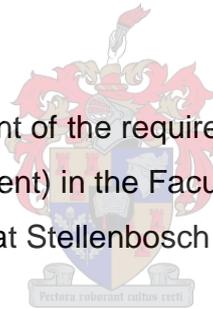


**Establishing the knowledge, perceptions and views of new entry level recruits
in a South African military training setting on HIV/AIDS to promote HIV/AIDS
awareness amongst young soldiers**

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Assignment presented in fulfilment of the requirements for the degree of Master of
Philosophy (HIV/AIDS Management) in the Faculty of Economic and Management
Science at Stellenbosch University



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DECLARATION

By submitting this assignment electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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ABSTRACT

The vulnerability and risky behaviours of young people is a growing concern in the fight against HIV/AIDS. The target group for this study were young people entering the armed force to commence with their initial military training at a military training setting in the Western Cape. These recruits were from all the nine provinces in South Africa. The perceptions, views and basic knowledge of young recruits on HIV/AIDS were assessed through the application of a standardized structured questionnaire. Data analysis was done by using the Statistical Package for the Social Sciences (SPSS). The findings of the study presented high levels of knowledge on HIV/AIDS. However, misconceptions on the transmission of HIV are still a huge concern due to the fact that a small percentage of the respondents are under the impression that HIV/AIDS is curable. Moreover, almost all of the respondents believed that it is very easy to get HIV, in contrast to their exceptional level of knowledge on the transmission routes of HIV. In addition, some of the respondents were also under the impression that HIV can be transmitted through the bite of a mosquito. Recommendations include the implementation of routine scheduled HIV/AIDS awareness programmes with up-scaling of HIV/AIDS prevention and awareness campaigns during military training.

OPSOMMING

Die kwesbaarheid en riskante gedrag van jong mense is nog steeds 'n groeiende bekommernis in die geveg teen MIV/VIGS. Die teikengroep vir hierdie studie was jong mense wat vir die eerste keer met hul weermag opleiding begin het in 'n weermagbasis in die Westelike Provinsie. Hierdie rekrute was afkomstig vanaf al nege provinsies in Suid Afrika. Die persepsies, menings, en basiese kennis van die rekrute rakende MIV/VIGS is bepaal deur die gebruik van 'n gestandaardiseerde gestruktureerde vraelys. Data analise is gedoen met behulp van die Statistiese Program vir Sosiale Wetenskappe (SPSW). Die bevindings van die studie het gedemonstreer dat alhoewel die rekrute oor genoegsame kennis van MIV/VIGS beskik, wanopvattinge rakende die transmissie van MIV/VIGS nog steeds kommerwekkend is deurdat 'n klein persentasie van die respondente onder die indruk is dat MIV/VIGS geneesbaar is. Verder, reken die meeste respondente dat dit baie maklik is om MIV te kan kry, in teenstelling met hul uitsonderlike kennis oor die oordraagbare roetes van MIV. Bykomend tot hierdie stelling is sommige van die respondente onder die indruk dat MIV deur die byt van 'n miskiet oorgedra kan word. Aanbevelings sluit in die implementering van roetine geskeduleerde MIV/VIGS bewusmakingsprogramme met opskaling van MIV/VIGS voorkomende bewustheidsveldtogte tydens weermag opleiding.

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CHAPTER 1

STUDY OVERVIEW

1.1 Introduction and background

The human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) is of great concern to adolescents, young people and young recruits in armed forces under the age of twenty five years, due to increase risky sexual behaviour, mobility, inconsistent condom usage and different ideologies on the transmission of HIV (Harrison, Feorino, Weintrob, Murray, Lloyd, Li, Lu, Miao, Aggarwal, & Carson, 2013). Notwithstanding, young soldiers are essential for the production of a young, agile, skilled and dexterous military force and are often overlooked when they express their opinions and viewpoints in the workplace (United Nations, 2013). Young people's opinions are further influenced by cultural norms, values and beliefs, even when they have a certain degree of knowledge on HIV/AIDS. The youth's divergent beliefs, inapplicable ideologies and myths on HIV/AIDS however, are barriers that strengthen their vulnerability when they suddenly have to adapt to conditions which were previously unknown to them, for example a highly mobile military environment.

On initial entry into the military setting it is expected of young recruits to be physically, spiritually and mentally fit to become strong and disciplined soldiers in an inherent masculine domain (Mankayi, 2011). When soldiers commence with their career in the armed force, they normally receive military training in confined spaces in all types of conditions. Thereby, the military is also known to be a unisex environment as explained by Lawrence, Duggan, and Conley (2010), military duties and training often requires male and female soldiers to reside and make use of the same ablution facilities on a continuous basis, cultivating an environment of acquaintance which can last a life-time or bring forth strained relationships that impacts performances during military training. Young male and female soldiers thus find themselves in the middle of the HIV/AIDS epidemic when they become involved in multiple sexual relationships in a state of vulnerability, ignorance and exposure to unprotected sexual activities (Mankayi, 2011).

Lack of knowledge, ignorance and poor perceptions on HIV/AIDS are influenced by myths surrounding the disease, the inability to grasp its disastrous effects, and the socio-economic factors impacting the spread of HIV infections. Barriers such as unprecedented and inadequate knowledge and misconceptions on HIV/AIDS prevails the spread of the virus when young recruits are subjected to abnormal conditions, stress, substance abuse and exposure to unprotected sex with multiple sexual partners (HealthLink Worldwide, 2002). Increased exposure to HIV also make young recruits vulnerable when their current level of knowledge on the disease is unknown as masculinity, peer pressure and gender concepts further influence the transmission of HIV infections in a young, vulnerable and mobile group. Most militaries on the other hand classifies young recruits as a high risk category, due to their vulnerability to behavioural diseases such as HIV and other sexually transmitted infections (Harrison et al., 2013).

Globally, 1.8 billion young people represents the world (UNAIDS, 2013a), anticipating that they commence with their military career at a very young and sensitive phase. This is coupled with limited to a more acceptable degree of knowledge on HIV/AIDS by young people when they start with their initial military training in a distinguished mobile and migratory setting (Hallum-Montes, D'Soaza, Tavarez, Manzanero, Dann, Chun, & Anastario, 2012).

Soldiers are generally seen as extremely operational and known to deploy predominantly into conflict and violent areas far away from family members and friends, which makes young soldiers vulnerable to sexually transmitted diseases. Thereby, most countries see HIV/AIDS as a threat and prescribes compulsory HIV testing for soldiers when they are selected for deployment into peacekeeping missions as a measure to keep track of the prevalence and incidence rates of the disease (UNAIDS, 2011). The South African National Defence Force (SANDF) as a troop contributory country ensures for the safety of the country's people and its borders. This facilitates for the involvement of internal and external deployments of young soldiers (Mankayi, 2011). Young soldiers are thus subjected to mandatory pre- and post deployment HIV testing and counseling interventions when they enter or

depart from unstable environments, where sexual exploitations, transactional sex and sexual violence are prevalent (UNAIDS, 2011).

It is evident that although studies addresses various aspects on young soldiers knowledge regarding HIV/AIDS, limited literature could be found on young people's knowledge of the disease when they initially enter the military environment from the civilian point of view. Most research studies primarily focuses on young soldiers when they have already been exposed to some form of HIV/AIDS workplace programmes in the military setting (Essien et al., 2010; De Jong, & Visser, 2006; Bazergan, 2006; van der Ryst, et el., 2001).

When young people start with their career in the armed force, it is expected of them to successfully adapt to conformed military prescripts, rules and disciplinary regulations, applicable to militaries during their initial military training. Significantly to this, male sexuality displays a more dominant role in armed forces whereby male soldiers are seen to be more superior to that of their female counterparts (Mankayi, 2011). It brings forth demarcated abilities in young soldiers, who are already in a phase of vulnerability and rebellious manifestations. To address these aspects in order to motivate young soldiers to conform to positive behavioural modification abilities, it is imperative to implement appropriate HIV/AIDS preventive strategies and measures to ensure that they develop into highly trained soldiers who will function responsibly in all types of environments.

The study therefore aims to investigate the level of knowledge of new recruits reporting for military training in a South African National Defence Force (SANDF) training context, to develop awareness strategies and programmes to combat the negative effects of the disease in the military, and to promote responsible sexual behaviours in young soldiers. Stimulating young recruits to modify risky sexual behaviour, is imperative for their health and well-being in the prevention, management, treatment and care of HIV/AIDS and sexually related diseases. Encouraging young recruits to take control of their health also contributes to productive outcomes in the military setting and at the same time empowers them to adapt to healthy life-styles, beneficial to their health and well-being.

1.2 Research problem

Over the years, it has been observed that new recruits reporting for initial military training at a military training facility in the Western Cape enter the armed force with limited knowledge on HIV/AIDS. The young recruits come from areas that range from townships and villages to rural and deep rural places, with different beliefs, values and views on HIV and AIDS. New recruits normally report from the civilian environment annually for military training to commence with their career in the South African National Defence Force (SANDF).

This encompasses that inadequate knowledge on HIV/AIDS and misconceptions regarding the disease increase the vulnerability of young recruits, which places them in a higher risk category for contracting HIV infections. According to Tzeng, Clark, Garges, and Otto (2013), a study conducted in the United States of America on young soldiers corroborated the vulnerable statuses of young soldiers between the ages twenty and twenty four years. The results confirmed that some young soldiers had multiple episodes of unprotected sexual occurrences and repeated episodes of sexually transmitted infections, even after a number of them tested positive for HIV.

1.3 Research question

The research question for this study focused on the following concept: What are the entry level knowledge, perceptions and views on HIV/AIDS of new recruits reporting for military training in a Western Cape military training setting?

1.4 Significance of the study

The study will be used as a basis to explore the knowledge of young recruits on HIV/AIDS when they commence with their initial military training, as young soldiers are beneficial for the rejuvenation of an armed force. It is a huge concern when young soldiers are exposed to HIV/AIDS risk factors when their knowledge on the disease is unknown. Barriers to the disease and ignorance inhibit the effective implementation of appropriate behaviour changing strategies and programmes. Determining the initial level of knowledge of new recruits, as well as their perceptions and views on HIV/AIDS when they commence with military training is imperative to establish a baseline towards improved HIV/AIDS intervention and workplace

programmes. Inadequate or even an acceptable level of knowledge on HIV/AIDS, and strong beliefs on the myths relating to the disease, hugely affects the vulnerable statuses of young soldiers to HIV risks when they are exposed to elements which enhance their vulnerability. Although the knowledge of youths relating to HIV/AIDS has improved over the years, there is still concern regarding increased risky sexual behaviours (UNAIDS, 2013b). According to UNICEF (2013), gaining insight into young people's risk perceptions on HIV/AIDS, provides guidance for improved awareness programmes, because barriers and vulnerabilities enhances HIV exposure as shown in Figure 1.1.

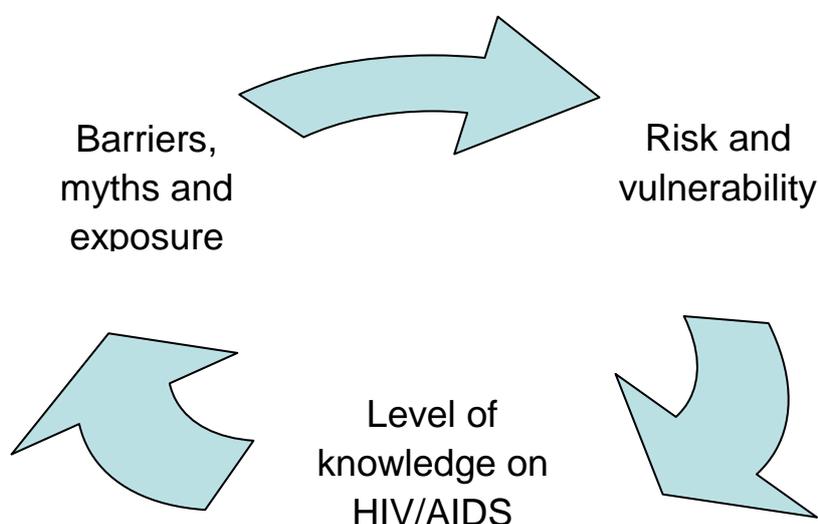


Figure 1.1: HIV/AIDS exposure components (UNICEF, 2013)

The outcome recommendations thus foresee to provide insight into problematic areas and barriers relating to HIV/AIDS awareness and prevention initiatives, which will serve as a basis for future research. The findings of the study will be invaluable to young soldiers and the organisation, due to the fact that very few studies could be found that expresses baseline knowledge of young recruits and their concepts on HIV/AIDS on entry level into the military environment.

1.5 Aim of the research study

The study aimed to explore and described the entry level knowledge, perceptions and views on HIV/AIDS of new recruits who reported for military training in a South African military training setting in the Western Cape, to review and establish HIV

programmes that will aid in the promotion of responsible behaviour changes for young soldiers, in-line with improved HIV/AIDS awareness strategies in the military milieu.

1.6 Objectives of the research study

The ultimate objectives of the research study were:

- To identify the levels of knowledge on HIV/AIDS of new recruits entering the military environment.
- To determine the perceptions and views of new recruits regarding HIV risks.
- To establish the potential needs of new recruits for HIV/AIDS related training towards improved behavioural changes.
- To provide guidelines for preventive initiatives on HIV/AIDS in-line within regulatory and legislative measures to promote responsible sexual behaviours as a means to reduce HIV risks in young soldiers in the military setting

1.7 Conclusion

Chapter one provided background information on the vulnerable status of young recruits when they start their career in the military with limited knowledge on HIV/AIDS. It also addressed some barriers and concerns on the impact of high risk behaviour of young people.

The chapter further formulated the research problem and subsequent research questions to be addressed by the study. The significance of the study was highlighted and the aim and specific research objectives were specified.

Chapter two gives an overview of the literature review as theoretical background to the research.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

The literature review expresses the etiological factors and concerns of the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) on young soldiers and portrays perceived risk factors to the disease. Most young people commence their initial military training in the armed force with very little knowledge and understanding of HIV and the debilitating effects of AIDS-related diseases on humans (Feldman, Kark, Zarka, Ankol, Letyagina, & Starkshall, 2010).

Over the years evidenced based studies highlighted concerns of young people's knowledge and perceptions on the disease.

