 36.9 million people were living with HIV globally at the end of 2014 (The Joint United Nations Programme in HIV/AIDS [UNAIDS] 2015:1). Since 1983, HIV prevalence has rapidly risen, especially in Sub-Saharan Africa. UNAIDS (2015:1) indicated that in 2014, there were 25.8 million people living with HIV and 790 000 died from HIV related conditions in the Sub-Saharan Africa. The same report highlighted the fact that this region had 1.4 million new HIV infections, accounting for 70% of the total new HIV infections in Africa. According to the World Health Organization (WHO)

(2016:1), Sub-Saharan Africa accounts for two-thirds of the global total of new HIV infections.

Lesotho, which is one of the Sub-Saharan Africa countries, is among the countries with highest HIV prevalence in the World (MoH 2013:1). It has been over three decades now since the country started to fight HIV, and still cure for this pandemic has not yet been found; however, there is hope as drugs have been developed to limit the spread of the virus and to allow infected individuals to live longer and healthier lives (WHO 2014:1). These antiretroviral drugs (ARVs) are also used by HIV uninfected individuals as Pre-Exposure Prophylaxis (PrEP) and Post-Exposure Prophylaxis (PEP) to prevent acquisition of HIV infection. In the HIV context, PrEP refers to ARV medication initiated “before” high-risk exposure whereas PEP as a preventive measure, is initiated shortly following a high-risk exposure to HIV (United States Agency for International Development [USAID] 2013:74-75).

In 2011, a trial which involved 4758 heterosexual serodiscordant couples in Kenya and Uganda showed that the HIV negative partners who took PrEP were 62% less likely to be infected with HIV than those who were receiving placebos (Baeten, Donnell, Ndase, Mugo, Campbell, Wangisi, Tappero... & Celum 2012:16). Since HIV PEP uses the same principle as HIV PrEP, which is to give a person’s immune system a chance to provide protection against the virus and to prevent HIV from being established in the body (USAID 2013:75), it is assumed that HIV PEP would work effectively as HIV PrEP..

Since early 1990s, HIV PEP has been prescribed following occupational exposure to HIV. The provision of HIV PEP has been extended to non-occupational exposures such as: consensual unprotected sexual intercourse, injection drug use and sexual assault (WHO 2014:15). According to the New York state Department of Health AIDS Institute (2014:2), HIV transmission most frequently occurs during sexual or injection-drug use. Center for Disease Control (CDC) (2014:1) states that HIV PEP can reduce the risk of infection if it is started promptly after exposure to HIV risk sexual behaviour. Examples of HIV risk sexual behaviours are unprotected sexual contact between an infected and an uninfected individual and condom non-use/slippage/breakage. Mayer and Pizer (2009:129) stated that providing PEP to people with a well-defined high-risk sexual exposure could reduce the likelihood of HIV transmission by 10-fold”.

The HIV PEP is now used worldwide after either occupational or non-occupational exposure (Rey 2014:1). Even with the extensive global dissemination of information on HIV/AIDS prevention aspect such as HIV PEP is mostly not taken seriously. Limited HIV PEP information is also prevalent among health care providers. Owalabi, Alabi, Ajay, Daniel, Ogundiran, Akande and Onafowokan (2012:2), document that knowledge about PEP among health care providers is limited. Furthermore Mukherjee, Bhattacharyya, SharmaSarkar, Goswami, Ghosh and Samanta (2013:14) conducted a study among interns of a medical college in India where they also reported that knowledge of PEP was inadequate. In another study by Methewos, Birhan, Kinfe, Boru, Tiruner, Addis and Alemu (2013:2) it was highlighted that 36.9% (72 out of 195) of the health care workers had inadequate knowledge regarding HIV PEP. This is a significant number considering that this is a group of people who are expected to be highly knowledgeable about issues of HIV.

World Health Organization (WHO) and the Government of Lesotho (GoL) through the Ministry of Health have approved the use of HIV PEP as a preventive measure against HIV (MoH 2014: v). The country has been providing ARV treatment for more than a decade now, this kind of experience means that the country has acquired the capability and infrastructure to avail services even to the remotest areas within its borders. ARV treatment in Public health facilities in Lesotho is provided free of charge.

### **1.3 STATEMENT OF THE RESEARCH PROBLEM**

Approximately 62 new infections and about 50 deaths due to AIDS are reported to occur daily in Lesotho (Ministry of Health (MoH) 2014: viii). This is occurring despite the approval of providing HIV PEP to the community following non-occupational exposure as HIV preventive strategy by the Lesotho Ministry of Health (MoH 2014: viii). Studies have shown that health care providers have limited knowledge about HIV PEP (Owalabi et al 2012:2; Mukherjee et al 2013:14; Methewos et al 2013:2). However, there is dearth of literature focusing on adults' knowledge, attitudes and utilisation of HIV PEP. If this information is not available, HIV infection may still continue to rise daily in Lesotho despite the free availability of HIV PEP. The continuing rise in HIV prevalence negates global vision to end the HIV pandemic (UNAIDS 2015: xx).



## **1.4 RESEARCH PURPOSE AND OBJECTIVES**

### **1.4.1 Research purpose**

The purpose of the study was to assess knowledge, attitudes and utilisation of HIV Post-Exposure Prophylaxis among adults in Roma, Lesotho in order to make recommendations for promoting awareness and the use of HIV PEP among adults in Roma, Lesotho

### **1.4.2 Research objectives**

- To assess the knowledge of adults in Roma regarding HIV PEP following non-occupational exposure,
- To explore the attitudes of adults in Roma regarding the use of HIV PEP,
- To assess utilisation of HIV PEP services by adults in Roma.
- To determine accessibility to PEP services to adults in Roma,
- To recommend strategies for promoting awareness and the use of PEP among adults in Roma, Lesotho

## **1.5 RESEARCH QUESTIONS**

- What knowledge do adults in Roma have regarding non-occupational HIV PEP?
- What are the attitudes of adults in Roma towards HIV PEP?
- How accessible are HIV PEP services for adults in Roma?
- What is the rate of HIV PEP utilisation by adults in Roma?
- How can awareness and utilisation of HIV PEP by adults in Roma be promoted?

## **1.6 SIGNIFICANCE OF THE STUDY**

The study was vital at this point because Lesotho is facing a major crisis with the HIV/AIDS pandemic. New infections occur daily and many lives are lost due to this pandemic. The researcher is of the opinion that the findings of this study may be utilised to influence guidelines and policy on promotion of utilisation of HIV PEP. Services, therefore, need to be fully utilised by the general public to try and curb the increasing numbers of new infections. The hospital and other health care facilities serving this community will also become aware of the need to mobilise HIV PEP services. The Ministry of Health, as well as other stakeholders concerned in the fight against HIV/AIDS and the entire nation of Basotho, will also reap the benefits. The findings will also add to

the existing knowledge with regard to HIV PEP. Improved utilisation of HIV PEP may assist in reduction of new HIV infections in Roma, Lesotho and eventually contribute to global vision to end the HIV pandemic by 2030.

## **1.7 DEFINITION OF TERMS**

### **1.7.1 Definitions of key concepts**

A conceptual definition conveys the general theoretical meaning of the concept being defined, and uses words/concepts to describe its properties (Brink, van der Walt, C & van Rensburg G 2014:91). Below are definitions of key concepts.

**Adult:** One who is considered to be legally responsible for their actions, (Longman dictionary of contemporary English 2003:21)

**Attitude:** the opinions and feelings that one usually has about something; it can be positive or negative, (Longman dictionary of contemporary English 2003:82).

**Human Immunodeficiency Virus (HIV):** is a virus that causes AIDS, (van Dyk 2013:5).

**Human Immunodeficiency Virus Post-Exposure Prophylaxis (HIV PEP):** an HIV prevention approach for uninfected individuals to decrease chances of being infected by ingesting Antiretroviral (ARV) medication following exposure to potentially infected body fluids (USAID 2013:75).

**Knowledge:** the information, skills and understanding that one gains through learning or experience (Longman dictionary of contemporary English 2003:895).

**Post-Exposure Prophylaxis:** the administration of antibiotics, antiviral agents, or active and or passive vaccination following an exposure to an infectious agent (Weller 2014:328).

**Utilise:** to use something for a particular purpose (Longman dictionary of contemporary English 2003:1825).

### **1.7.2 Operational definitions**

According to Brink et al (2014:91), variables and terms in the research question have to be operationalized; that is, defined so that their meaning is clear to both the researcher and the reader. An operational definition describes the manner in which a variable is to be measured (Brink et al 2014:91). This section provides operational definitions.

**Adult:** A man or woman aged 18 years and above.

**Attitude:** opinions and feelings that one has about HIV PEP. It can be positive/favourable (when one accepts and supports the use of PEP) or negative/unfavourable (when one rejects the idea of using PEP).

**Knowledge:** the information and understanding that one has about HIV PEP. This can be non-existent/very poor (where one knows nothing about HIV PEP), deficient/poor (one knows a little about PEP) or adequate (one knows what HIV PEP is and understands indications for its use).

**Non-occupational exposure:** HIV exposure that is not related to or caused by one's job. This can be HIV exposure through sexual exposure, injection drug use, administering first aid to injured individuals or other exposures.

**Post-Exposure Prophylaxis:** a set of services, which includes provision of antiretroviral drugs; provided to manage the specific aspect of exposure to HIV and to help prevent HIV infection.

**Utilisation of HIV PEP:** accessing HIV PEP services from health care facilities. This can be poor (when only a few people use these services) or good (when a considerable number of people use these services).

## **1.8 RESEARCH METHODOLOGY**

### **1.8.1 Research approach**

The study employed a quantitative approach to assess knowledge, attitudes and utilisation of HIV Post-Exposure Prophylaxis among adults in Roma. Polit and Beck (2012:739) define a quantitative research approach as one that investigates observable occurrences that are subject to precise measurement and quantification.

### **1.8.2 Research design**

Brink, van der Walt & van Rensburg (2014:96) define research design as a set of logical steps that the researcher takes in order to answer the research question. The researcher used a descriptive cross-sectional design. More information regarding the design is provided in chapter three.

In a cross-sectional design, data are collected at one point in time (Polit & Beck (2012:184), and such was the case in this study. De Vos, Strydom, Fouche and Delport (2013:155,156) describes non-experimental designs as designs that are mainly used in descriptive studies in which the units selected to participate in the study are measured on all relevant variables at a specific time, and there is no manipulation of variables. In support of this Brink, van der Walt & van Rensburg (2014:112) state that a nonexperimental research aims to describe an occurrence and to explore and explain how variables are related, without any intervention whatsoever. Furthermore, Brink et al (2014:112) continue to define a descriptive study design as one that describes variables so as to answer the research question. This study was nonexperimental and descriptive in that the researcher did not in any way manipulate variables but just provided a description of how much people know about HIV PEP, how many have accessed HIV PEP and what their attitudes are regarding HIV PEP.

### **1.8.3 Setting and population**

A research setting is defined as the specific place where data are collected, (Brink et al 2014:59). The fieldwork of the study was carried out at St Joseph's hospital in Roma, in the district of Maseru. Polit and Beck (2012:738) define population as "the entire set of individuals or objects having some common characteristics". The population of this study comprised of both male and female adults of Roma.

### **1.8.4 Sampling method and technique**

Polit and Beck (2012:275) define sampling as a process of selecting a portion of the population that is representative of the entire population. The selected portion is then referred to as a "sample". The sample of this study was 96. The sample size was calculated using the sample size calculator from Survey Monkey Inc and the study employed stratified random sampling to select the respondents. A more detailed discussion follows in Chapter 3, section 3.4.2.

## **1.9 DATA COLLECTION**

Data were collected from April to June 2016, using structured questionnaire. Data collection process will be discussed in detail in Chapter three, section 3.4.4.

## **1.10 DATA MANAGEMENT AND ANALYSIS**

Polit and Beck (2012:725) define data analysis as the systematic organization and synthesis of data. Following collection, all raw data were reviewed for completeness and accuracy and then kept under lock and key for safety. Data were then reviewed for legibility, and data gaps were addressed (Polit & Beck 2012:463). The collected data were then analysed using Statistical Package for Social Sciences (SPSS) version 23.0. Results were presented in tables, charts, and interpreted. A more detailed discussion on data analysis will be made in Chapter 3, section 3.4.5 and results are presented in Chapter 4.

## **1.11 ETHICAL CONSIDERATIONS**

According to Brink et al (2014:32), researchers are responsible for conducting research in an ethical manner. This section provides a brief discussion on ethical issues. A more detailed discussion will follow in Chapter 3, section 3.4.3. Following submission of the research proposal, the Higher Degrees Committee of the Department of Health Studies at the University of South Africa gave approval to the researcher to conduct the study. Permission was also sought and granted by the Ministry of Health Research Ethics Committee and the Management of St Joseph's hospital. Respondents were informed about the purpose of the study and participation was voluntary.

## **1.12 SCOPE OF THE STUDY**

The study was limited to assessing the knowledge, attitudes and utilisation of HIV PEP among adults utilising out-patient department at St Joseph's Hospital in Roma within April and June 2016.

### **1.13 STRUCTURE OF THE DISSERTATION**

This section outlines the structure of the dissertation:

**Chapter one**, Orientation to the study, provides a background to the study, the research problem including research purpose and objectives, ethical issues as well as the methodology used.

**Chapter two** focuses on reviewed relevant HIV PEP literature in general and knowledge, attitudes and utilisation/practice of HIV PEP.

**Chapter three** provides a detailed discussion on the research design and methodology. More information is provided on study site, sampling method, data collection and analysis, measures to ensure trustworthiness and ethical issues related to the study.

**Chapter four** presents the study results in the form of graphs and tables.,

**Chapter five** provides discussion of findings, conclusions, limitations as well as recommendations.

### **1.14 CONCLUSION**

This chapter gave an overview of the whole study. The chapter outlined background and context of the study. The problem statement, purpose of the study, objectives as well as research questions were highlighted. The next Chapter discusses the literature review.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 INTRODUCTION**

In the previous Chapter, the research problem that inspired the study was stated, as thus: Lesotho's increasing HIV prevalence despite the extensive dissemination of services and information on prevention measures. An assumption was made that one of the contributing factors to the rise in prevalence could be lack of knowledge regarding HIV PEP as another preventive strategy. This Chapter therefore serves to critically review existing literature on the knowledge, attitudes and use of HIV PEP among adults, the purpose of which is to guide and direct the study in order to prove or confute the aforementioned assumption.

Polit and Beck, (2012:732) define literature review as a critical summary of research on a topic of interest, the purpose of which is to put a research problem in context. Polit and Beck (2012:94) further state that research is conducted within the context of existing knowledge by undertaking a thorough literature review. According to Grove, Burns and Gray (2015:41) the purpose of literature review is to generate a picture of what is known and not known about a particular problem. It also provides the rationale for conducting a specific study.

Studies on HIV PEP following non-occupational exposure are quite scarce. However, information on HIV PEP following occupational exposure in Health Care settings is available and will mainly be used in this study. About 2.5% of the total global number of people living with HIV results from occupational exposures among health care workers (Singh, Din Ahmad, Munner, Sabah, Baig & Khan (2015:1). These authors agree that health care worker's jobs bring them in direct and close contact with patients' body fluids, putting them at a higher risk of occupational exposure to HIV.

The Chapter discusses the search strategy that was used when searching for literature, appraisal of reviewed studies, themes that emerged, a brief discussion on HIV PEP and literature on International and African perspectives on knowledge, attitude and use/practice of HIV PEP.

## 2.2 SEARCH STRATEGY

Polit and Beck (2012:98) show that there are several ways to search for research evidence, and advise to begin a search with some strategies in mind. The researcher utilised a systematic approach to conduct a thorough literature search. The University of South Africa (UNISA) library was used for literature search related to knowledge, attitudes and utilisation of HIV PEP among adults. The search included published studies and grey literature, the former being considered worthy as evidence because of the peer review system and the latter was included because of the “publication bias” defined by Polit and Beck (2012:657) as “the tendency for published studies to over-represent statistically significant findings”. The researcher mainly used Google scholar articles and electronic databases such as HINARI, Cochrane, ProQuest, Medscape and CINAHL for a broader perspective on the topic.

The following key words and phrases were used to search for the literature: “knowledge”, “attitudes”, “use”, “practice”, “HIV PEP” and “HIV non-occupational PEP”. The above search terms were initially used individually, and then combined using Boolean logic (AND, OR and NOT) to formulate a search strategy rather than the dissertation title. In order to guide the process of literature review on the topic, the following inclusion and exclusion criteria were utilised:

Inclusion:

- Studies published after 2010
- Studies published in English
- Studies that assessed/evaluated knowledge, attitudes and use/practice of HIV non-occupational PEP among adults
- Studies that assessed/evaluated knowledge, attitudes and use/practice of HIV occupational PEP

Exclusion:

- Studies published in or before 2010
- Studies published in languages other than English
- Studies that did not assess/evaluate knowledge, attitudes and use/practice of HIV PEP
- Studies conducted among underage children



The ancestry approach, which involves use of citations from relevant studies in order to track down earlier research on the topic, was also utilised. Leads were then pursued until search strategies yielded redundant information.

**2.3 APPRAISAL OF IDENTIFIED STUDIES**

When drawing conclusions about a body of research, the researcher must make judgements about the worth of the evidence (Polit & Beck 2012:111). This section discusses issues pertaining to appraisal of identified studies. After application of the above inclusion and exclusion criteria, lead sources were pursued until saturation was achieved. The sources were then screened for appropriateness and relevance and inappropriate and irrelevant sources were discarded. The information was then evaluated, analysed and interpreted. All sources that met the inclusion criteria were critically examined for inclusion in the review. The selected studies were then reviewed using the guidelines for critiquing data quality in quantitative studies offered by Polit and Beck (2012:34). The studies were evaluated according to their reliability and validity (Polit & Beck 2012:347).

**2.4 EMERGENT THEMES**

Two themes and several subthemes emerged from appraisal of reviewed literature as summarised in Table 2.1.

**Table 2.1: Emerged themes**

<b>Themes</b>	<b>Sub-themes</b>
Overview of HIV PEP	What is HIV PEP
	History of HIV PEP
	Indications for HIV PEP
	Rationale for HIV PEP
	Evidence of PEP efficacy
Knowledge, attitude and utilisation /practice of HIV PEP:	International perspective
	African perspective
Implication of the findings	

## **2.4.1 Overview of HIV PEP**

This theme provides description, history, indication and rationale and efficacy of HIV PEP.

### **2.4.1.1 What is HIV PEP?**

The United Nations programme on HIV/AIDS (UNAIDS) (2013:75) defines HIV PEP as an HIV prevention approach for uninfected individuals to decrease chances of being infected by ingesting Antiretroviral (ARV) medication following exposure to potentially infected body fluids. The medication is started immediately after exposure, that is, within 72 hours of exposure in order to prevent HIV seroconversion.

According to Shevkani, Kavina, Kumar, Purohit, Nihalani and Shah (2011:2,3) PEP services are a set of comprehensive services that are aimed at preventing HIV infection in persons, exposed either occupationally or non-occupationally, and a provision of short term (28 days) ARV drugs depending on the risk assessment. These services also include counselling, first aid care, HIV testing and follow-up care (WHO, 2016:1).

### **2.4.1.2 History of HIV PEP**

The use of antiretrovirals as HIV PEP for occupational exposures was first considered in guidelines issued by the Center for Disease Control and Prevention (CDC) in 1990 (Kuhar, Hendreson, Struble, Heneine, Thomas, Cheever, Gomaa, Panlilio & US Public Health working Group 2013:875). In most areas of North America and Europe HIV PEP has been available to health care workers as a component of workplace safety programs since early 1990s (UNAIDS 2013:75). In 1996, the first US (United States) Public Health Service recommendations advocating the use of HIV PEP following occupational exposure were published (Kuhar et al, 2013:875). According to Beekmann and Henderson (2014:2), A case control study of HIV seroconversion in health care workers (HCW) after percutaneous exposure published in 1997 provided the first evidence in humans that PEP with a single antiretroviral agent appeared to be protective against infection.

It was; however, only in 2005 that the US Department of Health and Human Services issued clinical guidelines recommending use of PEP in non-occupational situations (Kuhar et al 2013:875). In response to high violence levels, sexual assault and the associated high risk of HIV exposure, some hospitals and Non-Governmental

Organizations (NGOs) in South Africa pioneered the use of PEP following sexual exposure (USAID 2013:75). Today anybody who has been exposed to HIV can request PEP services.

