KNOWLEDGE OF HIV TRANSMISSION AND PREVENTION AMONG ADOLESCENTS IN TSHWANE WEST DISTRICT, SOUTH AFRICA

by

LUTENDO PHYLLIS TSHITAMBA

submitted in accordance with the requirements

for the degree of

MASTER OF PUBLIC HEALTH

UNIVERSITY OF SOUTH AFRICA

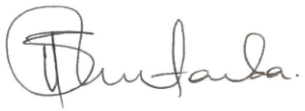
SUPERVISOR: DR MG MAKUA

JUNE 2018

Student number: 56414234

DECLARATION

I declare that **KNOWLEDGE OF HIV TRANSMISSION AND PREVENTION AMONG ADOLESCENTS IN TSHWANE WEST DISTRICT, SOUTH AFRICA** is my own work and that all the sources that I have used 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.



…… 10 June 2018

…… .....

SIGNATURE **DATE**

Lutendo Phyllis Tshitamba

KNOWLEDGE OF HIV TRANSMISSION AND PREVENTION AMONG ADOLESCENTS IN TSHWANE WEST DISTRICT, SOUTH AFRICA

STUDENT NUMBER: 56414234
STUDENT: LUTENDO PHYLLIS TSHITAMBA
DEGREE: MASTER OF PUBLIC HEALTH
DEPARTMENT: HEALTH STUDIES, UNIVERSITY OF SOUTH AFRICA
SUPERVISOR: Dr MG MAKUA

ABSTRACT

The aim of this study was to explore the knowledge of HIV transmission and prevention among adolescents aged between 14 and 16 years at the Tshwane West District. A qualitative exploratory descriptive contextual study was conducted. The World Café approach was used to obtain data from participants in this research. A questionnaire served as the data collection tool to extract data from participants. The study consisted of 37 participants and content analysis was done to analyse data gathered from participants during the World Café. Conclusions were drawn from the study and the findings revealed that the knowledge of HIV transmission and prevention among adolescents in the Tshwane West District is poor.

Key concepts

Adolescents, AIDS, antiretroviral, education, HIV, knowledge, prevention, sexual reproductive health transmission, youth.

.

NḐIVHO YA U PFUKHISELWA NA U THIVHELA HIV KHA VHASWA VHA TSHIṰIRIKI TSHA TSHWANE VHUKOVHELA

ṄOMBORO YA MUGUDI: 56414234
ṀUGUDI: LUTENDO PHYLLIS TSHITAMBA
DIGIRII: MASTER OF PUBLIC HEALTH
MUHASHO: HEALTH STUDIES, UNIVERSITY OF SOUTH AFRICA
MULANGULI: DR MG MAKUA

MANWELEDZO

Ndivho ya ngudo iyi yo vha ya u sedzulusa u pfukhiswa na u thivhela HIV kha vhaswa vha miṅwaha ya 14–16 Tshiṱirikini tsha Tshwane Vhukovhela. Ngudo yo vha ya tsedzuluso ya u tou ṱalutshedza ya khwalithethivi ho sedzwa zwiṅwe. Ho shumiswa nḓila ya *world café* sa ngona malugana na u wana data u bva kha vhashelamulenzhe. Ngudo yo shumisa vhashelamulenzhe vha 37, nahone ha shumiswa tsengulso u ya nga zwi re ngomu malugana na u sengulusa data yo kuvhanganywaho u bva kha vhashelamulenzhe kha *world café*. Khunyelodzo dzo swikelwa kha ngudo, nahone mawanwa o sumbedza uri nḓivho ya u pfukhiselwa na u thivhela HIV kha vhaswa vha tshiṱiriki tsha Tshwane Vhukovhela i fhasi.

Maipfi a ndeme

AIDS, HIV, muswa, nḓivho, u pfukhisela, u thivhela, vhaswa, pfunzo, mutakalo wa zwa vhudzekani, tshithivhelavairasi.

TSEBO MABAPI LE PHETETṠO LE THIBELO YA HIV MAGARENG GA BASWA BA DISTRIKI YA TSHWANE BODIKELA

NOMORO YA MOITHUTI: 56414234
MOITHUTI: LUTENDO PHYLLIS TSHITAMBA
TIKREE: MASTER OF PUBLIC HEALTH
KGORO: THUTO YA TṠA MAPHELO, YUNIBESITHING YA AFRIKA BORWA
MOOKAMEDI: NGAKA MG MAKUA

ABSTRAKTE

Maikemiṡetṡo a nyakiṡiṡo ye e be e le go utolla tsebo mabapi le phetetṡo le thibelo ya HIV magareng ga baswa ba mengwaga ye 14–16 mo Distriking Ya Tshwane Bodikela.

Nyakiṡiṡo ya “qualitative exploratory descriptive contextual” e dirilwe. Aproutṡhe ya “world café” e diriṡitṡwe bjalo ka mokgwa wa go hwetṡa dipalopalo tṡa dintlha go tṡwa go batṡeakarolo mo nyakiṡiṡo ye. Potṡiṡonyakiṡiṡo e ṡomiṡitṡwe bjalo ka thulu ya go hwetṡa dipalopalo tṡa dintlha go tṡwa go batṡeakarolo. Dinyakiṡiṡo di bile le batṡeakarolo ba 37 mola “content analysis” e ṡomiṡitṡwe go hlopholla dipalopalo tṡa dintlha tṡeo di kgobokeditṡwego go tṡwa go batṡeakarolo nakong ya “world café” Sephetho se tṡerwe go tṡwa go dinyakiṡiṡo le dihwetṡwa di utullotṡe gore tsebo mabapi le phetetṡo le thibelo ya HIV magareng ga baswa ba disriking ya Tshwane bodikela.

Mantṡu a bohlokwa

HIV, AIDS, tsebo, phetetṡo, thibelo, baswa, thuto, maphelo go tṡa tswalothobalano,”antiretroviral”, baswa.

ACKNOWLEDGEMENTS

The completion of this study would have not been successful without the contributions of the people listed below and it is therefore of importance to acknowledge their contributions to the study.

- Firstly, I would like to thank the Almighty God, for without His grace I would not have made it this far.
- I also wish to express my sincere gratitude to my father Mr ME Tshitamba, for the support and encouragement to persevere throughout the study.
- My heartfelt gratitude to my Mother Mrs MT Tshitamba, for the moral support she gave me and for staying up late with me just so I can type few pages of my dissertation each day.
- I humbly extend my thanks and appreciation to my supervisor, Dr MG Makua, for the invaluable guidance, support, patience and for always being available and reachable when I needed assistance.
- A special word of gratitude is due to my manager, Dr PN Tseke and the officer commanding of Area Military Health Unit Gauteng, Colonel DV Ndlovu, for their gracious support
- I am grateful to my sister, Phumudzo Tshitamba, for the tremendous support and for constantly motivating me to work hard.
- Special thanks to my colleague, friend and a study buddy, Miss Koketso Mogotsi, for all the academic support she gave me, this journey wouldn't have been easier travelled alone.
- I would also like to extend my gratitude to Miss FC Siavhe, Miss NN Hlaulani and Miss MO Teffo, for the support and assistance they gave me throughout the study.
- I am indebted to express my gratitude to the study participants for willingly participating in the study and their parents for granting consent to participate in the study.
- My thanks and appreciation expressed to the Gauteng Department of Education for granting me permission to conduct the study.
- My sincere gratitude also goes to the school management team of Baleseng Secondary School for allowing me to conduct research.
- Many thanks to language editor, Miss L Kraft, technical editor, Mrs R Coetzer and African language Translators Prof M.J Mafela and Mrs S.M Tembane for the professional input they have contributed.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
ASRH	Adolescent Sexually Reproductive Health
CDC	Centre for Disease Control
FET	Further Education and Training
HEAIDS	Higher Education and Training HIV/AIDS
HIV	Human Immunodeficiency Virus
HSRC	Human Sciences Research Council
ISHP	Integrated School Health Programme
MMC	Male Medical Circumcision
NSP	National Strategic Plan
NDOH	National Department of Health
SRH	Sexual and Reproductive Health Service
STATSSA	Statistics South Africa
STD	Sexually Transmitted Disease
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations International Children Emergency Fund
UNISA	University of South Africa
WHO	World Health Organization

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

HIV/AIDS is now the leading cause of death among adolescents in Africa and the second leading cause of death among adolescents globally (UNAIDS 2015:3). South Africa is one of the countries with the highest profile of HIV epidemic, with an estimate of about 7.1 million people living with HIV in 2016 (Avert 2017a:1). As much as counselling, testing and treatment facilities are available in various health institutions, it is still a battle to reduce the number of new HIV infections in South Africa. Statistics have shown that the incidence of HIV among young people (aged 15–24) is higher when compared to other age groups (StatsSA 2016:8).

AIDS-related deaths among adolescents have increased in the past decades, while decreasing in other age groups. This can be associated with children with perinatally acquired HIV who are now surviving to adolescence (UNICEF 2017:1). However, it is extensively believed that South Africa has reached a stage where eliminating perinatally acquired HIV is possible. In 2015, more than 95% of HIV-infected pregnant women received antiretrovirals (ARVs) to reduce perinatally acquired HIV. This has reduced mother-to-child transmission in South Africa to 1.5% (Avert 2017a:5).

The National Strategic Plan (NSP) 2012–2016 is primarily bordered by the UNAIDS vision of “Zero new HIV infections”, “Zero discrimination” and “Zero AIDS-related deaths”. It has also committed itself to “Zero new infections due to mother-to-child transmission” (Avert 2017a:5).

The high-rate statistics of HIV incidence among young people raises a concern of the knowledge of HIV transmission and prevention among adolescents as they are in a phase which is often linked to being sexually active. At this age, they are vulnerable to experimenting with new things, including injecting drugs, drinking alcohol and having unprotected sexual intercourse (Schantz 2012:3). In 2008, 85% of young males aged

15–24 reported using condoms during their last sexual act; this has dropped to 68% in 2012 (Avert 2017a:6).

The HIV and AIDS life skills education programme was introduced in South African public primary and secondary schools in 2000 to help create youth-friendly sexual reproductive health services (SRHS) and make them accessible. This implementation was also aimed at promoting HIV prevention and encouraging the ones who are HIV negative to remain negative. However, the rates of implementing the school-integrated sexual health programme has dropped from 160% in 2013 to 20% in 2014 (Avert 2017a:6).

1.2 BACKGROUND TO THE RESEARCH PROBLEM

Adolescence is a phase of physical growth and maturation, which often leads to sexual relationships. At this stage, adolescents are thought to be at high risk for contracting HIV as they tend to experiment with things that may be a danger or a threat to their life. These things include engaging in unprotected sexual intercourse, injecting drugs, sharing needles and drinking alcohol (which can also lead to behavioural changes) (Achhab, Ammari, Kazdouh, Najdi, Berraho,Tachfouti, Lamri, Fakir & Nejjari 2016:2).

A generation of children who were born with HIV are now surviving to adolescence (WHO 2017:2). Their knowledge of HIV transmission and prevention, and the disclosure of their status to their sexual partners is a serious concern. From a clinical experience of healthcare professionals, the knowledge of HIV prevention among adolescents is poor and they have a different perspective on abstinence and condom use. They believe they are too young to get infected with HIV (Kaushik, Pineda & Kest 2016:2).

Young people (adolescents included) involve themselves in blesser-blessee relationships where they receive expensive goods in exchange for sex from older partners (Health24 2016:1). A major cause for these relationships is poverty and gender-based violence (Avert 2017a:3). Older partners are more likely to be living with HIV and less likely to use condoms; they can therefore easily infect young people (Health24 2016:1). Avert (2017a:3) states that intergenerational relationships between young women and older men are perceived as operating a cycle of infection.

According to the World Health Organization and the Joint United Nations Programme on HIV/AIDS (cited in Thanavanh, Harun-Or-Rashid, Kasuya, & Sakamoto 2013:16), young people are more susceptible to HIV infection due to poor knowledge of health, risky behaviour and lack of access to SRHS. A global estimation of about 5,000 youth (between the ages of 15 and 25) are infected with HIV daily.

Nyaope addicts have now come up with a new way of sharing drugs, namely "nyaope Bluetooth", which they believe is less costly for them. One would inject oneself with a drug, draw blood and then inject others with it so that more than one person can become intoxicated from a single dose (Mabena 2017:2). This raises concerns regarding adolescents' knowledge of HIV transmission prevention because such behaviour increases their risk of being infected with HIV and other infectious diseases.

In South Africa, females as young as 12 years old are allowed to get contraceptives without their parents' consent. Therefore, most adolescents would rather use hormonal contraceptives to avoid using condoms (Health24 2016:11). Adolescents seem to be more conscious of unwanted pregnancy than they are of HIV/AIDS, not taking into consideration that hormonal contraceptives will prevent unwanted pregnancy but will not prevent HIV transmission, unless a dual (condoms and hormonal) contraceptive method is used. According to a survey conducted in 2012, 25% of HIV new infections were among female adolescents and young women aged between 15 and 25 old (Avert 2017:3).

1.3 RESEARCH PROBLEM

HIV/AIDS remains one of the main challenges South Africa is facing. UNICEF ([s.a.]:1) reported that about 1.8 million adolescents globally are living with HIV/AIDS. Furthermore, in 2016 alone there were about 610,000 new HIV infections among young people aged between 15 and 24, and 260,000 of those 610,000 were adolescents (UNICEF 2017:1). It is therefore a concern if the lack of HIV transmission and prevention knowledge among adolescents is the reason for the increasing rates of HIV prevalence among adolescents.

Strydom (2003:59) states that “about half of all people who acquire HIV become infected before they turn 25 years and typically die of the life-threatening group of illness

called AIDS before their 35th birthday". This implies that adolescents are more vulnerable and it is therefore important to determine their level of knowledge of HIV transmission and prevention while it is still early, to achieve less or no HIV infection among young people.

O'Leary, Jemmott, Jemmott, Bellamy, Ngwane, Icard and Gueits (2012:1) support the statement above by stating that intervention is singularly important among adolescents, before or just after sexual debut, as they are highly vulnerable and have not yet established habitual patterns of sexual behaviour.

1.4 AIM AND OBJECTIVES OF THE STUDY

1.4.1 Research purpose

The purpose of this study was to understand the knowledge of HIV transmission and prevention among adolescents aged 14 to 16 years at Tshwane West District.

1.4.2 Research objectives

- To explore and describe HIV transmission knowledge among adolescents aged between 14 and 16 years at Tshwane West District.
- To explore and describe HIV prevention knowledge among adolescents aged between 14 and 16 years at Tshwane West District.

1.5 SIGNIFICANCE OF THE STUDY

Exploring the knowledge of HIV transmission prevention among adolescents will help to understand their perspective on HIV. It might help to determine if there is any lack of information and if HIV education needs to be intensified. Results of this study could be linked to the high rate of HIV incidence among young people. If their knowledge of HIV prevention is very low, an inference can be drawn that the lack of knowledge of HIV prevention is one of the causes of the high rate of HIV incidence among adolescents.

The lack of knowledge might not be the cause of the high rate of HIV incidence among adolescents. However, the outcome of the study and the researcher's recommendations

will assist the Department of Education together with the Department of Health to enhance the HIV transmission prevention education at schools.

1.6 DEFINITION OF TERMS

1.6.1 HIV

Human Immunodeficiency virus is a disease in which the virus attacks the T cells of the immune system resulting in depletion of CD4 cells and suppressed immune system (Longmore, Wilkison, Davidson, Foulkes & Mafi 2010:409).

1.6.2 AIDS

Acquired Immune Deficiency Syndrome (AIDS) refers to the more advanced stages of HIV infection and is indicated by the presence of a group of opportunistic infections and HIV-related cancers (Longmore et al 2010:409).

1.6.3 HIV transmission

HIV transmission refers to the transfer of the Human Immunodeficiency Virus from an infected individual to another. HIV can be transmitted through unprotected sexual intercourse, oral sex, sharing of needles from an infected person to another, transmission from infected mother to child and, less commonly, it can be spread through blood transfusion. However, in South Africa blood is screened before transfusion (CDC 2016b:2).

1.6.4 Transmission prevention

Measures taken to avert the spread or transmission of a disease (CDC 2016a:3).

1.6.5 Knowledge

According to the *Oxford Dictionary* (2012:402), knowledge is defined as facts, information and skills acquired though education or experience; the theoretical or

practical understanding of a subject. In the study, knowledge refers to the sum of what is known by the adolescents regarding HIV transmission and prevention.

1.6.6 Adolescents

A group of children maturing to adulthood ranging between the ages of 10 to 19 years old (WHO 2017:1). In this study, adolescents are Grade 9 learners at a secondary school in Tshwane West District, aged between 14 and 16 years.

1.7 RESEARCH DESIGN AND METHOD

1.7.1 Research method

Research design is a set of strategies used by a researcher to obtain answers to the research questions. It is also referred to as the architectural backbone of the study (Polit & Beck 2012:58).

This study made use of a qualitative approach because the researcher wanted to gather detailed information on HIV transmission prevention knowledge among adolescents. “Qualitative research is the investigation of phenomena, typically in an in-depth and holistic fashion, through collection of rich narrative materials using a flexible research design” (Polit & Beck 2012:739).

1.7.2 Research design

Ehrlich and Joubert (2014:78) define research design as the approach followed by a researcher to answer a research question. It is an overall plan to address a research question which includes a detailed description for improving the integrity of the study (Polit & Beck 2012:741).

Through research design, the researcher considers other decisions that have been made regarding the proposed study, from selection of participants and data collection methods to analysis and the interpretation of data (Kumar 2014:381).

A qualitative exploratory descriptive contextual study was conducted. The researcher intended to do an exploration and description of the knowledge of HIV transmission and prevention within the context of adolescents.

1.7.3 Setting

Setting refers to a location and conditions in which data collection takes place in a study. It can be in one or more sites; decisions on where to conduct the study are based on the research question and purpose (Polit & Beck 2012:49).

The study took place at a secondary school in Tshwane West District, in the learners' classroom during school hours. The research setting was chosen because it was an ideal place to study the participants relevant to the study. A junior secondary school was an ideal place to study adolescents aged between 14 and 16 years.

1.7.4 Population

Population refers to the entire group of individuals or objects sharing common characteristics in which the researcher is interested and is not limited to humans only. Population might consist of health records or even blood samples (Polit & Beck 2012:738). Ehrlich and Joubert (2014:98) note that it is important for the researcher to clearly define the group that the study will focus on to collect data and make inferences. The population in this study were Grade 9 learners aged between 14 and 16 years at a junior secondary school in Tshwane West District.

1.7.5 Sample and sampling

1.7.5.1 Sample

According to Polit and Beck (2012:742), a sample refers to a subset of a population in a study selected by a researcher.

The sample of this study was Grade 9 learners aged from 14 to 16 years at a junior secondary school in Tshwane West District.

1.7.5.2 Sampling

Sampling refers to the process of selecting a sample from a population (Polit & Beck 2012:275). In qualitative sampling, participants are not randomly selected. Fewer participants are selected, depending on data saturation. Sampling is usually driven to a great extent by conceptual requirements (Polit & Beck 2012:516).

Site sampling

There were four secondary schools with Grade 9 learners aged between 14 and 16 in the Tshwane West District. The school's socio-demographic aspects were the same. The secondary schools were in the same geographic area and within the same education district. Convenience sampling was done on one of the junior secondary schools in Tshwane West District. There was more than one classroom of Grade 9 learners in the secondary schools of Tshwane West District, and they were mostly overcrowded, with between 40 and 50 learners in a classroom. Purposive sampling of one of the Grade 9 classes in the sampled school was done. The class comprised 40 Grade 9 learners aged between 14 and 16 years. The class of 40 learners was sampled to group the learners into five groups of maximum 8 learners per table, as one of the principles in the World Café data collection method. However, only 37 learners were able to participate in the study.

The sampling of participants

Purposive sampling of the learners was done. The Grade 9 learners aged between 14 and 16 years in the class of 40 from the sampled secondary school were selected after consent from parents had been obtained and assents had been signed. Only the learners who had obtained permission from their parents to participate in the study and those who had agreed to participate formed the sample for the study.

1.7.6 Data collection methods and procedures

Data collection is the process during which data are obtained by the researcher. Polit and Beck (2012:725) define data collection as "the gathering of information to address a research problem".

The World Café approach was used as the method to obtain data from participants in this research. This method was considered appropriate for the study because it provides a variety of responses from adolescents on their knowledge of HIV transmission prevention and it also creates a comfortable, friendly environment for them to respond to questions freely. World Café also encourages maximum participation by all participants in a fun way (World Café 2015:2).

The Café host introduced the topic to the participants without giving them answers of the questions that were asked, and each group had a fair chance to present their answers. Stationery (colour markers, A4 papers, A3 charts for presentation, pens and pencils) was provided to each group.

The researcher introduced the team of research assistants and explained the proceedings of the day. The researcher had two research assistants. One facilitated the World Café session. The other moved around between the tables, assisting the participants to move between questions, facilitated the presentation of group feedback and removed pasted feedback from the clipboard when the sessions were complete, as part of data evidence. The researcher set up the audio recorder and took notes. The researcher was available to provide clarity, answer participants' questions where necessary and summarise the session at the end of the World Café. The questions were divided into two sections; the first section was presented within the first 2 hours. Thereafter, a break was taken, refreshments were served and the second section then commenced after the break.

1.8 SCOPE OF THE STUDY

The study was conducted with one class of Grade 9 learners at a junior secondary school with in Tshwane West District in Gauteng for feasibility purposes. The participating adolescents were between the ages 14 and 16 years, even though adolescence is regarded to start earlier and end later than the age group of the sample in this study.

1.9 STRUCTURE OF DISSERTATION

Table 1.1 The five chapters of the dissertation

Chapters	Title
Chapter 1	Orientation of the study
Chapter 2	Literature review
Chapter 3	Research design and method
Chapter 4	Analysis, presentation and description of the research findings
Chapter 5	Conclusions and recommendations

1.10 CONCLUSION

This chapter provided a brief overview of what the study entails. It explained the background of the research problem, the purpose of the research and the design as well as the methods and their conditions used.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Literature review is defined as “a critical summary of research on a topic of interest often prepared to put a research problem in context” (Polit & Beck 2012:732). It helps the researcher to gain more understanding of the research topic from the existing knowledge (Hart 2018:2–3).

The purpose of a literature review is to:

- Differentiate between what has been done and what needs to be done and to enhance and gain vocabulary relating to the topic.
- Discover essential variables relating to the topic and gain new perspective on the topic.
- Identify the relation between practice and ideas and also relate ideas and theory to the research problem.
- Establish the context of the problem and to have logical reasons of theoretical and practical significance of the research problem.
- Understand the origin of the research problem and understand the methodologies and data collection methods that have been used.
- Have knowledge that can be related to the research topic and place the research into a historical context.

  (Hart 2018:31).

This chapter entails the literature review that was undertaken during the study. The literature review briefly describes the concepts related to HIV and the modes of transmission and prevention. This chapter further elaborates on the impact HIV has socially and economically and also outlines the global and South African statistics of infected adolescents. The literature review elaborates more on the adolescents’ sexual health, knowing their HIV status, status disclosing, the knowledge adolescents have

regarding HIV transmission and prevention, the knowledge they acquired by regarding HIV transmission and prevention and the management of HIV on adolescents.

2.2 CONCEPTS RELATED TO HIV/AIDS

HIV/AIDS

HIV is a virus that is mainly transmitted through sexual contact, breastfeering, sharing of needles or blood transfusion, there is no cure for HIV however there is antiretroviral treatment that helps to control the virus and increasing life expectancy of people living with HIV. AIDS is an acquired immunodeficiency syndrome caused by HIV, it is the final stage of HIV where the infected person has a variety of opportunistic infections (Health24 2013:1).

HIV transmission

HIV can be transmitted through bodily fluids (i.e. bloods, semen, vaginal secretions) and breast milk) of an infected person. There are different modes of transmission through which a person can be infected. The most common one is unprotected sexual intercourse. It can also be transmitted through the sharing of injectable objects, contact of contaminated blood and transmission from an HIV positive mother to child – either during pregnancy, birth or breastfeeding (Avert 2017a:2).

HIV prevention

HIV prevention refers to measures taken to prevent HIV infection. These included the use of condoms during sexual intercourse, avoiding the sharing of injectable objects, an HIV positive pregnant woman taking ARVs to prevent mother-to-child transmission and a pre-exposure prophylaxis for those who accidentally came into contact with contaminated body fluids, for example healthcare workers working with infected people or people who have been raped. Healthcare workers take precaution when working with patients by wearing gloves and goggles and safely disposing of sharp objects (Avert 2017:2).

2.3 GLOBAL SUMMARY OF THE HIV/AIDS EPIDEMIC

HIV/AIDS remains a major global public health issue, having claimed about 1.0 million (830,000–1.2 million) lives in 2016 globally. There were approximately 36.7 million (30.8 million to 42.9 million) people living with HIV at the end of 2016 with approximately 1.8 million (1.6 million to 2.1 million) new infections in 2016 globally (UNAIDS 2017:2–3).

According to UNAIDS (2017:4) global estimates, there were about 5,000 new HIV infections daily in 2016 globally, of which 64% were in Sub-Saharan Africa, about 400 among children under 15 years of age and about 4,500 among adults aged 15 years and older. Of these, about 43% were among women, 37% among young people (aged 14–24 years old) and about 22% among young women aged 15–24 years.

2.4 SOUTH AFRICAN HIV STATISTICS

South African statistics showed a drop in 2% (see Table 2.1) on HIV prevalence among youth (aged 15–24) from the year 2002 to 2016 (StatsSA 2016:7). However, it should not be assumed that the level of knowledge of HIV by adolescents has improved or dropped. The cause of decline in HIV prevalence rates could also be a decline in vertical HIV transmission.

However, according to the study by Strydom (2003:67) on HIV/AIDS and South African adolescents' attitudes and information needs, where 70% of the respondents regarded their level of knowledge of HIV as inadequate and uncertain, Strydom (2003:67) states that "there is an urgent need to spread correct and factual information/knowledge among pupils in the category that the study was based on". This implies that the knowledge of HIV among adolescents has not yet improved.

Table 2.1 HIV prevalence estimates and the number of people living with HIV 2002–2016

Year	Prevalence %				Incidence rate% 15–49	HIV population (in millions)
	Women 15–49	Adults 15–49	Youth 15–24	Total population		
2002	19.6	17.1	7.6	10.3	1.77	4.72
2003	19.8	17.2	7.1	10.6	1.74	4.87
2004	19.9	17.3	6.6	10.7	1.76	5.00
2005	20.0	17.3	6.4	10.8	1.81	5.13
2006	20.1	17.4	6.3	11.0	1.83	5.26
2007	20.3	17.5	6.2	11.1	1.82	5.40
2008	20.5	17.6	6.2	11.3	1.77	5.56
2009	20.7	17.8	6.3	11.5	1.72	5.73
2010	20.9	17.9	6.4	11.6	1.65	5.89
2011	21.2	18.1	6.3	11.8	1.59	6.07
2012	21.5	18.3	6.2	12.0	1.50	6.27
2013	21.8	18.5	6.1	12.2	1.39	6.47
2014	22.0	18.7	5.9	12.4	1.34	6.67
2015	22.2	18.8	5.8	12.5	1.30	6.85
2016	22.3	18.9	5.6	12.7	1.27	7.03

(Source: StatsSA 2016:7)

2.5 HIV AND ADOLESCENTS

More than 2 million adolescents aged between the ages of 10–19 years are living with HIV, and many do not receive the support and care they need to improve their state of health and prevent transmission, thus placing millions of adolescents at risk of contracting the virus (WHO 2013:1).

According to the World Health Organization and the Joint United Nations Programme on HIV/AIDS (cited by Thanavanh et al 2013:16), young people are more susceptible to HIV infection due to poor knowledge of health, risky behaviours and lack of access to SRHS. A global estimation of 5,000 youth (between the ages of 15 and 25) are infected with HIV daily.

Adolescents living with HIV either acquired it from birth or recently got infected during their teens. Most of the infected youth contracted HIV through sexual intercourse. The teens and adolescence are the two stages of their lives in which young people are most

likely to contract HIV (Avert 2017:3). In 2016, about 610,000 young people between the ages of 15 and 24 were newly diagnosed with HIV, of whom 260,000 were adolescents aged 15 to 19 years. UNICEF (2017:1) states that “adolescents and young people represent a growing share of people living with HIV worldwide”.

According to the new global strategy which was launched in 2015 (cited by UNICEF 2017:1) to end the AIDS epidemic by 2030 and to achieve an HIV-free generation, it is critical to address the HIV epidemic among young people.

2.5.1 Early sexual debut

Early sexual debut is commonly defined as the first sexual intercourse at or before the age of 14. It is sex associated with sexual and reproductive health problems, including unwanted pregnancies, sexually transmitted infections, HIV and risky sexual behaviours (Richter, Mabaso, Ramjith & Norris 2015:204). Early sexual debut may be either voluntary or coerced (Richter et al 2015:306). Sexual coercion is defined as a forced sexual act and is also associated with sexual abuse (Richter et al 2015:304).

In South Africa and Tanzania, at least half of young people are sexually active by the age 16, of which 40% from South Africa and 28% from Tanzania are females who reported that their first sexual intercourse was coerced (Wubs, Aarø, Kaaya, Onya & Matthews 2015:1).