- Firstly it was found that many young people demonstrate irresponsible behaviour, contrary to the norm which makes them highly susceptible to HIV transmission (United Nations, 2005).
- Secondly, some young people have the tendency to mistakenly believe in misconceptions regarding the transmission and spread of HIV/AIDS, which anticipates for higher vulnerable statuses (Georges, 2011).
- It has also become clear that the level of knowledge and perceptions of young people, as well as their views regarding HIV and AIDS ranges from high to very low, which places them in high risk categories, especially when they become involve in unprotected sexual relationships (Lammers, van Wijnbergen, & Willebrands, 2013).
- Finally, many young people are under the impression that their knowledge on HIV/AIDS is sufficient to protect them against the disease, thus when they enter the military environment they do not see themselves as being at risk of contracting the disease and continue to participate in high risk sexual behaviour (Feldman, et al., 2010).

It is therefore imperative to explore the knowledge, perceptions and views of young soldiers on HIV/AIDS with entry level military training, as military communities has unique norms, values and beliefs within a specific cultural context. Well prepared

strategies and measures will give a good indication on risks to the disease to overcome vulnerabilities, and remove obstacles which may hamper effective and sustainable HIV prevention programmes and interventions (Couldrey & Herson, 2010).

2.2. Etiological facts and concerns on HIV/AIDS for young soldiers

The World Health Organisation (WHO, 2012) defined HIV, as an organism that slows down the immune system of individuals in such a manner that the immune system becomes incapable to effectively protect individuals against opportunistic infections. Once the virus enters the bloodstream of an individual, it is difficult to eradicate and ensures for an incurable chronic condition due to its extra-ordinary mutational capabilities (National Defense Research Institute, & Rand Corporation, 2010). HIV infection is thus a slow progressive disease which depletes the fighting mechanism of the immune system over a long period of time.

In reality HIV/AIDS establishes false expectations to symptomless youths who are under the impression that they are risk-free, especially in unsuspecting situations (Amu, 2014). The complexity of HIV infection contributes to an undisputable thinking that one is in “good health” (World Health Organization, 2012). In fact young people living with progressive HIV/AIDS, who do not show any signs and symptoms of the disease, in reality, demonstrate an overall manifestation of the true incidence rate of the disease in relation to risky sexual behaviour (UNAIDS, 2014a).

Negative influences on the perceptions and knowledge of some people regarding the disease dispels the prominence of the myths and stigma surrounding HIV/AIDS in communities, especially when individuals are still fearful to openly discuss the disease with their partners, friends or family members (Shoveller, Knight, Johnson, Oliffe, & Goldenberg, 2010). Characteristically HIV is linked to the way people live and behave in specific environments and within certain communities which require systematic approaches with prevention strategies to conquer HIV/AIDS barriers for young soldiers (Chung, 2009).

The military is a community that recruits and provides continuous military training to young soldiers, which foster periods of high stress levels integrated with periods of loneliness. Soldiers on the other hand normally attracts commercial sex workers and as a result of their vulnerable statuses, participates in risky sexual behaviour to counter balances the negative effects of work and training stressors (Adebajo, Mafeni, Moreland, & Murray, 2002). Alternatively, the high mobility of their occupation predisposes young soldiers to participate in unsafe sexual practices (Hussain, & Akande, 2009), which makes it necessary to apply rigorous and persistent HIV/AIDS prevention strategies in the military setting (Essien, Mgebere, Ekong, Holstad, & Kalichman, 2011). Another factor is that young soldiers mistakenly belief that their fellow soldiers adhere to safer sex practices during sexual relationships, to prevent the transmission of sexually transmitted infections and HIV/AIDS (Kraemer, 2006).

The virus on the other hand, displays a remarkable ability to modify itself in such a manner that it is difficult to eradicate or to develop an effective vaccine to prevent people from acquiring HIV/AIDS. In-effect the World Health Organization declared HIV/AIDS a chronic disease (WHO, 2012), due to its catastrophic pathway and ability to slowly damage the immunity of a person over a long period of time (Bauer, 2006). However, detecting HIV infection in the advanced AIDS stage, when a soldier's immune system is already weakened by its damaging effects, pre-empts effective management, treatment and care measures for militaries (National Defense Research Institute, et al., 2010).

HIV and AIDS also negatively impacts young soldiers in a highly mobile environment, as they are primarily in the midst of the destructive path of the disease due to their vulnerable statuses (UNAIDS, 2003). Ignorance regarding the disease is another element that reflects negativity on young soldier's perceptions and views of the disease. Such as the belief that HIV transmission can transpire through touching, hugging and eating out of the same plate of an HIV infected person. Moreover, it strengthens stigma and discrimination against people living with HIV/AIDS (UN/AIDS, 2014a; Chao, Lin, Ma, Ku, Tsai, & Shi, 2010). In retrospect the authors of a study illustrated the high percentage of soldiers who seem to be knowledgeable on HIV/AIDS, but argued that young soldiers projects a sense of vulnerability with

regard to the misconceptions and inaccurate beliefs on the disease (Saiprasad, Banerjee, Jadhav, Sahoo, Parasher, & Basanner, 2003).

New recruits are normally youthful and permeate a sense of emblematic grandiosity in their sexuality, which reflect a status of un-conquerable enigma during high risk behaviour (Adebajo, et al., 2002). According to the Centers for Disease Control and Prevention (2014), a survey conducted in 2010 on youths in the United States of America indicated the knowledge levels of young people and the effects of HIV/AIDS in their lives. A compilation of the statistics demonstrated that:

- Over twenty percent of new HIV infected cases were predominantly young people.
- Same sex young males were found to be more vulnerable to HIV transmission than their heterosexual counterparts.
- About sixty percent of young people were unaware of their changed HIV statuses.

A South African study conducted on male recruits corresponded with other studies by demonstrating that about eighty percent of young soldiers possessed over an adequate amount of knowledge on HIV/AIDS, but contrary to their high levels of knowledge, they still pursue aberrant sexual behaviour during high risk sexual relationships (van der Ryst, Joubert, Steyn, Heunis, le Roux, & Williamson, 2001). However, the Joint United Nations Programmes on HIV/AIDS (2014a) proclaimed that a positive HIV response rate can be achieved through applicable preventive measure, due to the fact that newly infected youths depicted more favourable outcomes with early detection, management, treatment and care programmes in militaries.

2.2.1. Risk versus mobility for young soldiers

Soldiers are always on the move and their interactions with the general public in relation to HIV/AIDS, seems to have an influence on the spread of HIV/AIDS (Essien, Mashack, Ekong, Williams, Amos, James, Peters, Ogungbade, & Ross, 2005). Communities where soldiers are deployed into, sees members in uniform as charismatic and unique. Soldiers are also deployed into extreme environments, with

very poor communities and these frequent occupational changes with its distinctive drivers, contributes to increased risks for young recruits when they enter the military environment (Rubertone, & Brundage, 2002). For instance, HealthLink Worldwide (2002) highlighted the risks taken by soldiers and their ignorance to the disease constitute to high rates of HIV infections in civilians residing in close proximity to military camps. Other studies stipulated how soldiers are seen as transmitting HIV infection from one place to another, and from community to community during deployments into mission areas with high prevalence rates (Tripodi, & Patel, 2004).

On the contrary, it was found that the correlation between HIV infection, the soldiers and the general public does not reflect a true picture and are taken out of perspective. Therefore a comparison between military personnel and civilians regarding HIV/AIDS is irrelevant in terms of the prevalence rate of the disease (Whiteside, de Waal, & Gerbre-Tensae, 2006). Notwithstanding, soldiers are still being recognised as a risky community in the ubiquitous stage of HIV/AIDS and other sexually transmitted infections, due to sporadic condom application and multiple sexual relationships through irresponsible behaviours (Hallum-Montes, D'Souza, Tavarez, Manzaner, Dann, & Chun, 2012).

Affairs and casual sexual relationships are also not unfamiliar to young recruits. In fact, young soldiers with higher education are more inclined to get involved into sporadic voluntary sexual activities outside the marriage than their older counterparts (Hussain et al., 2009). In a cohort study, it was demonstrated that educational background does not deter young soldiers from getting involved into risky sexual relations, especially when they are under the influence of substance and drugs (Essien, Ogungbade, Ward, Ekong, Ross, Meschack, & Holmes, 2007).

Although young people know the consequences and effects of alcohol and drugs on their body (Roberts, & Preville, n.d.), they still apply it as a stress reliever and during periods of boredom and loneliness (World Health Organization, 2012). Increased risks regarding HIV/AIDS normally encompass deviations in physical, emotional, economical and biological factors, accompanied by substance and drug abuse. This make young people vulnerable to the disease, for example in countries that are youth

dominant (Summers, Kates, & Murphy, 2002). It can also be as a result of the correlation between substance abuse and deviant sexual behaviour for which high risk groups are known (Essien, et al., 2007).

Some soldiers prefer to consume alcohol before cohabitation with their sexual partners, which include ingesting large amounts of alcohol over short periods of time to enhance sexual pleasure (Cheng, Ortiz, Weiss, Shi, Ovalle-Bahaman, Ernesto, Grillo, & Bing, 2012). This can have an effect on young recruits during exposure, as they are still in a phase of increased vulnerability and rebelliousness. In due course, increased mobility, extended periods away from family members, boredom and long periods of isolation contribute to substance abuse (Adebajo et al., 2002). These risk behaviour can be detrimental when it is associated with occupational stress accompanied by increased substance abuse in the military field, attributable with inconsistent condom applications (Tavarez, Chun, & Anastario, 2011).

Soldiers are more exposed to multiple sexual partners due to high mobility, which includes unprotected sexual activities with commercial sex workers, especially when they are under the influence of alcohol or during periods of binge drinking (Bing, Cheng, Ortiz, Ovalle-Bahaman, Ernesto, Weiss, & Beyer, 2008). This was illustrated in a study which found that the majority of youths consumed drugs and alcohol to increase sexual pleasure. It also included giving drugs deliberately to young women to escalate sexual satisfaction (Roberts, et al., n.d.).

On the other hand, the concern is that alcohol intake contributes to impaired sexual relationships which impacts young females to effectively negotiate for safer sex practices with their partners (Okulate, Jones, & Olorunda, 2008; Harrison, Feorino, Weintrob, Murray, Lloyd, Li, Miao, Aggarwal, & Carson, 2013). Furthermore, increased ignorance to the disastrous effects of the disease constitute to the effect that some soldiers are less inclined to use condoms during sexual relations, when they are under the influence of alcohol and drugs (Essien, Ogungbade, Kmiru, Ekong, Ward, & Holmes, 2006).

But the National Institute on Drug Abuse (2013) argued that while uniform members are subjected to substance and drug abuse, it is less likely for young soldiers between the ages of eighteen to twenty five years to rely more on drugs than their civilian equivalents in the same age group, as excessive alcohol and drug use is more confounded in situations where soldiers are dispersed on a regular basis from home and family members. Ultimately soldiers are seen to be extremely vulnerable to HIV and AIDS in a negative manner (Hallum-Montes et al., 2012). This has been demonstrated in a cohort study conducted by Essien, et al., (2007), justifying that increased vulnerable young male soldiers were influenced by substance and drug abuse as a means to enhance their masculinity statuses. This, of course is essentially more visible in militaries known to be male dominant, as male soldiers are contemplated to be superior to female soldiers (Mankayi, 2011).

2.3. HIV/AIDS concepts in a military socio-cultural context

Militaries cater for a unisex environment where it is expected of both sexes to live, train and function in close proximity with each other on a continuous basis (Korb, Duggan, & Conley, 2010). The general concept is that young recruits are usually in a very sexually active stage when they report for military duty, with limited perceptions on the risks to HIV/AIDS (Adebajo et al., 2002). This escalates for continuous HIV/AIDS prevention and behaviour changing education in order to reduce risky sexual behaviours, which will be more appropriate to them when they start with their career in the military environment (Harrison et al., 2013). Continuous HIV education also contributes to effective harm reduction measures when young recruits participates in extramarital relationships, with very little knowledge on sexually transmitted infections (Chao, et al., 2010).

According to the Joint United Nations Programmes on HIV/AIDS (2003), young soldiers often find themselves at the height of their career when they enter the military, and are subjected to different types of environments in short periods of time. This can render them vulnerable to HIV infection and facilitate for the strengthening of poor perceptions to high risk behaviour as a result of:

- Long periods of absenteeism from family members and friends, due to training and deployments.
- Adherence to strict rules within a military disciplinary framework.
- Financial stability in sometimes very poor socio-economic environments.
- An authoritative position as a measure of empowerment.
- Multiple sexual partners with inconsistent condom application.
- Misconceptions regarding the spread of HIV/AIDS.
- Excessive substance and drug abuse.

Another important aspect is the socio-economic backgrounds from which young people originate, especially deep rural areas. Although it has been documented that some young people possess over an acceptable level of knowledge on HIV/AIDS, because it is incorporated into school curriculums, the concerns still remains on the high levels of unprotected sexual activities and risks taken by teenagers (Mabunda, 2004). In fact male soldiers were found to be more competitive when they get involved into multiple sexual relationships than females, due to cultural norms and beliefs (Lammers, et al., 2013). This also includes the measures of upbringing of young people, accompanied by cultural and socio-economic influences in relation to risky sexual behaviour (Roberts, et al., n.d.).

HIV risks are dominated by geographical boundaries, community values, norms and cultural backgrounds within a normative social perspective (Chung, 2009). According to Ramjee and Daniels (2013), females are more at risk to HIV transmission than men due to bio-socio and cultural concepts. However a study conducted in Haitian, predisposes the fact that young men are no longer known to be less at risk than young women, since their risk perception are currently the same in relation to females (Georges, 2011). Moreover, the Joint United Nations Programme on HIV/AIDS (2013a), for the period 2002 and 2011, declared that more and more young people under the age of 24 years realized that they need to protect themselves against the disease through effective condom usage.

Concerns regarding level of knowledge are still huge. That is why organizations such as armed forces have the ability to positively reinforce strategies to prevent the

spread of HIV and AIDS, within their strict disciplined hierarchical framework and context (Bing, et al., 2008). Furthermore, indeterminate statements whether uniform members can be categorized as being more at risk than their civilian peers is also questionable (UNAIDS, 2011).