#### **2.4.1.3 Indications for HIV PEP**

Protection against HIV exposure (e.g. abstinence from sexual intercourse, abstinence from shared injection drug use, sexual intercourse only in a mutually monogamous relationship where both partners are uninfected, consistent and correct condom use) is the only certain way of preventing HIV infection. However, when the primary measures have failed and exposure has occurred, secondary measures have to be in place to reduce the probability of being infected. The HIV PEP is one such measure and it has been proven efficient if initiated timely and strictly adhered to (Kuhar et al 2013:875).

According to HIV Clinical Resource (2014:4), non-occupational PEP (nPEP) offers the possibility of preventing HIV transmission when potential exposure to HIV has already occurred. Situations that may prompt one to request nPEP include condom slippage, breakage, or lapse in use by serodiscordant partners; unsafe needle-sharing; or other episodic exposures to blood (USAID 2013:75). Treatment of high-risk exposures should be combined with a strong educational component that emphasizes prevention of future exposures (HIV Clinical Resource 2014:4). PEP should therefore only be used in emergency situations (AIDS gov 2016:1).

The WHO and USAID recommend the use of PEP in the following settings:

- Occupational exposure
- Non-occupational exposure

#### **2.4.1.4 Rationale for HIV PEP**

Volberding, Greene, Lange, Gallant and Sewankambo (2012:118) state that after an individual has been exposed to HIV, there is a small window of opportunity to use antiretroviral drugs to prevent systemic infection. This strategy has been shown to prevent HIV infection in both occupational and non-occupational exposures. The effectiveness of HIV PEP in preventing establishment of HIV infection; however, is dependent on a number of factors, namely: route and dose of exposure, efficacy of drug(s) used, interval

between exposure and initiation of drug(s) and level of adherence to the treatment (Volberding et al 2012:118-119). Currently, the consensus is that combination of antiretroviral therapy (ART) should be initiated as soon as possible following exposure, and continued for four weeks (28 days) (HIV Clinical Resource 2014:4). In order to minimise the possibility of behavioural disinhibition among individuals receiving HIV PEP for sexual or drug use exposures, the provision of PEP be accompanied by behavioural counselling following such exposures (Volberding et al 2012:119).

The aim of HIV PEP is to give a person's immune system a chance to provide protection against the virus and to prevent HIV from being established in the body (USAID 2013:75). Experimental models of HIV infection engage in the following sequence of events: After percutaneous or mucosal exposure to HIV, local replication of virus occurs in tissue macrophages or dendritic cells; host cytotoxic T cells will kill productively infected target cells. However, if infection cannot be contained at this stage, it is followed within 2 to 3 days by replication of HIV in regional lymph nodes; viremia then follows within 3 to 5 days of virus inoculation (HIV Clinical Resource 2014:4). This sequence of events carries significant implications. Given the rapid appearance of productively infected cells following the introduction of virus, regimens with the most rapid onset of activity, multiple sites of antiviral action, and greatest strength are likely most effective (HIV Clinical Resource 2014:4). Aminde, Takah, Noubiap, Tingdon, Ngwasiri, Jingi, Kengne and Dzudie (2015:3) state that it may take 3 days (72 hours) from exposure for HIV to be detected in lymph nodes and up to 5 days in blood, offering a very short window of opportunity for prevention through HIV PEP. The HIV PEP works by suppressing viral replication and stopping the irreversible establishment of HIV infection (Aminde et al 2015:3).

#### ***2.4.1.5 Evidence of HIV PEP efficacy***

According to the HIV Clinical Resource (2014:4), there are no studies that directly demonstrate the efficacy of nPEP, but there are data to support its biologic plausibility, including animal studies of prophylaxis following exposure, efficacy data from mother-to-child transmission studies and a case-control study of occupational exposure. To corroborate these, Aminde et al (2015:3) state that efficacy in humans is supported by retrospective data from occupational exposure studies and studies on prevention of mother-to-child transmission (PMTCT).

## **2.4.2 Knowledge, Attitude and Utilisation/Practice of HIV PEP**

### **2.4.2.1 International perspective**

In a study that dealt with nPEP in New York, Mehta, Silvera, Bernstein, Holzman, Aberg and Daskalakis (2011:1) assessed awareness of HIV Post-Exposure Prophylaxis and the associated factors amongst 554 men who have sex with men. Sixty three percent (63%) of the respondents reported unprotected sex and 7% reported any (protected/unprotected) sex with a known HIV infected partner (Mehta et al 2011:1). This clearly shows that some populations still demonstrate risky sexual behaviours even in the presence of known HIV infection. This calls for more aggressive measures in educating people about HIV. Only 36% of the respondents were aware of PEP or PrEP (Mehta et al 2011:1).

Study conducted Fernandez-Balbuena, Belza, Castilla, Hoyos, Rosales-Statkus, Sanchez, de la Fuente and the Madrid Rapid Testing group (2012:2) indicated that only 22% of the 2545 respondents were aware of PEP, and only 2% had used PEP before despite 70% participation in high-risk sexual activities. The two studies concluded that awareness of PEP was very low despite exposure to HIV high risk sexual behaviours.

Myers, Myers, Wheat and Yin indicated that knowledge about post-exposure management was poor (25%) among dental students. Results also indicated that 8.2% of the respondents also acknowledged unwillingness to do procedures on HIV infected patients for fear of being exposed (Myers et al 2011:1-2). This warranted the need for knowledge assessment as the unwillingness to assist HIV infected clients might have been influenced by deficient knowledge on prevention and management of exposures. In the study, Myers et al (2011:1) concluded that there were knowledge gaps among the respondents and these may lead to failure to manage blood borne pathogen exposures accordingly, and also the negative attitudes towards treating HIV infected patients affects care of such patients. Therefore, there is need to improve education on blood borne pathogen exposures in dental schools.

A similar study was conducted in 2011 by Guruprasad and Chauhan in India, where they evaluated knowledge, attitudes and practices regarding risk of HIV infection through accidental needle stick injuries amongst 120 dental students. Results revealed that 13 of

the 120 respondents were not even aware that virus can be transmitted through an infected needle (Guruprasad et al 2011:155). This is an indication that more still needs to be done to educate people about HIV transmission. On management of the needle stick injury 26% said they would promote active bleeding at the affected site to flush out the pathogens, and 30% said they would take PEP. It was then concluded that there were misconceptions that needed to be addressed and also there was need to provide guidelines on management of needle stick injuries.

In another study titled "*Knowledge and Practice of Standard Precautions and awareness Regarding Post-Exposure Prophylaxis for HIV among interns of a Medical College in West Bengal, India*" Mukherjee, Bhattacharyya, SharmaSarka, Goswami and Ghosh (2013:2) revealed a considerable gap between knowledge and practice among the 130 respondents. The above three studies are a clear indication that education on HIV and its prevention should start in Health Schools to ensure more knowledgeable future professionals.

Lamichanne, Aryal and Dhakal (2012:1) conducted a descriptive cross-sectional study involving 65 nurse respondents in Nepal, where to assess knowledge on different variables on PEP and HIV. Of the 65 respondents, only 6% had what was classified as good level of knowledge, 68% had fair knowledge and 26% had poor knowledge. It was then concluded that HIV PEP knowledge among the respondents was fair and there was need for improvement through education and training.

Rodriguez, Castel, Parish, Willis, Feaster, Kharfen, Gardenas, Villamiza, Kolber, Vazquez-Rivera and Metsch (2013) investigated HIV medical providers' perceptions of the use of Antiretroviral therapy as non-occupational Post-Exposure Prophylaxis in two major Metropolitan areas, namely Columbia and Miami. Findings indicated underuse of nPEP as a preventive measure against HIV, one of the reasons being that patients rarely requested nPEP (Rodriguez et al 2013:2, 19). As indicated by earlier studies, people may not be aware of PEP and thereby justifying the rarity of PEP requests.

In their study Purov, Palummieri, De Carli, Piselli and Ippolito (2013), assessed attitude towards antiretroviral Pre-Exposure Prophylaxis (PrEP) prescription among 311 HIV specialists. Findings revealed favourable attitudes with 70% of the specialists indicating that they would prescribe PEP, mainly to serodiscordant couples (64%), 56% would also

prescribe to people at on-going high risk of infection. Those with a negative attitude towards the prescription of PEP favoured behavioural interventions and were also concerned about the toxicity of the drugs. The negative attitude was also associated with lack of information on PEP. Most specialists seem to be willing to promote PEP even with the evident conflicting attitudes. Guidance from the responsible bodies and more scientific evidence on effectiveness may help develop favourable attitudes towards PEP (Purov et al 2013:2).

Shaghaghian, Pardis and Mansoori (2014) evaluated knowledge, attitude and practice of dentists towards prophylaxis after exposure to blood and body fluids, in Shiraz. All three, knowledge, attitude and practice, were found to be undesirable among the respondents, warranting interventions to raise awareness (Shaghaghian et al 2014:147-152).

In another related study, Singh, Din Ahmad, Baig and Khan (2015) assessed 609 HIV health care workers in Lahore Pakistan on the knowledge, attitude and practice of HIV PEP. Findings in the study revealed that almost half of the respondents had never heard of PEP, 68% were of the opinion that PEP guidelines should not be listed in the working area, and 47.2% believed that PEP was not protective against HIV (Singh et al 2015:2). Provision of information and evidence of PEP use are needed to rectify the lack of awareness and negative attitudes. Internationally, HIV prevalence is not as high as it is in Africa, in fact, it is very low. That is the reason why there seems to be an overall lack of awareness and knowledge amongst both the general public and Health care workers.

#### ***2.4.2.2 African perspective***

HIV prevention is of public importance in Sub-Saharan Africa as it is endemic in this region, this increases the risk of health care providers contracting the virus through occupational exposure (Uzochukwu, Sibeudu, Ughasoro, Okwuosa & Onwujekwe 2014:4). Uzochukwu et al (2014:4) further state that health care workers are at risk of exposure through contaminated medical materials and infective body products.

Another study was undertaken by Chagani, Manji, Manji and Sheriff in 2011. They conducted a hospital based study involving 316 health care workers in Dar es Salaam, where they investigated knowledge, attitude and practices on HIV PEP. Results showed that 169 out of the 316 workers had been exposed. Only 41 of the exposed had taken

PEP and 40% of the 41 failed to complete the 28 day treatment. Only a third of the study population knew the initial steps to be followed after exposure. However, knowledge on HIV PEP was found to be satisfactory among most respondents. The study concluded that there is a need to heighten education on PEP among health care workers (HCWs) in order to increase their awareness and knowledge (Chagani et al 2011:1).

In a study conducted among 66 doctors in a Nigerian Tertiary hospital in 2011, Esin, Alabi, Ojoe and Ajape documented that knowledge of HIV PEP was very low. Only 62.1% of the respondents were aware of the existence of an HIV PEP policy in the hospital, over 90% were not aware of the risk of sero-conversion following significant needle stick injuries and mucous membrane exposures. Poor knowledge was also identified with regard to actions to be taken following exposure, how soon to commence PEP and the duration of the PEP medication. More than 50% of the subjects reported to have experienced significant previous exposures to potentially infective materials but none of them reported to have sought PEP advice (Esin et al 2011:2). The two studies also show that exposures are high among HCWs and therefore their prevention needs to be addressed.

In a study titled “Percutaneous injuries and accidental blood exposure in Surgical residents: Awareness and use of Prophylaxis in relation to HIV”, Nwankwo and Aniebue (2011) revealed a deficiency in knowledge and poor practice of PEP among the surgical residents underscoring the need for creating awareness.

Owolabi, Alabi, Ajayi, Daniel, Ogundiran, Akande and Onafowokan (2012) conducted a cross-sectional survey amongst 230 health care providers at the University of Abuja Teaching Hospital in Nigeria. Results indicated that most of the respondents (97%) had heard about PEP, but only 30% of them could correctly identify the drugs used and the duration of PEP. A conclusion was then made that the health care providers’ knowledge and practice was very poor (Owolabi et al 2012:2).

Another study that revealed misconceptions regarding management of exposures in health care settings was conducted by Sabbah, Sabbah, Sabbah, Akoum and Droubi (2013) in Lebanon. This was a cross-sectional study amongst 272 health care workers in general hospitals, where knowledge, attitude and practices concerning blood borne pathogens and adherence to universal safety precautions were evaluated. Results



showed that respondents incurring exposures to blood and body fluids resorted to other means (Sabbah et al 2013:70-78).

Mathewos, Birhan, Kinfu, Boru, Tiruneh, Addis and Alemu (2013) carried out a cross-sectional study amongst 195 Health care workers in Gondar, Ethiopia, where they assessed knowledge, attitude and practice of HIV PEP. 36.9% of respondents in this study were found to have deficient knowledge regarding HIV PEP. In the study, Mathewos et al (2013:9) highlighted that 75.4% of their subjects agreed on the importance of HIV PEP and 78.5% strongly believed that PEP can reduce the probability of being infected by HIV following exposure.

Ajibola, Akinbami, Elikwu, Odesanya and Uche (2014) conducted a cross sectional study with self-administered questionnaires among 372 health workers from various clinical specialties in a Teaching hospital in Lagos, Nigeria. Results of the study revealed that 83.3% of the respondents were aware of PEP, but level of knowledge was low as only 32% could name at least two of the recommended drugs for PEP and 54% knew when to commence PEP following HIV exposure. Uptake of PEP was reported to be very low (6.3%) despite frequent needle stick injuries and favourable attitudes toward PEP (Ajibola et al 2014:17,172).

A related cross-sectional study was conducted among health professional of Gimbi town in Ethiopia by Tesfaye, Gebeyehu and Likisa (2014). The study revealed a 100% awareness among the subjects, 54.2% could identify PEP drug regimens, and 83.3% had a positive attitude towards the use of PEP. Half the subjects had previous HIV risk exposures but only 16.7% of them sought PEP services. Tesfaye et al (2014:1); therefore, concluded that health professionals of Gimbi had adequate knowledge and a positive attitude towards HIV PEP, however, PEP uptake remained low even with the high rate of risky exposures experienced (Tesfaye et al 2014:1).

Monera and Ncube (2014:1) concur that the appropriate use of Post-Exposure Prophylaxis is an important strategy in the prevention of HIV infection in exposed health care workers. They conducted a cross-sectional survey amongst 131 health care workers in a Zimbabwean referral hospital, where they assessed knowledge, attitudes and practices on occupational HIV Post-Exposure Prophylaxis. Results revealed poor knowledge of occupational HIV PEP in the majority of the respondents, with 65% of the

subjects scoring less than 50% on knowledge and only 5% scoring above 75%. Respondents were however found to have positive attitudes toward HIV PEP, with 93% expressing willingness to undergo PEP in case of exposure. Of the 131 subjects, 49 had previously been potentially exposed but only 45% of them sought PEP, indicating low uptake.

A descriptive cross-sectional study among 129 primary health care workers was conducted by Uzochukwu, Sibeudu, Ughasoro, Okwuosa and Onwujekwe (2014). The study evaluated knowledge, attitude and practice of HIV PEP. In this study, findings revealed that 86% of the respondents had knowledge, 92.9% agreed that PEP reduces chances of infection and 29% treated themselves with PEP after exposure while the remaining 71% were not serious with the treatment. From these findings, a conclusion was made that a gap existed between the knowledge, which was impressive, or attitude, which was also favourable, and the practice of PEP among the health care workers (Uzochukwu et al 2014:4-6).

Aminde, Takah, Noubiap, Tingdon, Ngwasiri, Jingi, Kengne and Dzudie (2015) conducted a cross-sectional study amongst clinical medical students in Cameroon where they assessed knowledge on HIV PEP, practices in response to occupational exposure and the determinants of good knowledge on PEP. In this study, 89% of the 154 respondents were found to have heard about PEP, 61.7% had moderate knowledge and 32.5% had poor knowledge about PEP. A conclusion was therefore made that there was a significant knowledge and practice gap on PEP indicating the need to introduce and strengthen training modules on workplace safety (Aminde et al 2015:2, 3, 17).

Aminde, Takah, Dzudie, Bonko, Awungafac, Teno, Mbuagbaw and Sliwa (2015) conducted another cross-sectional study in Cameroon which involved 80 nurses, where knowledge and practice of PEP by nurses was assessed. Results showed that 73.7% of the respondents had poor knowledge about HIV PEP, 85% considered themselves to be at risk of occupational exposure of HIV, with 67.5% having been exposed in the past. But only 18.9% of those exposed received PEP. Aminde et al (2015:3) then concluded that knowledge and practice of HIV PEP amongst nurses in Cameroon was low.

Ncube, Meintjes and Chola (2014:2) state that “studies have demonstrated a lack of awareness of non-occupational PEP in the general population.” The authors conducted

a descriptive cross-sectional study aimed at evaluating knowledge and attitudes towards availability of, access to and use of nPEP among 169 medical students. 28% of the respondents reported knowledge of nPEP, of the 28%, 67% reported hearing about it from lecturers while 1% reported hearing about it from their partners. The subjects had a positive attitude towards nPEP even though their knowledge was poor.

Generally findings in the African studies revealed high HIV exposures and high awareness of PEP. Knowledge was found to be fair and there seems to be an overall positive attitude towards use of PEP. This could be owed to the high prevalence of HIV

### **2.4.3 Implication of the findings**

The majority of the studies reviewed revealed that knowledge regarding HIV PEP amongst health care workers is very poor. These are people who are responsible for providing the general population with HIV PEP services should the need arise. This findings invokes feelings of worry, who then provide HIV PEP services to the public when the health care providers themselves have deficient knowledge? Adequate knowledge and practices on HIV PEP among health care providers are crucial for prevention of HIV (Aminde et al 2015:2). Generally, attitudes toward use and prescription of HIV PEP are favourable; however, most health care settings seem to have low uptake of PEP even with the evident reported high risk exposures to HIV.

The findings on knowledge in Africa are profoundly worrying seeing as Africa is the one continent mostly affected by the HIV pandemic and it is therefore the one region where Health Care workers would be expected to be conversant with issues pertaining to HIV prevention. Health Care Workers, being providers of the HIV PEP services, are responsible for disseminating information and education to the general population, not only about PEP but about all other measures of prevention. Their deficient knowledge or lack thereof consequently becomes detrimental to the health of their clients.

All studies reviewed focus mainly on the Knowledge, attitude and use of PEP by health care professionals. The research design used in most of the studies reviewed used descriptive cross-sectional. This assisted the researcher to utilise descriptive cross-sectional design for the study. Little is documented about the clients or people who are non-health care workers. This made the researcher to realise the need for conducting this study which focused on assessing knowledge, attitudes and utilisation of HIV PEP among adults in Roma, Lesotho in order to make recommendations for promoting awareness

and the use of HIV PEP among adults in Roma, Lesotho. The findings of this study will assist add to the body of knowledge regarding HIV PEP. The findings of the study will also assist in finding ways of increasing information and utilisation of HIV PEP by the clients especially in Lesotho where HIV prevalence and incident rates are still high.

## **2.5 CONCLUSION**

This Chapter presented the search strategy used, appraisal of reviewed studies, a short discussion on HIV PEP as well as literature on knowledge, attitude and use of HIV PEP. Since studies on nPEP are scarce, the focus of literature review was mostly on occupational HIV PEP. The succeeding Chapter discusses the methodology and research design used to conduct the study.

## **CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY**

### **3.1 INTRODUCTION**

The previous chapter gave a detailed discussion on relevant literature reviewed regarding HIV PEP. The findings from literature also guided the research design and methodology for this study. This chapter discusses the methodology that was used to conduct the study. The discussion is structured around the research approach, design, setting and population, sampling, ethical considerations, data collection process and management as well as data analysis.

### **3.2 RESEARCH APPROACH**

According to Polit and Beck (2012:739), a quantitative research approach is one that investigates observable occurrences that are subject to precise measurement and quantification. According to Thomas (2013:116), a quantitative research deals with numbers. The researcher felt that the quantitative approach would be best suited for this study as it is to deal with data in numeric form and utilise variables that are measurable, such as looking at the number of adults who have accessed HIV PEP and how much they know about HIV PEP.