Sub-Saharan African countries have high levels of HIV infection among young women (aged 16–24) compared to males of the same age. This is mainly due to early sexual debut among female adolescents (Stöckl, Kalra, Jacob & Watt 2013:27). Girls are more likely to engage in sexual activity at an early age compared to adolescent boys. This is seen as one of the potential HIV infection risk factors due to potential genital trauma or the partner being more likely to be HIV positive. Poverty, limited education and livelihood options such as social norms regarding sex and marriage, intergenerational relationships and sexual abuse of girls may also be contributing factors (Stöckl et al 2012:28–39).

Wubs et al (2015:1) concur with the statement above by stating that early sexual debut is mostly associated with sexual and reproductive health problems such as unwanted

pregnancies and inconsistent condom use, which may result in promiscuity, sexual transmitted infections and/or HIV.

According to a study done in Kenya by Onsomu, Kimani, Abuya, Ahmed, Moore, Winfield and Harwell (2013:55) on delaying sexual debut as a strategy for reducing the HIV epidemic, the risk of acquiring HIV is higher in women who had sexual debut between the ages of 8 and 15 compared to men in the same category. One of the factors attributed to this outcome was the imbalance in gender power relations, as most women were undermined and not able to make decisions concerning their sexual and reproductive health; one good example would be the use of condoms.

The other factor also contributing to early sexual debut is socio-economic status. Females who are from a poor economic background are more likely to engage in early sexual debut for economic reasons, which goes back to the point of gender power relations. As males in this situation are providing money, they will be the one making decisions on matters relating to sexual and reproductive health (Onsomu et al 2013:55).

2.5.2 Adolescents born with HIV

With the help of ARVs, the generation of infants born with HIV are now maturing to adolescence (POZ 2012:1). Before the availability of ARVs in Africa, infants born with HIV had a 50% chance of demising before reaching the age of 2. With the availability of ARVs, the perinatally acquired HIV babies are now surviving to adolescence (Lowenthal, Bakeera-Kitaka, Marukutira, Champman, Goldrath & Ferrand 2014:2).

Many of the adolescents are living into young adulthood. However, there are challenges which they are faced with, such as the possibility of horizontal transmission and disclosure of their HIV status from sexual partners (Albright & Fair 2014:587). Just like any other youth with chronic illness, adolescents with perinatally acquired HIV also come across different challenges, such as ongoing medical treatments, hospitalisation and medical appointments, exposure to pain, coping with stigma and sheltered life experiences (Mellins & Malee 2013:1–2). Tshuma (2015:82) also states that “Adolescents with perinatally acquired HIV live in fear of being stigmatised if their status is known”.

There are adolescents with perinatally acquired HIV who are not aware of their HIV status and yet they are on ARV treatment. This may have a negative impact on their adherence to the treatment when they find out. Denial and anger which negatively affect their adherence may be the result (Tshuma 2015:79).

Mellins and Malee (2013:2) also state that "for youth exposed to severe HIV disease, psychosocial ramification of hospitalisation, potential mortality, missed school opportunities and delays are significant". Studies suggest that youth born with HIV are at risk of suffering from mental health problems. Although the HIV infection is not the primary aetiology of the mental health problems, it should be ruled out given the abundance of risk of health problems on HIV-infected individuals (Mellins & Malee 2013:15).

Mellins and Malee (2013:16) discuss the mental health issues in perinatally infected youth and also suggest that there is a high need for mental health-related treatment programmes, although adolescents are in a stage in life where it is risky to diagnose mental health problems because of their behavioural outcomes.

2.5.3 Adolescents' behaviour towards HIV

With studies that have been conducted in South Africa on adolescents' behaviour, it has been noted that adolescents not only use substances (i.e. alcohol and drugs), but also engage in risky sexual behaviour (Flisher, Reddy, Muller & Lombard 2003; Kaaya et al 2002; Randay, Reddy & Bergstrom 2007) as cited by Amoateng, Kalule-Sabiti and Arkaah (2014:487).

Risky sexual behaviour in adolescents remains a major concern. It is important that a thorough background research on adolescents behaviour is done in order to develop and implement effective education and prevention programmes (Simons, Stutton, Simons, Gibbons & Murry 2016:257).

According to Amoateng et al (2014:493), the following is perceived as influential to adolescents' risky behaviours.

Low parental value in children – When parental value is low, adolescents are more likely to be involved in anti-social activities. According to Amoateng et al (2014:493), most adolescents with low parental value have reported recent sexual activity compared to adolescents with high parental value. Kheswa (2017:127) also noted that neglect by foster parents may contribute to adolescents' low self-esteem; to mask their emotional inadequacies, they might use substances or have multiple sexual partners.

Weak attachment to school – Amoateng et al (2014:493) state that adolescents who reported weak attachment to school are more likely to be have multiple sexual partners compared to adolescents with strong attachment to school.

Strong ties to peers – Adolescents with strong peer influence are more likely to report recent sexual activity compared to adolescents with weak peer influence (Amoateng et al 2014:493).

Adolescents with low religiosity – Adolescents with high religiosity are less likely to report recent sexual encounter compared to adolescents with low religiosity (Amoateng et al 2014:493).

The use of alcoholic beverages and drugs – Most adolescents involve themselves in unintended risky sexual behaviours when they are under the influence of alcohol and/or drugs (Amoateng et al 2014:493).

2.5.4 The relationship between parenting practices and risky sexual behaviour

Simons et al (2015:257) elaborated on six theories that attempt to explain the relationship between parenting practices and risky sexual behaviours.

- **The problem behaviour theory**

Studies have linked risky sexual behaviour with substance abuse (alcohol and cigarettes included) and misconduct (Simons et al 2015:257). According to the problem behaviour theory, these behaviours co-vary because they share a common cause, namely ineffective parenting. Low support, hostility and inadequate monitoring by

parents may result in adolescents' involvement in substance abuse and misconduct, which may in turn lead to risky sexual behaviour (Simons et al 2015:257).

- **The social learning theory**

This theory explains that behaviour is learned through observation. As adolescents grow, they are exposed to different types of behaviour. In most cases, they perceive their peers' behaviour as ideal and are therefore more likely to behave like them (Simons et al 2015:257).

- **The attachment theory**

According to the attachment theory, warm and responsive parenting is necessary to secure attachment style, unlike harsh parenting in which adolescents are more likely to develop an insecure style of attachment. People with a secure style of attachment are trusting and comfortable in intimate relationships, whereas those with an insecure style of attachment have trust issues in intimate relationships, are more likely to be involved in risky sexual behaviours to gain acceptance from their partner and also prefer little intimacy in relationships (Simons et al 2016:257).

- **The self-control theory**

Self-control is established during childhood and exposes effective parenting, which is defined by the theory as levels of support, monitoring and consistent discipline in response to bad behaviour (Simons et al 2016:258). Individuals with low self-control are more likely to act impetuously and make risky behavioural decisions based on instant satisfaction of desires and lack of concern of long-term outcome (Simons et al 2016:258).

- **The life history theory**

This theory explains that the impact of early sexual maturity on sexual behaviour should be viewed from a reproductive-strategy perspective. Studies have shown that adolescents whose parents are non-supportive and harsh are more likely to reach puberty early, whereas adolescents with supportive parents have a stronger bond with

their parents are less likely to reach puberty early Belsky et al cited in (Simons et al 2016:257).

- **The social control theory**

This theory focuses on the important influence of bonds within a conventional social institution, especially family Hirschi cited in Simons et al (2016:258). Parents are in most cases responsible for their adolescents' control over their own behaviour as they are most likely to adopt their norms and values. Therefore, poor and harsh parenting may negatively affect adolescents' control over their own behaviour (Simons et al 2016:258).

2.5.5 Adolescents' knowing their status

HIV status disclosure is one of the essential steps in the management of the disease (Vreeman, Senlon, Mwagi, Turissini, Ayaya, Tenge & Nyandiko 2014:4). Disclosure is a traumatic event for many children and is often accompanied by unpleasant or negative emotions which may result in long-term poor adherence (Vreeman et al 2014:5).

2.5.5.1 Levels of disclosure

According to the National Department of Health's (NDOH's) (2016a:11) guidelines, there are five levels in the process of disclosure, as explained below:

- Non-disclosure: This is a stage where the child is unaware of their illness and its impact on the body (NDOH 2016a:11).
- Partial disclosure: This is when the child is made aware that they have an illness but is not told that it is HIV (NDOH 2016a:11).
- Full disclosure: The child is aware that they are HIV positive (NDOH 2016a:11).
- Health promoting disclosure: The child knows everything about their illness according to what is appropriate for their age. They are equipped in a supportive manner with skills to take responsibility for their health (NDOH 2016a:11).
- Complete disclosure process: The child is guided through the non-disclosure to the health promoting disclosure process, considering the child's age throughout the process (NDOH 2016a:11).

2.5.5.2 Types of disclosure

According to the NDOH (2016a:11), there are five types of disclosure as explained next.

- Prepared disclosure: In this type of disclosure, the healthcare professional and the primary caregiver together with the child are prepared for the disclosure process (NDOH 2016a:11).
- Unprepared disclosure: This is a type of disclosure where either the primary caregiver, the healthcare professional or the child is not fully prepared for the disclosure (NDOH 2016a:11).
- Involuntary disclosure: This is when the primary caregiver is compelled to disclose to the child due to circumstances (NDOH 2016a:11).
- Accidental disclosure: In this type of disclosure, the child becomes aware of their status through an accidental incident (NDOH 2016a:11).
- Complete disclosure: The child is guided through the whole process of disclosure, from the stage of non-disclosure to the stage of health promoting. The child, the primary caregiver and the healthcare professional are prepared for the disclosure (NDOH 2016a:11).

According to the cross-sectional study conducted by Vreeman et al (2014:4) on the disclosure of HIV status to children and adolescents in Western Kenya, it was found that the majority of adolescents living with HIV did not know their status. However, the adherence of non-disclosed children living with HIV was found to be less affected by negative effects of HIV stigma and discrimination, including being discreet about the HIV status, compared to the adherence of disclosed children living with HIV (Vreeman et al 2014:5).

On the other hand, HIV disclosure may affect adherence positively for reasons such as increased responsibility on medication-taking and better access to social support (Vreeman et al 2014:5). There are also other factors that contribute to poor adherence apart from status disclosure, such as increased incidence of depression; adolescents in general have poorer medication adherence (2014:5). This is supported by Cluver, Hodes, Toska, Kidia, Orkin, Sherr and Franzika (2015:62), who state that adolescents

who know their status and whose status was disclosed before the age of 12 are associated with full adherence.

Healthcare workers also associate early disclosure with higher treatment adherence and state that it is better for caregivers and parents to disclose status as early as the age of 10 or 11 as it becomes more difficult when they are older. The reason is that teenagers will experience hurt and betrayal as their medical condition has been kept from them. As adolescents, they are already at a difficult stage of their lives and disclosing their status during this stage may have a negative impact (Cluver et al 2015:62).

Disclosure of HIV status may vary in terms of understanding between healthcare workers, caregivers and adolescents (Cluver et al 2015:62). This statement was made based on the response of a 14-year-old participant in a study conducted by Cluver et al (2015:62), who stated: “At first my grandmother said that I will take these pills until I die, because they are my life. At that time I didn’t understand. I only understand when I was eleven years old … I thought she was kidding with me but I took them anyway because I was sick and I thought the tablets were for my fever.”

It is important that children living with HIV understand their illness as it minimises negative self-image and has a positive impact on adherence. However, disclosing HIV status may provoke anxiety for parents and caregivers (Lowenthal, Jibiil, Sechele, Mathuba, Tshumbe. & Anabwani 2014:144). Cluver et al (2015:63) state that “disclosure is multistage process rather than an event and must adapt for paediatric developmental process, perhaps especially when accompanied by HIV-related cognitive delays”.

2.5.5.3 Reasons for low disclosure in South Africa

According to the NDOH (2016a:11), the reasons for the low disclosure rates are as follows:

2.5.5.3.1 Primary caregivers’ issues

- Fear of emotional impact of disclosure.
- Fear of consequences of disclosure

- Issues of blame, guilt and shame.
- Primary caregivers are by definition not always biological parents.

(NDOH 2016a:11)

2.5.5.3.2 Healthcare provider issues

- Lack of access to policies or guidelines to guide them through the disclosure process.
- Healthcare provider often misses an opportunity to educate the primary caregiver about the process and the importance of the disclosure.
- Lack of skills and tools to provide age-appropriate counselling services to children.

(NDOH 2016a:11)

2.5.5.3.3 Health systems issues

- Poor implementation of available policies (e.g. integrated management of childhood illness, IMCI and provider-initiated counselling and testing).
- Lack of child and adolescent-friendly spaces to provide appropriate disclosure services.
- Poor referral and linkage systems to strengthen disclosure processes between facility and community level.

(NDOH 2016a:11)

2.5.5.4 Legal and ethical framework on disclosure

South Africa has committed and is legally obliged to the following international, national and domestic agreements and laws (NDOH 2016a:13).

The following are the rights of the child in the context of disclosure according to the NDOH HIV disclosure guidelines for children and adolescents (NDOH 2016a:14-16):

- Every decision made in a child's life should be in the best interest of the child.
- Every child has the right to non-discrimination.
- The right to the highest attainable medical care and enjoy the best attainable state of physical, mental and spiritual health.
- Every child has the right to live, survive and develop healthily.
- Every child shall have the right to enjoy the best attainable state of physical, mental and spiritual health.

2.5.5.5 Disclosure (child's right upheld)

When the rights above are upheld, positive outcomes such as reduced mortality and morbidity will evolve, attitudes and quality of life will be improved, the national paediatric welfare will improve and it will also have a positive impact on the psychosocial wellbeing of the child and the family (NDOH 2016a:14–16).

It empowers the child with information and knowledge, reducing stigma and victimisation. There will an increased diagnosis of HIV, TB and other opportunistic infections, which impacts positively on HIV management. There will also be improvement in adherence as children get to be part of their own health management (NDOH 2016a:14–16).

2.5.5.6 Non-disclosure (child's right violated)

Violating the rights mentioned above may result in poor prognosis, poor/non-adherence, treatment failure, increased risk of transmission, clinical treatment may be delayed, the child's privacy might be threatened and will not be considered as part of their own health management, poor family relationships as well as stigma and victimisation (NDOH 2016a:14–16).

2.5.6 Adolescents' adherence to antiretroviral treatment

Adherence means to stick firmly. When it is defined in an HIV-related context, it means strictly taking treatment as prescribed by the healthcare provider (US Department of Health 2017:1). Adherence helps reduce the viral load in the human body, thus

strengthening the immune system, while non-adherence results in the virus multiplying in the body, weakening the immune system and making it hard for the immune system to fight opportunistic infections (US Department of Health 2017:2).

Adolescents continue to face challenges with regard to adherence to ARV therapy (Kariuki, Some & Kimanthi 2016:7). Kim, Gerver, Filder and Ward (2014:1947) conclude in their study that adherence in adolescents is low compared to adults. Kariuki et al (2016:7) suggest some of the challenges adolescents face with regard to treatment adherence as pointed out in the list below.

- Lack of disclosure (Kariuki et al 2016:7): Early disclosure on perinatally acquired HIV children has a positive impact on adherence (Cluver et al 2015:62–63). This statement is supported by Ubesie, Iloh, Emodi, Ibeziako, Obumneme-Anyim, Iloh, Ayuk, Anieke and Enemuo (2016:137), who state that poor disclosure is associated with poor treatment adherence and increased mortality and morbidity.
- Drugs and alcohol (Kariuki et al 2016:7): Taking drugs has physiological effects, including forgetfulness, hesitation and exhaustion which may interrupt treatment adherence in people living with HIV. Antiretrovirals also reduce the intoxicating effect of drugs and therefore a reduced state of euphoria or intoxication. As a result, people may interfere with treatment for the sake of drugs (Hosseini, Eftkhar, Nedjat,Ebadi, Abbasian, Zamari, Aghamollaei & Shojaeizade 2016:8).
- Stigma and discrimination in schools (Kariuki et al 2016:7): Education is important for human development for all children from different socio-economic backgrounds (Ngiya, Odundo, Ngaruiya, Kahiga, & Murithi 2016:1). HIV stigma and discrimination refer to unfairness and negative attitudes towards people living with HIV (Avert 2017b:1). According to Ngiya et al (2016:1) the most disadvantaged segment of children within the system are those living with HIV and often suffer from stigma and discrimination. Martinez, Harper, Carleton, Hoesek, Bojan, Glum, Ellen and The Adolescent Medicine Trials Network (2012:109) add on this statement by stating that individuals who suffer from HIV stigma and discrimination are most likely to be non-adherent to treatment compared to those with low stigma concerns.
- Poor support systems from guardians or parents (Kariuki et al 2016:7): Because of the absence of parental support, some orphans struggle to keep up with ARV treatment adherence (John 2017:31). Some adolescents stay with guardians, but

not all guardians seem to care much or some are too busy to supervise treatment adherence (John 2017:31).

- Transition from childhood to adolescents (Kariuki et al 2016:7): As part of normal human development, young people undergo physical, emotional and social transition during puberty. Some social changes include experiencing new things even if they put their lives at risk, such as drinking excessive alcohol and taking drugs (Murdoch Children Research Institute 2015:1).
- Peer pressure (Kariuki et al 2016:7): In a study conducted by Nabukeera-Barugi, Elyanu, Asire, Katureebe, Lukabwe, Namusoke, Musinguzi, Atuyambe and Tumwesigye (2015:6) a caregiver who was interviewed stated that, due to peer pressure, adolescents are driven to experiment with different things, such as taking drugs or going out for dances, which could interfere with treatment adherence.
- Poor understanding of disease (Kariuki et al 2016:7): When adolescents lack knowledge of their illness, it may affect adherence to treatment negatively as they will be lacking motivation to support adherence (WHO 2014:1).

In the studies that have been published on adherence from 1999–2013, it has been reported that overall 50 studies have been done globally and a percentage of 62.3% on adherence was obtained. Of the 50 published studies, 22 were done in North America and obtained 52.7% on adherence, 8 studies were from Africa, which had 83.8% adherence, 3 studies were published from Asia with 83.9% adherence, 12 studies were done in Europe and had 62% adherence and the remaining 5 studies were done in South America and had 62.8% adherence (Kim et al 2014:1947).

2.5.7 HIV Transmission and prevention knowledge among adolescents

Idele, Gillespie, Porth, Suzuki, Mahy, Kasedde and Luo (2014:147) state that the level of knowledge of HIV among adolescents is appallingly low especially in countries with a high burden of HIV. It is therefore important to address misconceptions about HIV and improve knowledge of HIV transmission prevention (Ugarte, Hogberg, Valladares & Essen 2013:37). Idele et al (2014:147) substantiate this by stating that a basic understanding of HIV and how it spreads plays a major role in prevention.

A basic understanding of HIV transmission and prevention is essential for HIV prevention; however, it is not sufficient to bring about behavioural change and to reduce the risk of contracting the disease (Idele et al 2014:147). Adolescents are less likely to contract HIV when relevant gender-sensitive information is given (UNICEF 2012:1).

For most adolescents who are newly diagnosed with HIV, the mode of transmission is through sexual intercourse (Idele et al 2014:147). If adolescents are given proper sexual health education before sexual debut, they are more likely to make informed decisions regarding their sexuality and approach sexual relationships with confidence. Sexual health education helps encourage condom use among female adolescents, increases voluntary HIV testing and counselling and also reduces teenage pregnancy (Avert 2015:6).

Thanavanh, Harun-Or-Rashid, Kasuya, and Sakamoto (2013:16) state that "increasing sbuilding safe practices among population. Hence, a clear understanding about knowledge, attitudes and practices among any population is very important for planning to control or prevent the spread of HIV".

Idele et al (2014:144) state that "millions of adolescents who are becoming sexually active live in countries with high burden of HIV". South Africa is one of the countries with a high burden of HIV with about 320,000 adolescents (aged 10–19) living with HIV and who are sexually active. Most of them report having not used condoms with their partners (Right to Care 2016:1).

A national study in South Africa found that only 24% of youth had accurate knowledge about HIV transmission and prevention knowledge. This indicates that there is a gap in HIV knowledge among adolescents in South Africa (Miller, Nkala, Closson, Chia, Cui, Palmer, Hogg, Kaida, Gray & Dietrich 2017:5).

2.5.7.1 Reasons for poor comprehensive HIV knowledge among adolescents

Comprehensive knowledge of HIV is the knowledge of two or more modes of transmission and at least three misconceptions about HIV (UNICEF 2012:1). Oljira, Yemane and Worku (2013:1) state that "the level of comprehensive HIV/AIDS

knowledge and access to HIV/AIDS information and services have been matters of a great concern".

In comparison, boys seem to have better comprehensive knowledge about HIV than girls (Idele et al 2014:147). Girls and young women are more susceptible to HIV infection (UNICEF 2012:1). In Sub-Saharan Africa, 26% of adolescent girls aged 15–19 and 36% of adolescent boys in the same age group have the same comprehensive knowledge about HIV (Idele et al 2014:147–148). This is supported by Oljira et al (2013:2), who state that statistics showed that females were 40% less knowledgeable about HIV as compared to males. This may be due to cultural double standards, which allow and encourage male adolescents to talk openly about sexual matters and to be involved in sexual activity, while females are discouraged and even restricted from discussing sexual-related matters (Oljira et al 2013:3).

Some cultures in Ethiopia discourage premarital sex among female adolescents but encourage it among adolescent males. Therefore, adolescent females do not feel comfortable to discuss sexual-related matters (Oljira 2013:3). This leaves adolescents with no choice but to discuss such matters with their friends rather than their parents or family members (Oljira 2013:4).

Adolescents living in rural areas and even those who are economically disadvantaged have been also found to be have poor comprehensive knowledge of HIV (Idele et al 2014:148). Family Wealth Index is strongly associated with the comprehensive knowledge among adolescents. Adolescents from a high or middle class Family Wealth Index are more likely to have better comprehensive knowledge compared to those with a low Family Wealth Index (Oljira et al 2013:2). Families that are not economically disadvantaged can afford mass media items like television, radio, newspapers and magazines through which information about HIV/AIDS is mostly conveyed (Oljira et al 2013:4).

2.5.7.2 How HIV knowledge affects adolescent behaviour

In a study conducted by Omyeni, Akinyeni and Fatusi (2014:340), adolescents were found to have high HIV transmission knowledge. However, the use of condoms during sexual intercourse within the last 12 months among adolescents in the study was

reported to be low. This is supported by Taffa (2017:6), who states that over 90% of respondents had HIV knowledge, but when it comes to practice, only a few reported to have used condoms during sexual intercourse. As stated by Idele et al (2014:147), the level of HIV knowledge among adolescents is not sufficient to change adolescents' risky sexual behaviours. Therefore, Omyeni et al (2014:340) concluded that there is a need for widespread and effective behavioural-change communication programmes which emphasise safe sexual practices and abstinence.

Omoyeni et al (2014:341) further state that despite the widespread knowledge of HIV among adolescents in this study, adolescents still engage in risky sexual behaviours such as promiscuity, non-condom use during sexual intercourse and accepting gifts in exchange for sex. Aderemi, Pillay and Esterhuizen (2013:6) reveal that low levels of HIV knowledge also have a negative effect on adolescents' behaviour by stating that learners with intellectual impairments had less access to information sources on HIV and therefore portrayed low levels of HIV transmission knowledge compared to their non-disabled peers. Aderemi et al (2013:6) further report that learners with intellectual impairment were found to be more likely to engage in risky sexual behaviours such as non-use of condom during sexual intercourse, casual sexual partners as well as rape.

Taffa (2017:5–6) attributes the low HIV knowledge among adolescents to incomplete information on HIV found in different sources by youth. The study found the knowledge of HIV transmission among school youth to be insufficient, hence young people still continue to engage in unsafe sexual practices. Taffa (2017:6) further states that dropping out from school and unemployment of young people contribute largely to risky sexual behaviour as some might secretly engage in commercial sex work due to financial strain and disappointment.

2.5.7.3 Who are adolescents with low levels of HIV transmission?

Gonçalves, Gonźalez-Chica, Mendez, Hallal, Araujo and Dumlth (2013:428) state that adolescents with low levels of HIV transmission belong to the illiterate families and families with low socioeconomic levels as they are attributed to having limited access to information on HIV. The association of HIV knowledge with ethnicity lost its importance after the adjustments of socioeconomic levels, suggesting that maternal intellectual level and socioeconomic status largely contribute in determining the adolescent's level

of knowledge. However, inadequate knowledge of HIV in heterosexual intercourse, open-mouth kissing and hugging an HIV-infected person was found to be greater among black participants with borderline statistical associations (Gonçalves et al 2013:429).

2.5.7.4 Does the source of information impact HIV knowledge?

Results of ANOVA as cited by Míguez, Espinoza, Vargaz, Perez, Ergon and Tartern (2015:3) state that young people who obtain information from their parents have significantly more knowledge compared to those whose primary source of information is school. Higher scores on the HIV knowledge survey were scored when other sources of information (such as newspaper, radio, television internet and primary care providers) were present. This implies that the more sources of information, the better the knowledge acquired.

2.5.8 Management of HIV in adolescents

With the help of successful strategies of prevention of mother-to-child transmission (PMTCT), the rates of perinatally acquired HIV infants have declined. However, there are about 2,000,000 children living with HIV globally, of whom 90% live in Sub-Saharan Africa (Agwu & Fairlie 2013:1). Infants born with HIV are now surviving to adolescence with the help of ARVs (Icap 2014:1).

South Africa has witnessed the improved survival of perinatally acquired HIV positive children due to the provision of ART and also an increase in behaviourally infected adolescents (NDOH 2015:34). Adolescents living with HIV require innovative public health strategies that will address their developmental and health needs as they are no longer children and not yet adults either. These strategies will help with engaging adolescents in successful lifelong treatment (Icap 2014:1).

In 2016 September, South Africa announced that all HIV positive children, adolescents and adults will be eligible for treatment regardless of clinical stage or CD4 count, prioritising those with a CD4 count of less than 350 (NDOH 2016b:1).

2.5.8.1 Challenges in relations to taking ARV treatment

When children reach puberty, they go through physical and sexual changes. Females develop more fat and males become more muscular. These changes may affect the drug pharmacokinetics, which is more essential for medications that have a narrow therapeutic index used in combination with protein-bound medicines or hepatic enzyme inducers or inhibitors (AIDSinfo 2017:1).

During their late teens or towards their 20s, adolescents should be facilitated through the process of transition to adult care and the transition process should be initiated as early as the second decade of life (AIDSinfo 2017:3). According to AIDSinfo (2017:3), the process of transition involves addressing medical, psychosocial, cognitive and educational needs of adolescents as they move from the child-focused care to the adult-focused care system.

Adolescents with perinatally acquired HIV may face treatment challenges such as extensive drug resistance, complex regimen and the long-term consequences of HIV and ART exposure (AIDSinfo 2017:1).

Adolescents with perinatally acquired HIV are often initiated with ARV early in life, with mono or dual therapy, which in most cases result in incomplete viral suppression or viral resistance (AIDSinfo 2017:2). Developmentally, adolescents are at a difficult crossroad as they are most likely to be involved in risk-taking behaviour and have the need to fit in with their peers. This adds to the challenges in the management of HIV in adolescents (AIDSinfo 2017:2).

2.5.9 HIV education in schools

The HIV education programme was implemented in South African schools in 2000. It falls under the Integrated School Health Programme (ISHP) which aims to create youth-friendly SRHS and make these services accessible. However, the percentage of schools implementing the ISHP has dropped from 160% in 2013 to 20% in 2014 (Avert 2016:7). Sarma and Oliveras (2013:25) state that introducing the HIV content in the curriculum will not give assurance that it will be implemented.

Reasons for the decline of this implementation are associated with shortage of teacher training on sexual reproductive health issues, dropouts of learners or students and also resistance from some of the schools due to the subject matter (Avert 2016:7). Alternative strategies introduced should be implemented to try and reach out to the youth not attending school (UNICEF 2018:3). According to the findings of the study conducted by Sarma and Oliveras in Bangladesh (2013:25), one of the barriers to HIV education was inadequate time to tackle the subject matter in the classroom.

2.5.9.1 The impact of education on HIV/AIDS

The HIV programmes mainly involve young people (UNICEF 2018:1). Well implemented programmes help young people not only to delay sexual debut but to also reduce the number of sexual partners and make known the use of contraceptives among those who are sexually active (UNICEF 2018:2). Although there are exceptions, there are challenges with regard to HIV education due to a lack of comprehensive strategies and adequate training of educators (UNICEF 2018:2).

2.5.9.2 Policy on HIV education

In South Africa, there is a national policy on HIV and AIDS for learners in public schools as well as students and educators in further education and training (FET) institutions gazetted in 1999 in terms of section 3(4) of the National Education Policy Act (27 of 1996) accessed from (Centre for Human Rights [s.a.]).

The following points were extracted from the policy:

- Disclosure of the learner/student or teacher's HIV status to the school or institution authority should not be compulsory and is not advocated. Educators are to be given support and also be prepared to handle such matters (Centre for Human Rights [s.a.]:4).
- Infection control measures must be applied universally regardless of the known or unknown status of the affected individuals (Centre for Human Rights [s.a.]:5).
- Funds should be made available to ensure the provision of HIV transmission education and application of universal precautions (Centre for Human Rights [s.a.]:5).