2.3.1. Sexuality and age

Young people seldom see themselves as being at risk to HIV transmission, although they find themselves in an environment of increased risk to sexual behaviour (Amu, 2014). Being subjected to sexual activities at a very young and sensitive stage through multiple sexual relations pre-empts HIV/AIDS viability for young soldiers. This means that young people become more at risk of contracting the disease in unstable sexual relationships (Chung, 2009). Such behavioural concepts constitute for the implementation of continuous evaluative and assessment strategies to develop a sense of responsibility in young recruits. Furthermore male and female soldiers are subjected to the same military training and working conditions, in a gender equity based environment, which foster for diverse relationships (Korb, et al., 2010).

Young people often get involved in unprotected sexual relationships even before the age of fifteen years, which is an area of great concern due to increased risks to HIV transmission (UNAIDS, 2014a). A study highlighted the socio-cultural concepts which influenced the vulnerability of young soldiers in relation to their civilian counterparts, and stresses the important elements that contribute to multiple casual sexual relationships, risky sexual behaviour and uncoordinated alcohol and drug use (Essien, Manjok, Chen, Abughosh, Ekong, Peters, Holmes, Holstad, & Mgbere, 2010). The cause for concern are felt globally due to the negative effects of the disease on militaries and the vulnerabilities of young soldiers with the subsequent negative effect to the general public at large (HealthLink Worldwide, 2002). Normally, about ninety percent of young people take part in sexual activities due to peer pressure; with eighty percent of them experimenting with sex, which include sex for financial reasons, same sex practices, and transactional sex (Roberts, et al., n.d.).

Thereby young people residing in rural areas or townships, demonstrates differences in acquired knowledge regarding HIV/AIDS, in accordance to their level of exposure to educational prescripts and within their societal norms (Mwakatobe, 2007). In fact it was stressed that soldiers with adequate knowledge and tertiary education still participates in risky sexual behaviour, irrespective of their level of knowledge to adequately protect themselves against HIV/AIDS, which does not correlate with risk reduction behaviour (Holmes, Ogungbade, Ward, Ross, Ekong, & Essien, 2009).

Women are seen to be more vulnerable due to limited knowledge on the disease. For example, it was found in a study that about fifteen percent of women expressed no knowledge of HIV/AIDS compared to five and a half percent of men (Lammers, et al., 2013). And yet, other studies stated how knowledgeable young people are on HIV/AIDS. Therefore they do not see themselves to be at risk to the disease (Roberts, et al., n.d.). HIV/AIDS intervention programmes must thus be more youth friendly to cater for the younger soldiers. Older soldiers on the other hand have already been exposed and subjected to numerous prevention programmes throughout their career, and is less likely to participate in risky sexual behaviour than new recruits (Essien, et al., 2007). It is also obvious that intervention programmes do have positive outcomes, as older soldiers are more likely to protect themselves against the disease through consistent condom application and other protective measures than younger soldiers (Essien, et al., 2010).

2.3.2. Young soldiers relating to testing and counselling services

According to the World Health Organization (2012), HIV/AIDS affects everyone, irrespective of age, gender, and ignorance to the disease, with the resultant effect to the spread of the disease when people unknowingly participate in unprotected sex due to unknown HIV statuses. Young people seldom make use of voluntary testing and counselling services irrespective of high risk behaviour, which can be as result of in- accordance to (Mwakatobe, 2007):

- Limited knowledge on voluntary testing and counselling services.
- Inadequate or unavailability of testing and counselling services.
- Stigma and discrimination when attending testing and counselling services.
- Undergoing sporadic HIV testing, only when the need arises.

It is a well-known fact that new recruits entering most armed forces are normally subjected to compulsory HIV screening as part of the health assessments strategies, which impact young people who participate in risky sexual behaviours negatively during recruitment processes, especially in countries with high HIV/AIDS prevalence rates (UNAIDS, 2011; Feldman, n.d.). Young people applying for military service may be unaware of their HIV status when they have never been subjected to voluntary HIV testing and counselling measures (WHO, 2012). Young individuals are also more compromised by HIV transmission due to unprotected sexual activities, as they are unaware of their changed status (Georges, 2011).

A low perception to risky sexual behaviour by young soldiers are influenced by high risk behaviour due to the fact that young recruits do not see themselves as being at risk to the HIV and AIDS (Chung, 2009). However, the unique working environment which military people finds themselves in, constitutes to routine HIV testing and counselling methods for armed forces, for the early detection, prevention, management and care of possible new cases (Bauer, 2006). According to UNAIDS (2013a), HIV testing and counselling is vital to determine previous and current statuses, especially in most at risk groups. It enables young soldiers to seek medical support early in life to prevent the crippling effects of the disease, and to adhere to safer sex practices. The military's composition should thus be seen as suppressing the prevalence rates of HIV/AIDS in the more older categories of soldiers, with little to no effect on the younger recruits (Whiteside, et al., 2006).

When young soldier's perceptions and views on HIV/AIDS is vastly construed through myths and misconceptions regarding the disease, it impacts risky behaviours as a result of false beliefs (Chung, 2009). That is why it is very important to counteract peer vulnerabilities through effective, efficient and sustainable educational programmes, specific to a youth dominance military community (Okulate, et, al., 2008). Knowing one's status encourages young soldiers to adapt to positive behaviour changes (Mgebere, et al., 2013). It has been demonstrated over and over that not knowing one's status, is not only a risk for oneself but also to other individuals with which an HIV positive person unknowingly have unprotected sexual relations (Georges, 2011).

Most young people are rebellious and do not see the need to make concise decisions regarding their risk to HIV transmission, which relates to unabated knowledge-based information regarding the disease, for example young people are informed on voluntary counselling and testing measures, but do not see the need to make use of such facilities (Mwakatobe, 2007). These factors can have an influence on young soldiers when they enter the military environment, as illustrated in a study by Kirby, Laris, and Rolerri (2007). The researchers reviewed eighty three educational programmes conducted in different countries, which included all age groups. And out of the eighty three research studies, only seven percent of the respondents prescribed abstinence as an effective measure against HIV transmission.

Young people unknowingly also have to face many barriers and challenges when they opt to attend voluntary testing and counselling services, which stretches from views from their parents and family members to the quality and quantity of services. This fosters negative attitudes in young people when they have to make use of voluntary testing services for HIV/AIDS (Mwakatobe, 2007). Globally, it has been found that over 10,000 soldiers of both gender tested positive, since the detection of the disease in the ninety-eighties, integrated with sporadic outbreaks of sexually transmitted infections (Kortepeter, 2013). However, it must be taken into account that the Sub-Saharan countries are known to be largely affected by the HIV/AIDS epidemic including South Africa, and has a prevalence rate of 5, 6 million HIV positive adults and children living with HIV and AIDS (USAID, 2011; Cowan, & Shaffer, 2012).

Contrary to some studies, it has also been noted that soldiers are no longer perceived to have higher HIV/AIDS prevalence rates in relation to the civilian population (Whiteside et al., 2006). Thus, irrespective of the fact that young soldiers engage more freely into multiple sexual relations than their older counterparts (Kraemer, 2006), a young military can effectively contribute to a decline in the incidence rates of new HIV infections with the application of continuous motivational campaigns and essential health prevention and promotion strategies, in order to reduce risky sexual behaviours (Whiteside, et al., 2006).

2.4. Perceived risk factors for young soldiers regarding HIV/AIDS

Many young people report for military service directly after completion of their secondary school education which makes it vital to concentrate on young recruits when they enter the military context with limited knowledge on HIV/AIDS, in order to strengthen current knowledge on the disease (Feldman, et al., 2010). While some young people possess a certain degree of knowledge relating to the disease, there is still a vast difference on knowledge-based HIV/AIDS in youths coming from different geographical areas (Mwakatobe, 2007). Notwithstanding, HIV/AIDS has a huge impact on militaries and security, which render soldiers incapable to perform their normal day to day military duties when they are in the AIDS stage (Feldman, n.d.).

However militaries can control HIV infection with effective supportive prevention and management strategies, due to the fact that prevalence rates can be contained in older soldiers, as younger soldiers predominantly demonstrates lower HIV positive statuses (Whiteside, et al., 2006). Consequently young soldiers are normally under the impression that they are invulnerable to HIV/AIDS and at such a sensitive age, there is a greater tendency to high risk behaviour (Adebajo, et al., 2002) when they are exposed in deployed mission areas.

Increased risky sexual behaviour for young soldiers during training or deployments goes hand in hand with their vulnerable statuses as a result of their young and sexually active phase when they enter the military environment. The risks include inter-intra-partner changes, inconsistent condom usage and inter-generalisation relationships, with sporadic infected periods of sexually transmitted infections (Essien, et al., 2010). Thereby, some young people do not see the necessity in using condoms during sexual activities, due to the fact that they want to maintain a platform of love, acceptance and trust in their relationships (Roberts, et al., n.d.).

Promoting abstinence and safe sex practices within multi-partner relationships plays a major role in the prevention method for sexually transmitted infections in young soldiers. In particularly, a study found that the majority of young people, over eighty six percent, do not adhere to abstinence, forty two percent had more than one sexual partner and fifty eight percent applied inconsistent condom usage, with a very small

percentage of young people taking part in sexual relationships for monetary gain (Amu, 2014). To reduce inappropriate risky sexual behaviour, the primary objective is to ensure that HIV/AIDS educational projects will ensure for an effective reduction in new HIV infections, especially for young soldiers (Harrison et al., 2013).

If properly managed, HIV/AIDS can be controlled by constructive preventive strategies, consistent condom usage, and acceptable voluntary testing and counselling methods in partnership with antiretroviral treatment to maintain good healthy statuses for soldiers (National Defense Research Institute, et al., 2010). But in untreated cases, HIV is of great concern to the health and wellbeing of young soldiers in armed forces with devastating effects on communities and the already overburdened health care systems (Harrison et al., 2013), bringing to mind the vulnerability statuses of young soldiers when they enter the military environment.

Young soldiers are bound to take risks when they undergo military training as they are taught to develop and maintain courage, strength, commitment, agility and the ability to endeavour and survive in all types of environment. This brings forth a vast diversity in the sexuality of young male and female soldiers due to gender differences and preferences (Mankayi, 2011). Alternatively, these risk taking can contribute to deviant sexual behaviour, as stated in a study which found that about ninety percent of young people take risks due to peer pressure, seventy percent of them normally follow in their parents footsteps, and most of the young females partakes in initial sexual activities because of fear of losing their partners (Roberts, et al., n.d.).

Condom application by young soldiers also seems to be almost non-existent, as they do not perceive themselves as being at risk to the disease. It was reported that older soldiers were more prone to protect themselves against HIV transmission than younger recruits (Essien, et al., 2010). In retrospect condom usage by male soldiers is also hampered by excuses, such as the type of condom and its contribution to reduced sexual pleasure (Okulate et al., 2008). However, Kraemer (2007) reported that most soldiers omit the application of consistent condom usage irrespective of age, and that younger soldiers are more inclined to have multiple sexual partners than the older soldiers.

In some cases condom application by young soldiers are seen as a method to prevent pregnancy and not as a contribution to the prevention of sexually transmitted infections (Villaran, Bayer, Kanda, Mendoza, Quinjandra, Ampero, Apolaya, Palacios, & Lesano, et al., 2012). Accordingly, risk taking by soldiers is accompanied with masculinity and predisposes behaviour of low condom usage by young soldiers (Essien, et al., 2010; Hussain, et al., 2009). One study revealed how young people experiment with sex at a very young age, interchanging between regular partners and short term relationships, with sporadic condom use, depending on the sexual situation (Von Sadovszky, & Ryan-Wenger, 2007).

Overall, consistent condom application by young soldiers still poses as a challenge with dramatic influences on risky sexual behaviours (Hallum-Montes et al., 2012). Intra-partner relationships amongst soldiers further increase risky sexual behaviour, in relation to low condom application (Essien, et al., 2010). A study showed the differences in abstinence and condom usage amongst young males and females, which demonstrated that young males are more inclined to apply condoms during sexual relations than young females. In fact young females on the other hand preferred to abstain from sexual activities (Ugboma, Kooffreh, & Nwauche, 2011). Notwithstanding the devastating effects of the disease on individuals, condom use across all spheres are still poor and inconsistent during sexual activities (Hallum-Montes et al., 2012).

2.4.1. Young soldier's exposure to HIV/AIDS

Young soldier's exposure to risk factors is another concern, which is being exploited in their state of vulnerability as most young people clearly do not accept their vulnerable statuses, as they are in denial towards reduced risk perception and unsafe sexual practices (Mgebere, Monjok, Abughosh, Ekong, Holstad, & Essien, 2013). Thereby the belief in misconceptions regarding HIV/AIDS relating to the transmission routes and the physical appearance of a person as a reflection of good health, further hampers safe sex methods (UNAIDS, 2014a).

According to Georges (2011), cultural norms and values predispose vulnerabilities in young women regarding sexuality, especially in minority groups. This was previously

corroborated by Chung (2009), who stated that young people are prone to HIV exposure and high risk behaviour as a result of group pressure and strict cultural rules, where it is expected of young women to be subservient to men. Irrespective of the high exposure rate of young people to HIV transmission, UNAIDS (2013a) documented a significant reduction in the overall prevalence rate in young people since 2001, in the Sub-Saharan region. Simultaneously it was also argued that young men seem to participate more in high risk sexual activities than young females, such as commercial sex within unstable sexual relations (Chung, 2009). However females living with HIV/AIDS is still twice as much as men, with an estimated total of 4,5 million youths globally, and an average of 2.1 million teenagers, affected by the disease (UNAIDS, 2013b).

Another concern is that young soldiers become involved in sexual relationships through casual sex, and extra-marital affairs (Hussain, et al., 2009). Furthermore, widespread studies contemplated that HIV/AIDS in armed forces is confined to stratified rank structure, number of employment years, military sexual assault and seniority (Couldrey, et al., 2010).

Undoubtedly, young soldiers falsely believe that it is acceptable to get involved in unprotected sexual activities with symptomless HIV positive soldiers. This can drastically compromise effective HIV/AIDS prevention and promotion strategies when forecasting for a decrease in new HIV infections in young soldiers (UNAIDS, 2014b). To demonstrate this, a study conducted on male recruits under the age of twenty four years, gave a clear indication on young soldiers perspectives regarding HIV transmission and the consequences of unprotected sexual relations, irrespective of high levels of knowledge obtained through different educational mediums (van der Ryst, et al., 2001). Moreover, it has also been proofed on numerous occasions, that knowledge on HIV/AIDS does not impede recruits from participating in risky sexual activities in high risk relationships (Chao et al., 2010).