### **3.3 RESEARCH DESIGN**

Brink, van der Walt and van Rensburg (2014:96) define research design as a set of logical steps that the researcher takes in order to answer the research question. Babbie and Mouton (2011:74-75) define a study design as a plan or blue print of how one aims to conduct the research and; it focuses on the end product, logic of the research and point of departure. For this study, the researcher employed a cross-sectional, descriptive, non-experimental design to assess knowledge, attitudes and utilisation of HIV PEP among adults in Roma, Lesotho. De Vos, Strydom, Fouche and Delport (2013:155,156) described non-experimental designs as designs that are mainly used in descriptive studies in which the units selected to participate in the study are measured on all relevant variables at a specific time, and there is no manipulation of variables. In support of this Brink, van der Walt & van Rensburg (2014:112) state that a non-experimental research aims to describe an occurrence and to explore and explain how variables are related, without any intervention whatsoever. Furthermore, Brink et al (2014:112) continue to define a descriptive study design as one that describes variables so as to answer the

research question. This study was non-experimental and descriptive in that the researcher did not in any way manipulate variables but just provided a description of how much adults know about HIV PEP, how many have accessed HIV PEP and what their attitudes are regarding HIV PEP.

### **3.4 RESEARCH METHOD**

Research method refers to the steps, procedures, principles and strategies for collecting and analysing the data in a research investigation (Rees 2011:244). This section addresses study setting, sampling, data collection and data analysis.

#### **3.4.1 Setting and population**

##### **3.4.1.1 Setting**

Polit and Beck (2012:743) define research setting as “the physical location and conditions in which data collection takes place in a study”. The fieldwork of the study was carried out at St Joseph’s Hospital, in an area called Roma in the district of Maseru, Lesotho. St Joseph’s, the only hospital in Roma, is a Catholic hospital that services about 6% (120 000) of Lesotho’s population. Roma has a population of about 11612 (Lesotho Bureau of Statistics) Roma is situated about 34 kilometres south-east of Maseru, the capital of Lesotho. HIV prevalence in Maseru is 27% (Mugomeri, Senauoane, Ruhanya, Chino’mbe & Nyandoro 2015: 1). Roma also hosts the country’s national university, several primary and high schools and a nursing college.

##### **3.4.1.2 Population**

Polit and Beck (2012:273) define population as “the entire aggregation of cases in which a researcher is interested”. According to Parahoo (2014:411) population is defined as the entire set of individuals or objects having some common characteristics, from which data are collected. In other words, population is a complete set of units/elements that have some common characteristics that the researcher is interested in (Brink et al, 2014:131). According to Polit and Beck (2012:744), target population is the entire population in which a researcher is interested and to which the study results will be generalised. The target population of this study comprised of adult (male and female) out-patients who are not health care workers, at St Joseph’s Hospital in Roma.

### 3.4.2 Sampling

Sampling is defined as the process of selecting a portion of the population, so that conclusions/deductions about the entire population can be made (Polit & Beck, 2012:275). The researcher used stratified random sampling to select the elements/respondents. This sampling technique has an advantage of yielding a more representative sample as it allows each element in the population an equal probability of being selected (Polit & Beck, 2012:280). The researcher selected every second adult outpatient she met, and the sample was stratified according to gender to ensure representation of both the male and female population and thereby avoided sampling bias. However, attempts to get as many male respondents as female respondents failed as most outpatients were female.

A sample is a subset of the population that is selected to participate in a research study (Polit & Beck 2012:750). The researcher used the sample size calculator from Survey Monkey Inc. to calculate the study sample. A confidence interval/margin of error of plus-or-minus (+-) 10 and the confidence level of 95% were used.

The formula used is as follows:

$$Sample = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \frac{z^2 \times p(1-p)}{e^2 N}}$$

Where:

Z is the Z-value/score, which for a confidence level of 95% is 1.96, this value is a constant.

p is the standard of deviation, which in this case (expressed as a decimal) = 0.5.

e is the confidence interval which here, (expressed as a decimal) = 0.1.

N is the total population of Roma =11612

$$\begin{aligned} \text{Therefore sample size} &= \frac{\frac{1.96^2 \times 0.5(1-0.5)}{0.1^2}}{1 + \frac{1.96^2 \times 0.5(1-0.5)}{0.1^2 \times 11612}} \\ &= \frac{\frac{1.928 \times 1 - 1.928 \times 0.5}{0.01}}{1 + \frac{1.928 \times 1 - 1.928 \times 0.5}{0.01 \times 11612}} \end{aligned}$$

$$\begin{aligned}
& \frac{\frac{1.928-0.964}{0.01}}{1+\frac{1.928-0.964}{116.12}} \\
& \frac{\frac{0.964}{0.01}}{1+\frac{0.964}{116.12}} \\
& \frac{96.4}{1+0.0083} \\
& \frac{96.4}{1.0083} = 95.6 = 96
\end{aligned}$$

#### **3.4.2.1 Inclusion criteria**

- Non-health care workers
- Out-patients
- 18 years and above

#### **3.4.2.2 Exclusion criteria**

- Health care workers
- Inpatients
- Below 18 years.

#### **3.4.3 Ethical considerations**

Polit and Beck (2012:727) define ethics as “a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal, and social obligations to the rights and interests of respondents”. This following are ethical aspects which were considered for this study.



### **3.4.3.1 Informed and non-coerced consent**

The researcher has to ensure that respondents are not coerced into taking part, the participant must decide voluntarily whether or not to participate (Brink et al 2014:40). Polit and Beck (2012:157) state that the participant must have adequate information about the study, understand such information and decide whether to participate or not of their own free will. Before signing the consent form, respondents were informed about the purpose of the study, the procedures involved and how the findings of the study will be used. Participation was not coerced by any means whatsoever, and respondents were guaranteed anonymity, confidentiality of records and assurance that they maintained the right to refuse to participate or to withdraw from the study at any time, should they feel the need to, without any prejudice, penalty or castigation.

### **3.4.3.2 Privacy and confidentiality**

The most inviolable means of protecting confidentiality is anonymity, especially when the researcher is unable to link respondents to their data (Polit & Beck 2012:162). Codes were used, for example “R1” for first respondent, instead of real name of the respondents. All personal information that may be a threat to confidentiality such as patient hospital number or identity number was not requested. All other information obtained was strictly confidential and anonymous. To enhance anonymity, data collection was not primarily face-to-face; respondents dropped the completed data collection tool in boxes placed strategically at the hospital. For those respondents who for some reason required the researcher to assist in completing the questionnaire confidentiality was guaranteed.

The real name of the hospital was used because the information does not have any implications to the hospital; the hospital was just used to access the population.

### **3.4.3.3 Acknowledgement of data sources**

According to Brink et al (2014:43), a researcher must respect the scientific community by protecting the integrity of scientific knowledge. Plagiarism was avoided at all cost. Thomas (2013:86-87) defines plagiarism as “the submission of formal assessment of an assignment that incorporates without proper citation or acknowledgement by means of an accepted referencing standard, the intellectual property or work of a third party”. All

data obtained from documents and records was acknowledged and citations and references made accordingly.

#### ***3.4.3.4 Permission from authorities and gatekeepers***

Researchers may not be objective in their risk/benefit assessment or in their efforts to protect the rights of the research subjects (Polit & Beck 2012:165). For this reason, the ethical dimensions of a study must be subjected to external review. The proposal was therefore submitted to the Research and Ethics committee of the University of South Africa (UNISA), College of Human Sciences (CHS) for approval and ethical clearance. Permission was also obtained from the Ministry of Health and from St Joseph's Hospital management to undertake the study. Outpatient department staff were also sensitised to the study, following which permission was sought and granted prior data collection.

#### ***3.4.3.5 Principle of respect for human dignity***

Prospective respondents have the right to full disclosure and to decide whether to take part in a study without being prejudiced (Polit & Beck 2012:154). The researcher disclosed all the aspects of the study to respondents, their right to refuse participation and possible risks. The researcher ensured that rapport was well established before embarking on data collection, and sensitive questions were addressed in a manner that did not violate human dignity while also ascertaining that the true meaning was not lost. There were no promised personal gains/benefits for the respondents, they took part out of their volition and did not incur any financial costs.

#### ***3.4.3.6 Benefits from the study***

According to Polit and Beck (2012:152), "Human research should be intended to produce benefits for respondents or, a situation that is common for others." The researcher hopes that the findings will benefit the respondents and the Basotho nation as a whole because it will bring into awareness the need for mobilisation of PEP services to fight the HIV pandemic.

### **3.4.4 Data Collection**

Data collection refers to the process of gathering information to address a research problem (Polit & Beck 2012:725). This Section addresses the methods and procedures used in gathering information relevant to the research purpose. Data collection was conducted following the ethical approval by the Higher Degrees Committee of the Department of Health Studies at the University of South Africa (Annexure 1). Approval was also granted by the Lesotho Ministry of Health Ethics Committee (Annexure 2), as well as the Management of St Joseph's Hospital (Annexure 3).

#### ***3.4.4.1 Data collection instrument development***

The study employed a structured questionnaire (Annexure 5A), which was translated to Sesotho for better clarity and understanding (Annexure 5B). A questionnaire is a document that is used to gather self-report data through self-administration of questions (Polit & Beck 2012:740). In addition to being a primary means of data collection in quantitative studies (Polit & Beck 2012:305), as compared to other means of data collection, a questionnaire was the tool of choice in this study for the following reasons:

- It is less time consuming
- It is cost-effective
- It assures greater anonymity
- Absence of interviewer means no interviewer bias

The questionnaire was developed to elicit responses relevant to the aim of the study, which was to obtain information regarding knowledge, attitudes and utilisation of HIV PEP amongst adults. The formulation of questions was influenced by pre-testing outcomes, the objectives of the study and the reviewed literature. The questions included multiple choice questions, true or false questions and Likert type scale questions. Ambiguity and response biases were avoided and sensitive questions were worded cautiously. The questionnaire is composed of four sections. Section A focused on demographic data, section B focused on knowledge regarding HIV PEP, section C focused on attitude towards HIV PEP while section D focused on use of HIV PEP. The questionnaire was piloted with 10 individuals who met the inclusion criteria but were not part of the final sample.

#### ***3.4.4.2 Validity and Reliability of the questionnaire***

A researcher needs to consider both validity and reliability when selecting a research instrument, there is no point in using an instrument that is not valid. However reliable it may be, by the same token, if an instrument is valid but the measurements are not consistent, it is of no use (Brink et al 2014:171).

#### *3.4.4.2.1 Validity*

In the context of research, validity is the approximate truth of an inference (Shadish & colleagues), cited in Polit and Beck (2012:236). A conclusion made in a research could be wrong because of threats to validity, therefore when researchers introduce design features they have to strengthen the validity of the inference (Polit & Beck 2012:236). Polit and Beck (2012:336) further continue to define validity as the degree to which an instrument measures what it is supposed to measure. Validation functions to build sufficient evidence from which validity can be inferred and the greater the amount of evidence, the more sound the inference (Polit & Beck 2012:336). Brink et al (2014:165) show that an instrument can be the source of several factors that can cause random errors and affect data quality. Such factors include: unclear directions, unclear questions, inadequate sampling of items, wrong format, wording and order of questions (Brink et al 2014:165). If there are errors in the instrument, respondents may not know how to respond to items and end up guessing the answers rather than giving true answers. Brink et al (2014:165) define instrument validity as the degree to which an instrument measures what it is supposed to measure. To ensure validity of the data collection tool, the researcher has aligned the questions with the objectives, the research questions and the reviewed literature. The tool was also pre-tested on a few individuals who were not included in the final sample, following which errors were addressed. Following corrections, the tool was peer reviewed and then given to a PhD fellow for final review.

#### *3.4.4.2.2 Reliability*

According to Polit and Beck (2012:331), in a quantitative study, an instrument is said to be reliable if it is accurate and consistent in the way it measures the target attribute. In support of this, Thomas (2013:138) defines reliability as the extent to which an instrument will give the same result on different occasions. If there is less variation produced when an instrument is used in repeated measurements it has higher reliability, meaning it is stable, consistent or dependable (Polit & Beck 2012:331).

To address the issue of reliability, the confidence level of 95% was used when calculating sample size to ensure that the sample is large enough to inherently reduce sample errors. The cronbach's alpha was 0.9. The questions were aligned with the objectives of the study. The tool was pre-tested on a few individuals, who were not included in the study, and changes were then made accordingly. Any ambiguity was corrected and questions deemed unnecessary were modified or deleted from the tool.

#### ***3.4.4.3 Data collection approach and method***

The researcher first prepared a data collection plan for efficiency. She then personally disseminated the data collection tools. For those consenting respondents who, for whatever reason (e.g. illiteracy), were unable to complete the questionnaire, the researcher assisted. During data collection, the researcher was always within reach to supervise, assist and address concerns and to clarify any misunderstandings.

Respondents completed the questionnaires and then dropped them in a box outside the consultation rooms, where the researcher later collected them. Data collection took place from April to June 2016.

#### **3.4.5 Data management and analysis**

This Section discusses how data was stored, organised and analysed

##### ***3.4.5.1 Data management***

Upon collection, all data were kept under lock and key for safety. The questionnaires completed and returned were 96, giving a response rate of 100%. Data were then reviewed for completeness and legibility, and data gaps were addressed (Polit & Beck 2012:463). Language translations were made where necessary.

### **3.4.5.2 Data analysis**

Data analysis is a systemic organization and synthesis of the research data (Polit & Beck 2012:725). Grove, Burns and Gray (2013:46) define data analysis as a process that reduces, organises and gives meaning to the data.

Data capturing and analysis were done with the computer programme “Statistical Package for the Social Sciences (SPSS) version 23”. Analysis was done using descriptive and inferential statistics. Polit and Beck (2012:379) stated that descriptive statistics is used to describe and synthesise data. Burns and Grove (2013:490) mention that descriptive statistics allows researchers to organise data in a way that gives meaning and insight. Descriptive statistical procedures such as tables, graphs and proportions were used to report and describe findings. This method of analysis was chosen because the research aimed at quantifying the knowledge, attitudes and utilisation of HIV PEP by adults in Roma. The responses from respondents were quantified. The levels of measurements used are ordinal and categorical and data were synthesised in order to calculate average, frequencies and percentages.

### **3.5 CONCLUSION**

This Chapter presented the research methodology that was used in the study addressing study approach and design, setting and population and sampling. The chapter also detailed data collection approach used, development of questionnaire, piloting the questionnaire and administration of the research questionnaire. It further indicated how issues of validity and reliability and ethical considerations were addressed throughout the research study. Data analysis method was also highlighted. In the next Chapter, presentation and analysis of the collected data will be discussed.

## **CHAPTER 4: PRESENTATION OF RESULTS**

### **4.1 INTRODUCTION**

The previous chapter highlighted the research design, method of data collection and data analysis. This chapter presents the findings of the study. The data were analysed using the Statistical Package for Social Sciences (SPSS) version 23.0. The main Sections of the questionnaire were highlighted. The percentages in the tables and figures are presented as received from the data analysis software. Results were then presented in tables and charts, and interpretations were made.

### **4.2 RESEARCH FINDINGS**

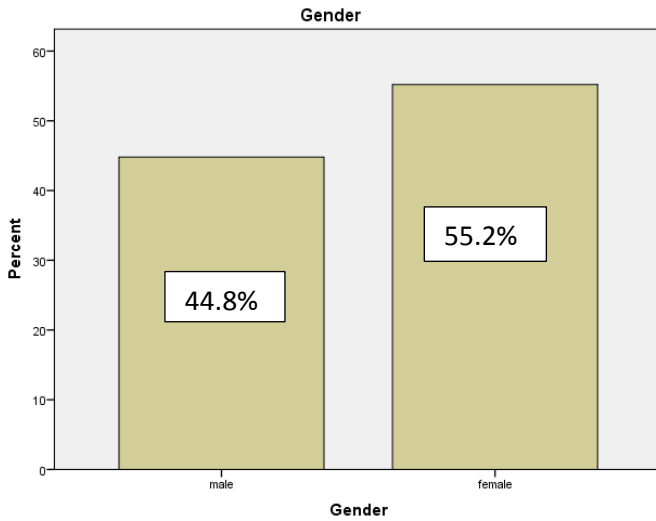
The main objectives of this study were to assess the knowledge of adults in Roma regarding HIV PEP following non-occupational exposure, to explore their attitudes regarding the use of PEP, to find out accessibility and utilisation of PEP services by the stated adults. The results have been organised around these objectives.

#### **4.2.1 Socio-demographic characteristics of respondents**

The socio-demographic characteristics of the respondents are described according to gender, age, marital status, educational qualification, religious background and occupation.

##### ***4.2.1.1 Gender of the respondents***

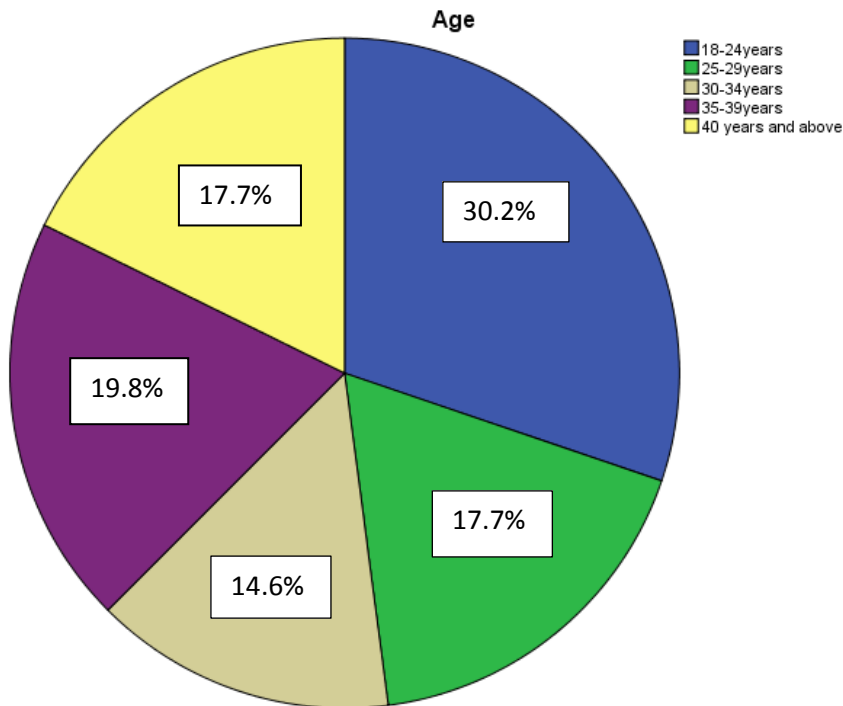
Out of the 96 respondents, 44.8% (n=43) were males while 55.2% (n=53) were females as depicted in Figure 4.1 below. There were more females than males.



**Figure 4.1: Gender of the respondents (N=96)**

#### **4.2.1.2 Age of the respondents**

Figure 4.2 depicts the ages of the respondents. According to the results, the most represented age group distribution was 18-24 years with 30.2% (n=29), followed by 35-39 years with 19.8% (n=19). Age groups 25-29 and 40 years and above came third with a representation of 17.7% (n=17) each and lastly 30-34 years with 14.6% (n=14).



**Figure 4.2: Ages of the respondents (N=96)**



#### 4.2.1.3 Marital status of the respondents

50% (n=48) of the respondents were single, 31.3% (n=30) were married, 9.4% (n=9) widowed, 5.2% (n=5) divorced and 4.2% (n=4) separated as depicted in Figure 4.3 below. A greater number of the respondents were single, followed by those who were married.

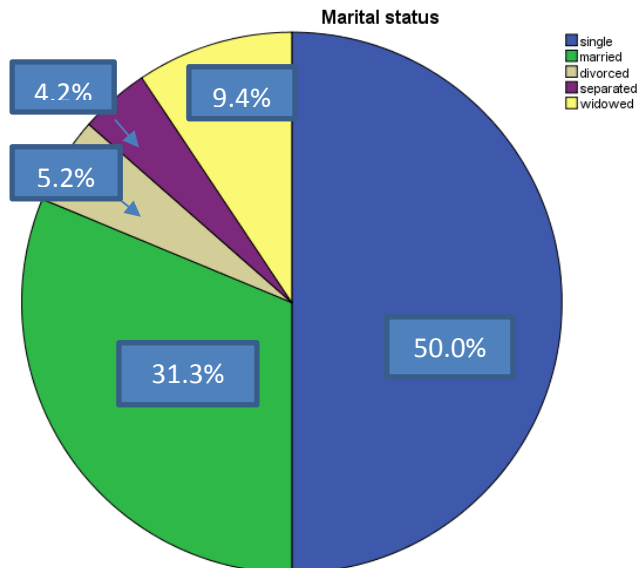


Figure 4.3: Marital status of the respondents (N=96)

#### 4.2.1.4 Educational qualifications of the respondents

Figure 4.4 depicts the educational qualifications of the respondents. A large number of the respondents had some educational qualification, with 38.5% (n=37) respondents holding a Cambridge Overseas School Certificate (COSC) or equivalent, followed by 15.6% (n=15) with Junior Certificate (JC), another 15.6% (n=15) with Diploma, 14.6% (n=14) with Primary School Leaving Examination (PSLE) certificate, and 6.3% (n=6) with a university degree. 9.4% (n=9) of the respondents had no educational qualification. No subjects held higher degrees.