- HIV education should not be presented as an isolated topic but rather in the context of life skills education, integrated with the whole curriculum (Centre for Human Rights [s.a.]:6).
- The learners are to acquire the age and context-appropriate knowledge of HIV that will help them adopt and maintain a behaviour that will shield them from getting HIV and encourage non-discriminatory attitudes towards people living with HIV (Centre for Human Rights [s.a.]:6).
- HIV is a sensitive topic in nature and educators are therefore to be trained and supported by the support staff responsible for life skills and HIV education (Centre for Human Rights [s.a.]:6).
- Educators are to emphasise the role of drugs, sexual abuse and STDs in the transmission of HIV and help them to deal with such situations (Centre for Human Rights [s.a.]:14).
- HIV education is to be presented in a language and manner that is understandable to learners or students (Centre for Human Rights [s.a.]:14).
- Parents and guardians of learners or students are to be informed of the HIV education offered at school and also be encouraged to be involved in HIV education in the form of parental guidance (Centre for Human Rights [s.a.]:15).

In South Africa, there is a national policy on HIV and AIDS for learners in public schools as well as students and educators in FET institutions gazetted in 1999 in terms of section 3(4) of the National Education Policy Act (27 of 1996) (Centre for Human Rights [s.a.]) and the policy on promoting HIV prevention through education (UNICEF 2018:3).

The following points were extracted from the policy and the report:

- No learner should be denied an opportunity to receive education, regardless of their HIV status and without any discrimination against them (Centre for Human Rights [s.a.]:3).
- Teaching and learning about HIV/AIDS must be interactive; learners, surrounding community and educators should both partake in it (UNICEF Report 2018:3).
- The purpose of HIV education is to prevent the spread of HIV and reduce the fears, stigma and discrimination attached to it. HIV prevention education is essential for all HIV education programmes (UNICEF 2018:3).

2.6 IMPACT OF HIV SOCIALLY

2.6.1 Child-headed households

One of the negative social impacts that HIV has on our society is high levels of child-headed families as parents are dying of HIV/AIDS. Older siblings take over parents' responsibilities and take care of the younger siblings. This places a huge stress on them as they are deprived of their own childhood and forced to skip to parenthood, having to take care of their siblings' educational, nutritional and social needs before their own (Keat 2014:1).

2.6.2 Stigma and discrimination

HIV stigma and discrimination refer to prejudice, abuse and negative attitude towards people living with HIV (Avert 2017:1). Although South Africa has educated society on HIV stigma and discrimination, there are still people living with HIV who experience stigma and discrimination. According to the South African National AIDS Council (2014:9) there are different types of stigma that people living with HIV experience. These are discussed next.
The external stigma refers to the stigma aimed at people living with HIV by others.

Internalised stigma happens when people living with HIV start to believe negative things that others say about them. It can also be seen as the person's negative thoughts about themselves based on their HIV status.

Anticipated stigma is the expectation that a person living with HIV has that they will be poorly treated.

Courtesy stigma refers to experiencing stigma due to association with an individual or a group.

Alonzo and Reynolds (cited in Letamo 2004:192) state that individuals living with HIV are stigmatised because their illness is:

- Associated with deviant behaviour.

- Viewed as the responsibility of the individual.
- Tainted by a religious belief as to its immorality and/or thought to be contracted via morally unsanctioned behaviour.
- Perceived to be contagious and threatening to the community.
- Associated with an undesirable and anaesthetic form of death.
- Not well understood by the illiterate community and viewed negatively by healthcare providers.

HIV stigma and discrimination have a devastating effect on health and disease transmission in terms of delaying to seek medical help/care, fear of disclosing the HIV status, fear of HIV screening (testing and counselling) and fear of isolation and rejection (Genberg et al cited in Lundgren & Olausson 2013:3).

2.6.3 Death and bereavement

Grieving the loss of a loved one has never been easy on anyone but it is more difficult for children and adolescents living with HIV to cope with the mortality of a loved one with HIV. Having to face and understand the possibility of their own death is one of the major challenges that children and adolescents face with regard to HIV. However, the cognitive and mental maturity of a child or adolescent often determines their level of knowledge of their own mortality as well as their coping skills and defences to deal with their realisation (Vranda & Mothi 2013:11).

2.6.4 Social impact on adolescents

When HIV-infected children mature to adolescence, they face normal developmental challenges such as puberty, sexuality and the desire to fit in or be normal. Such challenges are seriously complicated by the HIV infection (The American Academy of Paediatrics Committee on Paediatrics AIDS cited in Vranda & Mothi 2013:10). Adolescents are to be fully informed about their statuses so that they can make decisions regarding their life choices. The decisions involve knowing and managing their own health, disclosing to friends, family and sexual partners and making healthy sexual choices.

Adolescents living with HIV are more vulnerable to poverty, illness and abuse. Losing one or both parents could leave a family in financial hardships or even with the loss of property. To be able to survive, they may be forced to work in jobs that exploit child labour and may also be subjected to child abuse. Some may also be involved in relationships with older people and be forced to early marriages so that they can take care of younger siblings (WHO 2014:7).

2.7 IMPACT OF HIV ECONOMICALLY

2.7.1 Economic impact of HIV in South Africa

HIV was initially perceived as a serious health crisis but the pandemic now also holds economic consequences for South Africa. In any economic system, human capital is of importance to utilise other factors of production effectively. The HIV epidemic is viewed as one of the factors affecting production, and therefore also affects the whole country's economy (UK Essays 2013:1).

2.7.2 Impact on the individual or household

One of the notable economic factors that people living with HIV are faced with is absenteeism or early retirement due to illness (UK Essays 2013:1). Routine medical check-ups and appointments to collect medication every month for people who still need to use public transport to access healthcare facilities may be a financial strain, especially to the unemployed. Casale (cited in UK Essays 2013:1) confirms this by stating that households spend on average a third of their monthly income on HIV/AIDS-related medical expenses, which lowers the possibility of improving their financial and economic state.

Furthermore, it is assumed that deaths or early retirements of economically active members also affect the economic state negatively, leaving the household poor and with the burden to carry the financial responsibility of the retired or demised family member (UK Essays 2013:3).

2.7.3 Impact on the labour market

UK Essays (2013:3) states that “the economic impact of HIV/AIDS within the labour market subsequently influences firms and general industry, thus affecting the overall macro-economic impact of the pandemic”. HIV often leads to long-term hospital admissions and premature mortality, thus leaving the workplace with less skilled personnel and more absenteeism, which in turn results in reduced productivity and the economy being affected negatively. UK Essay (2013:3) concurs with this by stating that “premature adult mortality is making fewer workers available and causes increasing production costs”.

2.7.4 Impact on firms and general industry

Bollinger et al (cited in UK Essays 2013:4) state that the economy of the firm is negatively affected by both increasing expenditure and reducing revenue due to HIV/AIDS-related deaths of employees. Losing an employee in an industry or firm results in low productivity and requires training and recruitment of new employees. This affects expenditure, where revenue is else mainly affected by absenteeism due to employees who are admitted, booked off sick or on medical appointments (UK Essays 2013:4).

2.7.5 Impact on the government

One of most important yet negative effects of HIV on the government’s economy is the financial burden of public healthcare and social expenditure on social grants. This includes institutional care for orphans which coincide with reduced tax revenues as the organisations are making less profits due to low productivity (Bureau Economic Research cited by UK Essays 2013:4).

2.8 ACCESS TO SEXUAL REPRODUCTIVE HEALTH SERVICES BY ADOLESCENTS

In other areas, adolescents do have access to SRHS but because of poor interpersonal relationship with healthcare workers, most adolescents are reluctant to seek medical help or professional advice on sexual health (Morris & Rushwan 2015:41).

2.8.1 The global challenges of adolescent sexual reproductive health

- **Pregnancy, contraception and abortion**

Adolescents constitute about 11% of births worldwide; about 16 million adolescents give birth each year globally (Morris & Rushwan 2015:40). South Africa has the largest national number of HIV positive adolescents in the world (National Policy 2017:7). In most cases, adolescents' pregnancies are unintended; some are coerced and may lead to induced abortion (Morris & Rushwan 2015:41). Induced abortions may lead to unsafe abortions, which also have complications such as cervical tearing, perforated uterus and bowel, haemorrhage, chronic pelvic infection and abscess, infertility, endotoxic shock, renal failure and also death (Morris & Rushwan 2015:41). Some adolescents do not seek professional help for Termination of Pregnancy (TOP) because they do not want to shame themselves (Lince-Deroche, Hargey, Holt & Shochet 2015:77).

In a study conducted by Lince-Deroche et al (2015:76), one of the participants responded that, despite about the availability of contraceptives at local clinics, they noted that accessibility is hampered by the nurses' attitudes and their busy daily schedules.

Because of their age and sexual maturity, adolescents are at risk of pregnancy and delivery complications such as anaemia, HIV, Sexual Transmitted Infections (STI), postpartum haemorrhage and depression, compared to older women (Morris & Rushwan 2015:41).

- **HIV/AIDS and STIs**

HIV/AIDS currently has a huge impact on young people between the ages of 15 and 25, as it accounts for about 41% of new HIV infections globally; an estimation of about 5 million young people aged 15–24 worldwide are infected with HIV (Morris & Rushwan 2015:41). Same as HIV, Sexually Transmitted Infections (STIs) also have alarming rates of infection among young people (Morris & Rushwan 2015:41). Adolescents have immature reproductive and immune systems that make them more prone to STIs and HIV. Cultural and socioeconomic factors – particularly social inequality and involvement

in sexual relationships with older partners – make adolescents more vulnerable to STIs and HIV (Morris & Rushwan 2015:51). Globally only a few adolescents have access to acceptable and affordable STIs/HIV health services. In most countries, the knowledge of HIV among young people (aged 15–4) is low and HIV testing is also rare (Morris & Rushwan 2015:41).

- **Barriers and challenges**

In some countries, the issue of adolescents' sexual reproductive health (ASRH) is regarded low at a political level and often has restrictive policies and laws (Morris & Rushwan 2015:41). However, in South Africa, the National Policy on adolescents and youth health supports the provision of integrated SRHS and further states that the SRHS have mainly focused on adult women of child-bearing age; therefore, the needs of adolescents and youth were not met (Centre for Human Rights [s.a.]:7).

ASRH services may be also hindered by corruption, lack of resources or erratic availability of resources. Accessibility of SRHS may also be affected by economic and physical accessibility of services (Morris & Rushwan 2015:41).

Various cultural, religious and social factors create an inhibitive environment for adolescents to access SRHS as there are some societies that disapprove of sexual activity in this age group. Alli, Maharaj and Vawda (2013:1) explain one of the reasons why some societies create an inhibitive environment on the access to SRHS by stating that "because of the past stigma attached to youth sexuality, access to sexual health services was also restricted for fear of promoting promiscuity among this age group". Fear of finding out confidential issues, embarrassment, lack of knowledge, misinformation and myths, stigma and shame are other contributing factors to restricting adolescents from making use of SRHS (Morris & Rushwan 2015:41). Some of the adolescents and youth lack information or knowledge because they come across challenges in communicating with healthcare workers as these workers are mostly in a hurry and do not have time to answer their questions (Lince-Deroche et al 2015:76).

A range of people, including parents or guardians, teachers, peers, family members and healthcare workers, have an influence on the access to SRHS and information. It has been argued that the most important barrier is the healthcare workers with judgemental

attitudes and compromised confidentiality (Morris & Rushwan 2015:41). However, the South African National Policy states that adolescents and youth-friendly services are to uphold privacy and also ensure that they employ non-judgemental healthcare workers (Centre for Human Rights [s.a]:7).

2.8.2 Interventions and recommendations

Efforts have been made to create adolescent-friendly SRHS; however, despite the efforts, there have been concerns of whether these services are accessible to adolescents (Lince-Deroche et al 2015:80).

The recommendations made by Morris and Rushwan (2015:42) state that "political efforts need to be directed to providing youth-appreciate services and the health establishment must follow a comprehensive, evidence-based approach that raises the capacity of health workers and implements bold initiatives for and with adolescents".

The Centre for Human Rights ([s.a.]:7) states that adolescents and youth should have easy access to SRHS. The services must aim to not only address sexual health issues but to also address psychosocial requirements of adolescents, including working hours that accommodate learners' timetables.

SRHS are to improve and encourage contraception, dual protection and Male Medical Circumcision (MMC) and such services are to be open to accommodating learners Centre for Human Rights ([s.a.]:7).

Social Development together with SASSA and the National Department of Education are to implement social protection for 10- to 24-year olds. This will include cash, free school meals and parenting support, as it is conceived that such support can aid with HIV prevention among adolescent girls and young women (Centre for Human Rights ([s.a.]:7).

2.9 CONCLUSION

This chapter offered the literature review that was undertaken during the study. The review of literature elaborated on the impact that HIV has economically and socially. The chapter also outlined the knowledge, attitudes and challenges that adolescents come across regarding the prevention and management of HIV.

CHAPTER 3

RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

This chapter gives an account of the design and method that were followed during the study to fulfil the purpose of the study, namely to understand the knowledge of HIV transmission and prevention among adolescents aged between 14 and 16 years in Tshwane West District. The design and the methods followed aimed to answer the research question: What is the knowledge of HIV transmission and prevention among adolescents aged between 14 and 16 years? A qualitative exploratory descriptive contextual study was conducted to answer the research question. A detailed description of the methods and design chosen will follow and the reasons behind the choices are further explained in the study.

The objectives of this study were to explore and describe HIV transmission knowledge among adolescents aged between 14 and 16 years at Tshwane West District, and to explore and describe HIV prevention knowledge among adolescents aged between 14 and 16 years at Tshwane West District. Proper population sampling and site sampling were done and good ethical conduct was applied. This chapter further explains the data analysis method used, which will be explained in detail in Chapter 4.

3.2 RESEARCH APPROACH AND DESIGN

3.2.1 Research approach

The research approach that was used in this study was the qualitative approach. The reason for this is that the researcher wanted to gather detailed information on HIV transmission prevention knowledge among adolescents. “Qualitative research is the investigation of phenomena, typically in an in-depth and holistic fashion, through collection of rich narrative materials using a flexible research design” (Polit & Beck 2012:739). Qualitative research is an approach which seeks to explore and understand

the meaning individuals or groups attribute to a social or human problem (Creswell 2014:32).

Functions of qualitative research

One of the main functions of qualitative research is to comprehend the subjective aspects of individuals or groups under the study in which the researcher has interest (Okeke & Van Wyk 2015:217). The interest of qualitative research does not lie in the measurement of behavioural characteristics of participants (Okeke & Van Wyk 2015:217). The central understanding of the subjective aspects of individuals or groups under study influences the type of method the researcher should follow to conduct the research (Okeke & Van Wyk 2015:217).

3.2.2 Research design

Research design is an overall detailed strategy appropriate to address a research question (Polit & Beck 2012:741). It is an inquiry within the different research approaches that gives specific direction for the process to be followed in a research study (Creswell 2014:41). A qualitative exploratory descriptive contextual study was conducted. The researcher intended to explore and describe the knowledge of HIV transmission and prevention within the context of adolescents.

Research design serves to identify and develop specific strategies and protocols of the research plan of action for the research to be conducted. The design chosen directs procedures to ensure that the design is valid and accurate and sets out the research objectives (Okeke & Van Wyk 2015:165).

Bertam and Christiansen (2014:40) state that research design serves to answer these questions:

- What data or evidence needs to be collected in order to conduct the study?
- How will the data be collected or which data collection methods will be appropriate to use?
- What will the researcher do with the data collected?

- How will analysis of data be done and how will the researcher make meaning of the data collected?

3.2.2.1 Exploratory design

Exploratory design is the research design where the researcher explores the views of the respondents (Creswell 2014:41). It is the best design to gain background information on the research problem and to develop a better understanding of the nature of the research problem (SMstudy 2016:1). This design was chosen because it best suited the purpose of the study, which was to understand the knowledge of HIV transmission and prevention among adolescents.

The advantages of this type of design are that it is (Polit & Beck 2012:612):

- straight forward
- easy to describe
- easily done by a single researcher
- less likely to be biased and provide flexibility on how data can be perceived (Markopoulos, Martens, Mallins, Coninx & Liapis 2016:365)

3.2.2.2 Descriptive research design

This design is mainly used to get information on existing circumstances (Okeke & Van Wyk 2015:155). The researcher wanted to get information on the existing knowledge of HIV transmission and prevention among adolescents. This design is important to use when the researcher aims to describe human beings, organisations or a phenomenon under the study (Creswell et al 2016:54). Descriptive studies are more concerned with answering “what” questions (Creswell et al 2016:54) and the research question in this study asked what the knowledge of HIV transmission and prevention is among adolescents aged between 14 and 16 years. For this reason the researcher chose this type of research design; it was perceived to be the best method to address the research question. This type of design is also less interpretive and focuses mainly on the subjective information participants have to offer (Creswell et al 2016:54).

3.2.2.3 Contextual research design

Holtzblatt and Beyer (2014:1) define contextual design as a user-centred design that incorporates in-depth field research to drive innovative outline. It is a sequential process for collecting data and is used to outline any sort of technical product. In this study, this design was used to gain understanding and describe the knowledge adolescents aged between 14 and 16 years have regarding HIV transmission and prevention. It also aimed to learn more about the barriers and challenges they encounter with regard to HIV education.

3.3 RESEARCH METHOD

Research methods are a set of techniques utilised to make up a study to collect and analyse data in an orderly manner (Polit & Beck 2012:12). The researcher used the World Café method to create a friendly atmosphere for the learners to allow them to express themselves freely and to be able to gather as much information as possible on their knowledge of HIV/AIDS. World Café is a great method to gather people together to discuss conversations that matter and also produce effective solution to the fast-paced fragmentation and lack of connection in today's world (World Café 2017:2).

The research method gives deeper knowledge and comprehension of the study phenomenon and, if a suitable method is chosen, it influences the study findings accurately, whereas an untrustworthy method may influence unreliable findings (Okeke & Van Wyk 2015:501).

3.3.1 Population, sampling and sample

3.3.1.1 Population

Population refers to the entire group of individuals or objects sharing common characteristics in which the researcher is interested; it is not limited to humans only. Population might consist of health records or even blood samples (Polit & Beck 2012:738). Ehrlich and Joubert (2014:98) note that it is important for the researcher to clearly define the group that the study will focus on to collect data and make inferences.

It is important to differentiate between target and accessible population. The accessible population is the entire group of cases that have the required characteristics to be part of the study and which is accessible for a study. The target population is the aggregate of cases which the researcher would like to use to make a generalised inferences. A target population is usually drawn from an accessible population (Polit & Beck 2012:274). The target population in this study were the Grade 9 learners aged between 14 and 16 years at a junior secondary school in Tshwane West District.

3.3.1.2 Sampling

Sampling refers to the process of selecting a sample from a population (Polit & Beck 2012:275). In qualitative sampling, participants are not randomly selected. It involves fewer participants, depending on data saturation, and is usually driven to a great extent by conceptual requirements (Polit & Beck 2012:516). Sampling involves decisions such as who to include in the study, where to conduct the study and which behaviours to include in the study (Bertram & Christiansen 2014:59).

3.3.1.2.1 Site sampling

The idea behind qualitative research is to purposively select the sample and the site that will assist the researcher to gain understanding of the phenomenon researched (Creswell 2014:239). “It is important to choose sites that are suitable and feasible” (Creswell et al 2016:36).

There were four secondary schools with Grade 9 learners aged between 14 and 16 at Tshwane West District. The school’s socio-demographic aspects are the same. The secondary schools were in the same geographic area and within the same education district. Convenience sampling of one of the junior secondary schools in Tshwane West District was done. In this type of sample, the researcher chooses a sample or a site that is accessible and easy to reach; it is neither random nor driven by a certain purpose (Bertram & Christiansen 2014:59). This is a useful sampling method, especially in exploratory studies, as the researcher’s interest in this type of design lies in conducting an inexpensive and quick approximation of the truth (Creswell et al 2016:197).

There was more than one classroom of Grade 9 learners in the secondary schools of Tshwane West District and they were mostly overcrowded, with learners ranging between 40 and 50 learners in a classroom. Purposive sampling of one of the Grade 9 classes in the sampled school was done. The class was comprised of 40 Grade 9 learners aged between 14 and 16 years. However, only 37 learners were present on the day that the research was conducted. The class of 37 learners was sampled to group the learners in five groups of maximum 7 to 8 learners per table, as specified in one of the principles in the World Café data collection method.

3.3.1.2.2 The sampling of participants

- *Sampling criteria*

The following criterion was used to select participants in this study:

Participants had to be Grade 9 learners, male and female between the ages of 14 and 16.

Purposive sampling of the learners was done. Purposive sampling uses the researcher's knowledge about the population to draw a sample from a population. In this type of sampling, the researcher may opt to choose people who are known to be knowledgeable about the study phenomenon (Polit & Beck 2012:279). Researchers who opt for purposive sampling conduct the study with a purpose in mind (Okeke & Van Wyk 2015:230). This type of sampling is subjective and judgemental as it depends largely on the researcher's opinion and intention (Okeke & Van Wyk 2015:230).

The Grade 9 learners aged 14 to 16 years in the class of 40 from the sampled secondary school were selected after consent had been obtained from parents and assents had been signed. Only the learners who had permission from their parents to participate in the study and who also agreed to participate formed the sample for the study. From the class of 40 learners, only 37 managed to bring signed consent forms and were present on the day the research was conducted.

In purposive sampling, a case can be chosen because it is considered to be representative of the population. It can also be chosen because it has the attributes

required from the population to be part of the study. However, these characteristics do not always simultaneously (Bertram & Christiansen 2014:61).

“A key aspect of purposive sampling lies with the criteria used as a bias for sampling” (Creswell et al 2016:85). Curtis, Gesler, Smith and Washburn (cited in Creswell et al 2016:85) identified six criteria based on the work of Miles and Huberman (1994):

- The sampling strategy should be relevant to study and must serve to address the research question.
- The sample should be able to produce rich information needed for the study.
- The sample should improve the transferability of the study findings.
- The sample should generate explanations or descriptions that are trustworthy.
- The sample should take ethical aspects into consideration prior to the study.
- Sampling should be feasible in terms of money and time. Accessibility of the sample must also be taken into consideration.

3.3.1.3 Ethical issues related to sampling

The researcher strictly adhered to sampling procedures and ethical conduct was applied. There was no punishment for participants who could not be part of the study. Participants were not coerced to be part of the study; permission was asked from the participants and their rights were clearly explained to them. It was explained to them that they may refuse to be part of the study or withdraw from study if they did not wish to continue with the study. Consent and assent forms were then issued to participants who agreed to participate in the study.

3.3.1.4 Sample

According to Polit and Beck (2012:742), a sample refers to a subset of a population in a study selected by a researcher. Okeke and Van Wyk (2015:226) define sample as a set of respondents drawn from a larger population for study purposes. The sample of this study was Grade 9 learners aged from 14 to 16 years at a junior secondary school in Tshwane West District. Okeke and Van Wyk (2015:226) also state that it is essential

that the sample be representative of the population to enable the researcher to make generalisations about the population based on the sample drawn.

3.3.1.4.1 Sample size

There are no rules regarding sample size in qualitative research (Patton cited in Creswell et al 2016:84). The size depends entirely on the purpose of the study, the issue being researched, what will be of good use, what will have credibility and how available data and resources will be used (Creswell et al 2016:84). The sample size in qualitative studies should not be too large as extracting important rich data will be difficult. The sample size should not be too small either, as it will make it difficult to achieve data saturation or theoretical saturation (Creswell et al 2016:84). The sample in this study consisted of 37 participants; the sample size was neither too large nor too small for the researcher to achieve data saturation.

3.3.2 Data collection

Data collection is a process whereby the researcher collects data from relevant sources, with a goal to answer the research question and evaluate the outcome (Bussiness Jargons 2018:1)

3.3.2.1 Data collection approach and method

The World Café approach was used as the method to obtain data from participants in this research. World café is a method best used to create a living network of collaborative discussions on questions that matter in service to real work. It encourages collaborative dialogue, active engagement and constructive possibilities for action (The world café 2015:1-2). This method was considered appropriate for the study because it provides a variety of responses from adolescents on their knowledge of HIV transmission prevention and provided different perspectives of adolescents on HIV. It also allows people to listen and share insights (World Café 2015:3).

3.3.2.1.1 Advantages of the World Café method

The World Café method offers the following advantages:

- It has the ability to produce up-to-date and high quality data.
- It is the most appropriate tool used to gather feedback regarding the study phenomenon.
- Interaction with the group promotes participants' explanation.
- Most participants prefer working in groups and sharing ideas.
- It increases the reference sample.
- It promotes equity among participants, as they work together and since taking responsibility is encouraged.
- There are limited implementation costs.
- It facilitates learning.
- It is simple to utilise.
- It focuses on common ground rather than on differences.
  (Better Evaluation 2015:1)

The reason this method was perceived to be the best qualitative data collection technique is that it is a combination of certain aspects of several more traditional qualitative data collection techniques, such as interviewing, drawing and narrative. This method allows more information to be gathered as it also allows time to reflect on what was shared (Koen, Du Plessis & Koen 2015:183). Another advantage of using this method is that it can gather most participants in one place, which helps in shortening the data collection time (Koen et al 2015:183). This is one method that not only produces data but also facilitates dialogue and learning among participants (Löhr, Weinhardt & Sieber 2016:1).

The researcher gathered all 37 participants in one classroom and seated them in groups of 5, each group consisting of 7 to 8 members. Assent and consent forms were collected prior to the study commencement. The researcher introduced the team of research assistants and explained the proceedings of the day. The researcher had two research assistants. One facilitated the World Café session while the other was moving around between the tables, assisting the participants to move between questions and in

the presentation of group feedback, and removing pasted feedback from the clipboard when the session was complete, as part of data evidence.

The Café host, who was also one of the research fieldworkers, introduced the topic to the participants without giving them answers to the questions that had been asked and each group had a fair chance to present their answers. Stationery (colour markers, A4 papers, A3 charts for presentation, pens and pencils) was provided to each group.

The researcher set up the audio recorder and took notes. The researcher was available to provide clarity, answer participants' questions where necessary and summarised the session at the end of the World Café. The questions were divided into two sections, the first section was presented within the first two hours. This was followed by a break, during which refreshments were served. The second section commenced after the break.

3.3.2.2 Development and testing of the data collection instrument

Data in this research were collected using the World Café method; a set of questions was prepared in the form of a questionnaire (Annexure H). A questionnaire is a form of inquiry containing a series of questions arranged in an orderly manner and given to participants to gather information needed for the study (Okeke & Van Wyk 2015:317).

3.3.2.2.1 Advantages of a questionnaire

The advantages of a questionnaire are that it:

- can be administered by anyone other than the researcher
- is useful for collecting both qualitative and quantitative data
- gives participants an opportunity to hear and read the questions
- is one of the easiest methods to obtain data from people
- allows group administration without letting participants confer on responses (Okeke & Van Wyk 2015:317)

3.3.2.2.2 Testing of data collection tool

According to Okeke and Van Wyk (2015:330), researchers ought to test the data collection tool or questionnaire in a small sample of the study participants before the data collection tool can be utilised in the study. It is easier for others to note errors or uncertainty of the data collection tool than for the researcher to validate data on their own.

In this study the researcher gathered a group of 5 participants, explained the purpose of the pilot test, issued them with the questionnaires and gave them time to go through the questions to take note if anything was unclear. The time taken around each question was also evaluated. Participants did not seem to be familiar with the word “contraceptive”, which was used in the data collection tool. It was therefore put in simpler terms that were understood by participants. It is the researcher’s responsibility to check questions before administering the final questionnaire. This helps to evaluate the clarity of the information in the data collection tool (Okeke & Van Wyk 2015:330).

3.3.2.3 Characteristics of data collection instrument

The questionnaire consisted of two sections (see Annexure H):

- Section A consisted of questions on knowledge of HIV transmission and prevention.
- Section B consisted of questions on HIV education.

3.3.2.4 Data collection process

The researcher and the fieldworkers prepared the research setting, cleaned the classroom and arranged tables into 5 groups. Participants were seated in 5 groups with 7 to 8 members per group. The purpose of the study as well as the participants' rights was explained to participants. It was also explained to them that they may refuse to be part of the study or withdraw from study if they did not wish to continue with it.

The researcher introduced the fieldworkers to the respondents. The Café host introduced the topic to the participants without giving them answers to the questions that were asked and each group had a fair chance to present their answers. Stationery (colour markers, A4 papers, A3 charts for presentation, pens and pencils) was provided to each group.

Each group was issued with a questionnaire to enable them to read as they also listened to the questions being read by the Café host. The host went through each question with them and made sure that they understood the questions. After the first session, the researcher collected the charts and A4 papers that the participants had used to respond to the questions. A 40-minutes break was taken, refreshments were served and presentation of the first section was made by the groups after the break. After the presentations, participants commenced with the second section, took a 5-minutes break and then began with presentation on section 2. When all had been completed, the researcher collected all charts and A4 papers with the respondents' answers. The researcher then thanked all participants for sharing in the study.

3.3.2.5 Ethical considerations related to data collection

Research ethics ensure that the benefits gained from the research are as great as possible and that risks are minimised, made acceptable and are freely consented by participants or their advocates (McIntosh-Scott, Mason, Mason-Whitehead & Coyle 2014:207).

Prior to the commencement of the study, the researcher received approval to conduct the study from the Higher Degrees Committee, Department of Health Studies, UNISA (see Annexure A). Permission was requested and obtained from the Gauteng Department of Education Tshwane West District (Annexure B and Annexure C). Another letter was written to the school principal to request permission (Annexure D) after the Department of Education had given its permission. The school also granted their permission to conduct the research (Annexure E).

3.3.2.5.1 Protection from exploitation and discomfort

It is the researcher's responsibility to minimise exploitation and discomfort, especially in studies involving people. Their participation must be aimed at achieving important outcomes that could not otherwise be realised (Polit & Beck 2012:152–153).