2.4.2. Gender concepts in a military context.

The vulnerable status of young recruits entering the military environment between the ages of fifteen to twenty five years predisposes their risk to HIV infections

(Kingma, & Yeager, 2005), due to the fact that teenage boys take on the masculinity role at a very young and vulnerable age, in contrast to young girls, who most likely will get involved into inter-generalisation relationships for monetary gain (Momoh, Asagwara, & Meriamu, 2013). This further influences the risk statuses of young female soldiers, who are more vulnerable when they are subjected to unprotected sexual relations with HIV positive partners (Essien, et al., 2010). Moreover, Rochkind, DuPont and Otto (2009), proclaimed the undisputable concern on the expectations of communities regarding HIV transmission and the uncorroborated stigma surrounding the disease in relation to risky sexual behaviour.

According to society, gender acknowledges males for their manliness and strength and females for their womanly characteristics in a more feminine kind of way. This bring forth the diverse disparities between the two sexes on HIV/AIDS knowledge, especially in young recruits on the grounds that males are known to be adventurous in multi-partner relationships and females to be more submissive in their sexual behaviour (Asia, Reback, & Lombardi, 2005). Masculinity in men is also known to be a form of strength to fight disease and illness, whereby the belief is that strong and well-built male soldiers are seen to be HIV/AIDS free (Shoveller et al., 2010).

A Nigerian study conducted in 2008, presented the vulnerable statuses and differences between the two genders which highlighted the false perceived views and stigma regarding HIV/AIDS. Such cases demonstrate that women were more inclined to limited knowledge regarding the disease than their male counterparts due to gender differences. Which strengthen the fact that males preferred multiple sexual relationships more than women (Lammers, et al., 2013). Another aspect of vulnerability in young recruits is sexual disparities in stressful environments during deployments, which intensifies gender irregularities in risky sexual behaviours (Seckinelgin, Bigirumwami, & Morris, 2011). Both sexes normally participate at very young ages in risky sexual activities with multiple sexual partners for different reasons. It further constitutes to the vulnerable status of young soldiers in contracting HIV/AIDS when they participate in risky sexual behaviour with limited knowledge on the disease (Mudingayi, Lutala, & Mupenda, 2011).

Exposure to HIV infection are influenced by the muscularity role that young soldiers takes on in the military setting, in a predominantly male orientated environment, and entails a combination of male dominance and sexual differences (Buiten, & Naidoo, 2013). In effect, militaries have always been recognised to highlight the differences in masculinity roles between male and female soldiers (Mankayi, 2011). It is thus not uncommon for young soldiers to perceive a higher degree of exposure to HIV/AIDS due to increased sexual activities in relation to older soldiers. Young recruits also do not see themselves as being vulnerable to the disease, as they believe that HIV infections is only confined to adults (Roberts, et al., n.d.). According to Greig (n.d.), cultural differences and gender inequalities further influences risky sexual behaviour, due to the fact that both male and female recruits are accepted into armed forces at a very young and rebellious age, influenced by peer pressure, masculinity, subservience and unprecedented myths (Yeager, 2003).

This is further influenced by gender inequality, which depicts the vulnerability of young women to the risks of HIV/AIDS, due to cultural and socio-economic disparity's, social background and conflicting awareness levels to the disease (Nguyen, Osterhoff, Hardon, Tran, Coutinho, & Wright, 2008). The concept of cultural aspects, beliefs and values, which normally influence the knowledge and perceptions of soldiers on risky behaviour changes, was also reinforced in another study (Simelane, Kunene, & Magongo, 2006). Furthermore armed forces are seen to be male hegemonic whereby male soldiers are more vulnerable in acquiring HIV/AIDS when they are not knowledgeable to the disastrous effects of the disease (Hussain, et al., 2009). In addition the discrepancies between gender inequalities between male and female soldiers prevails that when female soldiers are involved in more than one sexual relationship, they are being seen in a different aspect as to those of their male counterparts (Mankayi, 2011).

Young female soldiers were also raised to be subservient in many aspects, requiring them to accept certain sexual norms and values within a cultural context (Asia, et al., 2005). However young female's soldiers sometime use their vulnerable statuses to their advantage, for instance a study illustrated that young female soldiers will not deter from the sexual attentions that they receive from male soldiers, in order to gain

leniency on the strenuous military training and exercises which they are subjected (Mankayi, 2011). Nevertheless, female soldiers are seen to be more vulnerable than male soldiers when they are unknowingly subjected to unprotected sexual relations with HIV positive partners. (Essien, et al., 2010). It was also noted that when young recruits experiment with sex early in life, young males are more inclined to participate in commercial and casual sex than female soldiers (Chung, 2009).

A study conducted by Mudingayi, Lutala, and Mupenda (2011), compared the variation in sexual preferences and deviations between the two genders, which placed young males on the forefront of sexual gratification, whereby young females are most likely to succumb to group influences. Even more scary is that young people omits to practice what they have learned regarding HIV and AIDS, exemplified through low attendances of voluntary testing and counselling services (Mwakatobe, 2007). To a large extent, the low voluntary testing and counselling application by young people are coupled with sexuality preferences as most young females prefer to be celibate (Ugboma, Kooffreh, & Nwauche, 2011).

Young females nevertheless seem to be more subjective in negotiating for safer sexual practices, which foster increased vulnerability. On the other hand young males prefer to demonstrate their masculinity statuses through risky sexual behaviours with sometimes devastating effects (Asia et al., 2005). The emphasis should therefore focus on gender equity programmes in the military training environment to motivate young people to become responsible soldiers in their occupational field (International Organization For Migration, 2003).

2.5. Factors inhibiting HIV/AIDS perceptions and knowledge in young people

Factors predisposing vulnerabilities for young people ranges from physiological, socio-economical, biological to sexual violence and gender disparities (USAID, 2011). It was further argued that awareness on HIV/AIDS for young people does not necessarily prepare them with practical preventive knowledge regarding the disease. It also do not constitute to an effective universal background to protect themselves against the risks of HIV infections (Summers, et al., 2002) Without doubt, exploring young soldiers knowledge and views on HIV and related diseases, provides a

baseline towards improved strategies in HIV/AIDS prevention programmes, especially with limited knowledge to the disease in instances where they believe that they have sufficient knowledge to adequately protect themselves against the debilitating effects of the disease (Villaran, et al., 2012).

A Taiwanese study found that young recruits consisted over limited awareness knowledge on the transmission route of HIV/AIDS, when they commenced with their career in armed forces. Most of the young recruits originated from tertiary educational backgrounds, which reiterated the importance of continuous health prevention and promotional programmes, even when they enter the armed force with a good educational background (Chao et al., 2010). Confusion for young people also relates to a certain degree on the level of agreement between the community and the professionals on the planning, coordination and execution of HIV/AIDS related programmes where differences can clearly be noted, as the community expresses concerns in general, while the professionals focuses on at risk groups (Rochkind, et al., 2009). It is thus very important to obtain initial base-line knowledge of HIV/AIDS on young soldiers to demonstrate the effectiveness of HIV/AIDS prevention and promotional programmes, in order to reduce risky sexual behaviour (Georges, 2011).

In accordance the Joint United Nations Programme on HIV/AIDS (2013), stated that young people's knowledge on HIV/AIDS between the ages of fifteen and twenty four years in the sub-Saharan region increased to a certain degree, but that discrepancies on the knowledge levels of young men in relation to young women still exists. It demonstrated that about thirty six percent of males still consist on limited knowledge to the disease, compared to the twenty eight percent of women. Effective educational programmes can thus address the differences in the two genders in the military environment (Harrison, et al., 2013), to overcome misconceptions on HIV transmission (Chao, et al., 2010).

2.5.1. Young soldier's knowledge and views on HIV/AIDS

According to UNAIDS (2013a), less than half of the percentage of the people in the Sub-Saharan region are knowledgeable of their statuses, while others have either never been tested before or after risky sexual relationships. Studies confirmed

increased risks of young soldiers on deployment missions due to high risk behaviour, even when knowledgeable on the disease (Hussain, et al., 2009). Moreover, it was argued that HIV/AIDS can be detrimental to effective combat and operational readiness, especially when young soldiers are affected early in their career (Grizzle, & Flanigan, n.d.).

Age is an indicator for soldiers regarding the aetiology and transmission of HIV, as matured soldiers are more knowledgeable than the younger recruits, which could be due to persistent health education and promotional guidance during military training (Essien, et al., 2010; Kraemer, 2006). In fact, when young people consist over a certain degree of knowledge on HIV/AIDS, they are confident in negotiating for safer sex methods, during sexually active periods (Essien, et al., (2010). In addition it has been found that the more knowledgeable a person is, the challenge is that they do not see themselves as being at risk to the disease and become more often involved in risky sexual practices (Chung, 2009).

Age is also an important indicator regarding the level of knowledge on HIV/AIDS for young recruits, as they display very little knowledge on the transmission routes of HIV as appose to their older counterparts (Okeke, Onwasigwe, & Ibegbu, 2012). It has been shown over and over that older soldiers are more knowledgeable on HIV/AIDS than the younger recruits, as a result of decreased risk behaviours (Mudingayi, et al., 2011). This can be due to the fact that younger soldiers are more sexually active than older soldiers (Essien, et al., 2007). Thus the cause for concern are felt globally due to the negative effects of the disease on militaries and the vulnerabilities of young soldiers with the subsequent negative effect to the general public at large (HealthLink Worldwide, 2002).

It was found that both sexes participate at very young ages in risky sexual activities with multiple sexual partners for different reasons. This further constitutes to the vulnerable status of young soldiers in contracting HIV/AIDS when they participate in risky sexual behaviour with limited knowledge on HIV/AIDS (Mudingayi, et al., 2011).

Another study highlighted the socio-cultural concepts which influenced the vulnerability of young soldiers in relation to their young civilian age groups, and stressed the important elements that contribute to multiple casual sexual relationships, risky sexual behaviour and uncoordinated alcohol and drug usage (Essien, et al., 2010). Some young soldiers are more inclined to participate in binge drinking with associated sexual behaviour changing norms as a relief to stressful situations when they are exposed to regular deployments in conflict zones (National Institute on Drug abuse, 2013). Disparities between young and older soldiers were also reported regarding sexual behaviour changes such as, young married female soldiers who are more consistent with condom usage than the younger unmarried female soldier (Essien, et al., 2010), as many young soldiers participate in sexual activities before marriage with a low level of degree on the knowledge on HIV/AIDS. However some of them with a higher level of secondary education are less likely to take part in risky sexual behaviour (Chao, et al., 2010; Hussain, et al., 2009).

Most of the times young soldiers had sexual contact in their adolescent years, whereby protected sexual relationships occur mostly with licentious sex and seldom in stable relationships, with almost no other method to prevent pregnancies (Von Sadvoszky, et al., 2007). In a South African study conducted on male recruits between the ages eighteen to twenty four years, the knowledge level of soldiers were more acceptable as they were already subjected to HIV/AIDS health promotion and prevention programmes in the military environment. However the misconceptions regarding the disease were still very high with negative consequences to high risk sexual behaviours (van der Ryst, et al., 2001).

A follow-up South African study conducted by De Jong and Visser (2006), on both sexes with different age groups, corroborated an acceptable level of knowledge of active duty soldiers, but expressed concerns to the high sexual practices with multiple partners over short periods of times and inconsistent condom application. In addition, it was also argued that age can be applied to establish the degree of knowledge on HIV/AIDS as an important indicator (Okeke, et al., 2012). An interesting fact is that age can also be used to establish the level of risk to HIV transmission (Georges, 2011), while some researches also reasoned that sexual

activities had no impact whatsoever on age and level of knowledge (Chao, et al., 2010).

2.5.2. False beliefs and myths on HIV/AIDS

False beliefs on the transmission of HIV and AIDS greatly influence the knowledge and views of young soldiers. This was demonstrated in a cross sectional study conducted on a large amount of military troops, which stated that although a large group of respondents have heard about HIV and AIDS, almost twenty three percent believed that mosquitoes can infect humans with the virus (Saiprasad et al., 2003). Thereby, Porta, Lopez-de-Silanes, and Shleifer (1999), corroborated the views of some young people regarding gender-based factors, attitudes and myths on HIV and AIDS, such as ...”HIV infection is “No big deal. It’s like diabetes.”. Such views and attitudes towards HIV/AIDS constitutes to increased exposure to the disease, which seem to be prevalent amongst risk takers (Rochkind, et al., 2009).

Young men are more inclined to the misconceptions on HIV/AIDS than young women (Chung, 2009). Furthermore misconceptions regarding the transmission of HIV impact the knowledge level of young soldiers, especially when chronic diseases are taken out of perspective. This is in effect contrary to how most people perceive other chronic diseases, as the understanding is that only risk takers acquires HIV transmission when they participate in unprotected sexual activities with multiple partners, in respect to ignorance to the disease (Rochkind, et al., 2009). The belief in myths can have detrimental effects on young soldiers as they are mostly peer group pressurized.

According to a Nigerian study, soldiers believed that a person living with HIV and AIDS can be cured (Okeke et al., 2012), similarly to another study where young individuals believed that sharing basic items with another person and the bite of a mosquito will transmit the HI-virus (Essien et al., 2005).

In essence, misconceptions regarding HIV and AIDS and vulnerable statuses of soldiers constitutes for the effective HIV/AIDS management of prevention and promotion strategies to reduce risky sexual behaviours (Harrison et al., 2013), with

the primary goal to effectively equip young recruits entering the military setting with appropriate knowledge on the risks of HIV/AIDS (Sahr, Gevao, & Swarray, 2009). Young people are highly at risk to HIV/AIDS, therefore it is imperative to put in place risk reduction measures for young recruits to stimulate and improve their knowledge, to positive behaviour changes, as well as to equip them to make concise sexual choices as a strategy to protect themselves against the disease (Mangesha, n.d.).

2.6. Role of the military regarding HIV/AIDS

It is an undisputable fact that most of the successes in HIV prevention in militaries were attained through methodical and well organised command structured approaches to obtain positive outcomes (UNAIDS, 2011). According to Curran and Munywoki (2002), militaries play a fundamental role in a country's security and peacekeeping abilities, whereby young men and women are exposed to situations opposed to the norm. In addition young male and female soldier's primary objective during training and deployments is to protect and ensure for the safety of communities within and outside the borders of a country, whereby at the same time, they are also subjected to another big enemy, namely HIV/AIDS (UNAIDS, 2003).