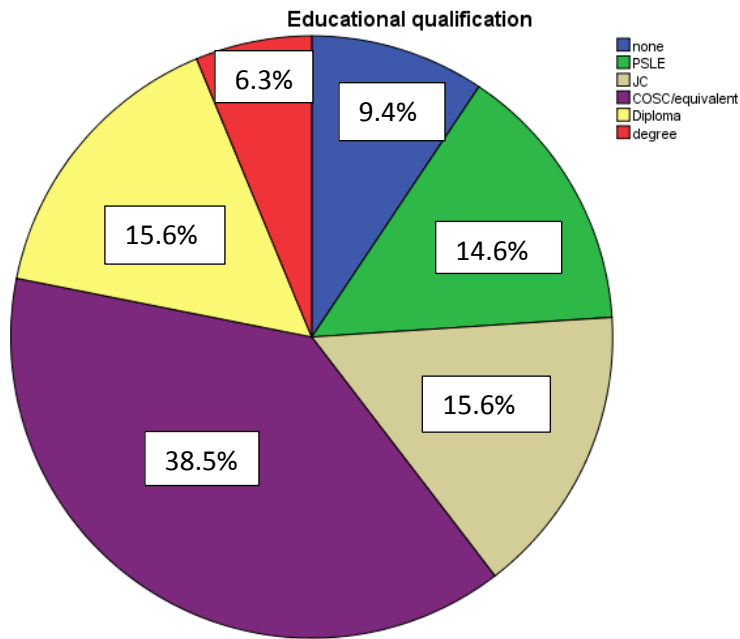


Figure 4.4: Educational qualifications of the respondents (N=96)

#### 4.2.1.5 Religious background of the respondents

Figure 4.5 below shows religious background of the respondents. 89.6% (n=86) of the respondents reported to be Christians, 6.3% (n=6) were ancestral worshippers and 2.1% (n=2) were Muslims. 1.0% (n=1) indicated other and another 1.0% did not respond to the question. The sample was mainly Christian.

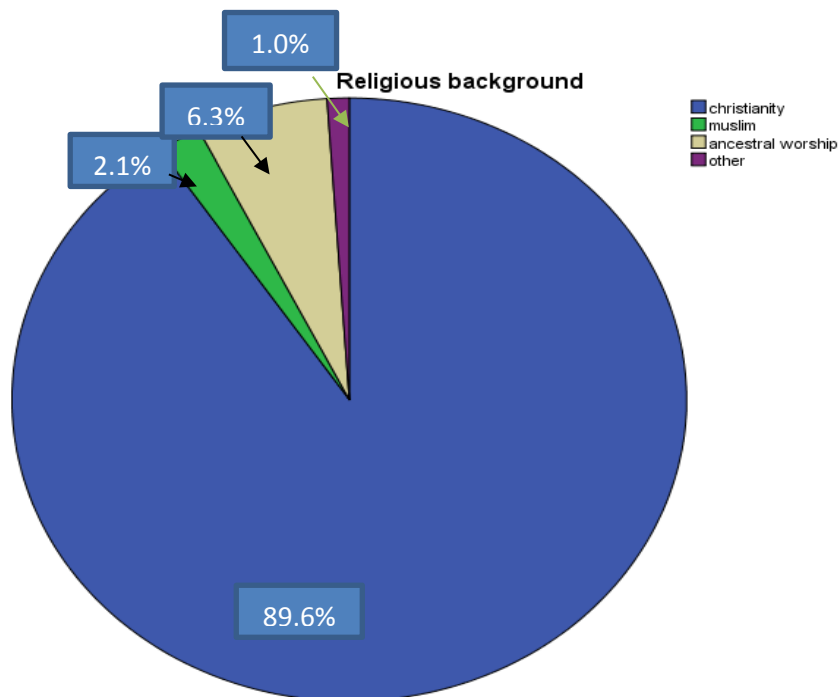


Figure 4.5: Religious background of the respondents (N=96)

#### 4.2.1.6 Occupations of the respondents

The Figure below presents the different occupations of the respondents. Study results showed that 54.2% (n=52) of the respondents were unemployed, 9.4% (n=9) were high school or tertiary students, 12.5% (n=12) reported to be self-employed and the rest were employed in either the formal or informal sectors as follows: 4 (4.2%) teachers, 4 (4.2%) security guards, 3 (3.1%) cashiers, 3 (3.1%) maids and 1% (n=1) each of the following: bank teller, barber, cook, court clerk, factory worker, herdboy, mechanic, policeman and taxi driver.

More than half of the respondents were unemployed. Those who were employed, the majority were self-employed, followed by those employed in the informal sector, and the last group were the professionals. Students were also represented.

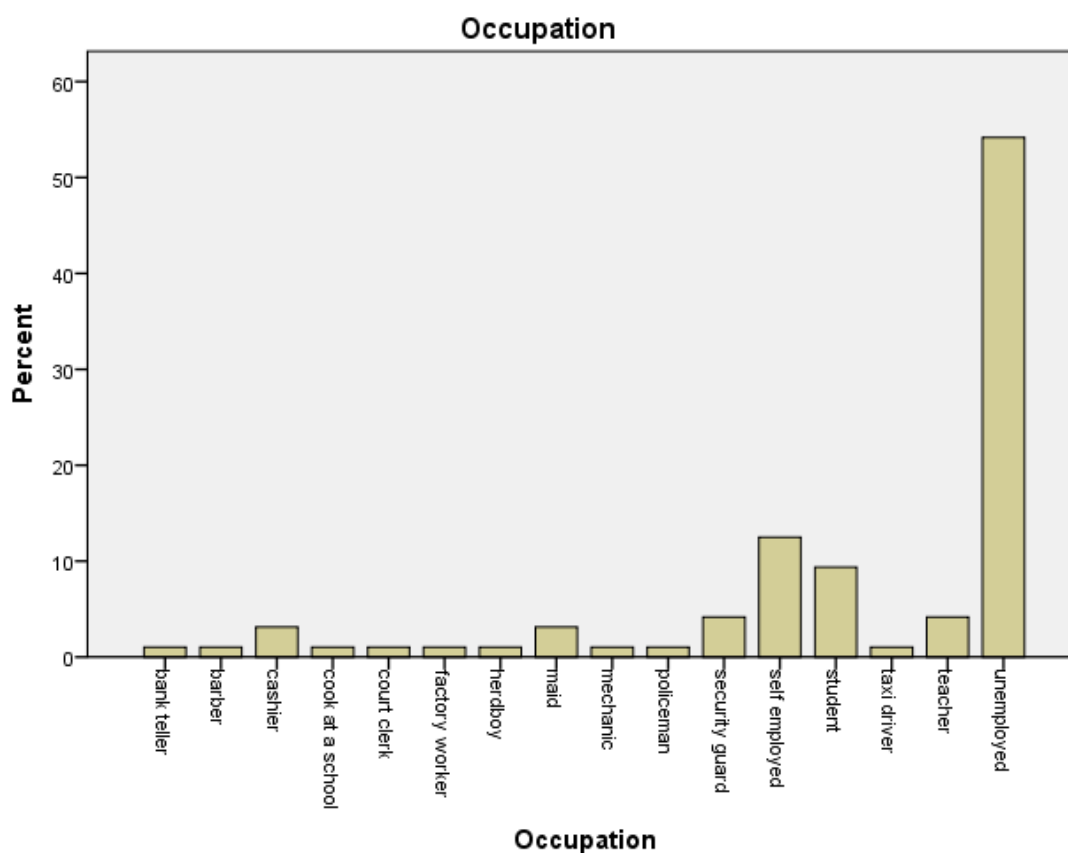


Figure 4.6: Occupations of the respondents (N=96)

### 4.2.2 Knowledge regarding HIV PEP

This section presents data collected on assessment of knowledge on HIV PEP as per a question. The questions were mostly multiple-choice questions with the following options: True, False or I do not know. All respondents were requested to answer the questions on knowledge, including those who were hearing of HIV PEP for the first time during data collection.

#### 4.2.2.1 HIV PEP awareness

Figure 4.7 below depicts the respondents' responses to the question "Have you ever heard of HIV Post-Exposure Prophylaxis?". Out of the 96 respondents, 35.4% (n=34) reported to be aware of HIV PEP while 64.6% (n=62) were hearing of it for the first time during data collection. Majority of the respondents were not aware of PEP.

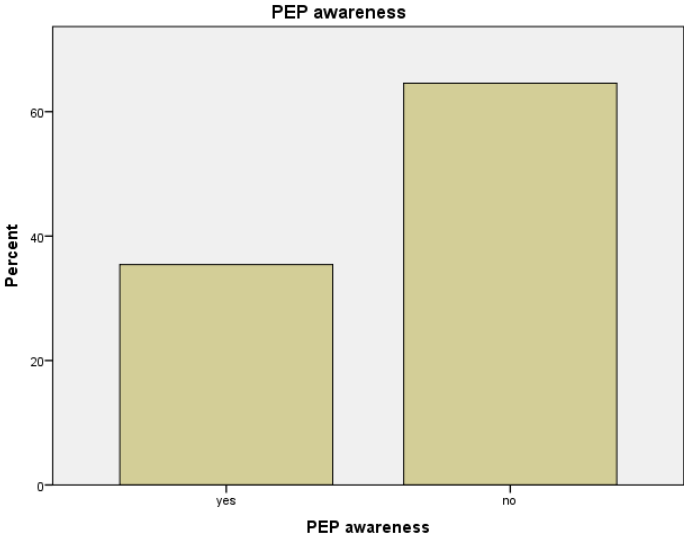
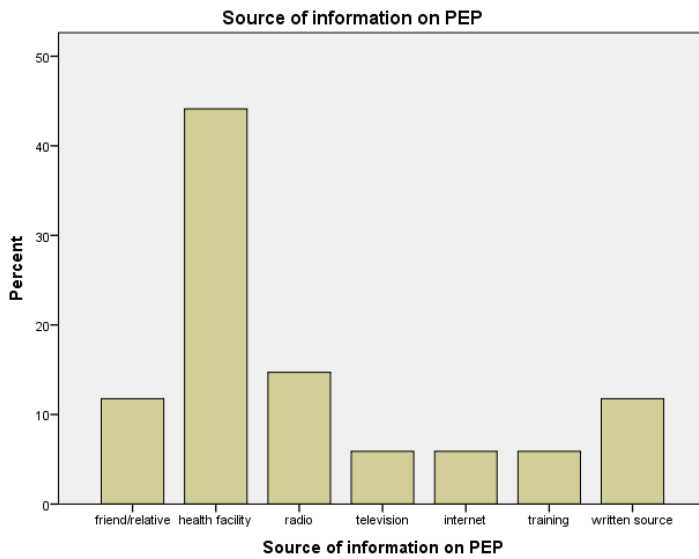


Figure 4.7: HIV PEP awareness (N=96)

#### 4.2.2.2 Sources of HIV PEP information

Out of the 34 respondents who reported to have heard of HIV PEP, 44.7% (n=15) had their source of information as a Health Facility, 14.7% (n=5) radio, 11.8% (n=4) friend/relative, another 11.8% (n=4) written source, and 5.9% (n=2) each of the following: television, internet and training. This information is shown in Figure 4.8 below.



**Figure 4.8: Source of information on HIV PEP (n=34)**

Of those respondents who were PEP-aware, majority learnt of it from a Health facility.

**4.4.2.3 Views related to the use of HIV PEP**

Respondents have different views regarding the use of PEP. Table 4.2 below presents responses to different statements in relation to PEP

**Table 4. 1 Views related to the use of HIV PEP (knowledge) (N=96)**

<b>Statement</b>	<b>True</b>	<b>False</b>	<b>Don't Know</b>	<b>Missing</b>	<b>Total</b>
<b>PEP refers to ARV medication used to prevent HIV infection</b>	<b>30.2%</b> <b>(n=29)</b>	<b>13.5%</b> <b>(n=13)</b>	<b>56.3%</b> <b>(n=54)</b>		<b>100% (n=96)</b>
<b>PEP is medication given to HIV positive individuals after being tested</b>	<b>25.0%</b> <b>(n=24)</b>	<b>11.5%</b> <b>(n=11)</b>	<b>63.5%</b> <b>(n=61)</b>		<b>100%</b> <b>(n=96)</b>
<b>PEP is given to HIV negative individuals to prevent acquisition of HIV following exposure to infected body fluids</b>	<b>22.9%</b> <b>(n=22)</b>	<b>14.6%</b> <b>(n=14)</b>	<b>62.5%</b> <b>(n=60)</b>		<b>100%</b> <b>(n=96)</b>
<b>PEP is taken for one week only</b>	<b>6.3%</b> <b>(n=6)</b>	<b>14.6%</b> <b>(n=14)</b>	<b>79.2%</b> <b>(n=76)</b>		<b>100%</b> <b>(n=96)</b>
<b>HIV negative individuals do not need to take PEP</b>	<b>31.3%</b> <b>(n=30)</b>	<b>9.4%</b> <b>(n=9)</b>	<b>59.4%</b> <b>(n=57)</b>		<b>100%</b> <b>(n=96)</b>
<b>PEP is for nurses and doctors only</b>	<b>3.1%</b> <b>(n=3)</b>	<b>38.5%</b> <b>(n=37)</b>	<b>58.3%</b> <b>(n=56)</b>		<b>100%</b> <b>(n=96)</b>
<b>PEP can be started 5 days post exposure</b>	<b>6.3%</b> <b>(n=6)</b>	<b>14.6%</b> <b>(n=14)</b>	<b>79.2%</b> <b>(n=76)</b>		<b>100%</b> <b>(n=96)</b>
<b>One cannot be given PEP if they have been exposed to HIV through consensual sexual intercourse</b>	<b>15.6%</b> <b>(n=15)</b>	<b>16.7%</b> <b>(n=16)</b>	<b>66.7%</b> <b>(n=64)</b>	<b>1.0%</b> <b>(n=1)</b>	<b>100%</b> <b>(n=96)</b>
<b>PEP is taken for 28 days only</b>	<b>15.6%</b> <b>(n=15)</b>	<b>9.4%</b> <b>(n=9)</b>	<b>74.0%</b> <b>(n=71)</b>	<b>1.0%</b> <b>(n=1)</b>	<b>100%</b> <b>(n=96)</b>
<b>PEP is a lifelong treatment</b>	<b>14.6%</b> <b>(n=14)</b>	<b>21.9%</b> <b>(n=21)</b>	<b>63.5%</b> <b>(n=61)</b>		<b>100%</b> <b>(n=96)</b>

<b>PEP medication has no side effects</b>	<b>8.3%</b> <b>(n=8)</b>	<b>11.5%</b> <b>(n=11)</b>	<b>80.2%</b> <b>(n=77)</b>		<b>100%</b> <b>(n=96)</b>
<b>PEP can be used as a primary means of HIV prevention</b>	<b>27.1%</b> <b>(n=26)</b>	<b>10.4%</b> <b>(n=10)</b>	<b>62.5%</b> <b>(n=60)</b>		<b>100%</b> <b>(n=96)</b>
<b>One needs to be tested for HIV before they can receive PEP</b>	<b>39.6%</b> <b>(n=38)</b>	<b>3.1%</b> <b>(n=3)</b>	<b>57.3%</b> <b>(n=55)</b>		<b>100%</b> <b>(n=96)</b>
<b>PEP can cure HIV</b>	<b>14.6%</b> <b>(n=14)</b>	<b>35.4%</b> <b>(n=34)</b>	<b>50.0%</b> <b>(n=48)</b>		<b>100%</b> <b>(n=96)</b>
<b>Frequent use of PEP can cause drug resistance</b>	<b>14.6%</b> <b>(n=14)</b>	<b>16.7%</b> <b>(n=16)</b>	<b>68.8%</b> <b>(n=66)</b>		<b>100%</b> <b>(n=96)</b>

Table 4.1 presents the following:

In response to the statement “PEP refers to antiretroviral medication used to prevent HIV infection” 54 (56.3%) of the 96 respondents did not know, 29 (30.2%) selected the correct answer (True), and 13 (13.5%) selected the wrong answer (False). Even though 34 out of 96 previously reported to be aware of PEP some of them still did not know what PEP was, this is supported by the number (29) of the respondents who selected the correct answer.

In response to the statement “PEP is medication given to HIV positive people after being tested” 63.5 % (n=61) did not know if the statement was true or false, 25.0% (n=24) selected the wrong option (True) and 11.5% (n=11) selected the correct option (False). The question was poorly answered, with only 11.5% selecting the correct answer.

In response to the statement “PEP is given to HIV negative individuals to prevent acquisition of HIV following exposure to HIV infected body fluids” 62.5 % (n=60) did not know if the statement was true or false, 22.9% (n=22) selected the correct option (true) and 14.6% (n=14) selected the wrong option (false). With only 22.9% of the respondents selecting the correct answer, this shows that even those who previously reported to be PEP aware did not know what PEP was.

When responding to the statement “PEP is taken for one week only” 79.2% (n=76) did not know if the statement was true or false, 14.6% (n=14) selected the correct option (true) and 6.3% (n=6) selected the wrong option (true). The statement was poorly addressed with only 14.6% selecting the correct answer. For the general population, knowledge of duration of PEP is not essential but it is important so that potential PEP seekers can be prepared.

In response to the statement “HIV negative people do not need to take PEP” 59.4% (n=57) did not know if the statement was true or false, 31.3% (n=30) selected the wrong option (true) and 9.4% (n=9) selected the correct option (false). Only 9.4% of the respondents selected the correct option.

In response to the statement “PEP is for nurses and doctors only” 58.3% (n=56) did not know if the statement was true or false, 38.5% (n=37) selected the correct option (false) and 3.1% (n=3) selected the wrong option (true). Less than half the respondents selected the correct option. It is imperative that people know that everyone can access PEP services when needed.

When responding to the statement “PEP can be started 5 days after being exposed to HIV” 79.2% (n=76) did not know if the statement was true or false, 14.6% (n=14) selected the correct option (false) and 6.3% (n=6) selected the wrong option (true). The question was poorly answered, with only 14.6% of the subjects knowing the correct answer. It means that if the other 85.4% were to be in a position that required them to request PEP, there would be a delay with dire consequences.

In response to the statement “One cannot be given PEP if they have been exposed to HIV through consensual sexual intercourse” 66.7 % (n=64) did not know if the statement was true or false, 16.7% (n=16) selected the correct option (False) and 15.6% (n=15) selected the wrong option (True). 1.0% (n=1) did not address the question.

With only 16.7% of the respondents knowing the correct answer, it means that the others, even if PEP-aware, would not seek PEP services following exposure through consensual sexual activities, leaving themselves at the mercy of “chance”.



In response to the statement “PEP is taken for 28 days only” 74.0% (n=71) did not know if the statement was true or false, 15.6% (n=15) selected the correct option (True) and 9.4% (n=9) selected the wrong option (False). One percent 1% (n=1) did not address the question. The question was also poorly addressed. Although important, it is not essential to know the duration of PEP treatment as one would get this information when they are started on the treatment.

In response to the statement “PEP is a lifelong treatment” 63.5 % (n=61) did not know if the statement was true or false, 21.9% (n=21) selected the correct option (False) and 14.6% (n=14) selected the wrong option (True). With only 21.9% of the respondents knowing the correct answer, the question was poorly answered. Although it is important to know the duration of PEP, it is not essential. However others may be deterred from seeking PEP services when exposed for fear of taking a lifelong treatment and thereby placing themselves at risk of acquiring the HIV infection.

For the statement “PEP medication has no side effects” 80.2% (n=77) did not know if the statement was true or false, 11.5% (n=11) selected the correct option (False) and 8.3% (n=8) selected the wrong option (True). The question was also poorly answered with just 11.5% having selected the correct option. Although important, the information regarding ARV side effects is not essential as one would get it at the health facility when started on the treatment. It might however be of benefit to the exposed individual to know what to expect and therefore be better prepared.