HIV can be a very sensitive topic, especially if discussed among adolescents who are already HIV positive. A fear of being asked about their status might arise and they might not be comfortable to participate in the study. Therefore, the researcher made sure that all participants were protected from emotional or social harm and discomfort by assuring participants that they were not compelled or expected to disclose their status to the researcher. The participants participated in the study voluntarily. No names were recorded in the feedback papers and participation took place in a group.

3.3.2.5.2 Protection from exploitation

According to Polit and Beck (2012:153), participants should not be exposed to damage or be placed at a disadvantage.

Participants were ensured that the information that they gave to the researcher would only be used for study purposes and would not be used against them. Neither would their responses be shared with their educators or peers. Participants were also informed that the recordings would not be published for public use, but would be utilised for only research purposes such as data analysis and report writing. The audio recordings and papers used during the World Café were kept in a locked cabinet at the researcher's home for the prescribed time, as evidence of the study conducted. Research articles emanating from the data will report the study findings in a way that does not identify the participants in anyway.

3.3.2.5.3 Right to self-determination

Participants have the right to refuse to participate in the study, to ask questions or to withdraw from the study without any prejudice (Polit & Beck 2012:154). Participants were given assurance that no judgement would be made based on how they have responded to the questions asked. They had the right to ask questions, to refuse to provide information and to withdraw from the study without any penalties.

3.3.2.5.4 Right to full disclosure

The researcher is obligated to explain to the participants what the study entails and to inform participants of their right to withdraw from the study or refuse to participate in the

study (Polit & Beck 2012:154). The researcher explained the nature of the study and disclosed all information pertaining to the study to the participants. Participants were informed that they were not compelled to participate in the study and that they had the right to refuse to partake in the study.

3.3.2.5.5 Right to privacy

Respecting the participants' privacy is one of the most important guiding principles of research (Okeke & Van Wyk 2015:126). To ensure privacy, the researcher requested a classroom from the principal, which was utilised during the World Café to collect data from the participants.

3.3.2.5.6 Confidentiality and anonymity

Anonymity refers to the researcher's ensuring that the name of the participants, the institutions to which they belong, names of their relatives and their addresses are protected throughout and also after the research process (Okeke & Van Wyk 2015:124). Participants must remain unidentifiable throughout the research process. The researcher may give participants pseudonyms but should ensure that they are not linked to the participants in any way. The researcher must also ensure that the participants are pleased with the pseudonyms assigned to them (Okeke & Van Wyk 2015:124–125).

Confidentiality means that the information given by the participants during data collection in the study, be it written or oral, should be kept private (Okeke & Van Wyk 2015:125).

Participants were given assurance that the information they had provided would remain confidential and would not be reported or presented in a way that identifies them. Participants were not asked to give their names and no information could be linked to the participants' identity.

3.3.2.5.7 Informed consent

Before data collection commences, the researcher must first negotiate with the identified sample and determine if they are keen to be part of the study by seeking consent from them. Seeking consent from participants should not be treated as an event but a process that has to be negotiated throughout the research procedure (Okeke & Van Wyk 2015:116).

The researcher made sure that participants who had agreed to partake in the study had obtained consent from their parent or guardian as they were still minors (Annexure G). Assents were issued to participants, which served as an agreement to participate in the study. Consent was given in writing, in addition to the continuous verbal consent (Annexure F).

3.3.2.5.8 Research fieldworkers

The researcher arranged for a meet and greet session with the fieldworkers for orientation to the study and training as necessary. The fieldworkers were health professionals who had conducted research before, but who needed information about the World Café and the study. They were given information leaflets to familiarise themselves with the study title, purpose, questions and objectives. The activities to be carried out during the World Café session were explained in detail a week before the World Café, and roles were clarified. The fieldworkers signed a confidentiality binding form to ensure confidentiality of the information (Annexure K).

3.3.3 Data management

Data management in qualitative studies refers to a conversion of collected data into smaller meaningful and manageable segments (Polit & Beck 2012:562). The papers containing the summary of responses presented by the groups during the World Café were stored in a lockable drawer for confidentiality. The audio-recorded conversations were transcribed verbatim and stored as word documents that are password-protected in the research folder of the researcher's computer. The art pieces generated during the World Café were stored with all other physical output in a lockable drawer at the researcher's home.

3.3.4 Data analysis

Data analysis refers to the systematic organisation and synthesis of research data (Polit & Beck 2012:725). The purpose of data analysis is to organise data and extract meaning from the data collected in the study. Morse and Field (cited in Polit & Beck 2012:557) refer to qualitative data analysis as “a process of fitting data together, of making the invisible obvious, and of linking and attributing consequences to antecedents. It is a process of conjecture and verification, of correction and modification of suggestion and defence”.

The researcher used the content analysis method to analyse data gathered from participants during the World Café. According to Polit and Beck (2012:723), content analysis is defined as the process of organising and integrating material from documents, often narrative information from a qualitative study, according to key concepts. Audio-recorded conversations were transcribed verbatim. Art pieces and a summary of responses from the groups were analysed preliminarily with the group. The agreed upon responses of the groups were evaluated and included in the final analysis. Field notes were consulted to help in the final analysis.

The researcher read the transcriptions, field notes and the feedback papers from the World Café groups to familiarise and immense herself with the data. The data were categorised according to the questions which were asked during data collection. The responses were then compared to those from different groups where participants were grouped using summative content analysis. Categories and themes were generated from the data.

3.3.4.1 Content analysis

Content analysis is a systematic, replicable technique that compresses a large amount of data into a smaller context based on the coding rules (Stemler cited in Creswell et al, 2016:111). This type of analysis is not limited to analysing text only but it can also be used to analyse respondents’ drawings or videotaped responses (Holsti cited by Creswell et al 2016:111). The researcher opted for this type of analysis as most participants in this study responded to some of the questions with drawings.

Content analysis is the method of choice in qualitative descriptive studies (Hesse-Biber & Leavy cited by Creswell et al 2016:111). One of the issues the researcher has to consider when doing the content analysis is whether the analysis should focus on manifest or latent content (Graneheim & Lundman cited in Creswell et al 2016:111-112). In this study, latent content analysis was used. This method of analysis allows the researcher to analyse actions, people, places or events (Creswell et al 2016:112).

3.4 SCIENTIFIC RIGOR

The following are criteria for developing trustworthiness of a qualitative inquiry suggested by Lincoln and Guba (cited in Polit & Beck 2012:584).

3.4.1 Credibility

Credibility is the extent to which results are credible or believable from the standpoint of participants (Klenke 2016:39). The researcher ensured credibility by audio-recording the conversations during the World Café and allowing participants to express themselves in writing or using art.

3.4.2 Dependability

Dependability refers to the reliability of data over time and similar conditions (Polit & Beck 2012:585). The researcher ensured that the data that were analysed were the true reflection of the data that had been collected from the participants. Each step in the World Café was explained in detail to enable the next researcher to conduct the study the very same way and to obtain similar results.

3.4.3 Confirmability

Confirmability means providing an audit trail that consists of raw data, analysis notes, reconstruction and synthesis products, process notes, personal notes and preliminary developmental information (Lincon & Guba cited in Klenke 2016:39). The researcher attached the transcribed notes and scanned transcripts to the research report to support the interpretation of data (Annexure I and Annexure J).

3.4.4 Transferability

Transferability refers to the extent to which findings of the study can be transferred or be applicable in other settings or groups (Polit & Beck 2012:585). The researcher provided a detailed description of the research method and sufficient descriptive data to make applicability of data to other contexts possible.

3.4.5 Authenticity

According to Polit and Beck (2012:585), authenticity refers to the extent to which researchers fairly and faithfully show a range of realities. The researcher ensured that participants partake in the study willingly, consent forms were signed before the study commenced and views and perceptions of the participants were taken as they were and without any modifications. The researcher therefore recorded the World Café session and took the feedback papers for analysis. Preliminary analysis of the data was done during the World Café. Hosts did member-checking with World Café participants to verify the codes and themes obtained from the summary of the content in the pasted sheets of papers from the tables. These are summaries of agreed-upon answers from the World Café tables.

3.5 CONCLUSION

This chapter described the design and method that were followed during the study to fulfil the purpose of a detailed description of the methods applied and the design chosen. The reasons behind the choices were further explained.

CHAPTER 4

DATA ANALYSIS, PRESENTATION AND DESCRIPTION OF THE RESEARCH FINDINGS

4.1 INTRODUCTION

The previous chapter described the detailed method followed when conducting the research. This chapter discusses data analysis and provides a description of research findings. Data were collected using the World Café method and content analysis was used to analyse the data collected. The purpose of this study was to understand the knowledge of HIV transmission and prevention among adolescents aged 14 to 16 years at Tshwane West District. In this study, the researcher's objectives were to explore and describe HIV transmission knowledge and to explore and describe HIV prevention knowledge among adolescents aged between 14 and 16 years at Tshwane West District.

4.2 DATA MANAGEMENT AND ANALYSIS

As discussed in Chapter 3, data were collected through World Café method. A questionnaire was designed as the data collection tool. However, the Café host went through each question with participants to ensure that each participant understood the questions. The questionnaire consisted of two sections, namely section A which consisted of questions on knowledge of HIV transmission and prevention, and section B which consisted of questions on HIV education.

Content analysis was the method of choice used to analyse data in this study. This type of analysis is not limited to analysing text only but it can also be used to analyse respondents' drawings or videotaped responses (Holsti, cited by Creswell et al 2016:111). The researcher decided on this type of analysis as most participants in this study responded to some of the questions in drawings.

4.2.1 Demographical information

A total number of 37 participants formed a sample of the study, with 20 females and 17 males aged between 14 and 16 years. Participants were grouped into 5 groups, of which:

- Group 1 consisted of 4 females and 3 males
- Group 2 consisted of 4 females and 4 males
- Group 3 consisted of 4 females and 3 males
- Group 4 consisted of 4 females and 4 males
- Group 5 consisted of 4 females and 3 males
- Participants were all African and unmarried

4.3 THEMES, SUB-THEMES AND DATA CODING GENERATED FROM THE WORLD CAFÉ

4.3.1 Section A

This section outlines the findings from the first section of the data collection tool.

Table 4.1 Themes, sub-themes and data coding generated from section A

Themes	Sub-theme	Code
HIV knowledge	HIV as a disease	Infective disease
		Unknown disease
	HIV as a virus	Human origin
		Environment origin
	HIV as a sickness	Invisible
Transmission of HIV	Sexual intercourse	Unprotected sex
		Protected sex
	Blood as mode of transmission	Touching infected blood
		Use of needles
	Food	Sharing food
	Direct skin contact	Sleeping
		Touching an infected person

Themes	Sub-theme	Code
		Kissing
	Possible transmission among same age group	Yes
		No
	Reasons for transmission among same age group	Sexual behaviour
		Intergenerational relationships
		Perinatal acquired HIV
Prevention of HIV	Condom use	Protected sexual intercourse
Reducing HIV rates	Ways of HIV prevention suggested	Protected sexual intercourse
		Abstinence
		Intergenerational relationships
		Teenage pregnancy
		Avoiding blood contact
	Interventions	Drug discovery
	Treatment	Treatment adherence
Misconceptions	Contraceptives	Used for HIV prevention
		Not used for HIV prevention
	HIV counselling and testing	Importance of HIV counselling and testing
	HIV knowledge misconceptions	HIV affects bones
		Smoking
	HIV prevention misconceptions	HIV testing
		Gloves
		Treatment adherence
	HIV transmission misconceptions	Sharing objects
		Cough

4.3.1.1 Theme 1: HIV knowledge

This theme explains how participants responded when they were asked about what they knew about HIV. They were not narrative when responding to this question and the researcher noted some uncertainty as they were responding to the question. Some participants tried to describe HIV in the form of drawings. Participants' responses varied in this type of question. Although some responses were similar, they were explained differently.

4.3.1.1.1 Sub-theme 1: HIV as a disease

Some participants responded that they knew HIV is a disease; some said it is an infective disease, while other participants described it as an unknown disease.

- *Infective disease*

When asked what they knew about HIV, one of the groups (Group 1) responded that it is a *"disease that can infect someone".* The host did not ask the group to further explain how the disease "*infects someone*" as it was expected to be answered in the questions that followed after the one answered. This group of participants did not explain further as to what kind of a disease it is. However, they made a drawing (Figure 4.1), which they said symbolises HIV.

Figure 4.1 Drawing A of a ribbon symbolising HIV

- *Unknown disease*

Group 2, a group of participants who did not seem to understand what HIV is, described HIV as a disease that is not known by anyone. This group had various answers to this question, some of which are explained in other sub-themes. They seemed to have an idea that there is a disease called HIV but could not explain what exactly the disease is. They had also drawn a red ribbon, which they said symbolises HIV (Figure 4.2).

Figure 4.2 Drawing B of a ribbon symbolising HIV

4.3.1.1.2 Sub-theme 2: HIV as a virus

HIV was also defined as a virus. Of all the groups that defined HIV as a disease, Group 3 was the only group that described HIV as a virus. However, they could not explain further or give more details about the virus. They had also drawn a red ribbon, which they said symbolises HIV (Figure 4.3).

Figure 4.3 Drawing C of a ribbon symbolising HIV

- *Human origin*

Group 5 described HIV as a virus that comes from a man and a woman during unprotected sex *"when sperm of a man flows into a woman without using protection".*

This group might not have put the description into the desired context but they seemed to have an idea of what HIV is. They also included wrong information, namely that it is transmitted through coughing, and they were confident when presenting their answer.

- *Environment origin*

Group 4 described HIV as a virus caused by *"many populated things in the environment".* The group did not seem to understand their response either, but when probed further, sexual intercourse was one of the causative factors among the *"many populated things".*

4.3.1.1.3 Sub-theme 3: HIV as a sickness

- *Invisible*

Group 2 also defined HIV as a sickness that cannot be seen. However, they drew a picture of a sweating man with big eyes and a tongue covered in ulcers. Another picture had a man with sores on the face to demonstrate what HIV looks like (Figure 4.4).

Figure 4.4 Drawings illustrating how HIV looks like

4.3.1.2 Theme 2: Transmission of HIV

This theme explains participants' responses to how HIV is transmitted and how it is not transmitted. It also provides participants' responses on whether they thought that people of the same age as theirs could contract HIV as well as a substantiation to their responses.

4.3.1.2.1 Sub-theme 1: Sexual intercourse

Sexual intercourse was the most common answer in questions relating to HIV transmission. All groups had sexual intercourse as their answer to the question of mode of transmission of HIV. However, not all specified whether it is through protected or unprotected sex that one can contract HIV.

- *Unprotected sex*

All groups were confident that HIV transmission has everything to do with sexual intercourse. Groups 1 and 3 clearly stated that HIV is transmitted through unprotected sex. Group 2 stated that HIV can be transmitted by sleeping with an infected person but did not specify if protected or not. Groups 4 and 5 also stated that it is through sexual intercourse that HIV is transmitted and when asked to explain further, they became shy to explain. As the presentations unfolded, the researcher noted that they all meant unprotected sexual activity.

- *Protected sex*

In response to the question on how HIV is not transmitted, Groups 1, 2, 3 and 5 explained that one cannot get HIV through protected sexual intercourse. When asked what they meant with protected sex, they referred to using condoms during sexual activity. Group 4 did not include protected sex as one of their answers on how HIV is not transmitted and the Café host or researcher did not ask why it was not included as one of their answers as it would have sounded like they were being given hints to correct answers during the presentation.

4.3.1.2.2 Sub-theme 2: Blood as a mode of transmission

This sub-theme explains one of the modes of transmission which participants highlighted during the study. It also includes responses to the question that asked participants which health risks they thought people are faced with when sharing needles.

- *Touching infected blood*

Groups 3 and 5 included blood as the other mode of transmission of HIV. However, they highlighted only that it is through touching blood that one can get infected. According to them, one does not have to have a fresh cut to get infected if they come in contact with infected blood, but a mere touch may get a person infected. Although Group 2 did not note it down, they used a sketch in which they had drawn one of their teachers who usually suffers from nose bleeding and explained that they were not supposed to help him as they could get infected. Group 5 also drew a sketch showing a man with an injury on the shoulder and people around him refusing to help out of the fear of contracting HIV (Figure 4.5).

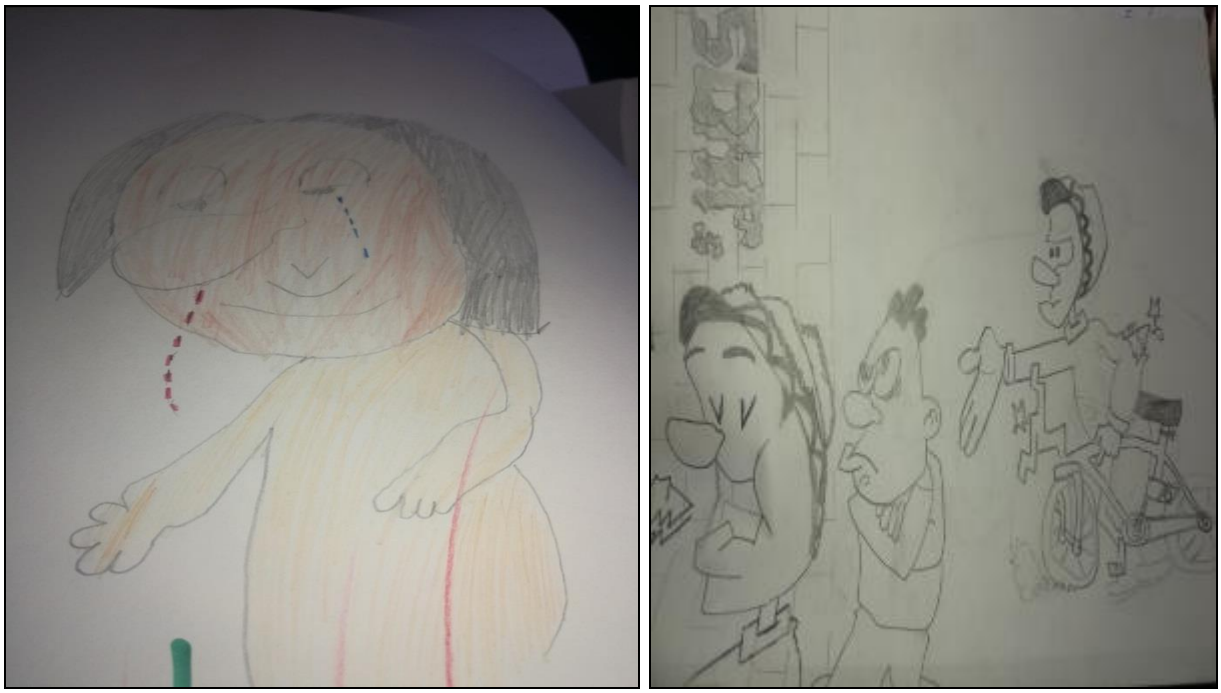


Figure 4.5 Drawings illustrating touching infected blood

- *Use of needles*

Participants were asked which health risk they thought people are faced with when using needles. Group 1 responded that there will be risks involved if only one of them has a disease. Group 5 stated that there will be transmission of disease if one among the people who are sharing the needle has the disease. When asked which diseases they were referring to, the answer was HIV. Group 2 generalised by stating that people who share needles are faced with diseases and sicknesses and they also mentioned HIV as one of the diseases which they will face. Groups 3 and 4 mentioned that they are at a high risk of contracting HIV. Some participants also demonstrated that sharing needles is dangerous by using sketches (Figure 4.6).

Figure 4.6 Drawings illustrating the danger of sharing needles

4.3.1.2.3 Sub-theme 3: Food

Food was also included as a response to the question on how HIV is not transmitted.

- *Sharing food*

Group 4, in addition to their responses on the question mentioned above, mentioned that one cannot contract HIV by sharing food.

4.3.1.2.4 Sub-theme 4: Direct skin contact

Under the sub-theme of direct skin contact, sleeping, touching and kissing were put under the same umbrella, although kissing may also involve salivary fluids exchange.

- *Sleeping*

Again, Group 4 mentioned that sleeping with an infected person will not increase the chances of one getting infected. When asked to elaborate on what they meant by sleeping, they responded that they meant sleeping without any sexual contact.

- *Touching an infected person*

Groups 3 and 4 also mentioned that touching an infected person will not get one infected. However, Group 3 highlighted that one has to wear plastic gloves when touching an infected person to avoid being infected by HIV.

- *Kissing*

Group 3 stated that HIV cannot be transmitted through kissing.

4.3.1.2.5 Sub-theme 5: Possible transmission among same age group

Participants were asked if they thought people with the same age group as them could get HIV.

- *Yes*

All participants responded that there is indeed a possibility that people as young as they were could contract HIV.

- *No*

No one responded with a no to this question.

4.3.1.2.6 Sub-theme 6: Reasons for transmission among same age group

The following were participants' substantiation as to why they thought that people the same age as them could contract HIV.

- *Sexual behaviour*

Groups 1, 2 and 4 stated that early sexual debut contributes to HIV infection among young people. Group 4 also stated that the fact that young people like to experiment by engaging in sexual activity makes adolescents more susceptible to HIV infection.

- *Intergenerational relationships*

Groups 2 and 4 also highlighted that young people who get involved in sexual relationships with older people increase the risk of getting infected. Group 2 emphasised that young people involve themselves in such sexual relationships and do not use condoms.

- *Perinatally acquired HIV*

Groups 2, 3, 4 and 5 mentioned the fact that some adolescents were born with HIV makes it possible to have people in the same age as them who are HIV positive.

4.3.1.3 Theme 3: Prevention of HIV

There were various responses to the question on how one can prevent oneself from getting HIV. However, only one relevant response was included in the sub-theme, as others were better fitted in the theme of misconceptions.

4.3.1.3.1 Sub-theme 1: Condom use

This was the most common response from participants on how one can be protected against contracting HIV. Participants also used drawings to emphasise the importance of condom use (Figure 4.7).

Figure 4.7 Drawings of condoms

- *Protected sexual intercourse*

Groups 1, 2 and 3 mentioned that HIV can be prevented by using condoms when engaging in sexual activity.

4.3.1.4 Theme 4: Reducing HIV rates

Participants were also asked an opinion about what could be done to reduce HIV rates among young people. Their opinions included preventive measures, interventions that could be taken and possible treatment. These are explained in detail below.

4.3.1.4.1 Sub-theme 1: Ways of HIV prevention suggested

Most participants mentioned different strategies to prevent HIV, thus reducing the rate of infection among adolescents.

- *Protected sexual intercourse*

Groups 1 and 5 believed that condom use will help to reduce HIV rates among adolescents. Group 4 also concurred with these two groups by stating that adolescents should avoid unprotected sex as it may increase the rate of infection among adolescents. Group 5 suggested that condoms need to be "donated" widely to promote condom use among everyone. Groups 4 and 5 also used drawings to emphasise the importance of condom use (Figure 4.8).

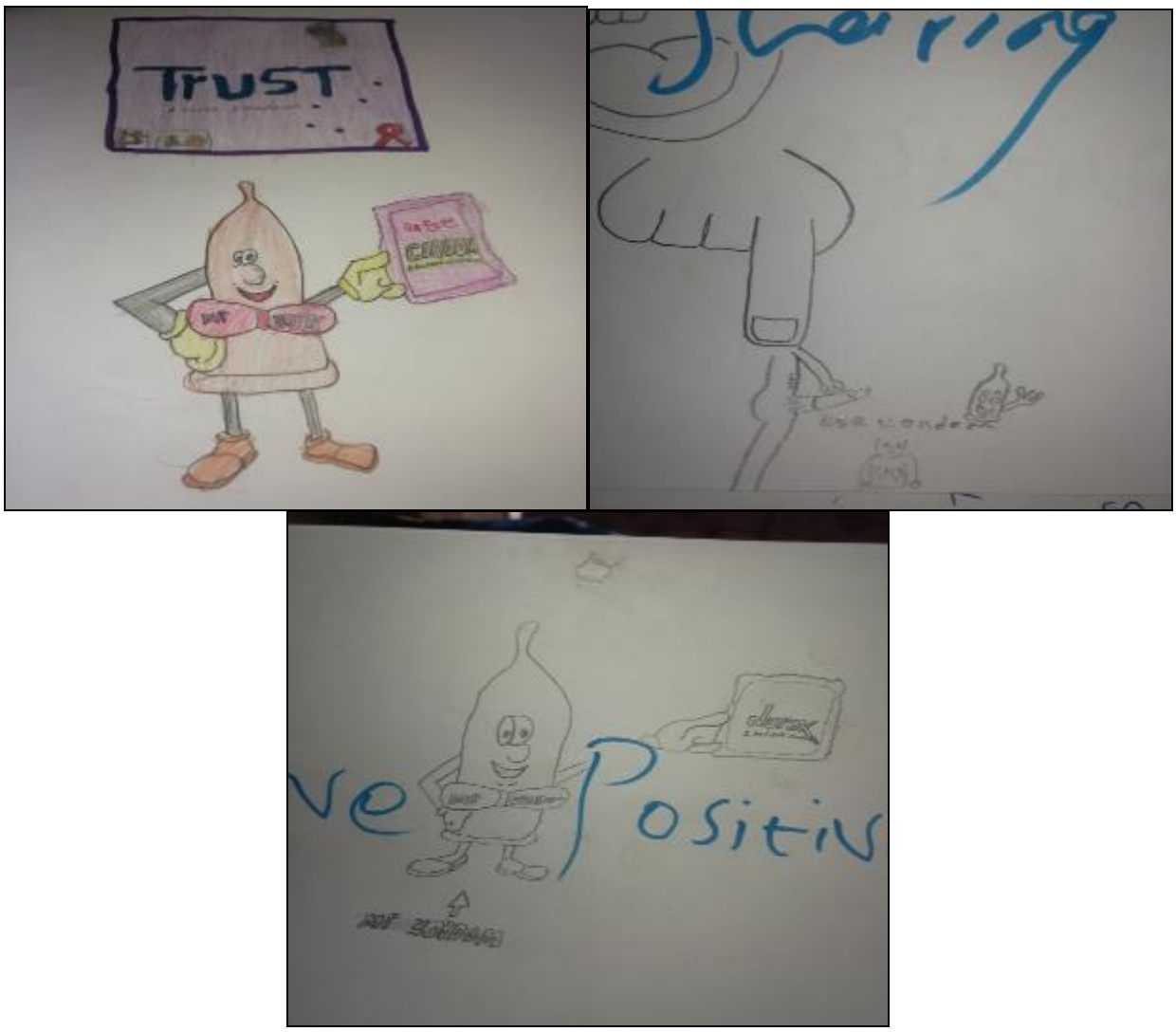


Figure 4.8 Drawing illustrating condom usage

- *Abstinence*

Group 3 suggested that abstinence among young people, especially when they are not ready to engage in sexual activity, will help reduce the rate of HIV infection among adolescents.

- *Intergenerational relationships*

Group 4 also acknowledged that the blesser-blessee relationship contributes largely to alarming HIV rates among young people and should therefore be stopped in order to reduce these rates.

- *Teenage pregnancy*

Group 4 mentioned that if the rates of teenage pregnancy are reduced, the rates of HIV will also be reduced.

- *Avoiding blood contact*

Groups 1 and 5 stated that adolescents need to be careful when assisting someone who is bleeding and that safety precautions need to be taken in such circumstances.

4.3.1.4.2 Sub-theme 2: Interventions

Some participants also came up with a suggestion which they thought could be a permanent solution to the alarming HIV rates that the world is faced with currently.

- *Drug discovery*

Group 3 suggested that scientists need to work harder to find a cure for HIV. Group 2 concurred with this statement by stating that “we must get a serious medication so that we must get healed”.

4.3.1.4.3 Sub-theme 3: Treatment

Treatment was one the useful strategies that some participants thought may contribute to reducing the rates of HIV among adolescents.

- *Treatment adherence*

Group 1 mentioned that treatment adherence of adolescents who are already infected with HIV is of great importance. Group 4 also used drawings to explain that adhering to treatment is important to reduce the rates of HIV among adolescents (Figure 4.9).

Figure 4.9 Drawing of ARVs

4.3.1.5 Theme 5: Misconceptions

From the participants' responses, the researcher noted some misconceptions about HIV. The misconceptions pertained to contraceptives, HIV testing and counselling, HIV knowledge, HIV prevention and HIV transmission.

4.3.1.5.1 Sub-theme 1: Contraceptives

Participants were asked if they thought people using contraceptives could get HIV. This was a closed-ended question, followed by a question that asked participants to substantiate their answers.

- *Used for HIV prevention*

Groups 1 and 2 responded that they did not think people using oral and injectable contraceptives could get HIV. Group 1 substantiated this answer by stating: "Because they are taking medication to prevent being pregnant", which implies that they are also preventing HIV. However, Group 2's response was contradictory to their initial answer which stated that contraceptives are not for HIV.

- *Not used for HIV prevention*

Groups 3, 4 and 5 responded that they thought people who are on oral or injectable contraceptives could get HIV. Groups 3 and 5 substantiated their answers by stating that contraceptives cannot be used to prevent HIV but to prevent pregnancy. Group 4's response was also contradictory as they stated: "Because we drink things with some glass while not knowing that the person that used it is infected or not infected." This implies that one can be infected when taking contraceptives with water using the same glass as an infected person.

4.3.1.5.2 Sub-theme 2: HIV testing and counselling

Participants were asked if they thought voluntary HIV testing and counselling are important, and to substantiate their answer. All participants responded that they thought voluntary HIV counselling and testing (HCT) are important. However, the reasons supporting their response varied.