The primary role for militaries therefore is to focus on measures towards improved behaviour changes in young soldiers when they report for military training, by educating them to obtain efficient knowledge regarding HIV risk reduction and to motivate them to continuously apply protective measures during sexual relations (Mgbere, et al., 2013). Frequent application of HIV education strengthens the knowledge of young soldiers on effective and consistent condom usage as a preventive measure against the disease, which have been demonstrated by older soldiers, who are more vigilant to protect themselves against sexually transmitted infections (Mudingayi et al., 2011).

It is also important to address concepts relevant to increased knowledge on HIV/AIDS, due to the fact that high levels of knowledge sometimes promote an increase in risky sexual behaviours (Chung, 2009). According to Roberts et al., (n.d.) most HIV and AIDS health education and prevention projects for young people is not always applicable to them, for instance they found that:

- More than half of the youths prompted for parent involvement in HIV/AIDS prevention programmes.
- About fifty percent of the young people opted for improvement to their socio-economic conditions and life-styles.
- An inadequate amount of prevention programmes were presented by the communities and schools in their environments.
- Not enough was done to include HIV/AIDS, drug and substance abuse victims in the prevention programmes.
- Peer group involvement in prevention projects was limited.
- Young people preferred that HIV/AIDS prevention programmes must be incorporated into an arts and culture-role-play context, which is youth friendly.

The military society is therefore useful in establishing strategic sustainable HIV/AIDS prevention programmes which will enable uniform members to be more vigilant to the effect of the disease. Armed forces can assist in a decline in barriers and challenges to effectively combat the spread of the disease, when positive communication strategies is delivered by soldiers (Bing et al., 2008). It is also eminent to maintain a low HIV/AIDS prevalence rate in the military by strengthening and enforcing behaviour changes in young recruits, in order to overcome barriers (Curran, et al., 2002).

According to the Joint United Nations Programme on HIV/AIDS (2014b), HIV prevention programmes should facilitate on the specific needs of young people in order to acquire for an effective response with the following in mind, and in accordance to the Millennium Development Goal Indicators:

- Acquire an epidemiological background on new HIV cases and data relating to young soldiers living with HIV/AIDS, in order to scale up HIV services, to cater specifically for young soldiers.
- Incorporate HIV/AIDS programmes into a youth friendly framework such as in a military training context, which will focus on sexuality, reproductive and women's health, promoting gender-based elements for young recruits.

- Review appropriate and current HIV/AIDS workplace programmes within a regulative legislative framework to cater for young soldiers with the focus on harm reduction to encourage positive behaviour changes in a high risk environment.
- Take into account young soldiers perceptions, beliefs and knowledge regarding HIV/AIDS
- Adequately prepare young HIV positive soldiers for anti-retroviral treatment.
- Establish a clear indication regarding the methods that young soldiers make use of to protect themselves against HIV/AIDS, including condom application in high risk situations.

The main focus for improved HIV interventions should thus concentrate on behaviour changing strategies, which must commence with young recruits in order to ensure for a reduction in risky sexual behaviours (UNAIDS, 2011). Young recruits should also be included in the decision-making processes when establishing harm reduction and HIV intervention strategies in order to acquire successful outcomes in behavior changing programmes in the military environment (UNAIDS, 2013a). It ensures for empowerment of young people when they are equipped with the right skills to make informed choices to protect themselves effectively against the disease (United Nations, 2005).

2.7 Conclusion

Chapter 2 focused on HIV/AIDS risk perceptions, barriers and socio-cultural factors which young people encounter during their lifespan. It indicated the vulnerability statuses of young recruits when they enter the military environment, relating to their different beliefs, views, knowledge and misconceptions on the disease. The chapter also stressed the uniqueness of young people to the different beliefs and barriers to the disease. Other elements such as living conditions and mobility in militaries were highlighted, as it can influence risky behaviours in young recruits. Furthermore, it expressed the overall role and successes of militaries in light of effective HIV/AIDS strategies for soldiers. The next chapter will outline the methodology, data analysis and ethical considerations of the study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter presented a background on the literature review and outcome results on the challenges and barriers that young recruits face when they enter the armed force. This chapter will focus on the research design, sampling population and methods, data collection, analysis and considerations of the ethical process.

3.2 Research design

A research design enables the researcher to systematically apply a scientific approach to explore the problem to be researched (Christensen, Johnson, & Turner, 2014). A descriptive, non-experimental research design with a quantitative approach was used through the application of a standardized structured questionnaire. The questionnaire was developed to investigate the knowledge, perceptions and views of the subjects on HIV and AIDS on initial entry into the armed force.

3.3 Sampling population

The sampling population focused on new recruits who reported for initial military training in the Western Cape region. The respondents came from the nine provinces in the country. A total number of one thousand and forty six new recruits entered the military training setting in 2015, of which the sampling population consisted of ten percent. According to Fisher, Foreit, Laing, Stoeckel, and Townsend (2002), a non-probability purposive sampling method enables the researcher to select a group of respondents who demonstrates the same characteristics of the population to be studied.

A non-probability purposive sampling method was thus applied through the use of a survey questionnaire which was issued to the respondents in April 2015, during their health interventions at the military health facility. Both males and females were included in the study and one hundred and ten questionnaires were completed and returned, indicating a hundred percent response rate.

3.4 Inclusion criteria

The research study included only new recruits who reported for military training, in a Western Cape military training setting.

3.5 Instrumentation

A self-administered survey questionnaire was applied, based on concepts of the literature review. Closed-ended and limited open-ended questions relating to the gender, age, knowledge, perceptions and views of the subjects on HIV/AIDS, were used. The questions in the questionnaire pertained to the demographic and geographical variables of the respondents, their knowledge and views on HIV/AIDS, voluntary testing and counseling, risk perception, harm reduction and their perceptions regarding HIV/AIDS management (See Appendix A).

3.6 Reliability and validity

Reliability refers to the stability and consistency of the variables being measured in the instrument, which means that it should reflect the same results when measured a second time (Christensen, Johnson & Turner, 2014). The questionnaires were tested and checked by experts in this field for consistency before it was issued to the respondents. Christensen et al., (2014) further explains that validity on the other hand stipulates that measured data must not only be accurate, but also give a true reflection of the study. The instrument should therefore measure what it is suppose to measure. The contents of the measuring instrument were reviewed by researchers in, among others, the medical field to ensure that the measured variables provide valid results.

3.7 Data collection

The data was collected over a one day period. A total number of one hundred and ten respondents were randomly selected when they reported for health assessment at the military health facility. Participation in the research was voluntary. On completion of the questionnaires, the respondents placed the completed questionnaires directly into pre-determined boxes, which were readily available.

3.8 Data analysis

The questions in the questionnaires was checked for overall completeness and numbered before it was entered into a Statistical Package for Social Sciences (SPSS) version 22. This was to determine the overall distribution of the individual variables under study. The knowledge, perceptions and views of the subjects were analyzed through descriptive statistics and measures of central tendency. A means and frequencies approach was applied to measure the variables and a correlation analysis was performed to depict the relationships between the associated variables.

3.9. Ethical Considerations

Consent was obtained from the subjects before the commencement of the study and anonymity, privacy and confidentiality was ensured throughout the conduction of the study. Request for ethical approval were obtained from the Ethics Committee of the University of Stellenbosch and the South African National Defence Force (SANDF) before the conduction of the research study.

The participants were informed that they were under no obligations to participate in the study, and would not be subjected to any harm. It was also brought under their attention that they have the right to refuse to take part in the study at any time during the conduction of the study. The respondents were also informed of their legal obligation to refrain from giving any classified information to other organizations, state institutions or individuals without authorization from the SANDF. After the completion of the questionnaires and the consent forms, the respondents placed it in pre-determined boxes. It was once again stressed that the research study does not contain any classified information relating to the Department of Defence. The completed questionnaires are kept for safekeeping according to a recorded inventory after the analysis of the raw data.

3.10 Conclusion

Chapter 3 gave a detailed explanation of the research design, the methods used to select the required study population, the collection of the data, the analysis of the raw data and the ethical considerations and confidentiality obligations. Chapter 4 will concentrate on the results of the research study.

CHAPTER 4

RESULTS OF THE STUDY

4.1 Introduction

Chapter 3 outlined the research design, study population, ethical obligations and methods used to process the research data. Chapter 4 will give a detailed explanation of the results of the study. Data analysis was conducted by using the SPSS 22 version. The questions to the respondents were formulated according to the Likert scale, which was constituted through the following values:

- Disagree strongly = 1
- Disagree = 2
- Not sure = 3
- Agree = 4
- Agree strongly = 5

Likewise, the responses to the questions were scored to analyze the raw data, where a score of one (1) was allocated for a correctly answered question and zero (0) was given for an incorrect and not sure response. Negative questions were reversed before scoring was done. The knowledge, perceptions and views of respondents were analyzed through a frequency statistical approach and measures of central tendency.

A cross tabulation was done on certain variables to determine if there was an association between two categorical variables, whereby gender, age and educational levels were measured against other variables, The Chi-Square test was performed to assess if any association found was statistically significant and a correlation test (2 tailed) was conducted to predict the strength of the correlation between some variables, to assess its significance. The open ended questions were grouped and coded into an Excel spreadsheet, and scored accordingly.

4.2 Socio-demographic information

About one thousand and forty six male and female recruits reported for initial military training in 2015 at the military training base in the Western Cape, South Africa. From

the overall total number of young people, one hundred and ten respondents were randomly selected to participate in the research study. The amount of respondents constituted to a total number of 81 (73.6%) males and 29 (26.4%) females as shown in Table 4.1.

Table 4.1: Distribution of respondents by gender (n=110)

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	81	3.6	73.6	73.6
Female	29	6.4	26.4	100.0
Total	110	100.0	100.0	

The recruits arrived at the military training base from all areas of the nine provinces in South Africa. Most of the respondents came from Limpopo 24 (21.8%), followed by Gauteng 18 (16.4%), Mpumalanga 16 (14.5%), North West 15 (13.6%), Northern Cape 12 (10.9%), KwaZulu-Natal 11 (10%), Free State 7 (6.4%), Western Cape 4 (3.6%) and Eastern Cape 3 (2.7%) as reflected in Table 4.2.

Table 4.2: Distribution of respondents by Province (n=110)

Provinces	Frequency	Percent	Valid Percent	Cumulative Percent
Western Cape	4	6	3.6	3.6
Northern Cape	12	10.9	10.9	14.5
Eastern Cape	3	2.7	2.7	17.3
Gauteng	18	6.4	16.4	33.6
Free State	7	6.4	6.4	40.0
KwaZulu-Natal	11	10.0	10.0	50.0
Limpopo	24	21.8	21.8	71.8
Mpumalanga	16	14.5	14.5	86.4
North West	15	13.6	13.6	100.0
Total	110	100.0	100.0	

The respondent's knowledge was evaluated through different basic questions on HIV/AIDS. The educational status of respondents was an important factor. The majority of the respondents, 82 (75.9%) stated that they completed Grade 12, while 26 (24.1%) had a tertiary educational level. Two, (1.2%) of the respondents refrained from mentioning their educational status (See Table 4.3).

Table 4.3: Distribution of respondents by education level (n=108)

	Frequency	Percent	Valid Percent	Cumulative Percent
Grade 12	82	74.5	75.9	75.9
University Degree	26	23.6	24.1	100.0
Total	108	98.2	100.0	
Missing	2	1.8		
Total	110	100.0		

The mean age of the respondents was 22.3 years. The ages ranged from 18 to 20 years (16.4%), 21 to 22 years (48.2%), 23 to 25 years (31.8%) and over 25 years of age (3.6%) as stipulated in Table 4.4.

Table 4.4: Distribution of respondents by age (n=110)

	Frequency	Percent	Valid Percent	Cumulative Percent
18-20 years	18	16.4	16.4	16.4
21-22 years	53	48.2	48.2	64.5
23-25 years	35	31.8	31.8	96.4
Over 25 years	4	3.6	3.6	100.0
Total	110	100.0	100.0	

4.3 Basic knowledge on HIV/AIDS

Overall, the respondents demonstrated high levels of knowledge on the first question (98%), when asked if HIV can cause damages to the immune system, as depicted in the table below.

Table 4.5: Knowledge on Effect of HIV/AIDS on immune system (n=11 (n=110))

HIV/AIDS damages immune system	Frequency	Percent	Valid Percent	Cumulative Percent
0 (Disagree)	2	1.8	1.8	1.8
1 (Agree)	108	8.2	98.2	100.0
Total	110	100.0	100.0	

The respondents were also very knowledgeable on the question relating to the determinant of AIDS. In total, 97% stated that AIDS is when a person becomes sick in the later stage of HIV. This is shown by the frequency and percentages table 4.6.

Table 4.6: Respondents knowledge of determinant of AIDS (n=110)

AIDS later stage of HIV	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	3	2.7	2.7	2.7
Agree	107	97.3	97.3	100.0
Total	110	100.0	100.0	

However, the respondents displayed some differences when they were asked if HIV/AIDS can be cured. About 57% strongly implied that HIV/AIDS cannot be cured, followed by 22.6% who corroborated with the statement that HIV/AIDS can be cured. Additionally, 9.4% were unsure, the other 9.4% agreed that HIV/AIDS can be cured and a further 9% stated that they strongly agreed that there is a cure for the disease. This is presented in figure 4.1.