In response to the statement “PEP medication can be used as a primary means of HIV prevention” 62.5 % (n=60) did not know if the statement was true or false, 27.1% (n=26) selected the wrong option (True) and 10.4% (n=10) selected the correct option (False). With only 10.4% disagreeing with this statement, it means that the other 89.6% are still not well informed with regard to HIV prevention measures.

In response to the statement “One needs to be tested for HIV before they can receive PEP” 57.3% (n=55) did not know if the statement was true or false, 39.6% (n=38) selected the correct option (True) and 3.1% (n=3) selected the wrong option (False). Only 39.6% gave the correct response, leaving the other 60.4% in the dark. It is important for potential PEP service seekers to know that they would need to be tested prior PEP prescription, so that they can be better prepared when they go to seek the services.

When addressing the statement “PEP can cure HIV” 50.0% (n=48) did not know if the statement was true or false, 35.4% (n=34) selected the correct option (False) and 14.6% (n=14) selected the wrong answer (True). The fact that only 35.4% of the respondents selected the correct option is an indication that the rest of the respondents still have an inkling that HIV can be cured.

In response to the statement “Frequent use of PEP can cause drug resistance” 68.8% (n=66) did not know if the statement was true or false, 16.7% (n=16) thought it was false and only 14.6% (n=14) selected the correct option (True). Only 14.6% of the respondents knew the truth of the statement. It is important that people know this so that exposure is avoided at all costs. Lack of this knowledge might influence careless behaviour among PEP aware individuals.

### 4.2.3 Attitude towards HIV PEP

This section presents data on assessment of attitude towards HIV PEP.

#### 4.2.3.1 Views related to HIV PEP

Table 4.2: Views related to PEP (attitude) (N=96)

Statement	SD	D	U	A	SA	Total
PEP is an important measure of HIV prevention	12.5% (n=12)	15.6% (n=15)	58.3% (n=56)	6.3% (n=6)	7.3% (n=7)	100% (n=96)
Everyone should have access to PEP	26.0% (n=25)	29.2% (n=28)	42.7% (n=41)	0.0% (n=0)	2.1% (n=2)	100% (n=96)
PEP can reduce the likelihood of HIV infection	28.7% (n=27)	7.3% (n=7)	58.3% (n=56)	2.1% (n=2)	4.2% (n=4)	100% (n=96)
PEP can help reduce new HIV infections	18.8% (n=18)	14.6% (n=14)	57.3% (n=55)	8.3% (n=8)	1.0% (n=1)	100% (n=96)

Key:

SD – Strongly Disagree

D - Disagree

U - Undecided

A - Agree

SA – Strongly Agree

Table 4.2 presents the following:

In response to the statement “PEP is an important measure of HIV prevention” 58.3% (n=56) were undecided about the statement, 15.6% (n=15) disagreed with the statement, 12.5% (n=12) strongly disagreed, 7.3% (n=7) strongly agreed and 6.3% (n=6) agreed. Responses in this question give an impression that respondents are undecided or have a vague idea about HIV PEP and thereby having neither a negative nor a positive attitude towards HIV PEP.

In response to the statement “Everyone should have access to PEP” 42.7% (n=41) were undecided about the statement, 29.2% (n=28) disagreed with the statement, 26.0%

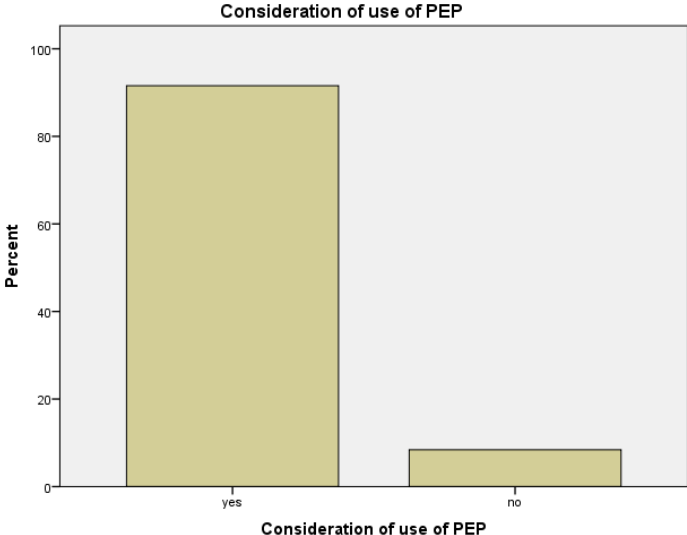
(n=25) strongly disagreed, 2.1% (n=2) strongly agreed. Most responses (55.2%) negate this statement, suggesting a negative attitude towards access to HIV PEP.

When addressing the statement “PEP can reduce the likelihood of HIV infection” 58.3% (n=56) were undecided about the statement, 28.1% (n=27) strongly disagreed with the statement, 7.3% (n=7) disagreed, 4.2% (n=4) strongly agreed and 2.1% (n=2) agree. While most respondents (58.3%) were undecided with regard to the statement, a slightly large number leaned towards disagreeing with the statement.

In response to the statement “PEP can help reduce new HIV infections” 57.3% (n=55) were undecided about the statement, 18.8% (n=18) strongly disagreed with the statement, 14.6% (n=14) disagreed, 8.3% (n=8) agreed and 1.0% (n=1) strongly agreed. Once again the majority were undecided about the statement and a somewhat large proportion of the subjects inclined towards disagreeing. This is most likely a result of deficient knowledge.

**4.2.3.2 Consideration of use of HIV PEP**

Figure 4.9 presents answers to the question “If you had to, would you use HIV PEP?”. Results show that 90.6% (n=87) said they would use HIV PEP and 8.3% (n=8) would not. One percent (n=1), did not answer the question. Majority of the respondents would use HIV PEP if the need arose; this is a major indicator for a receptive attitude towards use of HIV PEP.



**Figure 4.9 Consideration of use of HIV PEP (N=96)**

*4.2.3.2.1 Reason for not considering use of HIV PEP*

Table 4.3 presents responses obtained from the 8 respondents who said they would not use HIV PEP to indicate why they would not. Majority, 87.5% (n=7) indicated fear of possible side effects. One participant (12.5%) did not respond.

The small number that would not consider using HIV PEP for fear of possible side effects may lack information that would otherwise change their perspective. Individuals are unique with regard to the way they are affected by medication, some may suffer the side effects while others might not, and it is also important to understand and weigh the advantages against the disadvantages of taking the treatment.

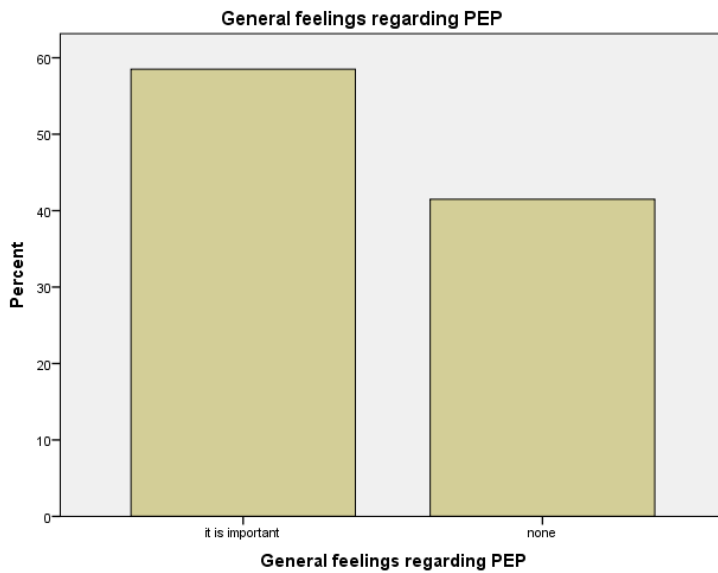
**Table 4.3: Reason for not considering use of HIV PEP (n=8)**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Fear of possible side effects</b>	<b>7</b>	<b>87.5</b>
<b>Missing</b>	<b>1</b>	<b>12.5</b>
<b>Total</b>	<b>8</b>	<b>100.0</b>

**4.2.3.3 General feelings regarding HIV PEP**

Figure 4.10 below presents responses obtained when respondents were asked to indicate how they generally felt about HIV PEP. Options were “it is important”, “none”, and “it is not important”. Majority, 57.3% (n=55) said it was important, 40.6% (n=39) selected none and none of the respondents thought it was not important. 2.1% (n=2) did not address the question.

Even with the negative attitude indicated in the previous several questions, when asked how they generally felt about HIV PEP, respondents mostly said it is important. The response further indicated positive attitude about HIV-PEP.



**Figure 4.10 General feelings regarding HIV PEP (N=96)**

#### ***4.2.3.4 Influence on general feelings regarding HIV PEP***

Table 4.4 presents responses obtained when respondents were asked to indicate what influenced their responses when asked to indicate their general feelings about HIV PEP. The Table shows that 39.6% (n=38) indicated religion as their influence while 5.2% (n=5) indicated that peers influenced their response. All 39 respondents (40.6%) who said they had no feelings regarding HIV PEP indicated that they were influenced by lack of knowledge, 9.4% (n=9) indicated it was just an opinion they had and 3.1% (3) indicated education received from a health centre as the influence. Two respondents (2.1%) did not address the question. Responses were mainly influenced by religion.

**Table 4.4: Influence on general feelings regarding PEP (N=96)**

Response given	Frequency	Percentage
Religion	38	39.6
Peers	5	5.2
Education from a health center	3	3.1
Lack of knowledge	39	40.6
Just my opinion	9	9.4
Missing	2	2.1
<b>Total</b>	<b>96</b>	<b>100.0</b>

Respondents who had no feelings regarding HIV PEP were influenced by lack of knowledge. Previous data suggest that had they been well informed, their responses might have been favourable towards HIV PEP, especially because majority indicated that they would use HIV PEP if they had to.

#### **4.2.4 Utilization of HIV PEP**

This section presents data on utilisation of HIV PEP.

##### **4.2.4.1 Previous HIV PEP use**

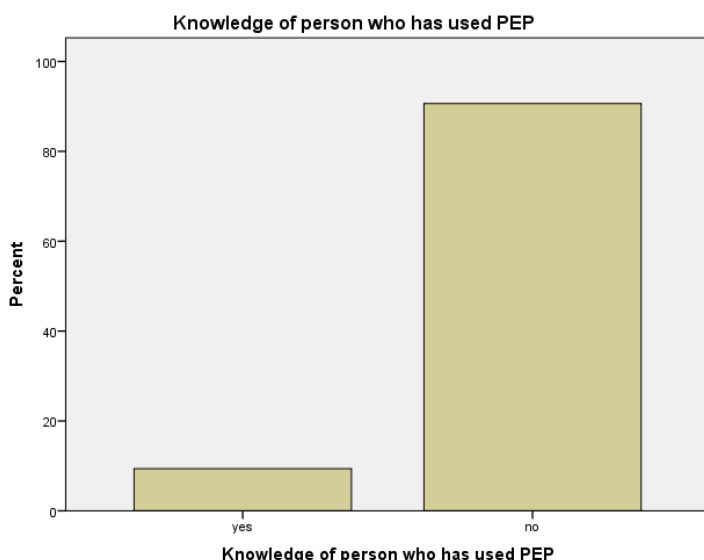
Table 4.5 presents responses obtained when respondents were asked if they had ever taken PEP. All 96 (100%) respondents reported to have never taken PEP. Use of PEP among the respondents is low or non-existent depending on the circumstances that might predispose to exposure.

**Table 4.5: Previous HIV PEP use (N=96)**

Response	Frequency	Percentage
No	96	100.0
<b>Total</b>	<b>96</b>	<b>100.0</b>

#### 4.2.4.2 Knowledge of person who has taken HIV PEP

Figure 4.11 presents responses obtained when respondents were asked if they knew anyone who has taken HIV PEP. 90.6% (n=87) said “no” while 9.4% (n=9) said “yes” they knew someone who had taken HIV PEP. The results here are a further indicator of low HIV PEP uptake not only among the respondents but also within their respective communities, also dependant on circumstances.



**Figure 4.11: Knowledge of person who has taken HIV PEP (N=96)**

Table 4.6 below presents reasons why HIV PEP was taken in 4.2.4.2 above. Out of the 9 respondents who reported to have known someone who has taken HIV PEP, 44.4% (n=4) said they had HIV, 22.2% (n=2) said they had been exposed to blood from an infected person, 11.1% (n=1) said it was because they had unprotected sexual intercourse, another 11.1% (n=1) said it was because they had been raped and another 11.1% (n=1) said it was to prevent mother to child transmission.

These results suggest either misinformation or lack of knowledge for the 4 respondents who gave the reason “she had HIV” as an indication for PEP. They also suggest that some respondents do have an idea of PEP but only as PMTCT.



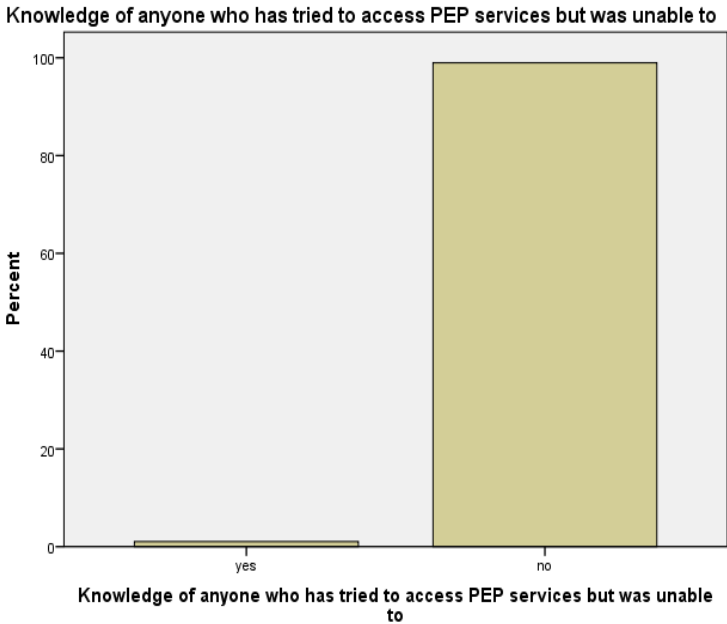
**Table 4.6: Reason for taking PEP (n=9)**

Response	Frequency	Percentage
Exposed to blood from an HIV infected person	2	22.2
PMTCT	1	11.1
She had HIV	4	44.4
She was raped	1	11.1
Unprotected sexual intercourse	1	11.1
<b>Total</b>	<b>9</b>	<b>100.0</b>

**4.2.4.3 Knowledge of anyone who had tried to access HIV PEP but was unable to**

Figure 4.12 presents responses obtained when respondents were asked if they knew of anyone who had tried to access PEP but was unable to. Ninety five respondents (99%) selected “no” and only 1.0% (n=1) reported to know of such an individual (reason being she was told to open a rape case first as she was a rape victim).

Even though majority (99.0%) of the respondents reported not to know of any individual who had tried but was unable to access PEP, the 1.0% (n=1) who did, revealed important information, that access might not be easy even for rape victims.



**Figure 4.12: Knowledge of anyone who had tried to access HIV PEP but was unable to (N=96)**

#### 4.2.4.4 Previous exposure to HIV

Figure 4.13 below presents responses obtained when respondents were asked if they thought they had ever been exposed to potentially HIV-infected body fluids. Forty three respondents (44.8%) selected “I don’t know”, 43.8% (n=42) selected “no” and 10.4% (n=10) selected “yes”. 1.0% (n=1) did not respond to the question.

Even though only 10.4% of the respondents reported exposure, the 43.8% that “did not know” calls for concern.

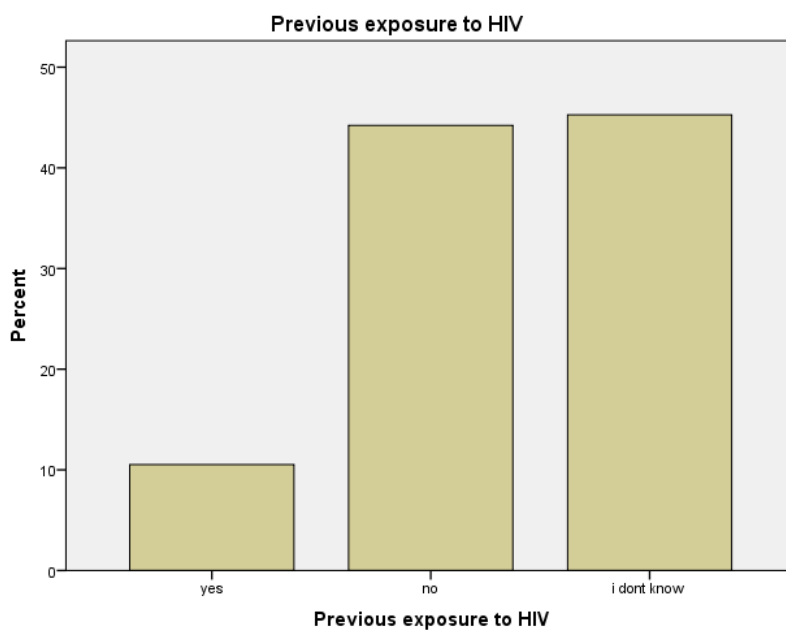
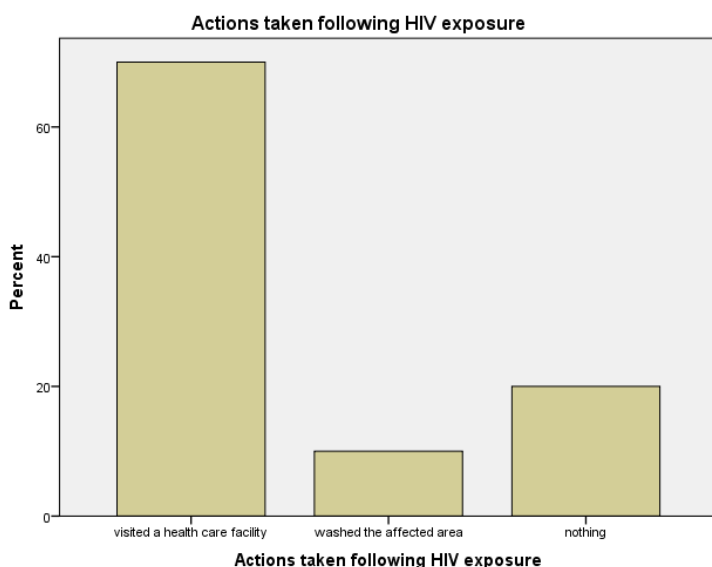


Figure 4.13: Previous exposure to HIV (N=96)

##### 4.2.4.4.1 Actions taken after exposure to HIV

From 4.2.4.4 above, the 10 respondents who reported to have been exposed to potentially infected body fluids were asked to indicate their actions following the exposure. Figure 4.14 below shows the responses they gave. Seven of them (70.0%) reported to have visited a health care facility, one (10.0%) washed the affected area and two (20.0%) did nothing.

Majority of those who reported to have been previously exposed to potentially infected body fluids also reported to have visited a health care facility following the exposure. This indicates proactive behaviour towards prevention and health promotion.



**Table 4.14: Actions taken following HIV exposure (n=10)**

#### 4.2.4.4.2 Reasons for actions taken following the exposure

The 10 respondents who reported to have been potentially exposed were asked to give reasons for the actions they took following the exposure, Table 4.7 below presents the reasons given. 40.0% (n=4) said they wanted to test for HIV, those who said they did nothing gave the following reasons; *I didn't know what to do* (10.0%) and *I didn't think it was a big deal* (10.0%). 10.0% (n=1) who washed the affected area said it was to remove the HIV, another 10.0% (n=1) each gave one of the following reasons: *Everyone at home had HIV*, *My partner has HIV* and *To protect my life*.

Of the 7 who visited a health facility following exposure, 4 reported to have gone to test for HIV, this would suggest limited knowledge if they thought they would immediately sero-convert after being exposed. For those that took no action following exposure and gave the reasons "*I didn't know what to do*" and "*I didn't think it was a big deal*" it might also be concluded that they had deficient knowledge.