- *Importance of HCT*

Groups 1, 2, 3, 4 and 5 noted that it is important for people to know their status. Group 1 stated that it is important to test for HIV because a person can have unprotected sex and not know the kind of disease they have contracted. Other groups did not seem to understand their response. Group 5's statement was also confusing; their reason to the question on why they thought HCT was important was "because you need to know your status according to your illness".

4.3.1.5.3 Sub-theme 3: HIV knowledge misconceptions

This misconception about HIV knowledge served to answer the question that was asked about the knowledge of HIV.

- *HIV affects bones*

One of the responses that Group 2 provided was that if a person is HIV positive, they can test for it before it goes to their bones.

- *Smoking*

Group 1 drew a sketch of a box of RG cigarettes and a lit cigarette, which suggests that a person who is HIV positive is not supposed to smoke (Figure 4.10).

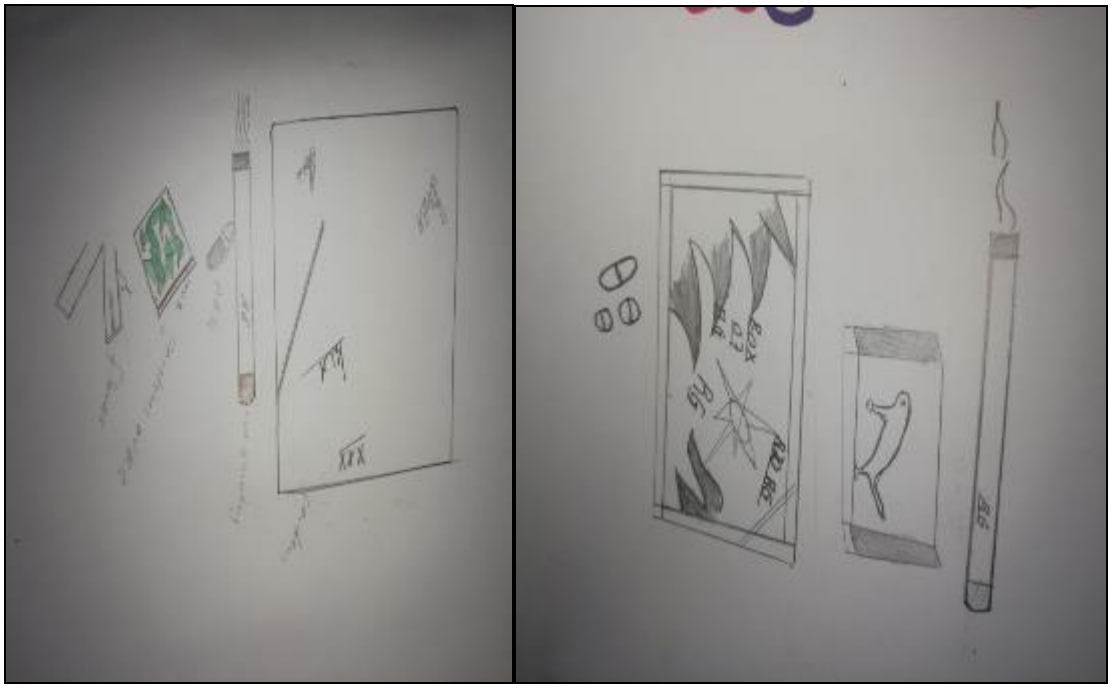


Figure 4.10 Drawings of cigarettes

4.3.1.5.4 Sub-theme 4: HIV prevention misconceptions

When participants were asked about how a person could prevent themself from contracting HIV, the following were some responses from participants, in addition to the ones mentioned above.

- *HIV testing*

Group 4 stated that HIV can be prevented by testing for HIV.

- *Gloves*

Group 3 mentioned that one needs plastic gloves when touching an infected person to prevent getting infected.

- *Treatment adherence*

Group 5 stated that adhering to treatment can help prevent HIV infection. However, they could not explain how treatment can prevent HIV.

4.3.1.5.5 Sub-theme 5: HIV transmission misconceptions

The following were misconceptions on HIV transmission which were noted from the study.

- *Sharing objects*

When responding to the question asked on whether contraceptives can prevent HIV, Group 4 stated that drinking from the same glass as an infected person can get one infected as well.

- *Cough*

When defining HIV, Group 5 described HIV as a virus that can be transmitted through blood, sex and coughing.

4.3.2 Section B

This section outlines the findings from the second section of the data collection tool.

Table 4.2 Themes, sub-themes and coding generated from section B

Theme	Sub-theme	Code
HIV education at school	Frequency of HIV education	Once/twice
		Never
	HIV teacher	Teacher A
		Teacher B
	Desired frequency of HIV education	Once/twice
		Quarterly
		Often
Knowledge acquired from school regarding HIV	Transmission of HIV knowledge acquired from school	Unprotected sexual intercourse
	HIV prevention knowledge acquired from school	Abstinence
		Practising safe sex
		Contact with blood
HIV knowledge required	HIV knowledge to learn	General HIV knowledge
		HIV testing
	Transmission of HIV	Chances of infection when sharing objects/food
		Chances of HIV transmission in motor vehicle accident
		Knowledge regarding perinatal HIV
		Possibility of HIV infection using a condom
	Prevention of HIV through condom usage	Condom use
Teaching manner	HIV transmission and prevention content	General HIV knowledge
		Information on how to use a condom to prevent HIV transmission
	Teaching strategies used for prevention education	Demonstration
		Instruct and explain
Desired teaching strategies for HIV transmission and prevention education	Content of HIV education	Novel
		HIV general knowledge regarding HIV transmission and prevention
		Knowledge regarding HIV transmission
		Knowledge regarding adherence to treatment

4.3.2.1 Theme 1: HIV education at school

On the second section of the data collection tool, participants were asked questions regarding HIV transmission and prevention education.

4.3.2.1.1 Sub-theme 1: Frequency of HIV education

Participants were asked how often they were taught about HIV transmission and prevention at school.

- *Once/twice*

Group 1 responded that they had been taught about HIV transmission and prevention once for almost a week long, while Group 2 responded that they had been taught once for a during of two weeks. Group 3 stated that they had been taught only twice. Group 5 answered irrelevantly to this question.

- *Never*

During the discussions, there were disagreements regarding this question among the members of Group 4. Some mentioned that no one had taught them about HIV transmission and prevention, while other members disagreed and said that they had been taught about HIV. However, those who agreed could not answer how often they had been taught about HIV.

4.3.2.1.2 Sub-theme 2: HIV teacher

Participants were asked who had taught them about HIV. Two teachers were mentioned and were referred to as Teacher A and Teacher B to protect their identities.

- *Teacher A*

All participants responded that Teacher A was the one who had taught them about HIV.

- *Teacher B*

Group 3 also mentioned that Teacher B had taught them about HIV.

4.3.2.1.3 Sub-theme 3: Desired frequency of HIV education

After responding to how often they had been taught about HIV, participants were asked how often they wanted to be taught about HIV transmission and prevention. Again, Group 5 answered irrelevantly in this question. The host explained the question in simpler terms to ensure that every participant understood. The host avoided simplifying the question even further as it would have resulted in leading participants to answer in a certain manner desired by the host or researcher.

- *Once/twice*

Groups 2 and 4 responded that they would like to be taught about HIV transmission and prevention once for two and half weeks. Group 4 also stated that HIV transmission and prevention education should be conducted annually in school.

- *Quarterly*

Group 1 responded that they would like to be taught about HIV transmission and prevention at least once in every school term.

- *Often*

Group 3 stated that they would like to receive HIV education more often, at least 3 times per week.

4.3.2.2 Theme 2: Knowledge acquired from school regarding HIV

Participants were asked about the knowledge they had acquired on HIV transmission and prevention from school.

4.3.2.2.1 Sub-theme 1: HIV transmission knowledge acquired from school

Participants were asked about what they had been taught regarding HIV transmission. Most responses were linked to sexual activity.

- *Unprotected sexual intercourse*

Groups 1 and 3 said that they had been taught that unprotected sex is very dangerous and that they should not practise unsafe sex. Group 5 also stated that they had been taught that HIV is transmitted through unprotected sexual intercourse.

4.3.2.2.2 Sub-theme 2: HIV prevention knowledge acquired from school

Participants were asked what they had been taught about HIV prevention. This question was coupled with the transmission question and some participants answered only one, while other participants answered both. Although some participants gave only one answer, some responses served to address both the transmission and prevention questions.

- *Abstinence*

Groups 2 and 4 said they had been taught that it is important to delay sexual debut at their age. Group 4 mentioned that they had been taught that when a person is HIV positive, they need to go to the clinic to “be good”.

- *Practising safe sex*

Group 1 and 3 mentioned that their educators had taught them to practise safe sex. Group 5 stated that they had been taught that unprotected sex is the mode of transmission of HIV.

- *Avoiding contact with blood*

Group 5 also stated that they had been taught to be careful when touching someone’s blood and to avoid touching blood.

4.3.2.3 Theme 3: HIV knowledge required

Participants were asked what they wished to learn regarding HIV transmission and prevention at school. Participants showed interest in learning about HIV, HIV transmission and HIV prevention.

4.3.2.3.1 Sub-theme 1: HIV knowledge to learn

The question asked participants what they wished to learn regarding transmission and prevention of HIV. However, some participants saw it fit to include everything they wanted to learn regarding HIV and one of the things they mentioned was HIV knowledge.

- *General HIV knowledge*

Groups 4 and 5 showed interest in learning about HIV in general. They mentioned that they wanted to learn every important thing regarding HIV.

- *HIV testing*

Group 4 also stated that they would like to know more about voluntary HCT.

4.3.2.3.2 Sub-theme 2: Transmission of HIV to learn

Most of the things that participants claimed that they would like to know more about were regarding transmission.

- *Chances of infection when sharing objects or food*

Group 1 stated that they would like to learn about the chances of one getting infected when sharing a piece of bubble gum with an infected person. Group 4 also stated that they would like to be taught about the dangers of sharing needles and that they should not use needles.

- *Chances of HIV transmission in motor vehicle accident*

Group 3 showed an interest in learning about the chances of one getting infected if involved in a motor vehicle accident.

- *Knowledge regarding perinatal HIV*

Group 3 mentioned that they would like to know if an HIV positive mother could give birth to an HIV negative child who is a “monomial”. The group defined a monomial as a person who is HIV negative and cannot get infected by HIV.

- *Possibility of HIV infection using a condom*

Group 4 mentioned that they wanted to learn about the chances of getting infected if one engages in sexual activity with an infected person while using a condom.

4.3.2.3.3 Sub-theme 3: Prevention of HIV through condom usage

The question regarding what participants would like to learn regarding HIV prevention was also coupled with the transmission question. Participants showed interest in learning about condom use.

- *Condom use*

Group 4 mentioned that they have an interest in learning about the risk of transmission when using condoms. Group 2 also emphasised that they wanted their educators to teach them everything and not hide or filter anything.

4.3.2.4 Theme 4: Teaching manner

Participants were asked how they had been taught about HIV at school. Participants explained the content and the manner in which they had been taught.

4.3.2.4.1 Sub-theme 1: HIV transmission and prevention content

When describing how they had been taught about HIV transmission and prevention, participants also included what they had been taught.

- *HIV general knowledge*

Group 1 participants highlighted that they had been taught about HIV in general but did not specify everything that had been taught.

- *Information on how to use a condom to prevent HIV transmission*

Groups 2 and 4 mentioned that they had wished to be taught on how to use condoms but were instead taught not to do what their peers or friends ask them to do.

4.3.2.4.2 Sub-theme 2: Teaching strategies used for HIV prevention education

Some participants also described the manner in which the educators had taught them about HIV.

- *Demonstration*

Group 5 mentioned that educators had taught them about HIV transmission and prevention using examples and warnings.

- *Instruct and explain*

Group 3 explained that their educators had come to the classroom and instructed them to open a certain page in a textbook with information about HIV. The educator would then explain the content to the learners.

4.3.2.5 Theme 5: Desired teaching strategies for HIV prevention education

Participants were asked how they wished to be taught about HIV and again participants explained the content and the manner in which they would like to be taught.

4.3.2.5.1 Sub-theme 1: Content of HIV education

From participants' responses, the content included reading a novel, HIV knowledge, HIV transmission and treatment adherence.

- *Novel*

Group 1 mentioned that they would like the educators to bring novels with the HIV content so that they could read, answer questions and also ask questions based on what the novel entails.

- *General knowledge regarding HIV* transmission and prevention

Group 5 highlighted that they would like to learn more about HIV in general so that they may be able to educate their peers as well. They also mentioned that they wanted to be taught about the "warnings" regarding HIV. Group 4 highlighted how they would like to be taught about HIV transmission and prevention by stating: "We will basically prefer the teacher to come with packs of condoms so that we could get a better view of what they want us to engage through".

- *Knowledge regarding HIV transmission*

Group 2 showed interest in learning more on how HIV can be transmitted.

- *Knowledge of adherence to treatment*

Group 4 mentioned that they wanted to be taught that if a person is HIV positive, they need to go to the clinic and get medication.

4.4 OVERVIEW OF RESEARCH FINDINGS

When analysing data, the researcher categorised data into different themes. These themes were generated from the first section (Section A) of the data collection tool. Section A consisted of responses from participants on the knowledge of HIV

transmission and prevention and was categorised into 5 themes, namely HIV knowledge, transmission of HIV, prevention of HIV, reducing rates of HIV and misconceptions. The second section (Section B) consisted of responses from participants on HIV education and was also categorised into 5 themes, namely HIV education at school, knowledge acquired from school regarding HIV, HIV knowledge required, teaching manner and desired teaching strategies for HIV transmission and prevention.

4.4.1 Section A

HIV knowledge: Only one out of five groups managed to define HIV correctly, although some managed to mention some concepts related to HIV, but they were used wrongly in a phrase defining HIV.

Transmission of HIV: Participants' knowledge of HIV transmission was not adequate; most participants described sexual intercourse as the mode of transmission but failed to clearly explain other modes of transmission. Participants also acknowledged that people with the same age as them could contract HIV – be it perinatally or behaviourally acquired.

Prevention of HIV: The most correct method of prevention that participants mentioned was condom use. Participants also had an idea that avoiding contact with blood is a preventive measure; however, the mechanism behind the idea of preventing blood contact was not correctly clarified.

Reducing HIV rates: Participants suggested that the alarming HIV rates can be reduced by applying preventive methods and adhering to treatment for those who are already HIV positive. Participants also suggested certain interventions which they thought could also assist in reducing the rates of HIV among young people like themselves.

Misconceptions: There were quite a lot of misconceptions noted from the participants' responses. The misconceptions were on HIV prevention, transmission, the importance of HCT and the use of contraceptives.

4.4.2 Section B

HIV education: Although participants were from the same class, their responses regarding HIV education varied greatly. Participants also suggested how often they would like to be taught about HIV.

Knowledge acquired from school regarding HIV: No adequate knowledge had been acquired about HIV transmission from school. Most participants pointed out sexual intercourse as the mode of transmission that they had been taught about. The knowledge acquired about HIV prevention was quite adequate; however, not all participants had sufficient knowledge of HIV prevention.

HIV knowledge required: Participants showed interest in learning more about HIV transmission and prevention. There was a lot of uncertainty regarding HIV transmission and prevention. Participants also pointed out that they had an interest in learning about HIV in general and not only about transmission and prevention.

Teaching manner: Participants also commented on how they had been taught about HIV. They described the context and the manner in which they had been taught. They explained that they had been taught using demonstrations and educators had also warned them on the dangers of HIV.

Desired teaching strategies for HIV transmission and prevention education: Participants made suggestions on how they would like to be taught about HIV. These included reading novels, which was perceived as making HIV education fun, and bringing condoms to class when teaching about HIV.

4.5 CONCLUSION

This chapter outlined the data analysis and provided a brief summary of themes which emerged from the World Café. These themes will be described in detail in Chapter 5, which will also include the conclusion, recommendations and limitations of the study.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents a summary of the research findings as well as the researcher's conclusions on the findings. The researcher further provides recommendations based on the findings of the study, discusses the limitations and contributions of the study and draws conclusions based on the findings on the knowledge of HIV transmission and prevention among adolescents in Tshwane West District.

5.2 RESEARCH DESIGN AND METHOD

This study made use of a qualitative approach. A qualitative exploratory descriptive contextual study was conducted. The researcher intended to gain an understanding of the knowledge of HIV transmission and prevention within the context of adolescents. The population consisted of Grade 9 learners aged between 14 and 16 years at a junior secondary school in Tshwane West District. The researcher used convenience sampling at one of the junior secondary schools in Tshwane West District. The World Café approach was used as the method to obtain data from participants in this research. A set of questions was prepared in the form of a questionnaire and given to participants to respond in groups, with the Café host going through the questions with them. The researcher used the content analysis method to analyse data gathered from participants during the World Café.

5.3 SUMMARY AND INTERPRETATIONS OF THE RESEARCH FINDINGS

A summary of the research findings were made based on the findings of the study.

5.3.1 HIV transmission and prevention knowledge

5.3.1.1 HIV knowledge

Only one out of five groups managed to define HIV correctly; although some managed to mention some concepts related to HIV, they were used incorrectly in a phrase defining HIV. Few participants had an idea that HIV is a disease or a virus but most of them failed to correctly describe the virus or disease they mentioned. Participants who defined HIV as a virus could not explain what the virus does or further describe the virus. Answers describing HIV as “a disease that can infect someone” were considered to not define HIV correctly as there are many diseases that can “infect someone”. A basic knowledge of HIV is essential for one to be able to comprehend what they have to do to prevent themselves from contracting the virus. Uncertainty was noticed on some participants as they were presenting their responses.

Some participants described HIV as an unknown disease, while others described it as a virus that originates from a populated environment. HIV was also defined as an invisible sickness but, contrarily, a picture of a sweating man with big eyes and a tongue with ulcers was drawn. Another picture of a person with sores on the face demonstrated what HIV looks like. According to these participants, HIV is perceived as a disease that cannot be detected; however, when one is infected, signs such as sores and tongue ulcers can be seen.

The current study established that the basic knowledge of HIV among participants was not adequate as the majority of participants failed to describe or define HIV correctly. Strydom (2003:67) also conducted a study on HIV/AIDS and South African adolescents; the findings concluded that 70% of the respondents regarded their level of knowledge of HIV as inadequate and uncertain. With similar findings, Idele et al (2014:147) stated that the level of knowledge of HIV among adolescents is appallingly low, especially in countries with a high burden of HIV. However, Taukeni and Ferreira (2016:3-6) in their study – which aimed to explore the HIV awareness among adolescents living in rural community of South Africa aged between 12 and 24 – stated that the majority of participants were aware of HIV/AIDS and are knowledgeable on HIV.

This is disquieting as poor knowledge of HIV may result in inclined rates of HIV infection among adolescents, as stated by Thanavanh et al (2013:16). The WHO and the Joint United Nations Programme on HIV/AIDS said that young people are more susceptible to HIV infection due to poor knowledge of health.

Thanavanh, Harun-Or-Rashid, Kasuya, and Sakamoto (2013:16) suggested that "increasing knowledge of HIV/AIDS can be a powerful means of fostering positive attitudes and building safe practices among population. Hence, a clear understanding about knowledge, attitudes and practices among any population is very important for planning to control or prevent the spread of HIV".

5.3.1.2 Transmission of HIV

Participants' knowledge of HIV transmission was not satisfactory. These findings are also supported by Miller et al (2017:5), which indicated that a national study in South Africa found that only 24% of youth had accurate information about HIV transmission and prevention knowledge. There is thus a gap in HIV knowledge among adolescents in South Africa.

These findings were, however, contrary to the findings of the study conducted by Gupta, Anjum, Bhardwaj, Srivastav and Zaidi (2013:122) on knowledge of HIV/AIDS among secondary students, which stated that the knowledge of HIV among secondary students was found to be adequate.

Not all participants managed to point out more than one mode of transmission. Most participants managed to mention at least the most common mode of transmission, as Idele et al (2014:147) state that the most common mode of transmission among newly diagnosed adolescents is sexual intercourse. There are more than three modes of transmission of HIV. However, when responding to how HIV is transmitted, only two out of five groups of participants managed to mention at least two modes of transmission. All participants described sexual intercourse as the mode of transmission but failed to clearly explain other modes of transmission. Two out of five groups of participants also described blood contact as the other mode of transmission but these participants did not point out that for transmission through blood to occur, infected blood needs to come in contact with a cut or an open wound. Still, it was wise that they perceived touching

blood without gloves as dangerous, since one may have a cut and not be aware of it. Some participants also used drawings of people bleeding and those around them refusing to help in fear of contracting HIV.

Few participants managed to point out that people using needles are faced with health risks such as HIV. Others mentioned that people using needles are faced with risks of diseases but did not specify which disease. Participants also used drawings of needles with a message that sharing needles is dangerous.

This leads to the point of how HIV is not transmitted. Most participants mentioned that HIV cannot be transmitted through protected sexual intercourse, sleeping together without any sexual act, kissing, eating together, avoiding contact with blood and also touching. Some participants pointed out that touching can be done only if one is wearing protective gloves when touching an infected person.

Idele et al (2014:147) state that a basic understanding of HIV transmission and prevention is essential for HIV prevention, although it is not sufficient to change adolescents' behaviour and to reduce the risk of contracting the disease but they are less likely to contract HIV when relevant gender-sensitive information is given (UNICEF 2012:1).

Participants also acknowledged that people that are the same age as them can contract HIV. Participants indicated that they believed that adolescents could contract HIV infection and that it may be perinatally or behaviourally acquired, as was mentioned by Lwenthal et al (2014:2) that children who were born with HIV are now surviving to adolescents. Participants also mentioned that people the same age as them were get involved in intergenerational relationships and like to experiment.

Early sexual debut was one of the participants' reasons to HIV infection among adolescents. They pointed out that they became sexually active at a tender age. This confirms the statement made by Wubs et al (2015:1) that at least half of young people in South Africa and Tanzania are sexually active by the age of 16, which often leads to undesirable health effects such as unwanted pregnancies, STIs and HIV infection.

Ugarte et al (2013:37) highlighted that it is of importance to address misconceptions about HIV and improve knowledge of HIV transmission prevention.

5.3.1.3 Prevention of HIV

The most correct method of prevention that participants mentioned was condom use. Participants also had an idea that avoiding contact with blood is a preventive measure; however, the mechanism behind the idea of preventing blood contact was not correctly clarified. There were a lot of misconceptions from participants' responses regarding HIV prevention and they are outlined under the misconception theme. The researcher concluded that the knowledge of HIV prevention among adolescents was also inadequate.

Although most participants mentioned condom use as one of the preventive methods they correctly pointed out, it appears that they do not practise the method. The findings by HSRC (2014:19) support this by mentioning that recent studies found that the level of HIV prevention knowledge among South African youth was generally high, although some knowledge gaps were noted.

This is also supported by the study findings conducted by Right to Care (2016:1), which stated that South Africa is one of the countries with a high burden of HIV, with about 320,000 adolescents' (aged 10 to 19) living with HIV and being sexually active, most of whom have reported not using condoms with their partners.

Drawings were also used to emphasise the importance of condom use. From the drawings, participants illustrated clear pictures of condoms, which included the condom brands, flavours and also a drawing of a man putting on a condom. This implies that adolescents do know that condoms exist as well as their intended use.

When correctly and consistently used, condoms are effective in preventing HIV infection. Most participants mentioned condom use as one of the HIV preventive methods rather than abstaining, which implies that some if not most of the participants might be sexually active. This raises a concern on whether the participants apply the preventive method and if they are correctly and consistently using condoms. HSRC

(2014:19) reported that there is a mismatch between the level knowledge among young people and their behaviour.

Post-exposure prophylaxis falls under HIV prevention; it was expected to be known by everyone in case of sexual abuse or accidental contact with blood. However, it was omitted when participants responded to how HIV could be prevented. It is important that adolescents know about post-exposure prophylaxis to be able to prevent HIV in case of sexual abuse or accidental contact with blood. Wubs et al (2015:1) state that at least half of young people in South Africa and Tanzania are sexually active by the age of 16, of which 40% of them from South Africa and 28% of them from Tanzania are females who reported that their first sexual intercourse was coerced.

There were misconceptions with regard to participants' responses on HIV prevention. These misconceptions will be discussed under the misconception sub-heading.

5.3.1.4 Reducing HIV rates

Participants were asked to come up with suggestions on how they thought the alarming HIV rates among adolescents could be reduced. The aim was to involve the participants in making recommendations on what they thought could work best to combat this disease as well as to get an idea of how they perceive HIV. Most of the suggestions made by participants were sound and showed a bit of interest from participants in combating HIV.

Applying preventive methods such using condoms and abstaining was one of the suggestions given by participants which they thought would help to reduce the rates of HIV among adolescents. Most participants suggested that condoms need to be distributed everywhere so they are easily accessed. They also mentioned that adolescents must refrain from engaging in unprotected sexual intercourse as it increases the chances of getting infected. Participants seemed to have an idea of what condoms are and showed interest in learning how to use them and easily accessing them. However, there were some participants who seemed to be knowledgeable on condom use and they used sketches to illustrate their knowledge on condom use.

There were only a few participants who suggested abstinence as one of the preventive measures that could be used to reduce the inclining rates of HIV infection among adolescents. This may imply that most adolescents do not consider abstaining but would rather use condoms when engaging in sexual activity.

Some participants suggested that if adolescents who are already HIV positive adhere to treatment, a number of HIV new infections among adolescents may be reduced. This may be considered as a good suggestion; when infected people are on treatment and more knowledgeable on their condition, chances are less that they would infect others. Avoiding contact with contaminated blood and interventions such as finding a cure for HIV were two of the interventions suggested by some participants.

Participants also acknowledged that the blesser-blessee relationship contributes largely to the alarming HIV rates among young people and should therefore be stopped in order to reduce these rates. As stated by Onsomu et al (2013:55), due to socioeconomic status, females who are from poor economic background are more likely to engage in early sexual debut for economic reasons and some may be involved in sexual relationships with older people in exchange for money for survival (WHO 2014:7). Cluver, Orkin, Yakubovich and Sherr (2016:8) also agree that intergenerational sexual relationships should be ended by suggesting that providing child-focused cash transfers, free schooling and school feeding will help reduce adolescents' HIV risks. Cluver et al (2016:8) further explain that this will reduce financial need for an adolescent girl to have a sugar daddy.

5.3.1.5 Misconceptions

Various misconceptions about HIV knowledge existed among participants and this portrayed poor knowledge of HIV among adolescents. Misconceptions about HIV knowledge served to answer the question that was asked about the knowledge of HIV. Some participants explained that HIV is a disease that cannot be seen and can be tested before going straight into one's bone. HIV was also defined as a disease caused by "populated" things in the environment and that when one is HIV positive they are not supposed to smoke. Smoking is a health threat on its own and it is therefore not linked to HIV infection unless there is a certain condition that one has and in which smoking is contraindicated. However, CDC (2014:1) states that quitting or avoiding smoking may

also help preserve one's life and spare them from possible medical conditions such as heart attacks and pneumonia.

Participants' knowledge of HIV transmission was not satisfactory as participants managed to point out only two modes of transmission. Furthermore, there were some misconceptions regarding the HIV modes of transmission. With similar findings, Vu, Burnett-Zieman, Banura, Okal, Elang, Ampewera, Caswell, Amanyire, Alesi and Yam (2016:27) reported that participants had lots of misconceptions regarding HIV transmission and prevention. Some participants mentioned that HIV can be transmitted by sharing a glass of water with an infected person and that HIV can be transmitted through coughing.

There were also various misconceptions from participants with regard to prevention; participants mentioned that testing for HIV could prevent HIV and that one needs plastic gloves when touching an infected person to prevent getting infected. Some participants stated that adhering to treatment could help prevent HIV infection. However, they could not explain how treatment could prevent HIV.

Participants were also asked if they thought people using contraceptives could get HIV. This was a closed-ended question followed by a question that asked participants to substantiate their answers. The findings showed that participants experienced confusion on whether or not contraceptives could prevent HIV. The study also showed that participants regard themselves as safe when using contraceptives. This is substantiated by Lemoine, Teal, Peters and Guiahi (2017:354), whose findings showed that adolescents regard pregnancy prevention as more vital than HIV prevention as one of the participants stated that she did not see the importance of an extra prevention against pregnancy.

A few participants responded that they did not think people using oral and injectable contraceptives could get HIV. One group of participants substantiated this answer by stating that "they are taking medication to prevent being pregnant", suggesting they are also preventing HIV. However, another group of participants' response was contradictory to the initial answer, which stated that contraceptives are not for HIV.

At least 3 out of 5 groups of participants responded that they thought people who are on oral or injectable contraceptives could get HIV. These participants substantiated their answers by stating that contraceptives could not be used to prevent HIV but to prevent pregnancy. However, some responses were also contradictory and confusing to both the researcher and the participants as a group of participants stated that the reason they thought contraceptives do not prevent HIV is “because we drink things with some glass while not knowing that the person that used it is infected or not infected”. This means that if a person takes contraceptives with water using the same glass as an infected person, they can be infected. This not only highlights the confusion and misconceptions surrounding HIV prevention but also points out the misconception on HIV transmission.

Participants were also questioned on whether they thought voluntary HIV testing and counselling is important. All participants responded that they thought that voluntary HCT is important. However, the reasons supporting their responses varied. Some participants stated that it is important to test for HIV because one can have unprotected sex and not know the kind of disease they have. Participants in this group did not seem to understand their response very well. Another group of participants’ statement was also confusing; their reason to the question regarding why they thought HCT was important was “because you need to know your status according to your illness”. These findings again confirm that the knowledge regarding HIV among adolescents is appallingly low.