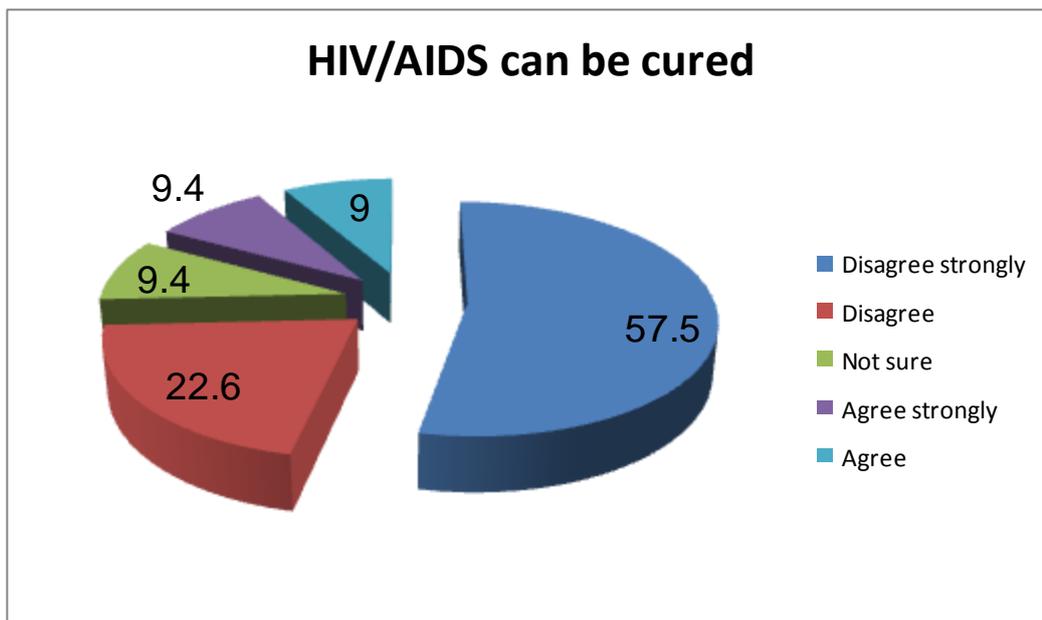


Figure 4.1: HIV / AIDS can be cured

The correlation between the educational level of the respondents and the question on the curability of HIV/AIDS, expressed a weak negative correlation coefficient of 0.005. See Table 4.7.

Table 4.7: Correlation of participants’ educational level and belief on curability of HIV/AIDS

		Education level of respondents	HIV/AIDS can be cured
Education level of respondents	Pearson Correlation	1	.005
	Sig. (2-tailed)		.958
	N	108	104
HIV/AIDS can be cured	Pearson Correlation	.005	1
	Sig. (2-tailed)	.958	
	N	104	106

A high percentage of the respondents (90%) showed good knowledge on the transmission of HIV and 97% agreed that an HIV positive person can give the virus to another person through unprotected sex. An overall of 89% confirmed that HIV

cannot be transmitted through coughing, sneezing, swimming or shaking the hands of a person living with HIV/AIDS. Many of the respondents, (82%) indicated that HIV cannot be given to another person by just sharing a house with an HIV positive person and 78% declared that a healthy looking HIV positive person can still transmit the HI virus to another person through unprotected sex. Contrary to the respondent's high levels of knowledge on the transmission of HIV, only 9% correctly indicated that it is not easy to get HIV infection, ($0.752 = p > .05$) as reflected in table 4.8. This is not significantly related to the respondents' age and high knowledge on the transmission of HIV.

Table 4.8: Chi-Square of respondents age and perceptions on ease of getting HIV infection. (n=108)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	100 ^a		.752		
Continuity Correction ^b	000		1.000		
Likelihood Ratio	104		.747		
Fisher's Exact Test				1.000	.551
Linear-by-Linear Association	099		.753		
N of Valid Cases	08				

A cross tabulation between age and condom usage as a protective measure against HIV transmission revealed that the Pearson Chi-Square showed no significant relationship between age and their knowledge on consistent usage of condoms to protect oneself against the disease ($p = 0.832$). This is demonstrated in table 4.9.

Table 4.9: Chi-Square Tests – Age and Person using condoms condoms consist during sexual relations cannot get HIV easily (n=110)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	873 ^a		.832
Likelihood Ratio	.223		.747
Linear-by-Linear Association	.014		.906
N of Valid Cases	10		

The respondents were also tested on the misconceptions of HIV transmission, which indicated that their knowledge on HIV/AIDS is inconsistent with their beliefs on the myths relating to the disease. Overall, only 65% of the respondents believed that HIV cannot be transmitted through a mosquito bite, see figure 4.2. A rather high percentage (27.3%) was unsure and 18.1% believe a person can get HIV through a mosquito bite.

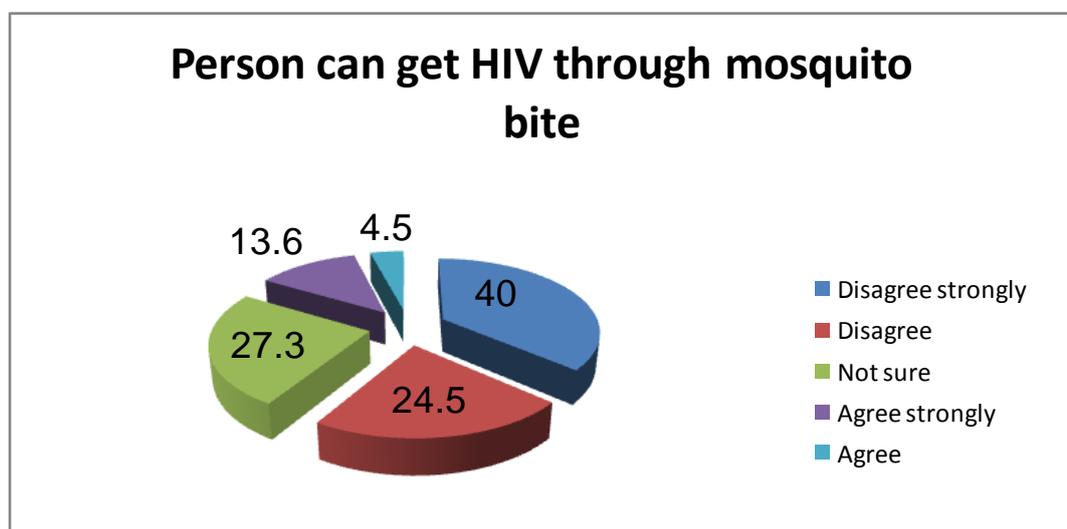


Figure 4.2: Person can get HIV/AIDS through mosquito bite

4.4 Voluntary testing and counseling

The respondent's knowledge and perceptions on HIV voluntary testing and counseling measures seemed to be of an exceptionally high level. Overall, 99% of

the respondents gave positive answers. Moreover, 76% percent demonstrated high levels of knowledge on the window period, while 99% stipulated that it is not necessary for a person to wait until they develop the symptoms of HIV to undergo voluntary testing and counseling. This is depicted in table 4.10.

Table 4.10: Persons do not have to wait until they develop symptoms to get tested for HIV (n=110)

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree (0)	1	9	.9	.9
Agree (1)	109	9.1	99.1	100.0
Total	110	100.0	100.0	

4.5 Management of HIV/AIDS

Most of the respondents (94%) indicated that a person can have HIV without testing for the virus which is significant with their good knowledge on the disease. Their replies were as follow, 45.5% agreed strongly to the statement, while 48.2% agreed, 3.6% was unsure, 0.9% disagreed strongly and 1.8% disagreed as illustrated in table 4.11 and figure 4.2.

Table 4.11: Person can have HIV without testing for HIV

	Frequency	Percent	Valid Percent	Cumulative Percent
0	7	6.4	6.4	6.4
1	103	93.6	93.6	100.0
Total	110	100.0	100.0	

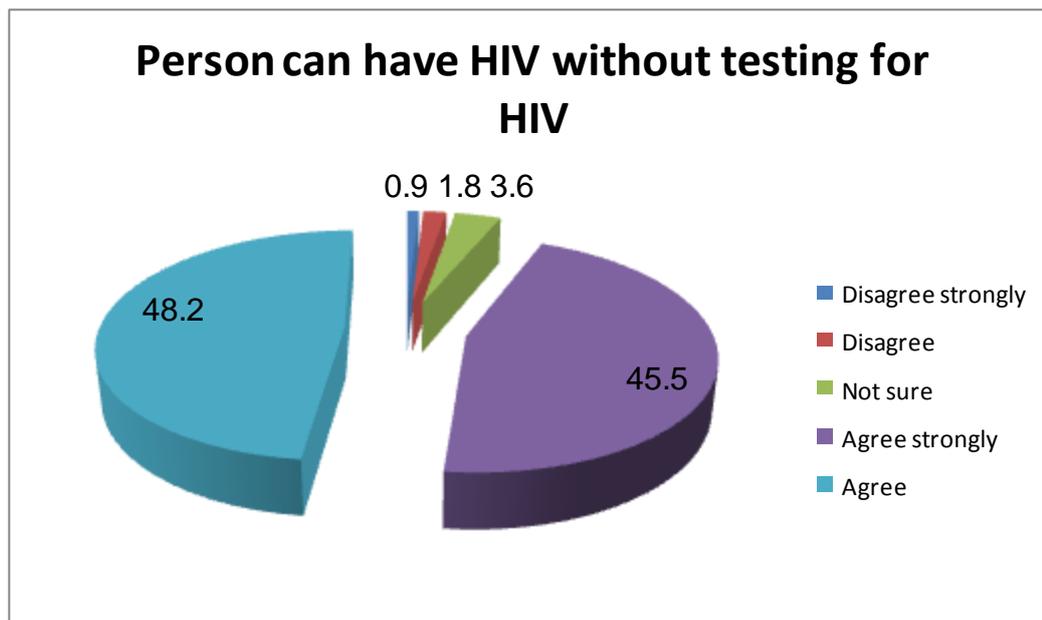


Figure 4.2: Person can have HIV without testing for HIV

A further 99% said that it is important for people living with HIV and AIDS to go to a health facility to seek health and medical support, while 85% correctly indicated that there is effective antiretroviral medication to reduce the amount of HIV in a person's bloodstream. The knowledgeable level of the respondents is illustrated through the mean and standard deviation in table 4.12.

Table 4.12: Basic knowledge on HIV/AIDS management (n=110)

		Mean	Std. Deviation
Important for people living with HIV/AIDS to go to a health facility	109	.99	.096
Person who gets very sick from HIV in later stage, has AIDS	110	.97	.164
Person can have HIV without testing for HIV	110	.94	.245
There is medication to treat HIV, to reduce the amount of HIV in bloodstream	110	.85	.363
It is necessary for people living with HIV to tell a Doctor or Nurse about their HIV stat	110	.81	.395
Valid N (listwise)	109		

A cross-tabulation between the educational status of the respondents and their knowledge on antiretroviral medication as a measure to reduce HIV replication demonstrated no significant relationship, (0.467 $p > .05$) according to table 4.13.

Table 4.13: Educational level and knowledge on medication to treat HIV to reduce the amount of HIV in bloodstream

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.529 ^a		.467		
Continuity Correction ^b	.169		.681		
Likelihood Ratio	.504		.478		
Fisher's Exact Test				.529	.329
Linear-by-Linear Association	.524		.469		
N of Valid Cases	108				

4.6 HIV/AIDS risk

The respondents also demonstrated high levels of knowledge on the protective measures against HIV/AIDS. In retrospect, 91% correctly related to the consistency of condom usage as a measure to protect oneself, 97% indicated that unprotected sex is the main reason of HIV transmission, 92% proclaimed that male and female condoms give equal protection and an astonishing 99% reasoned that an HIV positive person must still adhere to consistent condom application strategies. The percentages are presented in table 4.14.

Table 4.14: Basic knowledge and views on HIV/AIDS risks and harm reduction

Knowledge on harm reduction	Responses		Percent of Cases
		Percent	
Person using condoms correctly and consistently during sexual relations cannot get HIV easily	100	19.6%	90.9%
Unprotected sex is the main reason for getting HIV infection	107	21.0%	97.3%
Male and female condoms give the same protection against HIV infection	101	19.8%	91.8%
Person with HIV must still use condoms during sexual relations	109	21.4%	99.1%
Alcohol and drugs increase the risks of getting HIV	92	18.1%	83.6%
Total	509	100.0%	462.7%

4.7 Suggestions of respondents on HIV/AIDS prevention

The respondents were also asked to relay suggestions towards the improvement of knowledge on HIV/AIDS. About 50% of the respondents opted for HIV/AIDS classes to be incorporated into their military training, while 37% requested for regular awareness campaigns that is youth friendly. Ten percent of the respondents asked for more consistent voluntary testing and counseling sessions, while 1.8% recorded that they also prefer the life experiences and motivational talks of HIV positive guest speakers during military training schedules and awareness campaigns.

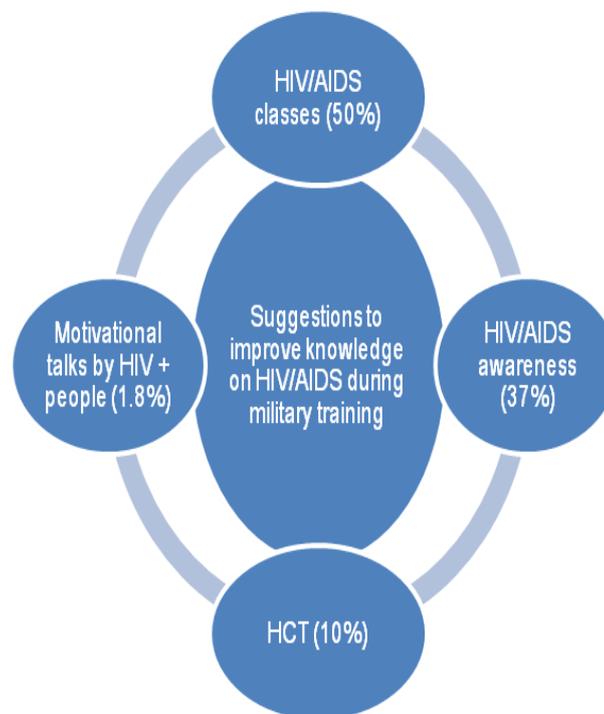


Figure 4.4: Suggestions of respondents to improve knowledge on HIV/AIDS

4.8 Concerns of respondents on HIV/AIDS

In addition to the suggestions, the respondents were asked to relay any concerns that they have relating to the disease. Many of the respondents (46%) proclaimed about insufficient motivational measures for young people to refrain from risky sexual behaviour. In relation to this, 31% expressed their concerns on the risks that young people take and 6% were worried about the lack of support for people living with HIV/AIDS. Moreover, 4.5% reasoned the impact of alcohol and drugs to HIV/AIDS, while 3% presumed that only weak soldiers gets infected by HIV, which can limit the career of a soldier, and 3% responded their concerns on equal opportunities for HIV

positive soldiers. Other concerns (3.6%) ranged from individuals becoming HIV positive through forced sexual assaults to loved ones dying as a result of the disease. Table 4.15 indicates some concerns of the respondents.