**Table 4.7: Reasons for actions following the exposure (n=10)**

Reasons given	Frequency	Percentage
Everyone at home has HIV	1	10.0
I did not know what to do	1	10.0
I did not think it was a big deal	1	10.0
My partner has HIV	1	10.0
To protect my life	1	10.0
To remove the HIV	1	10.0
To test for HIV	4	40.0
<b>Total</b>	<b>10</b>	<b>100.0</b>

When asked if they thought the actions they took following exposure were correct, the 10 respondents gave the responses shown in Table 4.8 below. 80.0% (n=8) selected “yes” while 20.0% (n=2) selected “no”. The two respondents that did nothing following potential exposure selected “no” when asked if they thought their actions were right.

**Table 4.8: Thoughts on actions taken following exposure (n=10)**

Response	Frequency	Percentage
Yes	8	80.0
No	2	20.0
<b>Total</b>	<b>10</b>	<b>100.0</b>

**4.3 CONCLUSION**

This Chapter presented the results of the data analysis using pie charts, bar charts and tables. Descriptive statistics were employed using SPSS version 23.0. No comparisons were made between variables as the study aimed to describe knowledge, attitudes and utilisation of HIV PEP among adults. The next Chapter will discuss conclusions and limitations of the study as well as recommendations based on findings.

## **CHAPTER 5: DISCUSSION, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

### **5.1 INTRODUCTION**

The previous Chapter presented results of the study. In the current Chapter, conclusions are drawn regarding knowledge, attitudes and utilisation of HIV PEP among adults in Roma, St Joseph's hospital. The Chapter also discusses limitations of the study as well as recommendations.

### **5.2 DISCUSSION OF RESEARCH FINDINGS**

The most significant research findings are summarised and interpreted in accordance with the main objectives of the study, which are:

- To assess the knowledge of adults in Roma regarding HIV PEP following non-occupational exposure,
- To explore the attitudes of adults in Roma regarding the use of HIV PEP,
- To assess utilisation of HIV PEP services by adults in Roma.
- To determine accessibility to PEP services to adults in Roma,
- To recommend strategies for promoting awareness and the use of PEP among adults in Roma, Lesotho

#### **5.2.1 Demographic data**

From the characteristics of the respondents, it can be deduced that there were more females (55.2%) than males (44.8%) in the study; nevertheless, 44.8% is still considered a fair representation for the male sex. Initially, there was a significant disproportion of gender distribution; however, the researcher extended the time allocated for data collection in an attempt to ensure a fair representation of both genders.

The most represented age group distribution was 18-24 years with 30.2%, even so all other targeted adult age groups were represented. A greater number of the respondents were single, followed by those who were married. The sample was mainly Christian as is the Basotho population.

The sample included a spectrum of educational levels, from respondents with no education, those with primary education, those with high school education and those with tertiary education; however, no subjects held higher degrees.

More than half of the respondents were unemployed, of those who were employed; the majority were self-employed, followed by those employed in the informal sector, and lastly, the professionals. Students were also represented. The sample was more representative of the peri-urban populations of Lesotho.

### **5.2.2 Knowledge regarding HIV PEP**

PEP awareness was revealed to be very low among the respondents. Those at risk of exposure need to know of the existence of PEP so that infection can be prevented in cases of exposures. The few respondents who were PEP-aware learnt of it mostly from health facilities, indicating that there is some dissemination of information on PEP by Health professionals. The proportion of individuals who reported to be aware of PEP in the study was 35.4% (n=34). More or less similar results were reported in other studies, one such study was conducted by Mehta et al (2011:1) in New York, where only 36% of the respondents reported to be aware of PEP. This however differs from most studies done in Sub Saharan Africa among health care workers, where PEP awareness was found to be high, for instance one study conducted among health professionals in Ethiopia revealed a 100% awareness of PEP among the respondents (Tefaye et al 2014).

The questions addressing PEP duration were also poorly answered. For the general population, knowledge of duration of PEP is not essential but it is important so that potential PEP seekers can be better prepared. Only a few respondents knew that PEP can be accessed by everyone, no matter the mode of exposure, and not just health care professionals. A very large number of respondents also did not know that PEP should be started within 3 days of exposure, meaning that if they were to be in a position that required them to request PEP, there would be delays with detrimental consequences. It is imperative that people know that time is of the essence when it comes to PEP and that everyone can access PEP services when needed.

Although also important, the information regarding PEP side effects and drug resistance as a result of repeated use is not essential as one would get it at the health facility when started on the treatment. However, lack of this information may encourage careless

behaviour among those who are PEP aware as it may be treated like “the morning after pill”. It is very important that people know that frequent use of PEP can result in drug resistance because lack of this information might influence careless behaviour among PEP aware individuals. It is also important for potential PEP service seekers to know that they would need to be tested prior PEP prescription, so that they can be better prepared when they go to seek the services. This study reflected that most respondents were not aware of this.

An issue of concern that was brought to light by the study is that some individuals are still not well informed about primary measures of prevention, such that they would consider medication as a primary measure for prevention, while some still think that HIV can be cured. Overall results revealed low awareness and poor knowledge of PEP.

### **5.2.3 Attitude towards HIV PEP**

Initially, questions dealing with attitude were addressed in a somewhat disinhibited manner, with most respondents indicating that they were undecided. Significant percentages were showing negative attitude by disagreeing with statements such as “everyone should have access to PEP”. However, in other questions, majority seemed to lean towards a more positive attitude. The study has shown that the knowledge a person has on certain practices could greatly affect their attitude towards such practices. A very large number of the respondents indicated that they would use PEP if the need arise. This, together with the fact that majority also generally felt that PEP was important, is a major indicator for a receptive attitude towards the use of PEP.

### **5.2.4 Utilization of HIV PEP**

None of the respondents had ever taken PEP and only a few reported to know of someone who had, indicating low uptake not only among the study respondents but also within the communities they live in. Uptake of PEP however, is dependent on incidences of exposure, if there is no exposure then people will not seek PEP services. With this in mind, there are respondents that reported potential exposure (10.4%) and those that reported they did not know if they ever have been potentially exposed (43.8%), meaning there is potential exposure; people are just not proactive in identifying and addressing it. This is in agreement with other studies which revealed mostly favourable attitudes towards PEP and its use. One such study was conducted by Monera and Ncube (2014:1)

who found out that above 75% respondents had positive attitudes toward HIV PEP, with 93% expressing willingness to undergo PEP in case of exposure.

### **5.3 CONCLUSIONS**

Through the characteristics of the respondents, the sample proved to be more representative of the general adult population of a peri-urban area. Findings revealed that knowledge regarding HIV PEP is very poor amongst the respondents and thereby amongst the population being represented. Attitudes range from fair to favourable, mainly because of lack of knowledge. Utilisation of PEP is very low. The study showed that there is lack of knowledge regarding HIV PEP among adults; as a result they are not utilising PEP services even though they seem to have a positive attitude towards PEP.

### **5.4 LIMITATIONS OF THE STUDY**

The study was conducted among outpatients in just one public secondary health facility in a peri-urban area, where health services are cheap and some free; therefore, attracting the lower and middle class population as well as students. Thus, the findings cannot be generalized to the entire nation.

The researcher noted that some questions were unanswered in spite of the researcher being with the respondents at all times. Employing data collectors might have been beneficial as data gaps could have been identified on the spot and addressed immediately.

The layout of the questionnaire on the section assessing knowledge encouraged complacency. Similar response options were used throughout the section, the researcher could have rephrased and rearranged some of the responses such that they were structured differently to discourage respondents from selecting answers out of habit. The researcher failed to achieve the intended equal representation of both the male and female genders because fewer males than females went for outpatient consultations.

### **5.5 RECOMMENDATIONS**

Based on the findings of this study, the researcher recommends the following:



- Similar studies should be conducted in other parts of the country to establish a baseline for awareness programs on non-occupational PEP.
- Studies to determine knowledge, attitude and prescription of both occupational and non-occupational PEP amongst health care providers in the country, to determine readiness for provision of PEP services should also be conducted.
- The mass media should be used to educate the general public about PEP as a secondary measure for HIV prevention.
- HIV education given at Health Care facilities should include PEP awareness; it should also be part of the information provided during HIV testing and counselling.
- Inclusion of HIV PEP awareness in health education sessions at St Joseph's hospital and nearby clinics.
- Advocacy for development of a policy and guidelines specific to non-occupational HIV PEP.

## **5.6 CONCLUDING REMARKS**

This study explored the knowledge, attitude and use of HIV PEP among adults at Roma. The findings and recommendations should serve to meliorate knowledge of HIV PEP, not only at Roma but across the nation, and thereby promoting positive attitudes that will result in Basotho accessing HIV PEP services when necessary. The study is a clear indication that there is a need to strengthen the HIV information being disseminated. The Government of Lesotho through the Ministry of Health and all stakeholders should make every effort to curb the HIV pandemic. Every Mosotho should play their part in achieving the sustainable development goals and strive towards ending the HIV/AIDS pandemic by the year 2030.

## REFERENCES

AIDS gov. 2016. *Post-exposure prophylaxis (PEP)*. From: <https://www.aids.gov/hiv-aids-basics/prevention/reduce-your-risk/post-exposure-prophylaxis/> (accessed 20 July 2016).

Ajibola, S, Akinbami, A, Elikwu, C, Odesanya, M & Uche, E. 2014. Knowledge, attitude and practices of HIV post-exposure prophylaxis amongst health workers in Lagos university teaching hospital. *The Pan African Medical Journal*. From: [www.ncbi.nlm.nih.gov/pmc/articles/PMC4366120/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4366120/) (accessed 23 April 2016).

Aminde, LN, Takah, NF, Dzudie, A, Bonko, NM, Awunggafac, G, Teno, D, Mbuagbaw, L & Sliwa, K. 2015. *Occupational post-exposure prophylaxis (PEP) against Human Immunodeficiency Virus (HIV) infection in a health district in Cameroon: Assessment of the knowledge and practices of nurses*. From: [www.journals.plos.org/plosone/article?id=10.1371/journal.pone.0124416](http://www.journals.plos.org/plosone/article?id=10.1371/journal.pone.0124416) (accessed 22 April 2016).

Aminde, LN, Takah, NF, Noubiap, JJN, Tingdon, M, Ngwasiri, C, Jingi, AM, Kengne, AP & Dzudie, A. 2015. Awareness and low uptake of post-exposure prophylaxis for HIV among clinical medical students in a high endemicity setting. *BMC Public Health*. From: [www.bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-015-2468-9](http://www.bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-015-2468-9) (accessed 22 April 2016).

Babbie, ER. & Mouton, J. 2009. *The practice of social research*. 12<sup>th</sup> edition. Cape Town: Oxford University Press.

Baeten, JM, Donnell, D, Ndase, P, Mugo, NR, Campbell, JD, Wangisi, J, Tappero, JW, Bukusi, EA, Cohen, CR, Katabira, E, Ronald, A, Tumwesigye, E, Were, E, Fife, KH, Kiarie, J, Farquhar, C, John-Stewart, G, Kakia, A, Odoyo, J, Mucunguzi, A, Nakku-Joloba, E, Twesigye, R, Ngunjiri, K, Apaka, C, Tamboho, H, Gabona, F, Mujugira, A, Panteleeff, D, Thomas, KK, Kidoguchi, L, Krows, M, Revall, J, Morrison, S, Haugen, H, Emmanuel-Ogier, M, Ondrejcek, L, Coombs, RW, Frenkel, L, Hendrix, C, Bumpus, NN, Bangsberg, D, Haberer, JE, Stevens, WS, Lingappa, JR & Celum, C. 2012. *Antiretroviral prophylaxis for HIV prevention in heterosexual men and women*. From: <http://www.nejm.org/doi/full/10.1056/NEJMoa1108524> (accessed 21 August 15).

Beekmann, SE & Henderson, DK. 2014. Prevention of HIV/AIDS: *post-exposure prophylaxis (including healthcare workers)*. From: [www.ncbi.nlm.nih.gov/pmc/articles/PMC4253549](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4253549) (accessed 23 April 2016).

Brink, H, van de Walt, C & van Rensburg, G. 2014. *Fundamentals of research methodology for healthcare professionals*. 3<sup>rd</sup> edition. Cape Town: Juta.

Center for Disease Control. 2014. *Proven HIV prevention methods*. From: <http://www.cdc.gov/nchhstp/docs/HIVFactsSheets/Methods-508.pdf> (accessed 31 March 2015).

Center for Disease Control. 1998. Morbidity and mortality weekly report. Vol 47. No.RR7. From: <https://www.cdc.gov/mmwr/pdf/rr4707.pdf> (accessed 29 March 2015).

Chagani, MM, Manji, KP, Manji, MP & Sheriff, FG. 2011. Health care workers knowledge, attitudes and practices on post-exposure prophylaxis for HIV in Dar es Salaam. *Tanzania Medical Journal*. From: [www.ajol.info/index.php/tmj/article/view/80807](http://www.ajol.info/index.php/tmj/article/view/80807) (accessed 22 April 2016).

De Vos, AS, Strydom, H, Fouche, CB. & Delpont, CSL. 2013. *Research at grass roots: for the social sciences and human service professions*. 4<sup>th</sup> edition. Pretoria: Van Schaik.

Elizabeth Glaser Pediatric AIDS Foundation. 2014. *Country Spotlight*. From: <http://www.pedaids.org/country/Lesotho> (accessed 03 March 2015).

Esin, IA, Alabi, S, Ojo, E. & Ajape, AA. 2011. *Knowledge of human immunodeficiency virus post-exposure prophylaxis among doctors in a Nigerian tertiary hospital*. From: [www.ncbi.nlm.nih.gov/pubmed/22248951](http://www.ncbi.nlm.nih.gov/pubmed/22248951) (accessed 23 April 2016).

Fernandez-Balbuena, S, Belza, MJ, Castilla, J, Hoyos, J, Rosales-Statkus, ME, Sanchez, R, dela Fuente, L & The Madrid Rapid HIV Testing Group. 2012. Awareness and use of non-occupational HIV post-exposure prophylaxis among people receiving rapid HIV testing in Spain. *HIV Medicine*. From: [www.onlinelibrary.wiley.com/doi/10.1111/j.1468-1293.2012.01056.x/full](http://www.onlinelibrary.wiley.com/doi/10.1111/j.1468-1293.2012.01056.x/full) (accessed 22 April 2016).

Grove, SK, Burns, N & Gray, J. 2015. *Understanding nursing research: Building an evidence based practice*. 6<sup>th</sup>edition. St Luis Missouri:Saunders.

Guruprasad, Y & Chauhan, DS. 2011. Knowledge, attitude and practice regarding risk of HIV infection through accidental needle stick injuries among dental students of Raichur, India. *National Journal of Maxillofacial Surgery*. From: <http://www.njms.in/text.asp?2011/2/2/152/9447> (accessed 23 April 2016).

HIV Clinical Resource. 2014. *Update: HIV prophylaxis following occupational exposure*.(Office of the Medical Director, New York, State Department of Health AIDS Institute in collaboration with John Hopkins University Division of Infectious Diseases. From: [www.hivguidelines.org/clinical-guidelines/post-exposure-prophylaxis/hiv-prophylaxis-following-occupational-exposure](http://www.hivguidelines.org/clinical-guidelines/post-exposure-prophylaxis/hiv-prophylaxis-following-occupational-exposure) (accessed 01 May 2016).

HIV Clinical Resource. 2014. *Update: HIV prophylaxis following non-occupational exposure*.(Office of the Medical Director, New York State Department of Health AIDS Institute in collaboration with John Hopkins University Division of Infectious Diseases. From: [www.hivguidelines.org/clinical-guidelines/post-exposure-prophylaxis/hiv-prophylaxis-following-non-occupational-exposure](http://www.hivguidelines.org/clinical-guidelines/post-exposure-prophylaxis/hiv-prophylaxis-following-non-occupational-exposure) (accessed 01 May 2016).

Kuhar, DT, Henderson, DK, Struble, KA, Heneine, W, Thomas, V, Cheever, LW, Gomaa, A, Panlilio, AL & US Public health Service Working Group. 2013. *Updated US Public Health service guidelines for the management of occupational exposures to Human Immunodeficiency Virus and recommendations for post-exposure prophylaxis. Inspection control and hospital epidemiology*. Vol 34, No 9.pp875-892. From: [www.jstor.org/stable/10.1086/672271](http://www.jstor.org/stable/10.1086/672271) (accessed 22 April 2016).

Lamichanne, J, Aryal, B & Dhakal, KS. 2012. Knowledge of nurses on post-exposure prophylaxis of HIV in Medical Colleges of Chitwan District, Nepal. *International Journal of Pharmaceutical & Biological Archives*. 3(6):1394-1399.

Lesotho Bureau of Statistics. 2013. from [www.bos.gov.ls](http://www.bos.gov.ls). (accessed 03 March 2015).

Lesotho Times. 2012. *Lesotho's HIV prevalence rate falls*. From: <http://www.lestimes.com/lesotho-hiv-prevalence-rate-falls/> (accessed 03 March 2015).

Longman dictionary of contemporary English. 2003. Pearson Education Limited. From: [http://fullapkdownload.com/Full\\_Dictionary-WordWeb\\_APK.html](http://fullapkdownload.com/Full_Dictionary-WordWeb_APK.html) (accessed 10 March 2015).

Mathewos, B, Birhan, W, Kinfe, S, Boru, M, Tiruneh, G, Addis, Z & Alemu, A. 2013. Assessment of knowledge, attitude and practice towards post-exposure prophylaxis for HIV among health care workers in Gondar, North West Ethiopia. *BMC Public Health*. 13:508. From: <http://www.biomedcentral.com/1471-2458/13/508> (accessed 17 April 2016).

Mayer, KH & Pizer HF (eds). 2009. *HIV prevention: A comprehensive approach*. 1<sup>st</sup> edition. London: Elsevier.

Mehta, SA, Silvera, R, Bernstein, K, Holzman, RS, Aberg, JA & Daskalakis, DC. 2011. *Awareness of post-exposure HIV prophylaxis in high-risk men who have sex with men in New York City*. From: [www.sti.bmj.com/content/early/2011/02/25/sti.2010.046284.short](http://www.sti.bmj.com/content/early/2011/02/25/sti.2010.046284.short) (accessed 23 April 2016).

Ministry of Health. 2013. *National guidelines for the prevention of mother to child transmission of HIV*. 3<sup>rd</sup> edition. Maseru: Government of Lesotho.

Ministry of Health. 2014. *National guidelines on the use of antiretroviral therapy for HIV prevention and treatment*. 4<sup>th</sup> edition. Maseru: Government of Lesotho.

Monera, T & Ncube, P. 2014. Assessment of knowledge, attitudes and practices of health care workers on occupational HIV post-exposure prophylaxis at a Zimbabwean referral hospital. *Journal of the International AIDS Society*. From: [www.jiasociety.org/jias/index.php/jias/article/view/18170](http://www.jiasociety.org/jias/index.php/jias/article/view/18170) (accessed 23 April 2016).

Mugomeri, E, Senauoane, MB, Ruhanya, V, Chino'mbe, N & Nyandoro, G. 2015. Occurrence of HBV/HIV co-infection by laboratory values in Roma, Lesotho. *GERMS*

5(1):[8-11]. From: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4350861/> (accessed 22 August 2015).

Mukherjee, S, Bhattacharyya, A, SharmaSarkar, B, Goswami, ND, Ghosh, S & Samanta, A. 2013. Knowledge and practice of standard precautions and awareness regarding post-exposure prophylaxis for HIV among interns of a Medical College in West Bengal, India. *Oman Medical Journal*. 28(2):[141-145]. From: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3631309/> (accessed 4 May 2015).

Myers, JE, Myers, R, Wheat, ME & Yin, MT. 2011. Dental students and blood borne pathogens: Occupational exposures, knowledge and attitudes. *Journal of Dental Education*. From: [www.identaled.org/content/76/4/479.short](http://www.identaled.org/content/76/4/479.short) (accessed 23 April 2016).

National AIDS Commission. 2006. *National HIV and AIDS strategic plan 2006-2011*. Government of Lesotho.

National AIDS Commission. 2006. *National HIV and AIDS policy*. Government of Lesotho.

Ncube, NB, Meintjes, WA & Chola, L. 2014. *Knowledge and attitude of non-occupational HIV post-exposure prophylaxis amongst first and second year medical students at Stellenbosch University in South Africa*. From: [www.ncbi.nlm.nih.gov/pubmed/26245421](http://www.ncbi.nlm.nih.gov/pubmed/26245421) (accessed 23 April 2016).