5.3.2 HIV education

5.3.2.1 HIV education at school

Although participants were from the same grade, their responses regarding HIV education varied greatly. Questions were asked regarding HIV transmission and prevention education. When asked about how often they had been taught about HIV transmission and prevention at school, participants’ responses varied. The majority of participants mentioned that they had been taught about HIV only once. Others said they had been taught only twice. There were disagreements among a group of participants regarding this question. Some mentioned that no one had taught them about HIV transmission and prevention while other members disagreed, claiming that they had

been taught about HIV. However, those who agreed could not answer how often they had been taught about HIV. On this note the researcher concluded that participants had been taught about HIV transmission and prevention, but not as often and as adequately as required. This finding is supported by Avert (2016:7), who states that the percentage of schools implementing the Integrated School Health Programme has dropped from 160% in 2013 to 20% in 2014.

Participants also mentioned that they had been taught about HIV during Life Orientation and Natural Science lessons; they also mentioned the teachers who had taught them about HIV. When asked on how often they would like to be taught about HIV, suggestions varied according to participants' preferences. Some suggested quarterly, some three times per week and most suggested two and a half weeks annually. These findings showed that adolescents were eager to learn about HIV and that they desired to be taught about HIV more often. In response to this question, there was a group of participants who answered irrelevantly. The host explained the question in simpler terms to ensure that every participant understood. The host avoided simplifying the question even further as it would have led to leading them to answer in a certain manner desired by the host or researcher.

5.3.2.2 Knowledge acquired from school regarding HIV

No adequate knowledge had been acquired from school about HIV transmission. Sexual intercourse was pointed out as the mode of transmission that had been taught at school. School further advised participants not to practise unprotected sex. A few participants did not respond to the question regarding what they had been taught about HIV transmission at school. This question was coupled with the transmission question and some participants answered only one; however, some participants answered both. The knowledge acquired about HIV prevention was quite adequate; however, not all participants had sufficient knowledge of HIV prevention. Abstaining, practising safe sex and avoiding contact with blood were mentioned as the preventive measures learned from school. The knowledge acquired on HIV prevention was satisfactory; however, not all participants had knowledge of all three preventive measures mentioned above. This may be attributed to teachers' not being provided with proper training to give HIV education. According to the findings of the study conducted by Francis and DePalma (2015:35), Life Orientation teachers lack uniformity in training. They have been trained

to master other fields, which makes it hard for them to provide adequate sexuality and HIV education. UNICEF (2018:2) also states that the quality of HIV education drops in both teaching mechanism and content due to untrained teachers.

5.3.2.3 HIV knowledge required

Participants showed an interest in learning more about HIV transmission and prevention. There was a lot of uncertainty regarding HIV transmission and prevention; participants also showed interest in learning about HIV in general, including voluntary HIV testing and counselling and not only about transmission and prevention. Participants also showed interest in learning more about HIV modes of transmission, knowing the chances of getting infected in a motor vehicle accident and the dangers of sharing needles and food such as bubble gum. Another group of participants also mentioned that they would like to know if an HIV positive mother can give birth to an HIV negative child who is a “monomial”. This group defined a monomial as a person who is HIV negative and cannot get infected by HIV.

It was also noted that there is an interest in learning about the chances of getting infected if one engages in sexual activity with an infected person while using a condom. When it comes to prevention, participants showed interest in learning about the possible risks of engaging in sexual activity while using condoms and also emphasised that they wanted their educators to teach them everything and not hide or filter anything. These findings showed that there is still a gap in knowledge regarding HIV transmission that adolescents have not been taught and wish to learn in school. Miller et al (2017:5) also indicated that there is a gap in HIV knowledge among adolescents in South Africa.

5.3.2.4 Teaching manner

Comments on how HIV lessons had been conducted were given. A description of the context and the manner in which HIV lessons had been conducted was provided. It was explained that they had been taught using demonstrations and educators had warned them on the dangers of HIV. It was further explained that the teacher usually came to the classroom, instructed them to open a textbook and explained the content of the book to learners. Some said that teachers had used warnings and examples to teach them about HIV and they also mentioned having been taught about HIV in general.

Instead of responding to how they had been taught about HIV, few participants responded with what they would like to be taught about HIV, which was to reject their friends' and peers' advice or teachings. From the findings, the manner in which participants had been taught about HIV transmission and prevention was found to be ineffective. UNICEF (2018:2) supports this finding by reporting that HIV education has been disappointing in the developing countries due to lack of comprehensive strategies, including teachers who have not been trained to conduct HIV lessons and scanty policies. From their study findings, Sarma and Oliveras (2013:25) reported that teachers expressed that one of the barriers to conducting HIV education was the insufficient allocated time, which could also have been a contributing factor to the ineffective manner of HIV education.

5.3.2.5 Desired teaching strategies for HIV transmission and prevention education

Suggestions were made on how they would like HIV lessons to be conducted. These included reading novels with HIV content and then asking questions on what the novel entails. Participants perceived reading novels and answering questions related to the novel as making HIV education fun, as well as bringing condoms to class when teaching about HIV. Participants mentioned that they would like to learn more about HIV in general so that they may be able to educate their peers as well. They also mentioned that they wanted to be taught about the "warnings" regarding HIV. Some participants showed an interest in learning more on how HIV can be transmitted and also about the importance of treatment adherence and wanting to interact during lessons. UNICEF (2018:2) states in its policy to promote HIV prevention through education that HIV education needs to be conducted in an interactive manner to allow participation from young people and the community as well. Suggestions were also made that teachers should bring condoms to class so that learners could get a better idea of what teachers want them to engage in. From these findings it is clear that adolescents are not fully satisfied with the manner in which they are taught and have given suggestions which they believe will make them become more interested in learning about HIV.

5.4 CONCLUSIONS

In conclusion, this study established that the basic knowledge among participants was not adequate as the majority of participants failed to describe or define HIV correctly. The knowledge of HIV transmission and prevention among adolescents was not satisfactory. Although there were a few participants who had a bit of knowledge of HIV transmission and prevention, judging from the overall results of the study, there were more participants who lacked knowledge regarding the misconceptions that existed around HIV transmission and prevention. This portrayed poor knowledge of HIV among adolescents. There were also sound suggestions made by participants, which showed a bit of interest from participants in combating HIV.

With regard to HIV education, the researcher concluded that participants had been taught about HIV transmission and prevention, but not as often and as adequately as required. This was perceived to be linked to inadequate time and lack of teacher training to conduct HIV lessons. The knowledge acquired on HIV prevention was satisfactory; however, only a few participants had knowledge of all three preventive measures mentioned above. The findings also showed that there is still a gap in knowledge regarding HIV transmission that adolescents have not been taught and wish to learn in school. The researcher also concluded from findings that the manner in which participants had been taught about HIV transmission and prevention was found to be ineffective. Suggestions were made on how participants would like HIV lessons to be conducted.

5.5 RECOMMENDATIONS

5.5.1 Recommendations for teaching programme

Based on the research findings, the researcher would like to make the following recommendations.

- HIV education in schools needs to be intensified. There is a gap in HIV knowledge and a lot of misconceptions exist among adolescents, which may affect HIV prevention programmes. HIV knowledge may not necessarily prevent

adolescents' risky behaviour but may greatly improve HIV prevention among adolescents.

- HIV education should be made fun and interactive; the setting and the manner in which HIV education is presented to learners should differ from the normal day-to-day teaching. During data collection, learners were delighted to a point that they even asked when they would be having another research session. This shows that learners enjoyed a World Café-like setting and found it to be fun and interactive, which is something that can be implemented in schools as well.
- In the absence of a trained teacher, qualified health personnel may be invited to conduct a lesson on HIV, considering the fact that the policy states that HIV should not be presented to learners as an isolated topic but rather integrated into the whole curriculum. There could be a health week of some sort in which all medical conditions (including HIV) that are to be taught in that particular grade are presented to learners in an interactive manner. Only qualified health personnel or trained teachers should conduct these lessons.
- The National Department of Education should provide training for Life Orientation teachers and all teachers who are expected to conduct HIV lessons.
- Parents and community health centres should also be involved in HIV education. Adolescent-friendly SRHS should be made known and available to adolescents. Adolescents should also be informed of services available to them. They should be informed to feel free to visit these premises for any sexual-related health issues. Parents or guardians should also educate and encourage adolescents to make use of SRHS, as some adolescents may find it easier to relate to a stranger than to their parents when it comes to ASRH.

5.5.2 Recommendations for further studies

The following are recommendations for future studies:

- A study on challenges faced by educators when conducting HIV/AIDS lessons among adolescents at public schools.
- A study on the use of SRHS by adolescents and the challenges thereof.

5.6 CONTRIBUTIONS TO THE STUDY

This study explored and described the knowledge of HIV transmission and prevention among adolescents in Tshwane West District. The study findings and recommendations may help in generating a strategy on improving the knowledge of transmission and prevention among adolescents.

5.7 LIMITATIONS OF THE STUDY

The limitations of the study were as follows:

- The targeted number of participants was not reached as there were 3 participants who were absent on the day of the study. Instead of 40 participants, the researcher had a total number of 37 participants who were present and who had both their consent and assent forms signed. However, the researcher managed to make inferences on the knowledge of HIV transmission and prevention among adolescents in Tshwane West District using data obtained from the 37 participants.
- The researcher used one of the school classrooms as the setting; there were disruptions from learners who were not part of the study as well as from some educators, which consumed some of the research time. However, data collection was successful regardless of the disruptions.

5.8 CONCLUDING REMARKS

This study served to explore the knowledge of HIV transmission and prevention among adolescents in Tshwane West District. Conclusions were drawn from the study findings that the knowledge of HIV transmission and prevention among adolescents in Tshwane West District is poor. Recommendations were made on how the knowledge of HIV transmission and prevention among adolescents can be improved.

LIST OF REFERENCES

Achhab, YF, Ammari, A, Kazdouh, HE, Najdi, A, Berraho, M, Tachfouti, N, Lamri, D, Fakir, SL & Nejjari C. 2016. Health risk behaviours amongst school adolescents: protocol for a mixed method study. *BMC Public health* 16(1209):1–6.

Aderemi, TT, Pillay, BJ & Esterhuizen, TM. 2013. Differences in knowledge and sexual practices of learners with intellectual disabilities and non-disabled learners in Nigeria. *Journal of the International AIDS Society* 16(17331):1–9.

AIDSinfo. 2017. *Guidelines for the use of antiretroviral agents in paediatric HIV infection.* From: https://aidsinfo.nih.gov/guidelines/html/2/pediatric-arv/78/specific-issues-in-antiretroviral-therapy-for-adolescents-living-with-hiv-infection (accessed 01 February 2018).

Agwu, AL & Fairlie, L. 2013. Antiretroviral treatment, management cshallenges and outcomes in perinatally HIV-infected adolescents. *Journal of the International AIDS Society* 16(1):1.

Albright, BA & Fair C.D. 2014. Providers caring for adolescents with perinatally-acquired HIV: Current practices and barriers to communication about sexual and reproductive health. *AIDS Patient Care and STDs* 28(11):587.

Alli, F, Maharaj, P & Vawda, MY. 2013. Interpersonal relations between health care workers and young clients: barriers to accessing sexual and reproductive health care. *Journal of Community Health* 38(1):1-6.

Amoateng, AY, Kalule-Sabiti, I & Arkaah YJ. 2014. The effect of socio-demographic factors on risky-sexual behaviours of adolescents in North West province of South Africa. *African Population Studies* 28(1):487–498.

Avert. 2017a. *Global information and education on HIV and AIDS*. From: www.avert.org (accessed 29 August 2017).

Avert. 2017b. *Stigma and discrimination.* From: https://www.avert.org/professionals/hiv-social-issues/stigma-discrimination (accessed 19 January 2018).

Avert. 2016. *HIV and AIDS in South Africa.*
From: https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/south-africa (accessed 19 January 2018).

Avert. 2015. *Young people, HIV and AIDS.* From:
https://www.avert.org/professionals/hiv-social-issues/key-affected-populations/young-people (accessed 30 November 2017)

Bertam, C & Christiansen, I. 2014. *Understanding research: An introduction to reading research.* Pretoria: Van Schaik.

Better Evaluation. 2015. *World café people and participation.*
From: http://www.betterevaluation.org/en/resources/guides/world_cafe/world_cafe-people_participation (accessed 29 September 2017).

Business Jargons. 2018. *Data collection.* From: https://businessjargons.com/data-collection.html (accessed 9 September 2018).

CDC see Centre for Disease Control.

Centre for Disease Control. 2016a. *HIV prevention.*
From: https://www.cdc.gov/hiv/basics/prevention.html (accessed 02 March 2018).

Centre for Disease Control. 2016b. *HIV transmission.*
From: https://www.cdc.gov/hiv/basics/transmission.html (accessed 02 March 2018).

Centre for Disease Control. 2014. *Smoking and HIV.*
From: https://www.cdc.gov/tobacco/campaign/tips/diseases/smoking-and-hiv.html (accessed 08 April 2018).

Centre for Human Rights. [s.a.] *National policy on HIV and AIDS for learners and public schools and students and educators in further education and training (FET) institutions gazetted in 1999 in terms of Section3(4) of the national education policy act 1996*. From: http://www.chr.up.ac.za/undp/domestic/docs/policies_05.pdf (accessed 02 February 2018).

Cluver, LD, Hodes, RJ, Toska, E, Kidia, KK, Orkin, FM, Sherr, L & Franzika, F. 2015. HIV is like a tsotsi ARVs are your guns: associations between HIV disclosure and adherence to antiretroviral treatment among young adolescents in South Africa. *Journal* of *Acquired Immunodeficiency Syndrome* 29 (Supplement 1):62–63.

Cluver, LD, Orkin, MF, Yakubovich, AR & Sherr, L. 2016. Combination social protection for reducing HIV-risk behaviour amongst adolescents in South Africa. *Journal* of *Acquired Immunodeficiency Syndrome* 72(1):1-16.

Creswell, WJ. 2016. *First steps in research.* 2nd edition. Edited by R Maree. Pretoria: Van Schaik.

Creswell, WJ. 2014. *Research design: Qualitative, quantitative and mixed methods approaches.* 4th edition. London: SAGE.

Ehrlich, R & Joubert, G. 2014. *Epidemiology: A research manual for South Africa*. 3rd edition. Cape Town: Oxford.

Francis, DA & DePalma R. 2015. 'You need to have some guts to teach': Teacher preparation and characteristics for the teaching of sexuality and HIV/AIDS education in South African schools. *Journal of Social Aspects of HIV/AIDS* 12(1):30–38.

Gonçalves, H, Gonźalez-Chica, DA, Mendez, AMB, Hallal, PC, Araujo, CLP & Dumlth, SC. 2013. HIV transmission knowledge among adolescents aged 11 years from Southern Brazil. *Scielo Analytics* 16(2):420–431.

Gupta, P, Anjum, F, Bhardwaj, P, Srivastav, J,& Zaidi, ZH. 2013. Knowledge about HIV/AIDS among secondary school students*. North American Journal of Medical Sciences* 5(2):119–123.

Hart, C. 2018. *Doing a literature review: releasing the research imagination.* 2nd edition. London: SAGE.

Health24. 2016. *'Sugar daddies' and 'blessers' increase HIV/AIDS risk.* From: https://www.health24.com/Medical/HIV-AIDS/Real-life-story/sugar-daddies-and-blessers-increase-hivaids-risk-20160721 (accessed 22 April 2016).

Health24. 2013. *What is HIV/AIDS?* From: https://www.health24.com/Medical/HIV-AIDS/Overview/What-is-HIVAids-20130205 (accessed 05 September 2018).

Holtzblatt, K & Beyer, H. 2014. *Contextual design evolved*. Edited by JM Carroll. California: Morgan & Claypool.

Hosseini, IZ, Eftkhar, H, Nedjat, S, Ebadi, A, Abbasian, L, Zamani, F, Aghamollaei T & Shojaeizade, D. 2016. Adherence to HIV/AIDS antiretroviral therapy among drug users: A qualitative study in Iran. *Iranian Journal of Nursing and Midwifery Research* 29 (1):29–37.

HSRC see Human Sciences Research Council.

Human Sciences Research Council. 2014. *HIV and AIDS related knowledge, attitudes and behaviours of students and staff at South African technical and vocational education and training colleges in South Africa.*
From:
http://www.hsrc.ac.za/uploads/pageNews/262/43227%20KAB%20Full%20Report.pdf
(accessed 04 April 2018).

Icap. 2014. *Adolescent HIV care and treatment, a training curriculum for healthcare workers.* Columbia. From: http://icap.columbia.edu/resources/detail/adolescent-hiv-care-and-treatment (accessed 01 February 2018).

Idele, P, Gillespie, A, Porth, T, Suzuki, C, Mahy, M, Kasedde, S & Luo, C. 2014. Epidemiology of HIV and AIDS among adolescents: current status, inequities, and data gaps. *JAIDS Journal of Acquired Immune Deficiency Syndromes* 66(supplement 2):144–153.

John, EH. 2017. Barriers to adherence to antiretroviral treatment among adolescents in Onanjokwe district, Namibia. MPH dissertation. Cape Town: University of Western Cape.

Kaushik, A, Pineda, C & Kest, H. 2016. Sexual behaviour and knowledge among adolescents with perinatally acquired human immunodeficiency virus infection compared to HIV-uninfected adolescents at an urban tertiary centre in New Jersey. *International Journal of Reproductive Medicine*:1–5.

Kariuki, TW, Some, ES & Kimanthi, G. 2016. Determinants of antiretroviral treatment adherence among HIV/AIDS infected adolescent in Thika level 5 hospital. *International Journal of Health Medicine and Nursing* 1(1):1-10.

Keat, M. 2014. *The impact of HIV AIDS in South African families.* BSTrust. From: http://www.bstrust.org/blog/the-impact-of-hivaids-on-families-in-south-africa (accessed 25 September 2017).

Kheswa, JG. 2017. Experiences of foster parents and fostered adolescent females, sexual behaviour in Eastern Cape. *Journal of Human Ecology* 59(2-3):123–129.

Koen, MP, Du Plessis, M & Koen, V. 2015. *Nursing research using data analysis; qualitative designs and methods in nursing.* Edited by M de Chesnay. New York: Springer.

Kumar, R. 2014. *Research methodology: A step-by-step guide for beginners.* 4th edition. London: SAGE.

Kim, S, Gerver, SM, Filder, S & Ward, H. 2014. Adherence to antiretroviral therapy in Adolescents living with HIV: systematic review and meta-analysis. *AIDS* 28(13):1945-1956.

Klenke, K. 2016. *Qualitative research in the study of leadership*. 2nd edition. Bingley: Emerald.

Lemoine, J, Teal, SB, Peters, M & Guiahi, M. 2017. Motivating factors for dual method contraceptive use among adolescents and young women: a qualitative investigation. *An International Reproductive Health Journal* 96(5):352–356.

Lince-Deroche, N, Hargey, A, Holt, K & Shochet, T. 2015. Accessing sexual and reproductive health information and services: A mixed methods study of young women's needs and experiences in Soweto, South Africa. *African Journal of Reproductive Health* 19(1):73–81.

Longmore, M, Wilkison, I, Davidson, EH, Foulkes, A & Mafi, AR. 2010. *Oxford Clinical Handbook of Medicine.* 8th edition. New York: Oxford.

Löhr, K, Weinhardt, M & Sieber S. 2016. *World café: a key method to link disciplines in international research.* From: http://www.tropentag.de/2016/abstracts/posters/504.pdf (accessed 29 January 2018).

Lowenthal, ED, Jibiil, HB, Sechele, ML, Mathuba, K, Tshumbe, O & Anabwani GM. 2014. Disclosure of HIV status to HIV-infected children in a large African treatment center: lessons learned in Botswana. *Science Direct* 45(1):143–149.

Lowenthal, ED, Bakeera-Kitaka, S, Marukutira, T, Champman, J, Goldrath, K & Ferrand RA. 2014. Perinatally acquired HIV infection in adolescents from sub-Saharan Africa: a review of emerging challenges. *Lancet Infect Disease* 14(7):627–639.

Lundgren, K. & Olausson, A. 2013. *HIV/AIDS-related stigma and discrimination among vietnamese adolescents – a quantitative study. Barriers to health.* From: http://msmgf.org/files/msmgf/documents/Promoting_Health/Module3.1.pdf (accessed 25 September 2017).

Mabena, S. 2017. *Sunday world. Nyaope addicts Bluetooth high shock.* From: https://www.sowetanlive.co.za/news/2017-02-01-nyaope-addicts-vampire-like-bluetooth-blood-high-shock/ (accessed 20 March 2017).

Markopoulos, P, Martens, J, Mallins, J, Coninx, K & Liapis, A. 2016. *Collaboration in creative design; methods and tools.* Switzerland: Springer.

Martinez, J, Harper, G, Carleton, RA, Hoesek, S, Bojan, K, Glum, G, Ellen, J & The Adolescent Medicine Trials Network. 2012. The impact of stigma on medication adherence among HIV-positive adolescents and young adult females and the moderating effects of coping and satisfaction with health care. *AIDS Patient Care and STDs* 26(2):108–115.

McIntosh-Scott, A, Mason, T, Mason-Whitehead, E & Coyle, D. 2013. *Key concepts in nursing and healthcare research*. London: SAGE.

Mellins, CA & Malee, KM. 2013. Understanding the mental health of youth living with perinatal HIV: lessons learned and current challenges. *Journal of the International AIDS Society* 16(1):1–19.

Míguez, MJ, Espinoza, LA, Vargaz, ME, Perez, C, Ergon, E & Tartern, R. 2015. Low HIV/AIDS among Hispanic adolescents. *Journal of Aids and Clinical Research* 6(7):1–5.

Miller, CL, Nkala, B, Closson, K, Chia, J, Cui, Z, Palmer A, Hogg, R, Kaida, A, Gray, G & Dietrich, J. 2017. The botsha bophelo adolescent health study: a profile of adolescents in *Soweto, South Africa. South African Journal of HIV mMdicine* 18(1):1–10.

Morris, JL & Rushwan H. 2015. Adolescent sexual reproductive health: The global challenges. *International Journal of Gynaecology and Obstetrics* 131:40–42.

NDOH see National Department of Health.

National Department of Health. 2016a. *Disclosure guidelines for children and adolescents in the context of HIV, TB and non-communicable diseases.* Pretoria: Government Printer.

National Department of Health. 2016b. Implementation of the universal test and treat strategy for HIV Positive patients and differentiated care for stable patients. From: http://www.sahivsoc.org/Files/22%208%2016%20Circular%20UTT%20%20%20Decongestion%20CCMT%20Directorate.pdf (accessed 18 February 2018)

National Department of Health. 2015. *National consolidated guidelines for the prevention of mother to child transmission (PMTCT) and the management of HIV in children, adolescents and adults.*
From: http://www.sahivsoc.org/Files/ART%20Guidelines%2015052015.pdf (accessed 0 February 2018).

National Policy. 2017.
From:
https://www.idealclinic.org.za/docs/policies/National%20Adolescent%20and%20Youth%20Health%20Policy%202017.pdf (accessed 11 February 2018).

Ngiya, M, Odundo, PA, Ngaruiya, AKB, Kahinga RWM & Muriithi, EM. 2016. Effects of stigma and discrimination on the right to Education of children with HIV/AIDS aged 4-8 years in Kikuyu sub-county, Kenya. *International Journal of Elementary Education* 5(1):1–7.

Okeke, C & Van Wyk, M. 2015*. Educational research: An African approval*. Cape Town: Oxford University Press.

Oljira, L, Berhane, Y & Worku, A. 2013. Assessment of comprehensive HIV/AIDS knowledge level among in-school adolescents in eastern Ethiopia*. Journal of the International AIDS Society* 16(1):1–5.

O'Leary, A, Jemmott, JB, Jemmott, LS, Bellamy, S, Ngwane, Z, Icard, L and Gueits, L, 2012. Moderation and mediation of an effective HIV risk-reduction intervention for South African adolescents. *Journals of Behavioral Medicine* 44(2):1-19.

Omoyeni, ST, Akinyeni, AI & Fatusi, A. 2014. Adolescents and HIV behaviour in Nigeria: does knowledge of HIV promote protective sexual behaviour among sexually active adolescent? *African Population Studies* 27(Supplement 2):331–342.

Onsomu, EO, Kimani, JK, Abuya, BA, Arif AA, Moore, D, Duren-Winfield, V & Harwell, G. 2013. Delaying sexual debut as a strategy for reducing HIV epidemic in Kenya. *African Journal of Reproductive Health* 17(2):46–57.

Oxford Dictionary. 2012. Sv "knowledge". Oxford: Oxford University Press. From: https://en.oxforddictionaries.com/definition/knowledge (accessed 7 March 2017).

Polit, DF & Beck, CT. 2012. *Nursing research: Generating and assessing evidence for nursing research*. 9th edition. China: Lippincott, Williams & Wilkins:30–750.

POZ. 2012. *Adolescents born with HIV engage in high-risk behaviors.* From: https://www.poz.com/article/AM-Adolescent-Risk-23118-2150 (accessed 18 October 2017).

Richter, L, Mabaso, M, Ramjith, J & Norris, SA. 2015. Early sexual debut: Voluntary or coerced? Evidence from longitudinal data in South Africa – the Birth to Twenty Plus study. *The South African Medical Journal* 105(4):304–307.

Right to Care. 2016. *SA youth AIDS mortality has doubled with girls most at risk.* From: http://www.righttocare.org/press-releases/sa-youth-aids-mortality-has-doubled-with-girls-most-at-risk/ (accessed 19 February 2018).

Sarma, H & Oliveras, E. 2013. Implementing HIV/AIDS Education: Impact of Teachers' Training on HIV/AIDS Education in Bangladesh. *Journal of Health, Population and Mutrition* 31(1):20–27.

Schantz, K. 2012. *Substance use and sexual risk taking in adolescents.* From: http://www.actforyouth.net/resources/rf/rf_substance_0712.pdf (accessed 21 July 2017).

Simons, LG, Stutton, TE, Simons, RL, Gibbons, FX & Murry, VM. 2016. Mechanism that links parenting practices to adolescents' risky behaviour: A test of six competing theories. *Journal of Youth and Adolescents* 45(2):255–270.

SMstudy. 2016. *Exploratory research design.*
From: https://www.smstudy.com/article/exploratory-research-design (accessed 03 March 2018).

South African National AIDS Council. 2014. *The people living with HIV stigma index: South Africa.* From: http://www.stigmaindex.org/sites/default/files/reports/Summary-Booklet-on-Stigma-Index-Survey%20South%20Africa.pdf (accessed 1 August 2017).

StatsSA. 2016. *Mid-year population estimates*.
From: http://www.statssa.gov.za/publications/P0302/P03022017.pdf (accessed on 29 June 2017).

Stöckl, H, Kalra, N, Jacobi, J & Watts, C. 2013. Is early sexual debut a risk factor for HIV infection among women in sub-Saharan Africa? A systematic review. *American Journal Reproductive Immunology* 69(Supplement 1):27–40.

Strydom, H. 2003. HIV/AIDS and South African adolescents: Attitudes and information needs. *Social Work/Maatskaplike We* 39(1):59–72.

Taffa, N. 2017. Sexual activity out of school youth, their knowledge and attitude about HIV/AIDS in Southern Ethiopia. *The Ethiopian Journal of Health Development.*

Taukeni, S & Ferreira, R. 2016. HIV and or AIDS awareness among adolescents in a South African at risk rural community. *Southern African Journal of HIV Medicine* 17(1):1–6.

Thanavanh, B, Harun-Or-Rashid, M, Kasuya, H & Sakamoto, J. 2013. Knowledge, attitudes and practices regarding HIV/AIDS among male high school students in Lao People's Democratic Republic*. Journal of the International AIDS Society* 16(1):1–7.

The World Café. 2017. *The world café; research.*
From: http://www.theworldcafe.com/key-concepts-resources/research/ (accessed 04 March 2018).

The World Café. 2015. *A quick reference guide for hosting world café.* From: http://www.theworldcafe.com/wp-content/uploads/2015/07/Cafe-To-Go-Revised.pdf (accessed 24 June 2017).

Tshuma, S. 2015. The challenges faced by adolescents with perinatal HIV. MSW health care dissertation. University of Pretoria. Pretoria.

Ubesie, AC, Iloh, KK, Emodi, IJ, Ibeziako, NS, Obumneme-Anyim, IN, Iloh, ON, Ayuk, AC, Anikene, CJ & Enemuo, JE. 2016. HIV status disclosure rate and reasons for non-disclosure among infected children and adolescents in Enugu, South east Nigeria. *Journal of Social Aspects of HIV/AIDS* 13(1):136–141.

Ugarte, WJ, Högberg, U, Valladares, E & Essén, B. 2013. Assessing knowledge, attitutes and behaviors related to HIV and AIDS in Nicaragua: A community level perspective. *Sexual Reproductive Healthcare: Official Journal of the Swedish Association of Midwives* 4(1):37–44.

UK Essays. 2013. *Economic impact of HIV aids in South Africa.* From: https://www.ukessays.com/essays/economics/economic-impact-of-hiv-aids-in-south-africa-economics-essay.php?cref=1 (accessed 8 October 2017)

UNICEF. 2018. *Education and HIV/AIDS.*
From: https://www.unicef.org/programme/hiv/focus/edu/edu.html (accessed 24 January 2018).

UNICEF. 2017. *Turning the tide against AIDS will require more concentrated focus on adolescents and young people.* From: https://data.unicef.org/topic/hivaids/adolescents-young-people/# (accessed 28 February 2018).

UNAIDS. 2015. *All in to end adolescent AIDS.*
From:
http://www.unaids.org/sites/default/files/media_asset/20150217_ALL_IN_brochure.pdf
(accessed 28 February 2018).