Table 4.15: Respondents concerns on HIV/AIDS

	Frequency	Percent	Valid Percent	Cumulative Percent
Young people take risks	34	30.9	30.9	30.9
Motivation for protected sex	50	45.5	45.5	76.4
Substance and drug abuse influence HIV/AIDS		4.5	4.5	80.9
Only weak soldiers get HIV, limits career		2.7	2.7	83.6
Equal treatment for HIV positive soldiers		2.7	2.7	86.4
Other		3.6	3.6	90.0
Lack of support for HIV positive people		5.5	5.5	95.5
No answer		4.5	4.5	100.0
Total	110	100.0	100.0	

4. Conclusion

Chapter 4 presented the results of the data analysis which was tabulated through frequency and percentages scales. Cross tabulation of some of the variables were performed to determine if there was any statistical significance between the variables, while suggestions and concerns of respondents were grouped together and coded into an Excel programme before it was tabulated. Chapter 5 relates to the discussion of the findings.

CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

5.1 Introduction

Chapter 4 presented the analysis of the research study and methods used to process the researched data. The raw data was tabulated through the use of a frequency, cross tabulation and correlation statistical approach. Chapter 5 will focus on the discussion and recommendations of the outcome results. The discussion of the results will be relayed according to the sequence of the questions in the questionnaire.

5.2 Discussion

The primary objective of the research study was to determine the basic knowledge of new recruits on HIV/AIDS when they initially start with their military training in the armed force, as young people are more inclined to participate in risky sexual behavior than older soldiers (Georges, 2011). The findings demonstrated that the respondents were highly knowledgeable on some aspects relating to HIV and AIDS (Table 4.6), its major transmission routes, which includes unprotected sexual activities, mother to child transmission and overall contact with contaminated body fluids of a person living with HIV/AIDS.

The results also indicated that the respondents had a clear understanding of casual contact with an HIV positive person. Most of the respondents agreed that HIV cannot be transmitted to another person by shaking hands, through coughing, hugging or swimming with an HIV positive person. The respondent's exceptional level of knowledge on HIV/AIDS preempts the findings of others studies which indicates that HIV/AIDS awareness programmes in different areas or institutions greatly substantiate knowledge-based background on the disease (Mwakatobe, 2007; Chung, 2009).

There was however inconsistencies on the curability of HIV/AIDS, although the majority of the respondents proclaimed that there is currently no cure for the disease, some of the respondents were unsure and even strongly agreed to an extent that the

disease is curable (see figure 4.1). Another factor prevailed that even though the respondents were highly knowledgeable on the transmission routes of HIV, they still proclaimed that it is easy to be infected by the virus. In addition 35% of the respondents believed that a bite from a mosquito can transmit HIV to the human host, as presented in figure 4.2. This results therefore corresponds with previous studies relating to the misconceptions on the transmission of HIV/AIDS (Saiprasad et al., 2003; Chung, 2009; Okeke, et al., 2012)).

The results further revealed that the respondents had a good level of understanding on HIV testing and counseling strategies based on the concept of confidentiality (Table 4.10). Findings of the study also showed that they demonstrated good knowledge on the decisions a person can make to be tested for HIV/AIDS. Considering the fact that the respondents believed in regular HIV testing and counseling measures, only some of the respondents (76%) were sure about the description of the window period, while most of them were knowledgeable on the consequences of unprotected sex during the window period, with an HIV positive person. Overall, the respondents positively identified the importance of HIV testing for the detection of the virus in a person's body, which is not aligned to some previous studies (Mwakatobe, 2007). This can be due to the fact that young people are more exposed these days to HIV/AIDS literature, as scholars.

In respect to the diagnosis and basic management of HIV and AIDS, most of the respondents stated correctly that a person can become very ill when in the final stage of AIDS. Many of them also agreed that it is vital for an HIV positive person to seek healthcare as soon as possible. In addition, the majority of the respondents confirmed that a person can have the HI virus in their bloodstream without testing for the virus (Table 4.11 & Figure 4.2).

The majority (81%) of the respondents stated that it is necessary for people living with HIV/AIDS to inform a healthcare professional of their HIV status in relation to 85% of the respondents who agreed that there is effective medication to slow down the replication process of HIV in a person's body (Table 4.12).

Concerning the protective measures against HIV/AIDS, many of the respondents knew that consistent and correct application of condom usage can prevent a person from acquiring the disease. Most of them also reiterated that male and female condoms provide the same protection if correctly applied. Relating to the question on whether it is still necessary for an HIV positive individual to use condoms during sexual contact, almost all of the respondents emphasized the importance of condom usage during sexual relations irrespective of a person's HIV status (Table 4.14).

Additionally, over 80% of the respondents corroborated the impact of substance and drug abuse on HIV/AIDS. The knowledge of the respondents is therefore comparative to other findings on alcohol and drug abuse in relation to increased risky sexual behaviour and HIV transmission (Essie, et al., 2007; Cheng, et al., 2012).

Irrespective of the high level of knowledge on HIV/AIDS, half (50%) of the respondents felt that a lot can still be done to improve current knowledge on the disease, such as incorporating special HIV classes during military training. A significant proportion of the respondents (37%), mentioned the effectiveness of continuous HIV/AIDS awareness strategies and workshops that is youth friendly during military training. They related that awareness campaigns should be practical and applicable to young soldiers and must encourage abstinence, motivation to be faithful to a partner and more information on risk reduction. A small group of the respondents, about 2%, relayed that educational talks from people living with HIV/AIDS may contribute to effective behaviour changes for young soldiers (Figure 4,4).

Results in table 4.15 highlighted some of the respondents concerns on the risks that young people take during their life-span and the effect of alcohol and substance abuse on risky sexual behaviour. Moreover, it is good to comprehend that a number of the respondents were concerned on the support elements for people living with HIV/AIDS and that HIV positive soldiers should not be managed differently from HIV negative soldiers. However, misconception that only weak soldiers are subjected to HIV infection should be addressed through continuous HIV/AIDS awareness strategies to combat the negative effect of the disease on young soldiers towards

increased risky sexual behaviour. In addition, UNAIDS (2014) corroborates the impact of misconceptions on risky sexual behaviour, and further states that such ignorance should be rectified through up-scaling of required prevention programmes on a continuous basis.

5.3 Conclusion

In Chapter 5 the most important aspects of the findings of the study was highlighted through a detailed discussion. The findings demonstrated high levels of knowledge of the respondents on HIV/AIDS with subsequent suggestions towards improvement of knowledge and concerns on some misconception regarding the disease. Respondents also envisioned the importance of HIV/AIDS awareness strategies, together with a unified support structure for people living with the disease. The recommendations for this study thus contribute to findings specific to this study.

5.4 Recommendations

This study demonstrated the overall need to continuously review and implement effective HIV/AIDS programmes for young soldiers during military training. According to Georges (2011), a good level of knowledge coupled with awareness projects alone, does not impede risky sexual behaviour in young people. Prevention programmes should thus be structured according to the needs of the young military community, to eliminate misconceptions which are peer-specific.

In order to generate the effectiveness of such programmes, continuous monitoring and evaluation of awareness and prevention programmes during military training should be included in an essential HIV/AIDS awareness package, as men and women in uniform has vast interactions with different people and communities throughout their military career (UNAIDS, 2003). Increased prevention programmes during military training can also effectively aid in positive behavioural changes, reduction in vulnerabilities, misconceptions and ignorance to the disease, to counteract the challenging risk perceptions of young recruits (Mgebere, et al., 2013). In general, militaries can play a major role in the collateral reduction and prevention of HIV transmission through a command structured approach during military training for young soldiers (Whiteside et al., 2006; Bazergan, 2006).

References

- Adebajo, S. B., Mafeni, J., Moreland, S., & Murray, N. (2002). *Knowledge, attitude and sexual behavior among the Nigerian military concerning HIV/AIDS and STDs*. Armed Forces Programme on AIDS Control (AFPAC), September 2002, United states of America.
- Amu, E.,O. (2014). *Sexual Behaviour and Risk Perception for HIV among Youth Attending the National Youth Service Camp, Ede, Osun State, Nigeria*. Journal of Health Science p-ISSN: 2166-5966, e-ISSN: 2166-5990 2014; 4(1): 1-6 doi:10.5923/j.health.20140401.01.
- Asia, T., Reback, C. J., & Lombardi, E. L. (2005). *Gender, Sexuality, Rights and HIV Anoverview for community sector organizations*. International Council of AIDS Service Organizations, African Studies, 31(3), 569–86.
- Bauer, H. H. (2006). *Demographic Characteristics of HIV: II. What Determines the Frequency of Positive HIV Tests? Journal of Scientific Exploration*, Vol. 20(1), 69–94.
- Bazergan, R. (2006). *HIV/AIDS Knowledge, Attitude and Practice survey: UN uniformed peacekeepers in Liberia*. New York: United Nations Peacekeeping Operations.
- Bing, E. G., Cheng, K. G., Ortiz, D. J., Ovalle-Bahamón, R. E., Ernesto, F., Weiss, R. E., & Boyer, C. B. (2008). *Evaluation of a Prevention Intervention to Reduce HIV Risk among Angolan Soldiers*. *AIDS and Behavior*, 12(3), 384–395. <http://doi.org/10.1007/s10461-008-9368-2>.
- Buiten, D., & Niadoo, K. (2013). *Constructions and representations of masculinity in South Africa's tabloid press: Reflections on discursive tensions in the Sunday Sun*. *South African Journal for Communication Theory and Research*, 39(2), 194-209.
- Centers for Disease Control and Prevention. (2014). *HIV among Youth*. CDC, March 2014. www.cdc.gov/hiv/risk/age/youth
- Chao, J., Lin, Y., Ma, M., Ku, Y., Tsai, C., & Shi, M. (2010). *Sexual knowledge, attitudes and activity of men conscripted into the military*. *BMC Public Health*, 10(1), 577. <http://doi.org/10.1186/1471-2458-10-577>.
- Cheng, K.G., Ortiz, D.J., Weiss, R.E., Shi, L., Ovalle-Bahamon, R.E., Ernesto, F., Grillo, M.P., & Bing, E.G. (2012). *Patterns of alcohol consumption and factors*

- influencing problematic drinking among Angolan soldiers*. *Journal of Substance Use*, April 2012; 17(2): 138–149.
- Christensen, L.B., Johnson, R.B., & Turner, L.A. (2014). *Research Methods, Design, and Analysis* (Eleventh Edition). UK: Pearson Education Limited.
- Chung, C., E. (2009). *At Risk? Exploring the relationship between HIV-related knowledge and risky behavior in young females in Jamaica*. St Paul, Minnesota, 4 May 2009, Macalester College.
- Couldrey, M., & Herson, M., (Eds.). (2010). *HIV/AIDS, security and conflict: making the connections*. Oxford Department of International development, UK.
- Cowan, L., & Shaffer, R. (2012). *2012 Department of Defense HIV/AIDS Prevention Program (DHAPP)*. DTIC. *Reducing the incidence of HIV/AIDS among uniformed personnel across the globe*. DHAPP annual 2012 annual Report.
- Curran, L., & Munywoki, M. (2002). *HIV/AIDS And Uniformed Services: Stocktaking Of Activities In Kenya, Tanzania And Uganda*. UNAIDS Inter-Country Team for Southern and Eastern Africa, August 2002.
- De Jong, A., & Visser, D. (2006). *Exploring sexual practices of South African soldiers to determine vulnerability to the Human Immune Deficiency Virus*. *SA Journal of Industrial Psychology*, 2006, 32 (3), 1-11.
- Essien, E. J., Mgbere, O., Monjok, E., Ekong, E., Holstad, M. M., & Kalichman, S. C. (2011). *Effectiveness of a Video-Based Motivational Skills-Building HIV Risk-Reduction Intervention for female military personnel*. *Soc Sci Med*. Jan 2011; 72(1), 63-71. doi: 10.1016/j.socscimed.
- Essien, E. J., Monjok, E., Ekong, E., Chen, H., Abughosh, S., Ekong, E., Peters, R.J., Holmes, J.L., Holstad, M. M., & Mgbere, O. (December 2010). *Correlates of HIV Knowledge and Sexual risk Behaviours among Female Military Personnel*. December 2010, 14(6), 1401-1414. doi: 10 1000/s 10461-101-9701-4.
- Essien, E. J., Ogungbade, G.O., Ward, D., Ekong, E., Ross, M. W., Meshack, A., & Holmes Jr, L. (2007, December 13). *Influence of educational status and other variables on HIV risk perception among military personnel: A large cohort finding*. *Mil Med*. Nov 2007; 172(11): 1177–1181.
- Essien, E.J., Ogungbade, G.O., Kamiru, H.N., Ekong, E., Ward, D., & Holmes, Jr. L. (2006). *Emerging sociodemographic and lifestyle predictors of intention to use*

condom in human immunodeficiency virus intervention among uniformed services personnel. Mil Med. Oct 2006; 171(10): 1027–1034.

Essien, J., Meshack, A., Ekong, E., Williams, M., Amos, C., James, T., Ross, M. (2005). *Effectiveness of a Situationally-based HIV risk-reduction intervention for the Nigerian Uniformed Services on readiness to adopt condom use with casual partners.* *Counselling Psychotherapy and Health*, 1(1), 19-30, July 2005.

Feldman, B. S., Kark, J. D., Zarka, S., Ankol, O., Letyagina, V., & Shtarkshall, R. A. (2010). *Behavioral Surveillance of Knowledge About HIV/AIDS Transmission and Perceived Need for Additional Knowledge in a National Sample of Young Israeli Men and Women Between 1993 and 2005.* *AIDS and Behavior*, 15(1), 193–203. doi: 10.1007/s10461-009-9657-4.

Feldman. (n.d.). *Beyond Sick Soldiers: The Impact of HIV/AIDS on Military Forces and Security in Africa.* Foreign Military Studies Office. LTC, USAR.

Fisher, A. A., Foreit, J.R., Stoeckel, J., & Townsend, J. (2002). *Designing HIV/AIDS intervention studies: an operations research handbook.* Population Council, May 2002.

Georges, Y. M., D. HIV/AIDS in Haiti. (2011). *An Analysis of Demographics, Lifestyle, STD Awareness, HIV Knowledge and Perception that Influence HIV Infection among Haitians.* Georgia State University. http://scholarworksgsu.edu/iph_theses

Greig, A. (n.d.) *Prevention of HIV/AIDS in the SANDF Armed Forces: Addressing High Risk Sexual Behaviours Caused by Gender Roles.* Prevention of HIV/AIDS in the South African Armed Forces: Addressing High Risk Sexual Behaviours Caused by Gender Role. <http://www.genderjustice.org.za/101753-men-as-partners-and-the-south-african-national-defence-force-1/file.html>

Grizzle, M. & Flanigan, T. (n.d.). *HIV/AIDS White Paper World Youth Alliance.* World Youth Alliance, New York 10021.