New York State Department of Health AIDS Institute. 2014. *HIV prophylaxis following non-occupational exposure*. From: <http://www.hivguidelines.org/wp-content/uploads/20/prophylaxis-following-non-occupational-exposure.pdf> (accessed 20 March 2015).

Nwankwo, TO & Aniebue, UU. 2011. *Percutaneous injuries and accidental blood exposure in surgical residents: Awareness and use of prophylaxis in relation to HIV*. From: [www.ajol.info/index.php/njcp/article/viewfile/6578/53406](http://www.ajol.info/index.php/njcp/article/viewfile/6578/53406) (accessed 22 April 2016).

Owolabi, RS, Alabi, P, Ajayi, S, Daniel, O, Ogundiran, A, Akande, TM & Onafowakan, T. 2012. Knowledge & practice of post-exposure prophylaxis (PEP) against HIV infection

among health care providers in a tertiary hospital in Nigeria. *SAGE Journals*. From: [www.jia.sagepub.com/content/11/3/179.short](http://www.jia.sagepub.com/content/11/3/179.short) (accessed 22 April 2016).

Parahoo, K. 2014. *Nursing Research: Principles, Processes and Issues*. 3<sup>rd</sup> edition. Hampshire: Macmillan Publishers Limited.

Polit, FD & Beck, TC. 2012. *Nursing research: Generating and assessing evidence for nursing practice*. 9<sup>th</sup> edition. Philadelphia: Lippincott Williams & Wilkins.

Puro, V, Palummieri, A, De Carli, G, Piselli, P & Ippolito, G. 2013. *Attitude towards antiretroviral pre-exposure prophylaxis (PrEP) prescription among HIV specialists*. From: [www.bmcinfectdis.biomedcentral.com/articles/10.1186/1471-2334-13-217](http://www.bmcinfectdis.biomedcentral.com/articles/10.1186/1471-2334-13-217) (accessed 23 April 2016).

Rees, C. 2011. *Introduction to Research for Midwives*. 3<sup>rd</sup> edition. Churchill Livingstone: Elsevier Limited.

Rey, D 2014. Expert Review of Anti-infective therapy: post-exposure prophylaxis for HIV infection. *Taylor & Francis*. 9(4):[1]. From: <http://www.tandfonline.com/doi/pdf/10.1586/eri.11.20> (accessed 30 October 2015).

Rodriguez, A., Castel, AD, Parish, CL, Willis, S, Feaster, DJ, Kharfen, M, Gardenas, GA, Villamiza, K, Kolber, M, Vazquez-Rivera, L & Metsch, LR. 2013. HIV Medical providers' perceptions of the use of antiretroviral therapy as non-occupational post-exposure prophylaxis (nPEP) in two major metropolitan areas. *J.Acquir Immune Defic Syndr*.2013 Nov 1;64(oi); doi10.1097/QAI.0b013e3182a901a2. From: [www.ncbi.nlm.nih.gov/pmc/articles/PMC3845443/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3845443/) (accessed 18 April 2016).

Sabbah, I, Sabbah, H, Sabbah, S, Akoum, H & Droubi, N. 2013. Occupational exposures to blood and body fluid (BBF): *Assessment of knowledge, attitude and practice among health care workers in general hospitals in Lebanon*. From: [www.scirp.org/juornal/paperinformation.aspx?paperID=26524](http://www.scirp.org/juornal/paperinformation.aspx?paperID=26524) (accessed 01/05/2016).

Shaghaghian, S, Pardis, S & Mansoori, Z. 2014. Knowledge, attitude and practice of dentists towards prophylaxis after exposure to blood and body fluids. *The International Journal of occupational and environmental medicine*. From: [www.theijoem.com/ijoem/index.php/ijoem/article/viewArticle/379](http://www.theijoem.com/ijoem/index.php/ijoem/article/viewArticle/379) (accessed 23 April 2016).

Shevkani, M, Kavina, B, Kumar, P, Purohit, H, Nihalani, U & Shah, A. 2011. AN overview of post exposure prophylaxis for HIV in Health care personals: Gujarat Scenario. *Indian Journal of Sexually Transmitted Diseases*. From: [www.ijstd.org/article.asp?issn=0253-7184;year=2011;volume-32;issue=1;spage=13;aulast=Shevkani](http://www.ijstd.org/article.asp?issn=0253-7184;year=2011;volume-32;issue=1;spage=13;aulast=Shevkani) (accessed 22 April 2016).

Singh, G, Din Ahmad, MUD, Munner, S, Sabah, NU, Baig, W, & Khan, A. 2015. Assessment of knowledge, attitude and practice towards post-exposure prophylaxis for HIV among health care professionals in Lahore. *Occupational Medicine & Health Affairs* 3:208.doi:10.4172/2329-6879.1000208. From: <https://www.escincecentral.org/journals/assessment-of-knowledge,-attitude-and-practice-towards-post-exposure-prophylaxis-for-HIV-among-health-care-professionals-in-lahore-2329-6879-1000208.php?aid=58578> (accessed 22 April 2016).

Tesfaye, G, Gebeyehu, H & Likisa, J. 2014. Knowledge, attitude and practice towards HIV post-exposure prophylaxis of health professionals of Gimbi town in Ethiopia: a cross-sectional study. *International Journal of Research in Medical Sciences*. From: [http://www.scopemed.org/?mno=1497\\_13](http://www.scopemed.org/?mno=1497_13) (accessed 23 April 2016).

Thomas, G. 2013. How to do your Research project: A guide for students in Education and Social and Applied Sciences. 2<sup>nd</sup> edition. London: SAGE.

Joint United Nations Programme on HIV/AIDS. 2015. *AIDS by the numbers 2015*. From: [https://www.unaids.org/sites/default/files/media\\_asset/AIDSbythenumbers2015en.pdf](https://www.unaids.org/sites/default/files/media_asset/AIDSbythenumbers2015en.pdf) (accessed 19 July 2016).

United States Agency for International Development. 2013. *Comprehensive review of biomedical, behavioural and structural determinants of HIV risk and protective factors and best practices in HIV prevention*. From:



[https://www.hivsharespace.net/system/files/SADC HIV Literature Review March2013.pdf](https://www.hivsharespace.net/system/files/SADC_HIV_Literature_Review_March2013.pdf) (accessed 18 April 2015).

Uzochukwu, Sibeudu, FT, Ughasoro, Okwuosa, C & Onwujekwe, OE. 2014. How do primary health care workers perceive and practice post-exposure prophylaxis for HIV in Enugu State. *Journal of AIDS & Clinical Research* 5:381.doi:10.4172/2155-6113.1000381. From: [www.omicsonline.org/open-access/how-do-primary-health-care-workers-perceive-and-practice-post-exposure-prophylaxis-for-hiv-in-enugu-state-2155-6113.1000381.php?aid=36012](http://www.omicsonline.org/open-access/how-do-primary-health-care-workers-perceive-and-practice-post-exposure-prophylaxis-for-hiv-in-enugu-state-2155-6113.1000381.php?aid=36012) (accessed 22 April 2016).

Van Dyk, A. 2013. *HIV and AIDS Education, Care and Counselling: A multidisciplinary approach*. 5<sup>th</sup> edition. Cape Town: Pearson.

Volberding, PA, Greene, WC, Lange, JMA, Gallant, JE & Sewankambo, N. 2012. *Sande's HIV/AIDS Medicine: Global care*. 2<sup>nd</sup> edition. China: Elsevier Saunders.

Weller, BF. 2014. *Baillierre's Nurses' Dictionary*. 26<sup>th</sup> edition. China: Elsevier.

World Health Organization. 2014. *Guidelines on post-exposure prophylaxis for HIV and the use of co-trimoxazole prophylaxis for HIV-related infections among adults, adolescents and children: Recommendations for a public health approach*. (December 2014 supplement to the 2013 consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection). Geneva. WHO Press. From: [http://www.who.int/hiv/pub/guidelines/arv2013/upplement\\_march2014/en/](http://www.who.int/hiv/pub/guidelines/arv2013/upplement_march2014/en/) (accessed 08 March 2015).

World Health Organization. 2016. *HIV/AIDS*. From: <https://www.who.int/mediacentre/factsheets/fs360en/> (accessed 20 July 2016).

Young, T, Arens, FJ, Kennedy, GE, Laurie, JW & Rutherford, GW. 2012. *Antiretroviral post-exposure prophylaxis (PEP) for occupational HIV exposure (Review)*. The Cochrane collaboration. John Wiley & Sons, Ltd. From: <http://www.thecochranelibrary.com> (accessed 14 April 2015).

## ANNEXURES

### ANNEXURE 1: Ethical clearance certificate from Health Studies Higher Degrees Committee at the University of South Africa



**UNIVERSITY OF SOUTH AFRICA  
Health Studies Higher Degrees Committee  
College of Human Sciences  
ETHICAL CLEARANCE CERTIFICATE**

**REC-012714-039**

**MSHDC/469/2015**

Date: 25 November 2015

Student No: 5758-539-3

Project Title: Assessment of knowledge, attitudes and utilization of HIV post exposure prophylaxis among adults.

Researcher: Maselobe Anna Lebona

Degree: MA in Nursing Science

Code: MPCHS94

Supervisor: Prof AH Mayhandu-Mudzusi

Qualification: D Litt et Phil

Joint Supervisor: -

**DECISION OF COMMITTEE**

Approved



Conditionally Approved



**Prof L Roets**

**CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE**

**Prof MM Moleki**

**ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES**

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES.

## ANNEXURE 2: Letter of permission from the National Health Research and Ethics Committee (Ministry of Health Lesotho)

  
LESOTHO

REF: ID<sup>92</sup>~~87~~-2015

Date: 12 February 2016

To:  
**Maselobe Lebona**  
MA Nursing Science candidate  
University of South Africa (UNISA)  
Pretoria, RSA

Dear **Maselobe Lebona**

**Ministry of Health**  
PO Box 514  
Maseru 100

**Category of Review:**  
 Initial Review  
 Continuing Annual Review  
 Amendment/Modification  
 Reactivation  
 Serious Adverse Event  
 Other \_\_\_\_\_

**RE: Assessment of Knowledge, Attitudes and Utilization of HIV PEP among Adults, Roma, Lesotho (ID 92-2015)**

This is to inform you that on 12 February 2016 the Ministry of Health Research and Ethics Committee reviewed and **APPROVED** the above named protocol and hereby authorizes you to conduct the study according to the activities and population specified in the protocol. Departure from the approved protocol will constitute a breach of this permission.

This approval includes review of the following attachments:  
 Protocol version 11 December 2015  
 English consent forms  
 Sesotho consent forms  
 Data collection forms  
 Participant materials:  
 Other materials:

This approval is **VALID** until 30 January 2017.

Please note that an annual report and request for renewal, if applicable, must be submitted at least 6 weeks before the expiry date.

All serious adverse events associated with this study must be reported promptly to the MOH Research and Ethics Committee. Any modifications to the approved protocol or consent forms must be submitted to the committee prior to implementation of any changes.

We look forward to receiving your progress reports and a final report at the end of the study. If you have any questions, please contact the Research and Ethics Committee at [rcumoh@gmail.com](mailto:rcumoh@gmail.com) (or) 22226317.

Sincerely,

**Dr. Nyane Letsie**   
Director General Health Services (a.i)

  
**Mrs. V.T. Lehana**  
Chairperson National Health-Institutional Review Board (NH-IRB)

### ANNEXURE 3: Letter of permission from St Joseph's hospital

31<sup>st</sup> March 2016

**MASELOBE LEBONA**

College of Human Sciences

UNISA

Dear Miss/Madam,

**RE: REQUEST TO CONDUCT RESEARCH AT ST.JOSEPH'S HOSPITAL**

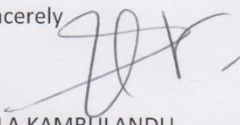
Your letter dated 01<sup>st</sup> March 2016 on the above matter refers.

I am glad to inform you that your request has been approved and you are allowed to conduct your study on **"Assessment of knowledge, attitude and utilization of HIV post-exposure prophylaxis among adults seeking out- patient services"** at St. Joseph's Hospital.

Kindly strictly comply with ethical rules on patient's information confidentiality at all time.

Hoping to receive a copy of your final report, I would like to wish you success in your study.

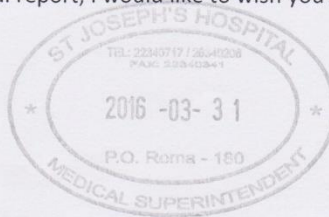
Yours sincerely

  
**DR. MUILA KAMBULANDU**

Medical Superintendent

CC: - MHNS

- PHCD



## **ANNEXURE 4A: Consent form (English)**

### **Part 1: Information sheet**

Ethics clearance reference number: REC-012714-039

Research permission reference number: HSHDC/469/2015

**Title: ASSESSMENT OF KNOWLEDGE, ATTITUDES AND UTILISATION OF HIV POST-EXPOSURE PROPHYLAXIS AMONG ADULTS, ROMA, LESOTHO**

### **Dear Prospective Participant**

My name is Maselobe Lebona. I am currently registered for a Master of Arts in Nursing Science with the University of South Africa (UNISA) and have to complete a dissertation as part of the requirements for the programme. The title of my intended study is as follows: ***Assessment of knowledge, attitudes and utilisation of hiv Post-Exposure Prophylaxis among adults, Roma, Lesotho. The study will be supervised by Professor AH. Mavhandu-Mudzusi, in the Department of Health Studies. I am requesting you to participate in this study.***

### **WHAT IS THE PURPOSE OF THE STUDY?**

The purpose of the study is to determine knowledge, attitudes and utilisation of HIV Post-Exposure Prophylaxis among adults in Roma Lesotho in order to develop a communication strategy for promoting the use of PEP among adults in Roma, Lesotho

### **WHY AM I BEING INVITED TO PARTICIPATE?**

You were chosen randomly as an adult out-patient at St Joseph's Hospital. You will be participating in the study with 95 other out-patients.

### **WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?**

As a participant, you will be required to complete a questionnaire. The questionnaire consists of multiple-choice questions with options to choose from, questions in the form of a checklist and a few questions that require responses in writing. The questionnaire will require approximately 20 minutes of your time.

## **CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?**

Your participation is completely voluntary, you are free to refuse to participate, to withdraw your consent (if the questionnaire has not yet been submitted) or to discontinue participating in the study at any point you feel you need to without having to explain, and you will suffer no penalty or loss. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form.

## **WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

There will be no direct benefits or compensation to you for taking part in the study, however the researcher hopes the findings will help benefit the Nation in the fight against HIV/AIDS.

## **ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?**

You will suffer no harm by taking part in the study, and the researcher guarantees anonymity to ensure that no information obtained from you as a participant leaks. The researcher however apologises in advance for any inconvenience that may result from your taking part in the study.

## **WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?**

Only the researcher and or the fieldworker, having delivered the questionnaire to you, will know about your involvement in this research and no one will be able to connect you to the answers you give. Even the researcher will not be able to connect the data to individual respondents as completed questionnaires will be dropped in boxes placed at different stations at the Hospital, and findings will be generalized. Only the researcher will have access to the data, and all data will be kept under lock and key at the researcher's office. Note however that, if necessary, your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee.

The information you provide may be used in the research report or in journal articles should the study be submitted for publication, however individual respondents will not be identifiable.

### **HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?**

Hard copies of your answers will be stored by the researcher for a period of five years in a locked filing cabinet at the researcher's office for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded and/or electronic copies will be permanently deleted from the hard drive of the computer if necessary.

### **WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?**

Respondents will not receive any form of payment or incentives for taking part in the study. Should respondents incur any costs as a result of the study, the researcher will refund them accordingly.

### **HAS THE STUDY RECEIVED ETHICS APPROVAL**

The study has received ethical clearance from the Research Ethics Review Committee of the Departmental Higher Degrees Committee at Unisa. Permission is also granted by Department of Health. Permission is also obtained from the hospital management.

### **HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?**

If you would like to be informed of the final research findings, please contact the researcher, Maselobe Lebona, on +26657682483 or [mslblebona519@gmail.com](mailto:mslblebona519@gmail.com). Should you require any further information or want to contact the researcher about any aspect of this study, please contact the above mentioned person.

Should you have concerns about the way in which the research has been conducted, you may contact +27124292055 or [mmudza@unisa.ac.za](mailto:mmudza@unisa.ac.za). Alternatively, contact Professor L Roets, the research ethics chairperson of the Departmental Higher Degrees Committee at Unisa.

Thank you for taking time to read this information sheet and for participating in this study.

Thank you.

.....  
Maselobe A. Lebona



**Part 2: Respondent consent**

**CONSENT TO PARTICIPATE IN THIS STUDY**

I, \_\_\_\_\_ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the questionnaire.

I have received a signed copy of the informed consent agreement.

Participant Signature.....Date.....

Researcher's Name & Surname.....(please print)

Researcher's signature.....Date.....

## **ANNEXURE 4B: Consent form (Sesotho)**

### **Part 1: Information sheet**

Ethics clearance reference number: REC-012714-039

Research permission reference number: HSHDC/469/2015

**Title: ASSESSMENT OF KNOWLEDGE, ATTITUDES AND UTILIZATION OF HIV POST-EXPOSURE PROPHYLAXIS AMONG ADULTS SEEKING OUT-PATIENT SERVICES AT ST JOSEPH'S HOSPITAL IN ROMA, LESOTHO.**

### **HO EA TLANG HO NKA KAROLO,**

Lebitso la ka ke Maselobe Lebona, ke ntse ke etsa boithuto le Professor Mavhandu-Mudzusi, lekaleng la lithuto tsa Bophelo, ke ithutela lengolo la "Master's".

Ke u memela ho nka karolo boithutong bona: Tlhahlobo ea tsebo, maikutlo, le ts'ebeliso ea litlhare tse thibelang ts'oaetso ea HIV kamora ho hahlameloa/thetsoa ke maro a nang le ts'oaetso ea kokoana-hloko ena (PEP), bathong ba baholo Roma, Lesotho.

### **MORERO OA BOITHUTO KE OFE?**

Boithuto bona ke bo etsa ho batlisisa hore na Basotho bana le tsebo e kae ka litlhare tsena tsa PEP, le hore na maikutlo a bona mabapi le tsona ke afe, le ho tseba hore na ba ea li sebelisa na.

### **HOBANENG KE MEMETSOE BOITHUTONG BONA?**

U memiloe feela hobane u le e mong ua bakuli ba batho ba baholo sepetleleng sena sa St Joseph Roma. U tla kena lipatlisisong tsena le bakuli ba bang ba mashome a robong le metso e mehlano.

### **EBE KAROLO EA KA BOITHUTONG BONA KE EA MOFUTA OFE NA?**

Joalo ka mo-nka karolo, u tla tlatsa foromo ea lipotso (questionnaire). Foromo ena e kenyelelitse lipotso tse nang le likarabo moo u ka ikhethelang karabo e arabelang litaba

tša hau ebe u ts'oaea e nepahetseng, tse ling tša lipotso tsena li hloka likarabo tse ngoloang. Lipotso tsena li tla nka feela metsotso e ka bang mashome a mabeli a nako ea hau.

### **ANA NKA KHETHA HO ITOKOLLA BOITHUTONG BOO LE HA KE NE KE SE KE ILE KA ITLAMA HO NKA KAROLO?**

Ho nka karolo ke boikhethelo ba hau, u lokolohile hore u ka hana ho nka karolo, u ka itokolla boitlamong (haeba foromo ea lipotso e ntse ele matsohong a hau), kapa hona ho emisa ho nka karolo boithutong neng kapa neng ha u utloa ho hloka hala, ntle le ho fana ka mabaka, mme u ke ke ua lahlehelo ke letho kapa hona ho nyefoloa ka tsela efe kapa efe. Ha u nka qeto ea ho nka karolo, u tla fuoa kh'opi (copy) ea tokomane ena hore ebe ea hau, mme u tla tekena lengolo la boitlamo.

### **KE TLA UNA MELEMO EFE KA HO NKA KAROLO?**

Ha ho na melemo eo u tlang ho e una ka kotloloho, kapa eona patala ha u nka karolo boithutong, empa moithuti (researcher) o ts'epa hore boithuto bona botla tsoela sechaba ka kakaretso molemo toants'ong ea HIV/AIDS.