UNICEF. 2012. *Preventing HIV infection among adolescents and young people.* From: https://www.unicef.org/esaro/5482_HIV_prevention.html (accessed 9 October 2017).

UNICEF. [s.a.] *HIV and AIDS*. From:
https://www.unicef.org/southafrica/hiv_aids_350.html (accessed 29 November 2017)

US Department of Health. 2017. *Understanding HIV/AIDS – medication adherence.* From: https://aidsinfo.nih.gov/understanding-hiv-aids/fact-sheets/21/54/hiv-medication-adherence (accessed 17 January 2018).

Vranda, MN & Mothi, SN. 2013. Psychological issues of children infected with HIV/AIDS. *Indian Journal of Psychological Medicine* 35(1):1–22.

Vreeman, RC, Senlon, ML, Mwagi, A, Turissini, M, Ayaya, SO, Tenge, C & Nyandiko, WM. 2014. A cross-sectional study of disclosure of HIV status to children and adolescents in Kenya. *Plos One* 9(1):1–8.

Vu, L, Burnett-Zieman, B, Banura, C, Okal, J, Elang, M, Ampewera, R, Caswell, G, Amanyire, D, Alesi, J & Yam, E. 2016. Icreasing uptake of HIV, Sexually transmitted infection, and family planning services, and reducing HIV-related risk behaviors among youth living with HIV in Uganda. *Journal of Adolescent Health* 60(2):22–28.

WHO see World Health Organization.

World Health Organization. 2017. *Adolescent health and development.*
From: http://www.searo.who.int/entity/child_adolescent/topics/adolescent_health/en/
(accessed 03 March 2018).

World Health Organization. 2016. *HIV/AIDS*.
From: http://www.who.int/features/qa/71/en/ (accessed 23 July 2017).

World Health Organization. 2014. *Adolescent HIV testing, counselling and care: psychosocial well-being.*
From: http://apps.who.int/adolescent/hiv-testing-treatment/page/Psychosocial_well_being (accessed 20 December 2018).

World Health Organization. 2013. *Adolescents: health risks and solutions.* From: http://www.who.int/en/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions (accessed 18 June 2017).

Wubs, G, Aarø, LE, Kaaya, S, Onya, H & Matthews, C. 2015. Social cognition variables and victimization as predictors of sexual debut among adolescents in South Africa and Tanzania: A multi-group SEM analysis. *AIDS and Behaviour* 19(12):1–11.

ANNEXURES

ANNEXURE A

ETHICAL CLEARANCE CERTIFICATE

UNISA university of south africa

RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES

REC-012714-039 (NHERC)

6 September 2017

HSHDC/706/2017

Lutendo Phyllis Tshitamba

Student 5641-423-4

Supervisor: Dr MG Makua
Qualification: D Litt et Phil
Joint Supervisor: -

Dear Lutendo Phyllis Tshitamba

Decision: Ethics Approval

Name: Lutendo Phyllis Tshitamba

Proposal: Knowledge of HIV transmission and prevention among adolescents in Tshwane, Gauteng province.

Qualification: **MPCHS94**

Thank you for the application for research ethics approval from the Research Ethics Committee: Department of Health Studies, for the above mentioned research. Final approval is granted from 6 September 2017 to 6 September 2019.

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on 6 September 2017.

The proposed research may now commence with the proviso that:

1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*

2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Research Ethics Review Committee, Department of Health Studies. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

3) *The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

4) *[Stipulate any reporting requirements if applicable].*

Note:
The reference numbers [top middle and right corner of this communiqué] should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the Research Ethics Committee: Department of Health Studies.

Kind regards,

Prof L Roets
CHAIRPERSON
roetsl@unisa.ac.za

Prof MM Moleki
ACADEMIC CHAIRPERSON
molekmm@unisa.ac.za

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

ANNEXURE B

LETTER SEEKING CONSENT TO THE DEPARTMENT OF EDUCATION

The Director

Department of Education

D15 Tshwane west

Private Bag X38

Rosslyn

0200

2277 Block L

Soshanguve

0152

30 March 2017

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I am Lutendo Tshitamba, a registered Master of Public Health student in the College of Health Sciences at the University of South Africa. My supervisor is Dr. MG Makua.

The proposed topic of my research is: knowledge of HIV transmission and prevention among adolescents. This study seeks to explore the knowledge of HIV transmission and prevention among adolescents, find out if there is any lack of knowledge that can be linked to the high incidence rate of HIV among adolescents and if there is a need to intensify HIV education in schools.

The objectives of the study are:

1. To explore and describe HIV transmission knowledge among adolescents aged between 14-16 years at Tshwane West District.

2. To explore and describe HIV prevention knowledge among adolescents aged between 14-16 years at Tshwane West District.

3. To assess the need to intensify HIV transmission and prevention education among adolescents at school.

4 To recommend HIV transmission and prevention information for adolescents that might be included in the HIV/AIDS programme by the Department of Education and Department of Health.

I hereby request your permission to conduct a research study at one of the Junior Secondary schools in Tshwane west District. The study will be conducted during school hours, preferably during life orientation period and will take approximately 3 hours. I also request to use the school hall, desks and chairs.

To assist you in reaching a decision, I have attached to this letter:

(a) A copy of an ethical clearance certificate issued by the Higher Degrees Committee of the department of health Studies at the University of South Africa

(b) A copy of the research proposal and supporting documents.

Should you require any further information, please do not hesitate to contact me or my supervisor. Our contact details are as follows:

Supervisor Dr. Makua MG |Tel +27 12 429 6524 | Email makuamg@unisa.ac.za

Student Tshitamba L.P.| Tel 083 492 4934 | Email 56414234@mylife.unisa.ac.za

The Chair of the University of South Africa, Department of Health Studies, Research Ethics Committee, Prof J E Maritz, can be contacted at maritje@unisa.ac.za.

Upon completion of the study, I undertake to disseminate my findings by providing the school / department/ etc with a bound copy of the dissertation.

Your permission to conduct this study will be greatly appreciated.

Yours sincerely,

L.P. Tshitamba

ANNEXURE C

LETTER OF APPROVAL FROM THE DEPARTMENT OF EDUCATION

GAUTENG PROVINCE
Department Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	23 October 2017
Validity of Research Approval:	05 February 2018 – 28 September 2018 2017/304
Name of Researcher:	Tshitamba L.P
Address of Researcher:	2277 Block L
	Soshanguve
	0152
Telephone Number:	083 492 4934
Email address:	Tendophyl@gmail.com
Research Topic:	Knowledge of HIV transmission and prevention among adolescents in Tshwane, Gauteng Province.
Number and type of schools:	One Secondary School
District/s/HO	Tshwane West

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

23/10/2017

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted: 1

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

ANNEXURE D

LETTER SEEKING CONSENT TO THE SCHOOL PRINCIPAL

2277 Block L

Soshanguve

0152

30 March 2017

The Principal

Baleseng Junior secondary

D15 Tshwane west

PO Box 25

Soshanguve

0164

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I am Lutendo Tshitamba, a registered Master of Public Health student in the College of Health Sciences at the University of South Africa. My supervisor is Dr. MG Makua.

The proposed topic of my research is: knowledge of HIV transmission and prevention among adolescents. This study seeks to explore the knowledge of HIV transmission and prevention among adolescents, find out if there is any lack of knowledge that can be linked to the high incidence rate of HIV among adolescents and if there is a need to intensify HIV education in schools.

The objectives of the study are:

1. To explore and describe HIV transmission knowledge among adolescents aged between 14-16 years at Tshwane West District.

2. To explore and describe HIV prevention knowledge among adolescents aged between 14-16 years at Tshwane West District.

3. To assess the need to intensify HIV transmission and prevention education among adolescents at school.

4. To recommend HIV transmission and prevention information for adolescents that might be included in the HIV/AIDS programme by the Department of Education and Department of Health.

I hereby request your permission to conduct a research study at one of the Junior Secondary schools in Tshwane west District. The study will be conducted during school hours, preferably during life orientation period and will take approximately 3 hours. I also request to use the school hall, desks and chairs.

To assist you in reaching a decision, I have attached to this letter:

(a) A copy of an ethical clearance certificate issued by the Higher Degrees Committee of the department of health Studies at the University of South Africa

(b) A copy of the research proposal and supporting documents.

Should you require any further information, please do not hesitate to contact me or my supervisor. Our contact details are as follows:

Supervisor Dr. Makua MG |Tel +27 12 429 6524 | Email makuamg@unisa.ac.za

Student Tshitamba L.P.| Tel 083 492 4934 | Email 56414234@mylife.unisa.ac.za

The Chair of the University of South Africa, Department of Health Studies, Research Ethics Committee, Prof J E Maritz, can be contacted at maritje@unisa.ac.za.

Upon completion of the study, I undertake to disseminate my findings by providing the school / department/ etc with a bound copy of the dissertation.

Your permission to conduct this study will be greatly appreciated.

Yours sincerely,

L.P. TSHITAMBA

(Researcher)

ANNEXURE E

LETTER OF APPROVAL FROM THE SCHOOL PRINCIPAL

GAUTENG DEPARTMENT OF EDUCATION
TSHWANE WEST
DISTRICT D15

BALESENG JUNIOR SECONDARY SCHOOL
STAND NO: 2115 BLOCK L
SOSHANGUVE
0132

EFERENCE NO: 240531
TELEPHONE NO: (012) 7930043
Email:balesengsecondartschool2 2@gmail.com

ENQ: PRINCIPAL(Mr Moramang)
FAX: 793-0043

Cell: 0825561975

To whom it may concern
Re:Approval in Respect of Request to conduct Research.

This is to attest that permission has been granted by the above mentioned institution to the Reseacher (Tshitamba L.P) to conduct her research process.

The institution wishes you well in this vital undertaking and looks forward to examining the findings of your research study.

Kind regards
Deputy Principal

SGB Chairperson

Date 03 · 11 · 2017

GAUTENG DEPT OF EDUCATION
BALESENG J S SCHOOL
Deputy Principal
2017 -11- 03
2115 BLOCK L ,SOSHANGUVE
012-793 0043

ANNEXURE F
INFORMATION LEAFLET AND ASSENT FORM

INFORMATION LEAFLET

You are requested to participate in a research study on knowledge of HIV transmission prevention among adolescents. The purpose of this study is to understand adolescents' perspective on HIV and determine their lever of knowledge on HIV prevention. The alarming rates of HIV infected adolescents prompted the researcher into conducting the study.

In this study you will be asked to participate in a world café facilitated by the researcher. In a world café the researcher asks a group of people questions and they write down the most correct answer according to the group consensus after a short discussion. You will not be requested to disclose your HIV status and you will not be requested to give in your names.

The information that you will give to the researcher will remain confidential not even your educators will have access to the information. The information will not be reported/ presented in a way that identifies you.

You are not compelled to participate in the study, you have the right to refuse to partake in the study and also have the right to withdraw from the study and no punishment will be imposed.

There will not be any judgement that will be made based the information you will provide and it will also not be used against you. The information will only be used for research purposes.

Parents/guardian consent forms will be issued to you by the researcher to obtain consent from your parents/guardian to participate in the study, you will not be allowed to participate in the study without your parent/ guardian's consent.

Once the parent/ guardian consent has been obtained you will be requested to sign an assent form which serves as an agreement to participate in the study. There will be no benefits for participating in this study however, correct this part to be like in the consent form

Should you require any further information, please do not hesitate to contact me or my supervisor. Our contact details are as follows:

Supervisor Dr. Makua MG |Tel +27 12 429 6524 | Email makuamg@unisa.ac.za
Student Tshitamba L.P.| Tel 083 492 4934 | Email 56414234@mylife.unisa.ac.za

The Chair of the University of South Africa, Department of Health Studies, Research Ethics Committee, Prof J E Maritz, can be contacted at maritje@unisa.ac.za.

ASSENT FORM

I _____ (full names) hereby give assent to participate in the study on knowledge of HIV transmission prevention among adolescents. I have read and understood the information attached to the consent form and my parents have given me consent to participate in the study.

_____ _____
(Participant's signature) (Date)

_____
(Witness Full names and Surname)

_____ _____
(Witness' signature) (Date)

_____
(Witness 2 Full names and Surname)

_____ _____
(Witness' signature) (Date)

ANNEXURE G
INFORMED CONSENT FORM

Your child is requested to participate in a research study on knowledge of HIV transmission prevention among adolescents. The purpose of this study is to understand adolescents' perspective on HIV and determine their lever of knowledge on HIV prevention. The alarming rates of HIV infected adolescents prompted the researcher into conducting the study.

In this study the participant (your child) will be asked to participate in a world café facilitated by the researcher. In a world café the researcher asks a group of people questions and they write down the most correct answer according to the group consensus after a short discussion. The participant will not be requested to disclose their HIV status and they will not be requested to give in their names.

The information that participant will give to the researcher will remain confidential not even their educators will have access to the information. The information obtained will not be reported in a way that will identify the participants.

Participants are not compelled to participate in the study, they have the right to refuse to partake in the study and also have the right to withdraw from the study and no punishment will be imposed.

There will not be any judgement that will be made based on the information that participants will provide and it will also not be used against them. The information will only be used for research purposes.

Participants will not be allowed to participate in the study without their parent/ guardian's consent.

Once the parent/ guardian consent has been obtained, participants will be requested to sign assent forms which serves as an agreement to participate in the study. There will be no benefits for participating in this study; the information that the participants will

provide will be used to recommend HIV prevention educational improvements to the department of education and the department of Health.

Should you require any further information, please do not hesitate to contact me or my supervisor. Our contact details are as follows:

Supervisor Dr. Makua MG |Tel +27 12 429 6524 | Email makuamg@unisa.ac.za

Student Tshitamba L.P.| Tel 083 492 4934 | Email 56414234@mylife.unisa.ac.za

The Chair of the University of South Africa, Department of Health Studies, Research Ethics Committee, Prof J E Maritz, can be contacted at maritje@unisa.ac.za.

INFORMED CONSENT FORM

I _____ (Full names) hereby give consent that my child _____ (names of the child) participate in the research study on knowledge of HIV transmission prevention among adolescents. I have read and understood the information the information attached with the informed consent form.

_____ _____

(Parent/ Guardian signature) (Date)

_____

(Witness 1 Full names and Surname)

_____ _____

(Witness' signature) (Date)

_____

(Witness 2 Full names and Surname)

_____ _____

(Witness' signature) (Date)

ANNEXURE H
QUESTIONNAIRE

WORLD CAFÉ QUESTIONS

Section A: HIV transmission and prevention knowledge

What do you know about HIV?
How is HIV transmitted?
How is HIV not transmitted?
Do you think people with the same age as you can get HIV?
Why do you think so?
Do you think one can get HIV if they are using Oral or Injectable contraceptives (Pregnancy Prevention)?
Why do you think so?
How can one prevent themselves from getting HIV?
Which health risks do you think people who share needles are faced with?
Do you think HIV voluntary testing and counselling is important? and why?
What do you think should be done to reduce the high rate of HIV transmission among young people like yourselves? (HIV transmission prevention)

Section B: HIV transmission and prevention education

How often do they teach you about HIV transmission and prevention at school?
Who teaches you about HIV transmission and prevention at school?
How often do you want to be taught about HIV transmission and prevention at school?
What did they teach you about HIV transmission and prevention at school?
What do you want to be taught regarding HIV transmission and prevention at school?
How do they teach you about HIV transmission and prevention at school?
How do you want to be taught about HIV transmission and prevention at school?

ANNEXURE I

TRANSCIPTION

Section A: HIV transmission and prevention knowledge

Question 1: What do you know about HIV?

Group 1

- HIV is a disease that can infect someone.

Group 2

- Sickness that cannot be seen.ss
- What I know about HIV is that being HIV positive, you can test it before it goes straight to your bones.
- It's a disease that everyone don't know

Group 3

- That HIV is a virus

Group 4

- HIV is Human Immune Virus that cause by many populated thing in the environment

Group 5

- I know that HIV is a virus that comes from a man and a woman during sex, when sperm of a man flow to a woman without using protection
- HIV is a virus that is transmitted by blood, sex or even cough.

Question 2: How is HIV transmitted?

Group 1

- It can be transmitted by having sex without protection

Group 2

- HIV is transmitted by sleeping with someone who has HIV positive and it can get into you too.

Group 3

- Through unprotected sex
- Through blood

Group 4

- HIV is the virus that is transmitted through sex

Group 5

- It can be transmitted during sex or when touching someone's blood who is HIV.

Question 3: How is HIV not transmitted?

Group 1

- If you protect yourself when having sex.

Group 2

- Is not transmitted by using condom when you sleep with your girlfriend or boyfriend/ using protection during sex time.

Group 3

- Protected sex
- Touching someone positive wearing plastic gloves.
- During kissing

Group 4

- By touching
- By coughing
- Sleeping together
- Eating together

Group 5

- By protecting our bodies by not touching someone's blood who is HIV positive and also by using protection during sex.

Question 4: Do you think people with the same age as you can get HIV?

Group 1

- Yes

Group 2

- Yes

Group 3

- Yes

Group 4

- Yes

Group 5

- Yes

Question 5: Why do you think so?

Group 1

Because they are in a hurry to have sex.

Group 2

- Because people who are younger they love to have sex at a younger age
- Because us people in South Africa we like things and some like to sleep with the older people without thinking first and using no condom.
- Because others they born by HIV and others they sleep with man that are older than them.

Group 3

- Because some people are born HIV positive

Group 4

- Because some are born with it
- Some sleep with people who have so they might get it, or some have sex with people who have it.
- Because maybe they teach each other to show how to have sex without knowing that one of the has HIV positive

Group 5

- When you are born with HIV there is a possibility that you will live with it from being a baby born

Question 6: Do you think one can get HIV if they are using Oral or Injectable contraceptives (Pregnancy Prevention)?

Group 1

- No

Group 2

- No

Group 3

- Yes

Group 4

- Yes

Group 5

- Yes

Question 7: Why do you think so?

Group 1

Because they are taking medication to prevent being pregnant

Group 2

Because that medication is not for HIV.

Group 3

- Because they are only preventing pregnancy and not preventing you from being stroked by HIV.

Group 4

- Because we drink things with some glass while not knowing that the person that used it is infected or not infected

Group 5

- Because it is only a prevention of pregnancy not HIV

Question 8: How can one prevent themselves from getting HIV?

Group 1

- By using condom

Group 2

- By using condom/ protection.

Group 3

- Protected sex
- Do not touch someone positive without plastic glove

Group 4

- By testing when needed or every month
- By testing when infective with illness such as HIV/AIDS

Group 5

- By following the steps of the medication that they are given. To live positively

Question 9: Which health risks do you think people who share needles are faced with?

Group 1

- If one of them have a disease and they are using one needle, he or she will infect one of them. But if one of them don't have any disease nothing will happen.

Group 2

- They are faced with sickness and diseases

Group 3

- Being positive; most of them get HIV and other diseases

Group 4

- By getting infective illness such as HIV/AIDS

Group 5

- It can be transmitted by using the same needles to two different people who are negative and positive.

Question 10: Do you think HIV voluntary testing and counselling is important? and why?

Group 1

- Yes, because you can have unprotected sex not know, what kind of disease he or she have.

Group 2

- Yes because you can know your status

Group 3

- Yes, because you should know your status and be responsible for your actions.

Group 4

- Yes, because you need to know your status whether you are positive or negative

Group 5

- Yes, because you need to know your status according to your illness. Because it can make you to all be sick.

Question 11: What do you think should be done to reduce the high rate of HIV transmission among young people like yourselves? (HIV transmission prevention)

Group 1

- Use condom while having sex and wear gloves always while touching someone's blood and always take your medication

Group 2

- We must get a serious medication so that we must get healed.

Group 3

- Scientic should work harder to search a pill
- Young people should not have sex when they are not ready.

Group 4

- By stopping teenage pregnancy
- Blesser things
- Unprotected sex, stop sleeping with old people.

Group 5

- We must donate condoms and tell people to be careful when touching someone's blood.

Section B: HIV transmission and prevention Education

Question 1: How often do they teach you about HIV transmission and prevention at school?

Group 1

- Almost a week

Group 2

- About 2 weeks

Group 3

- They taught us twice

Group 4

- Here at school they teach us more about HIV like don't have sex in our age.
- This is the first time about it and I like the experiment of it.

Group 5

- They said that HIV comes when a men and a woman activate sex without using a condom.

Question 2: Who teaches you about HIV transmission and prevention at school?

Group 1

- Teacher A

Group 2

- Teacher A

Group 3

- Our life orientation teacher who is Teacher A and our natural science teacher Teacher B

Group 4

- Teacher A
- No one

Group 5

- Teacher A

Question 3: How often do you want to be taught about HIV transmission and prevention at school?

Group 1

- In each term or week.

Group 2

- 2 and half week

Group 3

- Most often, maybe three times a week.

Group 4

- Two and half week
- Many more years in school life

Group 5

- We need to be taught all the important valuable things.

Question 4: What did they teach you about HIV transmission and prevention at school?

Group 1

- They taught us not to sleep without a protection

Group 2

- They say we must not have sex at these younger age.

Group 3

- They taught us that unprotected sex is dangerous.

Group 4

- They say we must not have sex at this young age.
- About if you are HIV you have to go to clinic so that you may be good.
- How can HIV be transmitted

Group 5

- They said transmission is activated during sex without protection
- Prevention when we watch out and to take care of our body from touching someone's blood.

Question 5: What do you want to be taught regarding HIV transmission and prevention at school?

Group 1

- Which health risk do they think people who share one bubble gum are faced with

Group 2

- To get more tips and they must not hide anything.
- To stop what my friends say to this because I don't know that how am I gonna get HIV positive

Group 3

- We want to be taught if you are involved in a car accident will you get infected and is it possible for a mother who is affected to give birth to a negative child who is monomial/ monialist

Group 4

- We want to be taught to know about HIV.
- About if I want to sleep with a person who has HIV and we are using condom, what is going to happen.
- By testing and not re-use a needle.

Group 5

- We want to be taught regarding to all premises that are actually important.

Question 6: How do they teach you about HIV transmission and prevention at school?

Group 1

- They teach us to know what is all about HIV

Group 2

- They must teach us about how to use condom. The end of topic.
- They are teaching us not to do what your friends ask you.

Group 3

- They come with text books and tell us to open a certain page then explain the information provided in the textbook.

Group 4

- They must teach us about to use condom/ protection.
- It is fun because we get to know how we can get infected

Group 5

- They teach us making examples and warnings.

Question 7: How do you want to be taught about HIV transmission and prevention at school?

Group 1

- I want to read the novel of HIV and answer the questions and understand.

Group 2

- They taught us about our future and to be careful.
- To understand how HIV can infect you.

Group 3

- We will basically prefer the teacher to come with packs of condoms so that we could get a better view of what they want us to engage through

Group 4

- They taught us about to be careful about our future.
- By when you are infected you should take your medication.

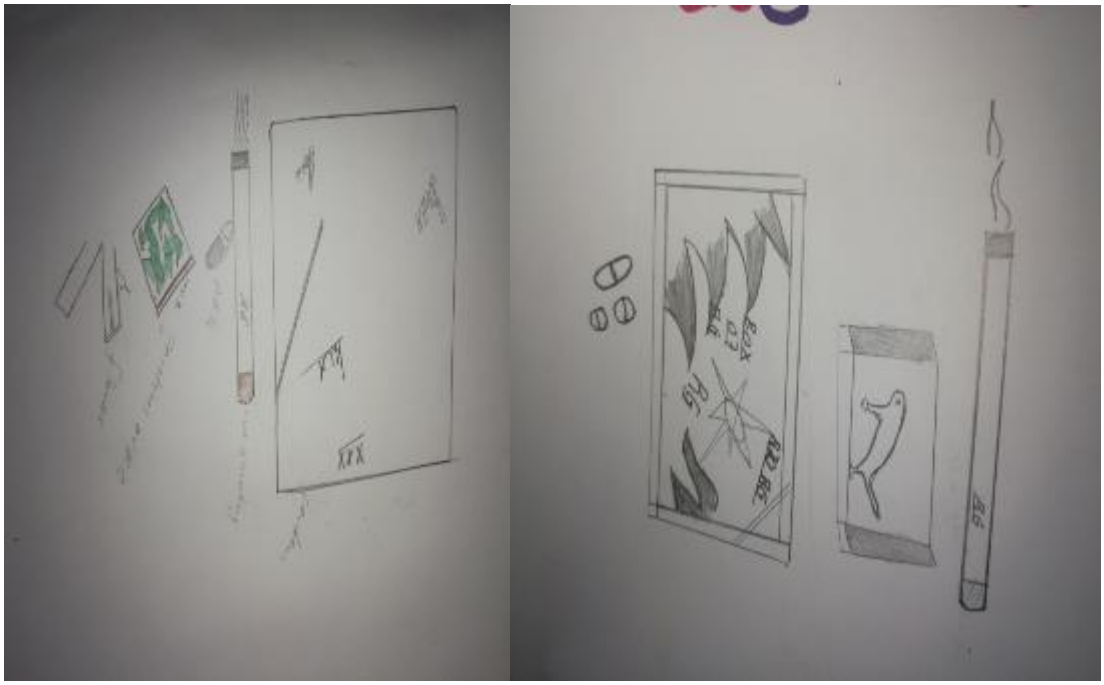
Group 5

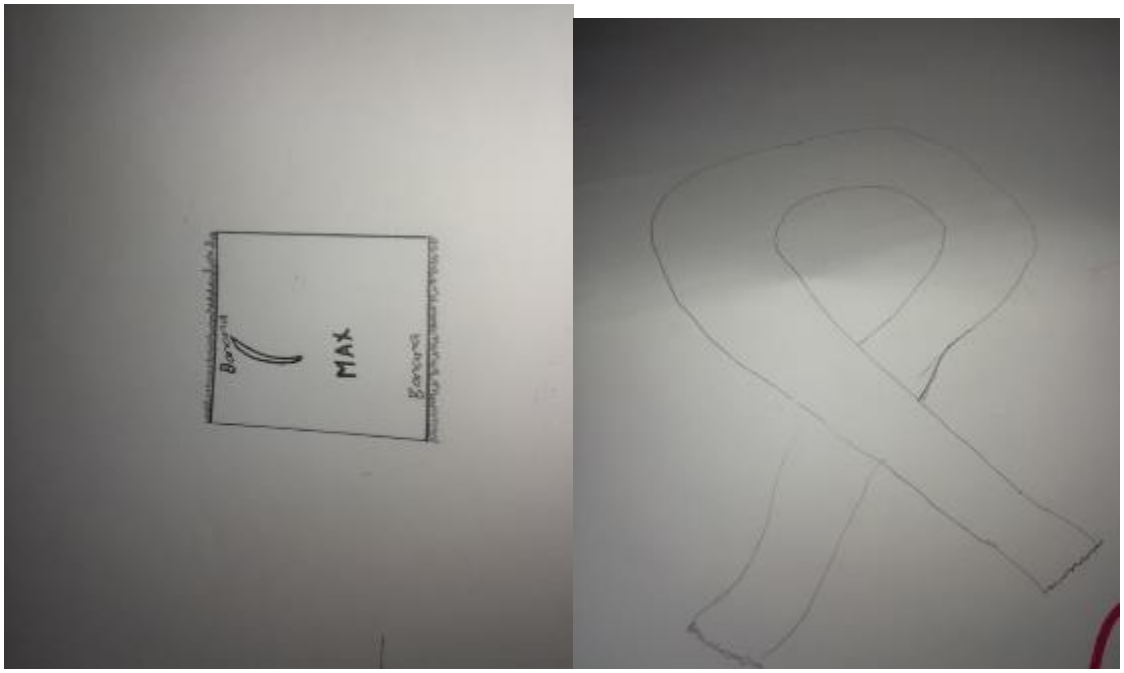
- We want to be taught according to the warnings and knowledge.
- We want to keep out our knowledge and teach others how it works according to the HIV through the tough

<u>Drawings</u>

Some participants also expressed their understanding of HIV through drawings.