### **NA HO TLA BA LE LITLA-MORAO TSE BOSULA HO NNA HA KE NKA KAROLO BOITHUTONG BOO?**

U ke ke ua lemala ka tsela efe kapa efe ha u nka karolo boithutong, mme moithuti u itlama hore lebitso la hau ha le na ho hlahella litabeng. Le ha ho le joalo moithuti o kopa ts'oarelo e sa le joale ka ts'itiso e ka bakoang ke ho nka karolo hoa hau boithutong bona.

### **NA LITABA TSEO KE TLA FANA KA TSONA HO MOITHUTI LE BOITSIBISO BA KA ETLA BA LEKUNUTU?**

Ke moithuti feela, le mothusi oa hae, ka mora ho u fa foromo ea lipotso, ba tlang ho tseba ka ho nka karolo hoa hau boithutong bona. Ha ho e mong ea tlang ho u amahanya le litaba tseo u tlang ho fana ka tsona. Le eena moithuti a ke ke a ba le bokhoni ba ho amahanya ba nkileng karolo le litaba hobane liforomo tša lipotso tse tlatsitsoeng li tla

mabokoseng a behiloeng libakeng tse fapakaneng sepetelele moo. Hape liphetho li tla akaretsoa.

Ke moithuti feela ea tlang ho ba le monyetla oa ho fihlela liforomo tse tlatsitsoeng, mme liforomo tsohle li tla notlolloa ofising ea moithuti. Hlokomela hore ha ho hlokahala likarabo tsa hau li ka nna tsa feta tlasa bahlahlobi ho bona hore boithuto bo phethahetse ka nepo.

Litaba tseo u fanang ka tsona li ka nna tsa sebelisoa lingoloeng empa le ha ho le joalo mabitso a ba nkileng karolo a ke ke a hlahella.

### **MOITHUTI O TLA NETEFATSA JOANG TS'IRELETSEHO EA LITABA?**

Liforomo tse tlatsitsoeng li tla bolokoa ofising ea moithuti nako ea lilemo tse hlano, ka hara lebokose le notletsoeng, moo li ka sebelisoang bakeng sa lipatlisiso tsa ka moso kapa ho ithuta; litaba tse kh'omphutheng (computer) tsona li tla sireletsoa ka nomoro ea lekunutu.

Ts'ebeliso ea ka moso ea litaba e tla feta tlasa bahlahlobi hape ha ho hlokahala.

Ha ho hlokahala, liforomo tse tlatsitsoeng li tla taboloa, mme litaba tse kh'omphutheng li tla hlakoleloa ruri.

### **NA KE TLA FUMANA PATALA KAPA LETHO BAKENG SA HO NKA KAROLO?**

U ke ke ua fumana letho bakeng sa ho nka karolo boithutong bona. Empa ha u ka qetella u kene lits'enyehelong ka lebaka la boithuto bona, moithuti u tla u khutlisetsa lits'enyehelo tse joalo.

#### **Na boithuto bo fumane tumello**

Boithuto bo fumane tumello ho tsoa ho Research Ethics Review Committee ea Departmental High Degrees Committee UNISA. Tumello e fanoe hape le ke Lekala la Bophelo UNISA le ho tsoa ho bookameli ba sepetelele.

### **KE TLA TSEBISOA JOANG KA SE TLANG HO FUMANOA/SEPHETHO BOITHUTONG BOO?**

Ha u na le khahleho ea ho tseba ka sephetho sa boithuto, u ka letsetsa moithuti, Maselobe Lebona, linomorong tsena +26657682483 kapa ua romela email ho [mslblebona519@gmail.com](mailto:mslblebona519@gmail.com).

Ha u ka hloka litlhalosetso kapa hona ho bua le moithuti letsetsa tsona linomoro tse fanoeng kaholimo.

Ha u ka ba le ho se khotsofale ka tsela eo boithuto bo tsamaisoang ka teng, u ka letsetsa linomoro tsena +27124292055, kapa ua romela email ho [mmudza@unisa.ac.za](mailto:mmudza@unisa.ac.za). Kapa u ka ikopanya le Molulasetulo oa Departmental Higher Degrees Committee maane Unisa, e leng Professor L. Roets.

Ke leboha ho nka boikhathatso ba ho bala litaba tsena le ho nka karolo boithutong bona.

Kea leboha.

.....

Maselobe Lebona

## Part 2: Respondent consent (Sesotho)

### BOITLAMO BA HO NKA KAROLO

'Na, \_\_\_\_\_ (lebitso la ea nkang karolo), ke paka hore motho ea batlang boitlamo ba ka boithutong bona u ntlhaloselitse ka botlalo semelo, mekhoha le melemo ea boithuto.

Ke balile (u ntlhaloselitse) mme ke utloisisa joalo ka ha ho ngoliloe.

Ke bile le monyetla oa ho botsa lipotso mme ke maemong a ho nka karolo boithutong bona.

Kea utloisisa hore ho nka karolo hoa ka ke boikhethelo ba ka, mme nka etsa qeto ea ho tsoa boithutong bona nako efe kapa efe ntle le litla-morao tse bosula.

Kea utloisisa hore liphetho tsa boithuto bona li tla sebelisoa lingoloeng (research report, journals, etc) empa ho nka karolo hoa ka e tla ba lekunutu.

Ke itlama ho tlatsa foromo ea lipotso.

Ke fumane kh'opi e tekennoeng ea boitlamo ba ka.

Tekeno ea ea nkang karolo.....Letsatsi.....

Lebitso la moithuti.....

Tekeno ea moithuti.....Letsatsi.....

## ANNEXURE 5A: Questionnaire (English)

### INSTRUCTIONS:

Do not write your name in the questionnaire.

**Complete the following items by circling the appropriate response and by writing a short response where necessary.**

The questionnaire has four (4) Sections.

Give your most honest response for each question.

Complete the questionnaire in black ballpoint pen.

<b>SECTION A: DEMOGRAPHIC DATA</b>			
1.	What gender are you? <ul style="list-style-type: none"> <li>• Male</li> <li>• Female</li> </ul>		
2.	How old are you? <ul style="list-style-type: none"> <li>• 18 - 24 years old</li> <li>• 25 - 29 years old</li> <li>• 30 – 34 years old</li> <li>• 35 – 39 years old</li> <li>• 40 years and older</li> </ul>		
3.	What is your marital status? <ul style="list-style-type: none"> <li>• Single</li> <li>• Married</li> <li>• Divorced</li> <li>• Separated</li> <li>• Other (specify).....</li> </ul>		
4.	Indicate your highest educational qualification. <ul style="list-style-type: none"> <li>• None</li> <li>• PSLE</li> <li>• JC</li> <li>• COSC/Equivalent</li> </ul>		

	<ul style="list-style-type: none"> <li>• Diploma</li> <li>• Degree</li> <li>• Other (specify).....</li> </ul>		
5.	<p>What is your religious background?</p> <ul style="list-style-type: none"> <li>• Christianity</li> <li>• Muslim</li> <li>• Hinduism</li> <li>• Ancestral worship</li> <li>• Other (specify).....</li> </ul>		
6.	<p>What is your occupation?</p> <p>.....</p>		
<b>SECTION B :KNOWLEDGE</b>			
7	<p>Have you ever heard of Post-Exposure Prophylaxis?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>		
8	<p>If your answer above is yes, what/who was your source of information?</p> <ul style="list-style-type: none"> <li>• Friend/ Relative</li> <li>• Health facility</li> <li>• Radio</li> <li>• Television</li> <li>• Internet</li> <li>• Training</li> <li>• Written source</li> <li>• Other.....</li> </ul>		
9	<p>PEP refers to antiretroviral (ARV) medication used to prevent HIV infection.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		



10.	<p>PEP is medication given to HIV positive people after being tested.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
11.	<p>PEP is medication given to HIV negative people to prevent acquisition of HIV after being exposed to HIV infected body fluids.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
12.	<p>PEP is taken for one week only.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
13.	<p>HIV negative people do not need to take PEP.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
14.	<p>PEP is given to nurses and doctors only.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
15.	<p>PEP can be started 5 days after being exposed to HIV.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
16.	<p>You cannot be given PEP when you have been exposed to HIV through consensual sexual intercourse.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		

17.	PEP is taken for 28 days only.  <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
18	PEP is a lifelong medication.  <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
19	PEP medication has no side effects  <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
20	PEP medication can be used as a primary preventive measure for HIV.  <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
21.	You need to be tested for HIV before you can receive PEP medication.  <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
22.	PEP can cure HIV.  <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		
23	Frequent use of PEP can cause drug resistance.  <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> <li>• I don't know</li> </ul>		

**SECTION C: ATTITUDE**

24	<p>PEP is an important measure of HIV prevention.</p> <ul style="list-style-type: none"> <li>• Strongly agree</li> <li>• Agree</li> <li>• Undecided</li> <li>• Disagree</li> <li>• Strongly disagree</li> </ul>		
25	<p>Everyone should have access to PEP.</p> <ul style="list-style-type: none"> <li>• Strongly agree</li> <li>• Agree</li> <li>• Undecided</li> <li>• Disagree</li> <li>• Strongly disagree</li> </ul>		
26	<p>PEP can reduce the likelihood of HIV infection.</p> <ul style="list-style-type: none"> <li>• Strongly agree</li> <li>• Agree</li> <li>• Undecided</li> <li>• Disagree</li> <li>• Strongly disagree</li> </ul>		
27	<p>If you had to, would you use PEP?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>		
28	<p>If you answered No above (27), why would you choose not to?</p> <ul style="list-style-type: none"> <li>• Fear of being stigmatized</li> <li>• Fear of possible side effects</li> <li>• Other (specify).....</li> </ul> <p>.....</p>		
29	<p>PEP can help reduce new HIV infections?</p> <ul style="list-style-type: none"> <li>• Strongly agree</li> <li>• Agree</li> <li>• Undecided</li> <li>• Disagree</li> <li>• Strongly disagree</li> </ul>		
30	<p>What are your general feelings about PEP?.....</p>		

	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>		
31	<p>Is your answer above (30) influenced by the following:</p> <ul style="list-style-type: none"> <li>• Culture</li> <li>• Religion</li> <li>• Peers</li> <li>• Other (specify)</li> </ul>		
<b>SECTION D: UTILISATION</b>			
32	<p>Have you ever taken PEP?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>		
33	<p>If you answered Yes above (32), what was the reason for taking PEP?</p> <p>.....</p>		
34	<p>Do you know of anyone who has taken PEP?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>		
35	<p>If you answered Yes above (34), what was their reason for taking PEP?</p> <p>.....</p> <p>.....</p>		
36	<p>Do you know of anyone who has tried to access PEP services but was unable to?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>		
37	<p>If you answered Yes above (36), why was that individual unable to access PEP services?.....</p> <p>.....</p> <p>.....</p>		
38	<p>Do you think you have ever been exposed to potentially HIV-infected body fluids? (e.g. condom slippage/breakage, unanticipated unprotected sexual intercourse, exposure to infected blood, etc.)</p>		

	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• I don't know</li> </ul>		
39	<p>If you answered Yes above (38), what did you do after the incident?</p> <ul style="list-style-type: none"> <li>• Visited a health care facility</li> <li>• Washed the affected area</li> <li>• Nothing</li> <li>• Other (specify).....</li> </ul>		
40	<p>Indicate the reason for your action in the above question?</p> <p>.....</p> <p>.....</p> <p>.....</p>		
41	<p>Do you think you acted in the right way (above)?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>		

**Thank you**

**TATAISO:**

**Se ngole lebitso la hau pampiri-potsong ena.**

**Araba ka ho ts'oea karabo e nepahetseng le ka ho ngola ha khuts'oanyanyane moo ho hlokahalang libakeng tse fanoeng.**

Pampiri-potso ena e na le likarolo tse nne (4).

Ka kopo araba lipotso tsohle ka bots'epehi.

Sebelisa pene e nts'o ho araba lipotso.

<b>KAROLO EA A: BOITSEBISO</b>			
1.	U motona kapa mots'ehali? <ul style="list-style-type: none"><li>• Motona</li><li>• Mots'ehali</li></ul>		
2.	U oela lilemong li feng? <ul style="list-style-type: none"><li>• 18 - 24</li><li>• 25 - 29</li><li>• 30 – 34</li><li>• 35 – 39</li><li>• 40 le ho feta</li></ul>		
3.	Boemo ba hau ba lenyalo ke bofe? <ul style="list-style-type: none"><li>• Ha ke ea nyaloa/nyala</li><li>• Ke nyetsoe/nyetse</li><li>• Ke hlalile</li><li>• Ke arohane le molekane</li><li>• Ho hong (hlalosa).....</li></ul>		
4.	U fihleletse lengolo lefe la sekolo? <ul style="list-style-type: none"><li>• Ha kena lona</li><li>• PSLE</li><li>• JC</li><li>• COSC/ho ts'oanang</li><li>• Diploma</li><li>• Degree</li><li>• Le leng (hlalosa).....</li></ul>		

5.	<p>Tumelo ea hau ke efe (kereke)?</p> <ul style="list-style-type: none"> <li>• Mokreste</li> <li>• Muslim</li> <li>• Hinduism</li> <li>• Balimo</li> <li>• E nngoe (hlalosa).....</li> </ul>		
6.	<p>U sebetsa hokae, u le eng?</p> <p>.....</p>		
<b>KAROLO EA B : TSEBO</b>			
7	<p>Na u kile ua utloela ka lithhare tse thibelang ts'oaetso ea HIV kamora ho kopana le maro a nang le tso'aetso (PEP)?</p> <ul style="list-style-type: none"> <li>• E</li> <li>• Che</li> </ul>		
8	<p>Haeba karabo ea hau kaholimo ke E, u ne u utloa litaba tseo hokae/ho mang?</p> <ul style="list-style-type: none"> <li>• Motsoalle/ Oa leloko</li> <li>• Setsing sa Bophelo</li> <li>• Radio</li> <li>• Television</li> <li>• Marangrang</li> <li>• Koetlisong</li> <li>• Lingoloeng</li> <li>• Ho hong (hlalosa).....</li> </ul>		
9	<p>PEP ke lithhare tsa li ARV tse sebelisoang ho thibela ts'oaetso ea HIV?</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		

10.	<p>PEP ke litlhare tse fuoang batho ba nang le ts'oaetso ea HIV ka mora ho hlahlojoa.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
11.	<p>PEP ke litlhare tse fuoang batho ba sokang ba eba le ts'oaetso ea HIV ho thibela hore ba se fumane ts'oaetso ka mora ho hahlangoeloa ke maro a 'mele a nang le ts'oaetso.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
12.	<p>Litlhare tsa PEP li sebelisoa beke ele nngoe feela.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
13.	<p>Batho ba so kang ba eba le ts'oaetso ea HIV ha ba hloke ho noa litlhare tsa PEP.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
14.	<p>PEP e fua manese le lingaka feela.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
16.	<p>U ka se fuae PEP ha u hahlametsoe ke HIV ka mokhoa oa thobalano eo uena le molekane le lumellaneng.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		



17.	<p>PEP e noa matsatsi a mashome a mabeli a metso e robeli (28) feela.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
18	<p>PEP ke lithare tsa bophelo bohle.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
19	<p>Lithare tsa PEP ha lina litlamorao.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
20	<p>PEP e ka sebelisoa ese mokhoa oa mantlha oa ho thibela tso'aetso ea HIV.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
21.	<p>U hloka ho hlahlobeloa HIV pele u ka fumana PEP.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
22.	<p>PEP e ka folisa HIV.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		
23	<p>Ho sebelisa PEP khafetsa ho ka qetella ho etsa hore lithare tseo li hloke matla mmeleng.</p> <ul style="list-style-type: none"> <li>• Ke nnete</li> <li>• Ha se nnete</li> <li>• Ha ke tsebe</li> </ul>		

**KAROLO EA C: MAIKUTLO**

24	<p>PEP ke mokhoa o bohlokoa oa ho thibela ts'oaetso ea HIV.</p> <ul style="list-style-type: none"> <li>• Ke lumela haholo</li> <li>• Kea lumela</li> <li>• Ha kena qeto</li> <li>• Kea hana</li> <li>• Ke hana haholo</li> </ul>		
25	<p>Bohle ba tlameha ho fumana PEP ha ho hlokahala.</p> <ul style="list-style-type: none"> <li>• Ke lumela haholo</li> <li>• Kea lumela</li> <li>• Ha kena qeto</li> <li>• Kea hana</li> <li>• Ke hana haholo</li> </ul>		
26	<p>PEP e ka fokotsa menyetla ea ts'oaetso ea HIV.</p> <ul style="list-style-type: none"> <li>• Ke lumela haholo</li> <li>• Kea lumela</li> <li>• Ha kena qeto</li> <li>• Kea hana</li> <li>• Ke hana haholo</li> </ul>		
27	<p>Ha ho se ho hlokahala, na u ka sebelisa PEP?</p> <ul style="list-style-type: none"> <li>• E</li> <li>• Che</li> </ul>		
28	<p>Haeba karabo ea hau kaholimo (27) e bile Che, hobaneng u ka se khethe ho sebelisa PEP?</p> <ul style="list-style-type: none"> <li>• Ho ts'aba ho khetholloa</li> <li>• Ho ts'aba litlamorao tsa litlhare tsa PEP</li> <li>• Ho hong (hlalosa).....</li> </ul> <p>.....</p>		
29	<p>PEP e ka thusa ho fokotsa ts'oaetso e ncha ea HIV?</p> <ul style="list-style-type: none"> <li>• Ke lumela haholo</li> <li>• Kea lumela</li> </ul>		

	<ul style="list-style-type: none"> <li>• Ha kena qeto</li> <li>• Kea hana</li> <li>• Ke hana haholo</li> </ul>		
30	<p>Maikutlo a hau ke afe mabapi le PEP?.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>		
31	<p>Karabo ea hau kaholimo (30) e na le ts'uts'umetso ea efeng ho tse latelang?</p> <ul style="list-style-type: none"> <li>• Setso</li> <li>• Tumelo</li> <li>• Metsoalle</li> <li>• Ho hong (hlalosa).....</li> </ul>		
<b>KAROLO EA D: TS'EBELISO</b>			
32	<p>Na ukile ua noa litlhare tsa PEP?</p> <ul style="list-style-type: none"> <li>• E</li> <li>• Che</li> </ul>		
33	<p>Haeba karabo ea hau kaholimo (32) ke E, lebaka ene ele lefe?</p> <p>.....</p>		
34	<p>Na ho na le motho eo u mo tsebang ea kileng a noa litlhare tsa PEP?</p> <ul style="list-style-type: none"> <li>• E</li> <li>• Che</li> </ul>		
35	<p>Haeba karabo ea hau kaholimo (34) ke E, lebaka leo motho eo a neng a noa litlhare tseo ke lefe?.....</p> <p>.....</p>		
36	<p>Na hona le motho eo u mo tsebang ea kileng a leka ho fumana lits'ebeletso tsa PEP empa a hloleha?</p> <ul style="list-style-type: none"> <li>• E</li> <li>• Che</li> </ul>		
37	<p>Haeba karabo ea hau ka holimo (36) ke E, hobaneng ha motho eo a ile a sitoa ho fumana lits'ebeletso tse joalo?</p> <p>.....</p>		

	..... .....		
38	<p>Na u nahana hore u kile ua hahlameloa ke ts'oaetso ea HIV ka tsela ea maro a mmele? (jk. Ho chophoha/taboha hoa khohlopo (condom) nakong ea thobalano, thobalano e sa ts'ireletsehang e neng e sa lebelloa, ho thetsa mali, joalojoalo)</p> <ul style="list-style-type: none"> <li>• E</li> <li>• Che</li> <li>• Ha ke tsebe</li> </ul>		
39	<p>Haeba karabo ea hau ka holimo (38) ke E, u ile ua etsa eng ka morao ho ketsahalo eo?</p> <ul style="list-style-type: none"> <li>• Ka etela lekala la Bophelo</li> <li>• Ka hlapa moo khahlamelo e bileng teng</li> <li>• Letho</li> <li>• Ho hong (hlalosa).....</li> </ul>		
40	<p>Lebaka leo u ileng ua nka qeto e kaholimo (39) ka lona ke lefe?</p> <p>.....</p> <p>.....</p> <p>.....</p>		
41	<p>U nahana qeto eo u ileng ua e nka (ka holimo) e ne e nepahetse?</p> <ul style="list-style-type: none"> <li>• E</li> <li>• Che</li> </ul>		

**Kea leboha**