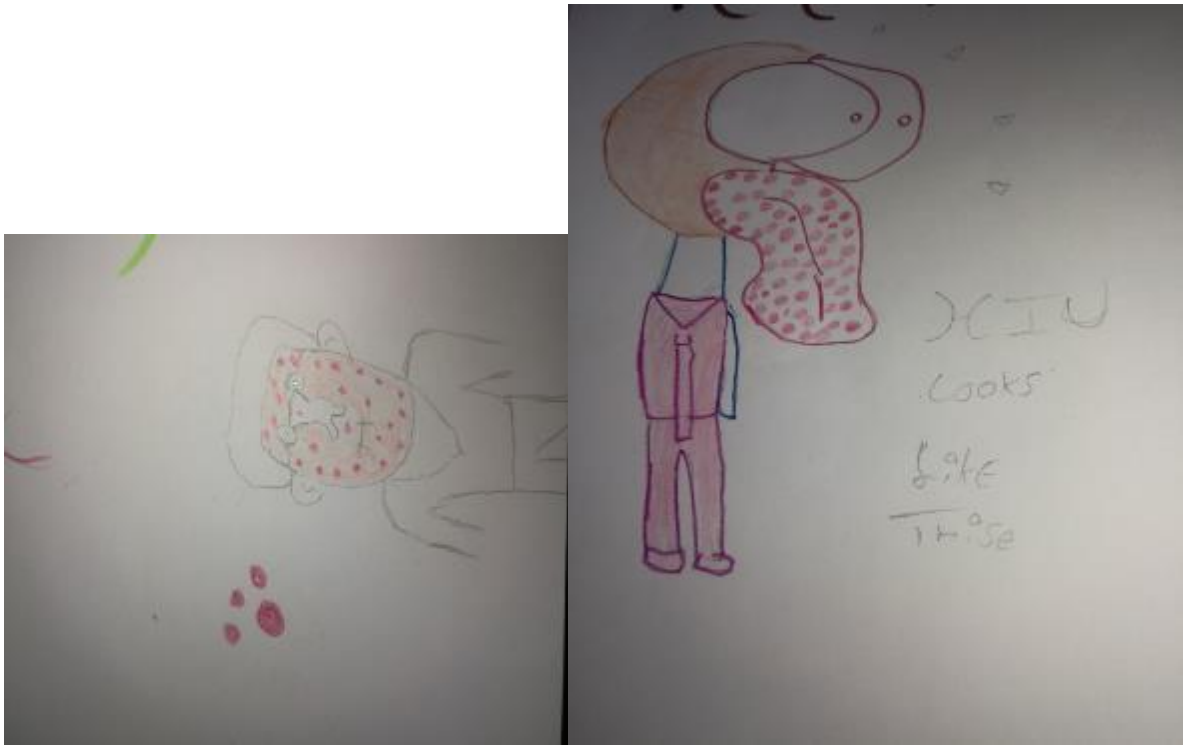
Group 1





- A box of RG cigarette and a lit cigarette means when you are HIV positive you are not supposed to smoke.
- A pill – ARV's that should be taken by HIV positive people
- Max condoms which symbolises protection against HIV
- A ribbon that symbolises HIV/AIDS

Group 2



- A person with pimples on the face, the other one tongue ulcers is a sign of a person who is HIV positive.
- A red ribbon symbolising HIV/AIDS
- One of the teachers has a nose bleeding problem, the drawing according to the group is a warning not to touch his blood.
- A syringe showing that blood should not be shared.

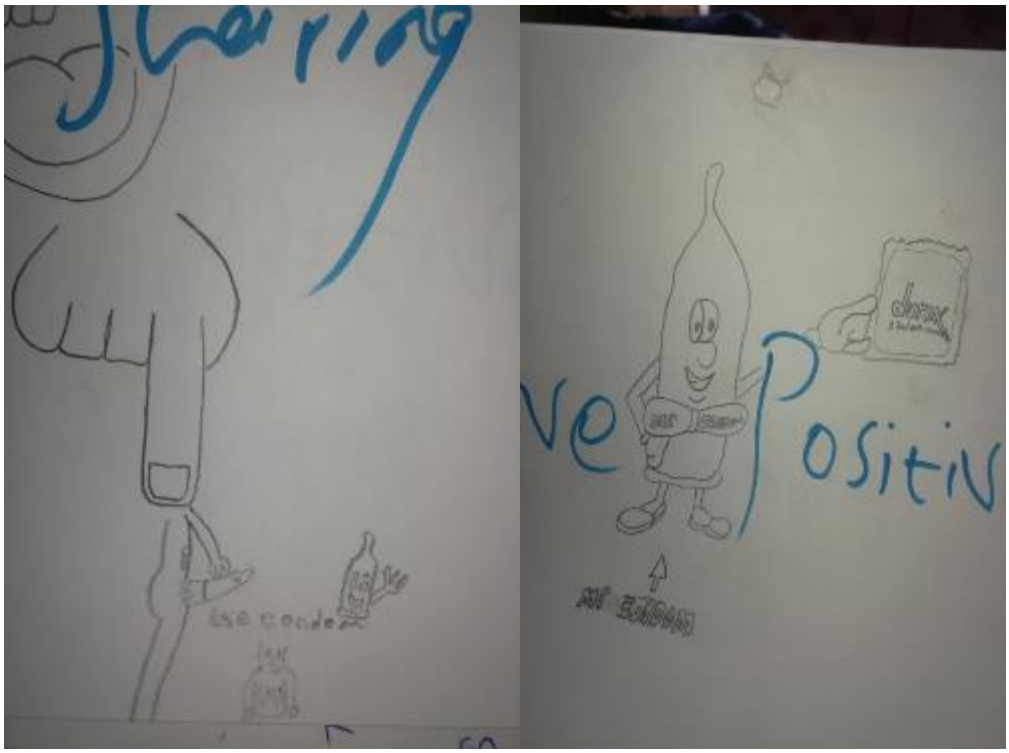
Group 3

- A syringe showing that sharing blood is dangerous
- A red ribbon symbolising HIV
- Condoms for HIV prevention

Group 4

- Condoms for HIV prevention
- ARVs to be taken by HIV positive people
- A man drawing blood on himself to share with a friend.

Group 5



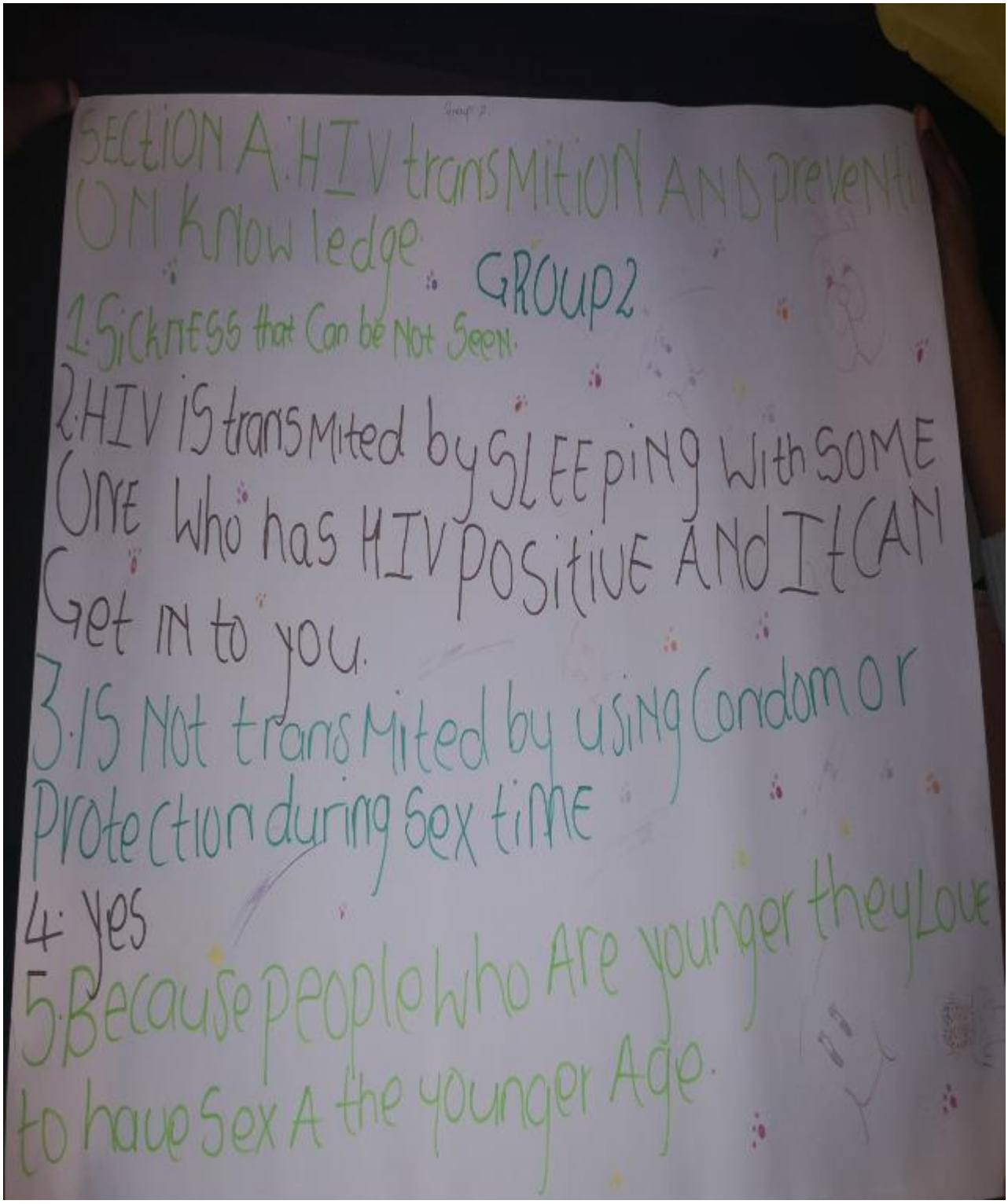
- *Protected sex*

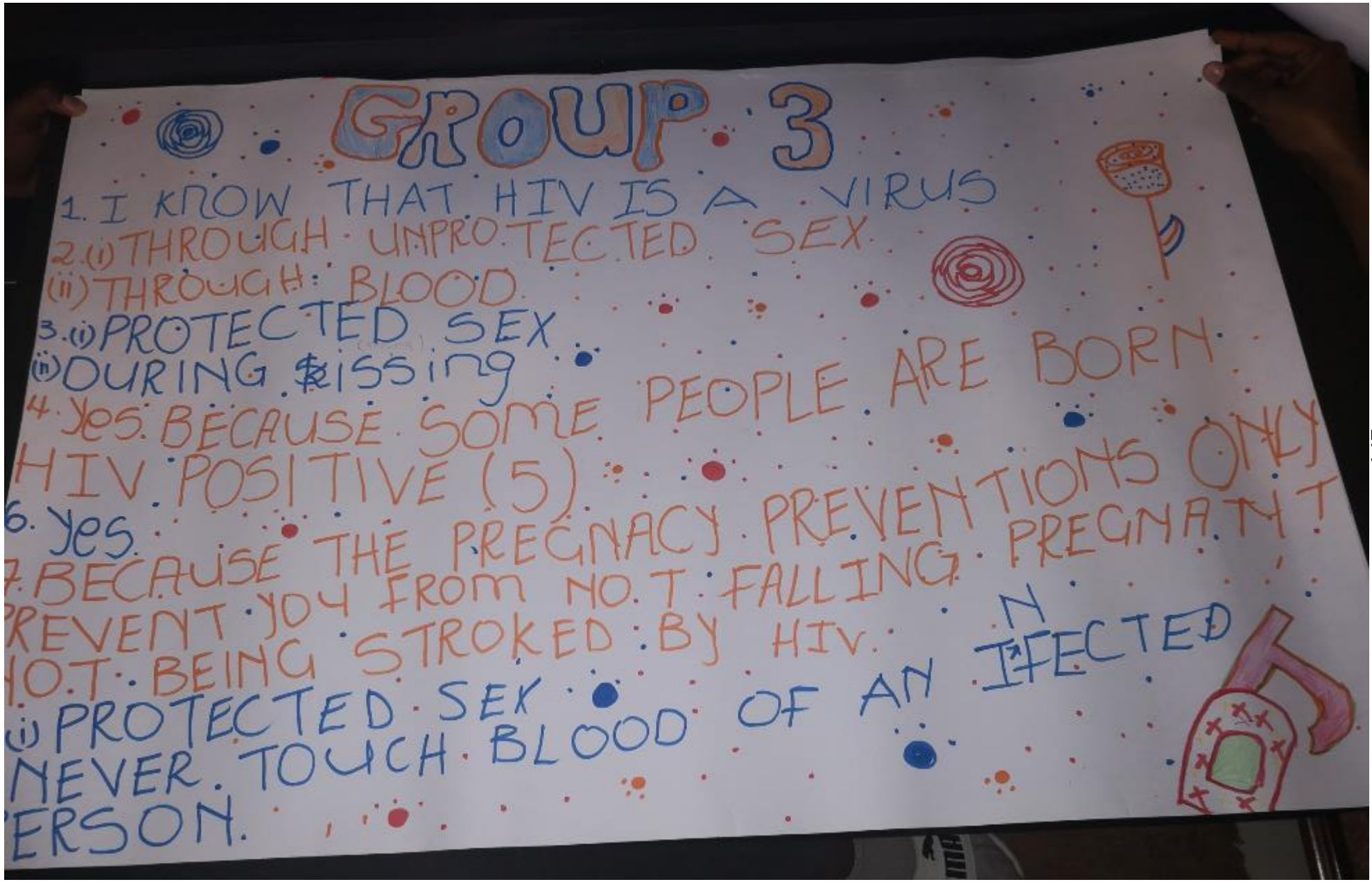
- A sketch illustrating condom use for HIV prevention

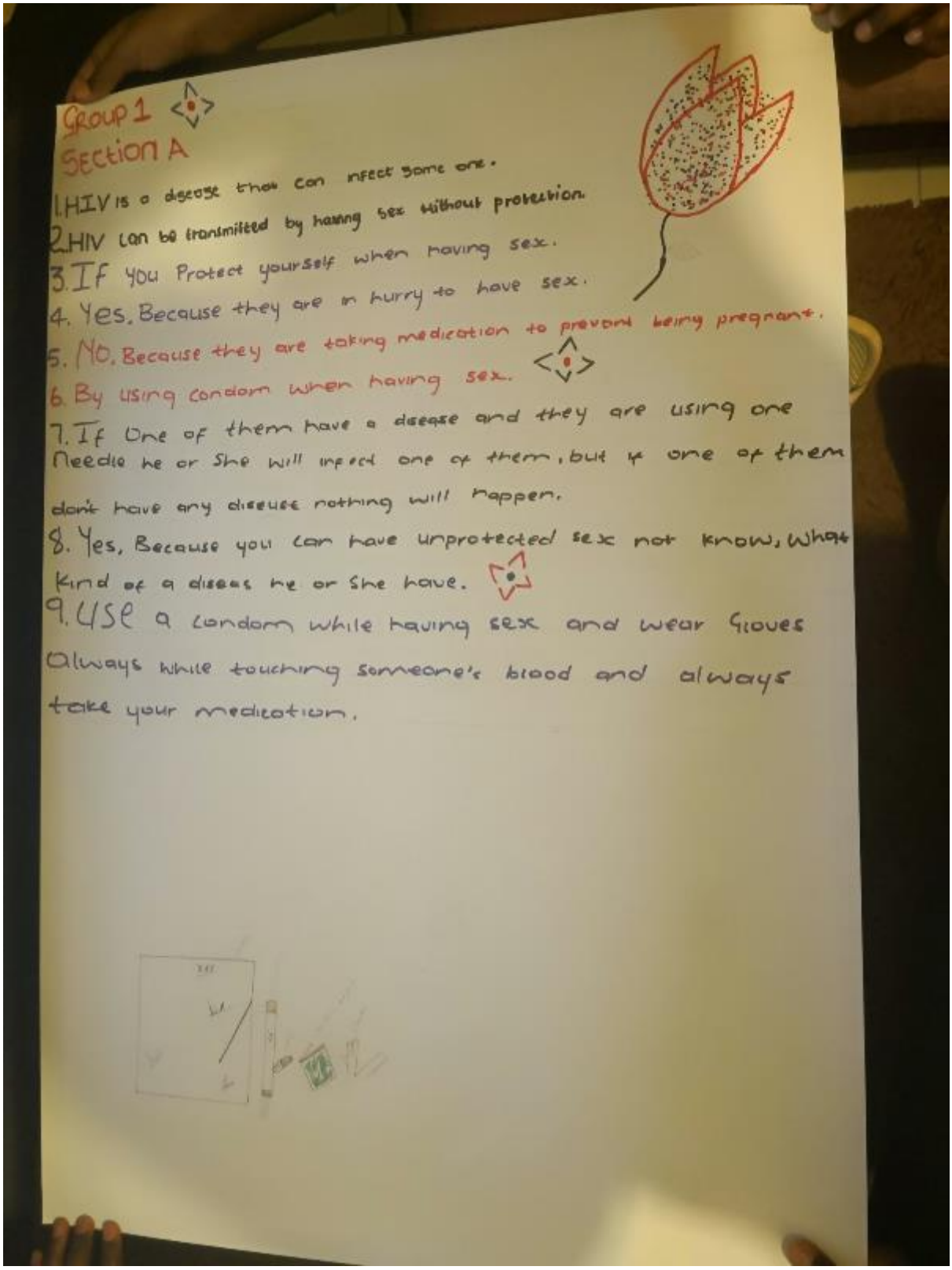
- and another one showing a man with an injury on the shoulder and people around him not helping refusing to help with the fear of contracting HIV

ANNEXURE J

SCANNED TRANSCRIPTS FOR CONFIRMABILITY

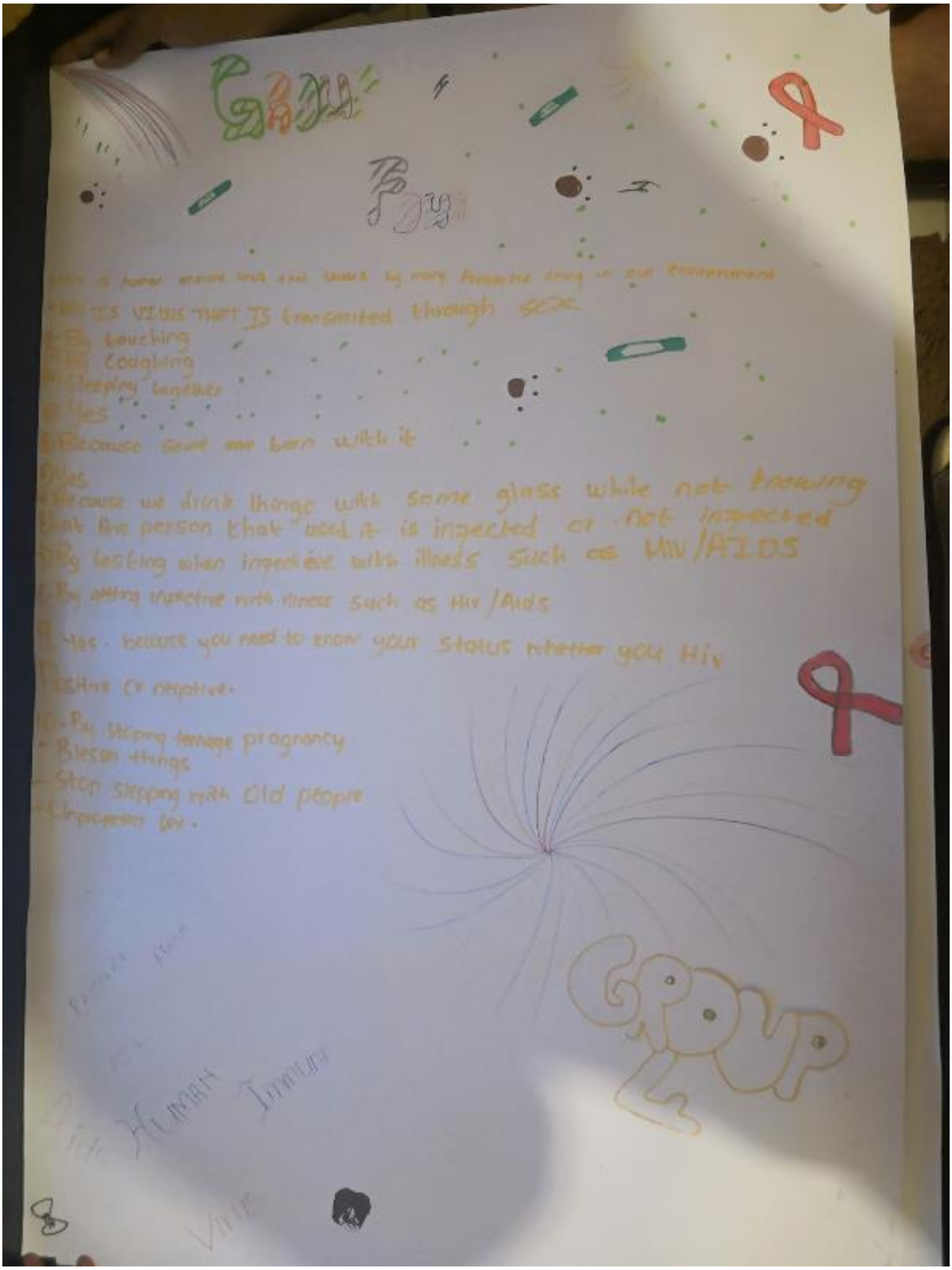



GROUP 3
1. I KNOW THAT HIV IS A VIRUS
2. (i) THROUGH UNPROTECTED SEX
(ii) THROUGH BLOOD
3. (i) PROTECTED SEX
(ii) DURING kissing
4. Yes BECAUSE SOME PEOPLE ARE BORN HIV POSITIVE (5)
6. Yes
7. BECAUSE THE PREGNACY PREVENTIONS ONLY PREVENT YOU FROM NOT FALLING PREGNANT NOT BEING STROKED BY HIV
(i) PROTECTED SEX
NEVER TOUCH BLOOD OF AN INFECTED
ERSON.

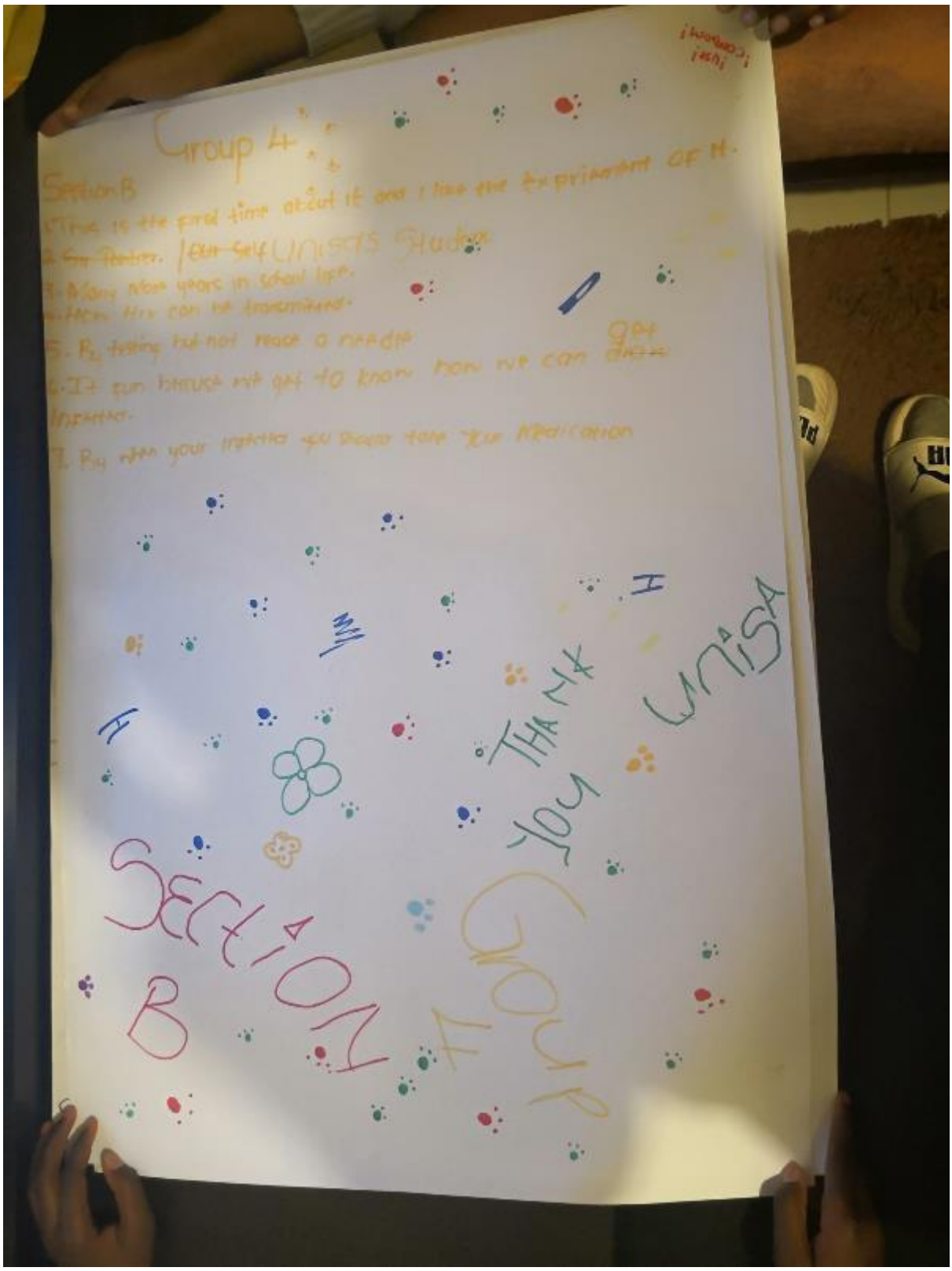


Group 1
Section A

1. HIV is a disease that can infect some one.
2. HIV can be transmitted by having sex without protection.
3. If you Protect yourself when having sex.
4. Yes. Because they are in hurry to have sex.
5. NO. Because they are taking medication to prevent being pregnant.
6. By using condom when having sex.
7. If One of them have a disease and they are using one Needle he or She will infect one of them, but if one of them don't have any disease nothing will happen.
8. Yes, Because you can have unprotected sex not know, What kind of a disease he or She have.
9. Use a condom while having sex and wear Gloves Always while touching someone's blood and always take your medication.



touching
coughing
Yes
born with it
because we drink things with some glass while not knowing
that the person that used it is
or not
such as HIV/AIDS
such as Hiv/Aids
because you need to know your status
or negative.
Stop slepping with Old people
GROUP


Group 4
SECTION B
THANK YOU UNISA
SECTION B AND GROUP 4

ANNEXURE K

FIELD WORKERS' CONTRACT

Contractual agreement between the researcher and field worker

I _____ hereby agree to assist with data collection for the study: **Knowledge of HIV transmission and prevention among adolescents in Tshwane West District,** with a remuneration agreement of R1000-00 only for the performance of the research duties under this agreement. The purpose and objectives of the research as well as my duties in the study has been clearly explained to me. I acknowledge that the information that will be provided by participants must remain confidential. I therefore will not leave the research setting until my duties has been fulfilled.

_____ _____

(Signature of Field worker) date

_____ _____

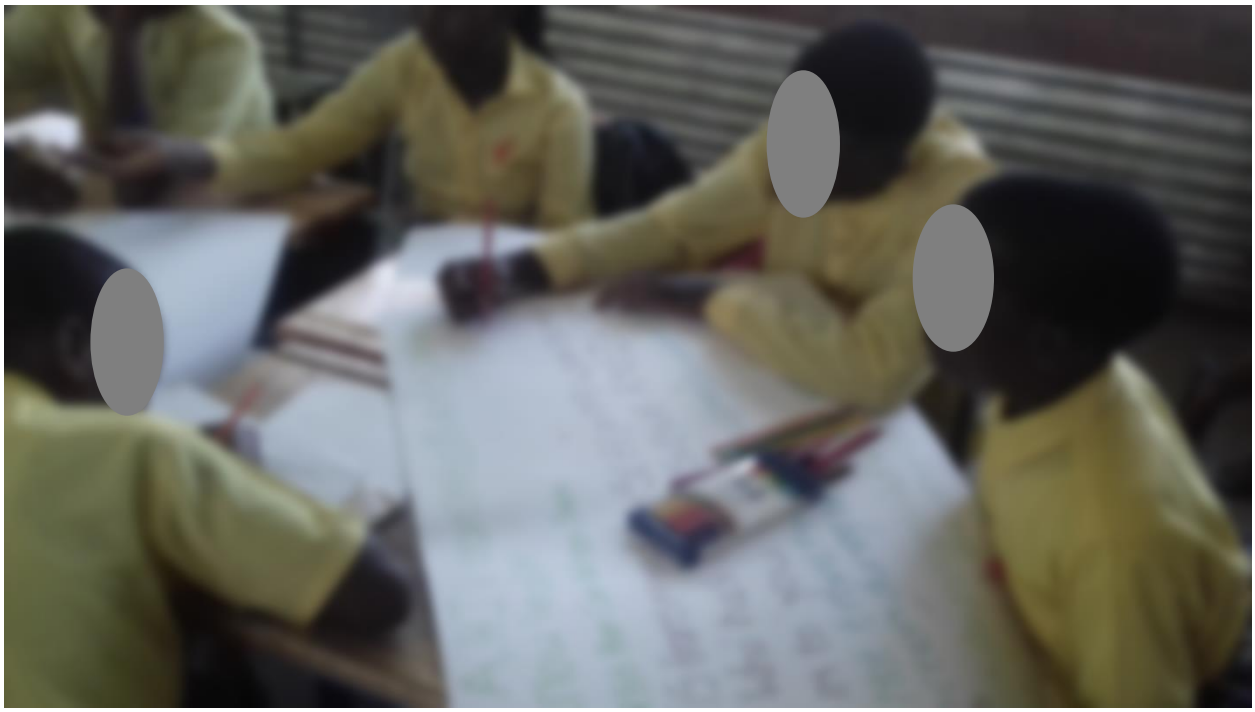
(Researcher's signature) date

_____ _____

(Witness) date

ANNEXURE L

WORLD CAFÉ IN PROGRESS



ANNEXURE M

EDITING LETTER

Letter KRAFT

Lené Kraft
Postal Address: PO Box 2313 Lichtenburg 2740
Telephone: 072 782 8990
Fax: 088 628 1773
E-mail: lene@englishproofreader.co.za
Website: www.englishproofreader.co.za

To whom it may concern

7 June 2018

I hereby declare that I am a professional editor and have edited and proofread the following dissertation:

KNOWLEDGE OF HIV TRANSMISSION AND PREVENTION AMONG ADOLESCENTS IN TSHWANE WEST DISTRICT

By

LUTENDO PHYLLIS

As a professional editor with an English major obtained from the University of Pretoria in 2003, I am also a Full Member of the Professional Editors' Guild and a member of SATI (membership number 1002505).

Yours sincerely

Mrs Lené Kraft