Hallum-Montes, R., D'Souza, R., Tavaréz, M. I., Manzanero, R., Dann, G. E., Chun, H. M., & Anastario, M.P. (2012). *Condom Use During Last Sexual Contact and Last 30 Days in Two Samples of Caribbean Military Personnel.* *American Journal of Men's Health*, 6(2), 132-135.

Harrison, A., Feorino, P., Weintrob, A. C., Murray, C. K., Lloyd, B., Li, P., Carson, M.,

- L.(2013). *Update: Routine Screening for Antibodies to Human Immunodeficiency Virus, Civilian Applicants for U.S. Military Service and U.S. Armed Forces, Active and Reserve Components, January 2008-June 2013*. Medical Surveillance Monthly Report, Vol, 20,No 8, August 2013.
- HealthLink Worldwide. (2002). *Combat AIDS: HIV and the world's armed forces*. London: Healthlink Worldwide.UK. London, Russell Press Ltd.
- Holmes Jr, L., Ogungbade, G., Ward, D., Ross, M. W., Ekong, E., & Essien, E. J. (2009, January 2). *Epidemiologic and behavioral characterization of knowledge of condom use and modeling among military personnel*. Afr J Reprod Health. 2008; 12(2): 32–44.
- Hussain, N. A. A., & Akande, T. M. (2009). *Sexual Behavior And Condom Use Among Nigerian Soldiers In Ilorin, Kwara State, Nigeria*. African Journal of Clinical and Experimental Microbiology, Vol, 10. 128-135, May 2009.
- International Organization for Migration. (2003). *Mobile Populations and HIV/AIDS in the Southern African Region*. <http://www.queensu.ca/samp/sampresources/migrationdocuments/documents/2003/un aids.pdf>
- Kirby, D.B., Laris, B.A., Roller, L.A. (2007). *Sex and HIV Education Programs: Their Impact on Sexual Behaviors of Young People Throughout the World*. Journal of Adolescent Health 40, 2007, 201-2017, California.
- Kingma, S. J., & Yeager, R. D. (2005). *Military personnel: on the move and vulnerable to HIV/AIDS and other infectious diseases*. Civil–Military Alliance to Combat HIV and AIDS, 2005), 10–11, Kluwer Academic/Plenum Publishers.
- Korb, L. J., Duggan, S. E., & Conley, L. (2010). *Implementing the Repeal of "Don't Ask, Don't Tell" in the U.S. Armed Forces*. Centre for American Progress, US Armed Forces.
- Kortepeter, M., G. (2013). *IDCRP Annual Report 2013, Infectious Disease Clinical Research Program*. <http://www.usuhs.mil/pdf/IDCRPAnnualReport2013.pdf>
- Kraemer, A.M. (2006). *Effects Of Perceived Social Norms And Locus Of Control On Condom Use And High Risk Sexual Behaviors In Military Personnel*. Philadelphia College of Osteopathic Medicine, July 2006.
- Lammers, J., van Wijnbergen, J.G., & Willebrands, D. (2013). *Condom use, risk perception, and HIV knowledge: a comparison across sexes in Nigeria*. HIV/AIDS -

- Research and Palliative Care, 283. Dove Press Journal, 22 October 2013. <http://www.dovepress.com/condom-use-risk-perception-and-hiv-knowledge-a-comparison-across-sexes-peer-reviewed-article-HIV>
- Lawrence, J.K., Duggen, S.E., & Conley, L. (2010). *Implementing the Repeal of "Don't Ask, don't Tell" in the U.S. Armed forces*. Centre for American Progress, March 2010.
- Mabunda, G. (2004). *HIV Knowledge and Practices Among Rural South Africans.*: <http://web.b.ebscohost.com.ez.sun.ac.za/ehost/pdfviewer>
- Mangesha, M. (n.d.). *The Impact of HIV/AIDS on the schooling of female students in Addis Ababa; 2004 - Impact of HIV/AIDS on the schooling of female students in Addis Ababa*. International Institute for Capacity Building in Africa.
- Mankayi, N. (2011). *Race And Masculinities In The South African Military*. Scientia Militaria, South African Journal of Military Studies, Vol. 38, Nr 2, 2010. doi: 10.5787/38-2-88.
- Mgbere, O., Monjok, E., Abughosh, S., Ekong, E., Holstad, M.M. & Essien, E.J. (2013). *Modeling Covariates of Self-Perceived and Epidemiologic Notions of Risk for Acquiring STIs/HIV among Military Personnel: A Comparative Analysis*. AIDS Behavior, March 2013, 17(3),1159-1175, doi: 10.1007/s11207-011-0126-5.
- Momoh, S. O., Asagwara, C. G., & Meriamu, U. M. (2013). *Male Gender Roles and Sexuality: Implications for University Girls' HIV/AIDS Awareness in a Nigerian University*. Journal of International Women's Studies, Vol, 8(4), 148–152.
- Mudingayi, A., Lutala, P., & Mupenda, B. (2011). *HIV knowledge and sexual riskbehavior among street adolescents in rehabilitation centres in Kinshasa, DRC: gender differences*. Received: 27/04/2011 - Accepted: 27/08/2011 - Published: 17/10/2011. The Pan African Medical Journal. 2011;10:23.
- Mwakatobe, K., B. (2007). *Use of HIV/AIDS counseling and testing services among young people in Tanzania: A case study of Kinondoni District*. University of Oslo. <https://www.duo.uio.no/handle/10852/30150>
- National Defense Research Institute, & Rand Corporation. (2010). *Sexual orientation and U.S. military personnel policy an update of RAND's 1993 study*. Santa Monica: Rand National Defence Institute, Rand Corporation. www.rand.org
- National Institute on Drug Abuse. (2013). *Drug Facts: Substance Abuse in the Military*. United States of America, March 2013.

- Nguyen, T. A., Oosterhoff, P., Hardon, A., Tran, H. N., Coutinho, R. A., & Wright, P. (2008). *A hidden HIV epidemic among women in Vietnam*. *BMC Public Health* 2008, 8:37, doi:10.1186/1471-2458-8-37. <http://www.biomedcentral.com.ez.sun.ac.za/1471-2458/8/37>
- Okeke, C.E., Onwasigwe, C.N., & Ibegbu, M.D. (2012). *The effect of age on knowledge of HIV/AIDS and risk related behaviours among army personnel*. *Afr Health Sci*. Sep 2012; 12(3): 291–296.
- Okulate, G.T., Jones, O., B. ,E., & Olorunda, M., B. (2008). *Condom use and other HIV risk issues among Nigerian soldiers: challenges for identifying peer educators*. *AIDS Care*, Vol. 20, No. 8, September 2008, 91-916.
- Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, 54(2), 471–517.
- Ramjee, G. & Daniels, B. (2013). *Women and HIV in Sub-Saharan Africa*. *AIDS Research and Therapy* 2013, 10:30 doi:10.1186/1742-6405-10-30. December 2013.
- Roberts, D. & Preville, L. (n.d.). *The link between drug use and HIV/AIDS among young people in Grenada*. United Nations Office on Drugs and Crime, Barnados.
- Rochkind, J., DuPont, S., & Ott, A. (2009, May). *Impressions of HIV/AIDS in America, A report on conversations with people throughout the country*. <http://www.publicagenda.org/files/pdf/HIV-AIDS-May-2009.pdf>
- Rubertone, M. V., & Brundage, J. F. (2002). *The Defense Medical Surveillance System and the Department of Defense serum repository: glimpses of the future of public health surveillance*. *American Journal of Public Health*, 92(12), 1900–1904.
- Sahr, F., Kargbo, B., Gevao, S.M., Gbakima, A. A., & Swarray-Deen, A. (2009). *Knowledge, Perception of Risk and Attitude of Sierra Leone Military Personnel towards Colleagues with HIV/AIDS*. *Sierra Leone Journal of Biomedical Research*, Vol. 1(1), 38–43, August 2009.
- Saiprasad, C. G., Banerjee, L. C. A., Jadhav, L. C. S., Sahoo, M. P., Parashar, S. S., & Basannar, S. D. (2003). *Behavioural Surveillance Survey Among Troops in a Large Military Station*. *MJAFI*, Vol. 59, No. 3, 2003, Medical Journal Armed Forces, India.
- Seckinelgin, H., Bigirumwami, J., & Morris, J. (2011). *Conflict and gender: the implications of the Burundian conflict on HIV/AIDS risks*. *Conflict, Security & Development*, Vol. 11 No. 1 pp.55-7811(01), 55–77.

- Simelane, H. S., Kunene, S. C., & Magongo, T. (2006). *HIV/AIDS in the Umbuto Swaziland Defence Force. The Enemy Within: Southern African Militaries' Quarter-Century Battle with HIV and AIDS*.
<http://www.issafrica.org/uploads/Book2006EnemyWithin.PDF#page=83>
- Shoveller, J. A., Knight, R., Johnson, J., Oliffe, J. L., & Goldenberg, S. (2010). "Not the swab!" *Young men's experiences with STI testing. Sociology of Health & Illness*. Vol. 32 No. 1 2010 ISSN 0141-9889, pp. 57-73, doi: 10.1111/j.1467-9566.2009.01222.x.
- Summers, T., Kates, J., & Murphy, G. (2002). *The Global Impact of HIV/AIDS on Young People*. Siecus Report, Vol. 31, No 1, October/November 2002.
- Tavarez, M., Chun, H., & Anastario, M. (2011). *Correlates of Sexual Risk Behavior in Sexually Active Male Military Personnel Stationed Along Border-Crossing Zones in the Dominican Republic. American Journal of Men's Health*, 5(1), 65-77. doi: 10.1177/1557988310362097.
- Tzeng, J.S., Clark, L.L., Garges, E.C., & Otto, J.L. (2013). *Epidemiology of Sexually Transmitted Infections among Human Immunodeficiency virus Positive United States military Personnel*. Volume 2013, Article ID 610258, 8 pages
<http://dx.doi.org/10.1155/2013/610258>
- Tripodi, P., & Patel, P. (2004). *HIV/AIDS, Peacekeeping and Conflict Crises in Africa*. London: Marine Corps University, 24 January 2007.
- Ugboma, H. A. A., Kooffreh, M. E., & Nwauche, C. A. (2011). *Gender differences in students knowledge of HIV/AIDS in the Niger Delta, Nigeria. Journal of Clinical Medicine and Research*, 3(1), 20-22, January 2011.
- UNICEF. (2013). *Young Key Populations at Higher Risk of HIV in Asia and the Pacific: Making the Case with Strategic Information*. UNICEF, East Asia, June 2013.
- UNAIDS. (2014a). *Global AIDS response progress reporting 2013: construction of core indicators for monitoring 2011 political declaration on HIV/AIDS*. Joint United Nations Programme on HIV/AIDS, January 2014. WHO Library Publication Cataloguing-in-Publication Data.
- UNAIDS. (2014b). *HIV Services Adolescents Youth*. UNAIDS/JC2568 (English original, May 2014). Geneva, Switzerland.
- UNAIDS. (2013a). *Thematic-segment-HIV-youth-adolescents*. UNAIDS/PCB (33)/13.22 Issue date: 21 November 2013, HHO, Geneva.

- UNAIDS. (2013b). *Global Report 2013, UNAIDS report on the global AIDS epidemic*. November 2013, Geneva, Switzerland.
- UNAIDS. (2011). *On the Front Line: A review of programmes that address HIV among International Peacekeepers and Uniformed Services 2005-2010*. United Nations Department of Peacekeeping Operations, United Nations.
- United Nations. (2013). *Youth Employment: Youth Perspectives On The Pursuit Of Decent Work In Changing Times*. World Youth report, United States of America: United Nations.
- United Nations. (Ed.). (2005). *World Youth Report, 2005: Young people today and in 2015*. New York: United Nations. 2 World Youth Report. United Nations New York, 10017, United States of America.
- UNAIDS. (2003). *ON THE FRONT LINE: A review of policies and programmes to address HIV/AIDS among peacekeepers and uniformed services. Engaging uniformed services in the fight against HIV/AIDS*. UNAIDS Office on AIDS, Security and Humanitarian Response (SHR), Copenhagen, Denmark.
- USAID. (2011). *HIV/AIDS Health Profile Southern Africa*. USAID, Pretoria, February 2011.
- Van der Ryst, E., Joubert, G., Steyn, F., Heunis, C., le Roux, J., & Williamson, C. (2001). *HIV/AIDS-related knowledge, attitudes and practices among South African military recruits*. South African Medical Journal, 91(7), 587–591.
- Von Sadvoszky, V., & Ryan-Wenger, N. (2007). *Army Women's Sexual Health Information Needs*. JOGNN, Volume 36, No 4, July/August 2007.
- Villaran, M.V., Bayer, A., Konda, K.A., Mendpoza, C., Quijandria, H., Ampuero, J.S., Apolaya, M., Palacios, O., Lescano, A.G., Vega, A.M., Blazes, D.L., Kochel, T., & Montano, S.M. (2012). *Condom Use by Partner Type Among Military and Police Personnel in Peru*. American Journal of Men's Health 6(4) 266–272. DOI: 10.1177/1557988311431628.
- Whiteside, A., de Waal, A., & Gebre-Tensae, T. (2006). *AIDS, security and the military in Africa: A sober appraisal*. African Affairs, 105(419), 201–218.
- World Health Organization. (2012). *Frequently Asked Questions on HIV/AIDS, Know Your HIV Status*. WHO, South East Asia.

Yeager, R. (2003). HIV/AIDS: *Implications for Development and Security in Sub-Saharan Africa*. Civil-Military Alliance to Combat HIV & AIDS (CMA),15, United States of America.

APPENDIX A**ESTABLISHING THE KNOWLEDGE, PERCEPTIONS AND VIEWS OF NEW ENTRY LEVEL RECRUITS IN A SOUTH AFRICAN MILITARY TRAINING SETTING ON HIV/AIDS TO PROMOTE HIV/AIDS AWARENES AMONGST YOUNG SOLDIERS**

Please answer all questions as honestly as possible by making a **X** in the applicable **block**. All information will be treated confidentially.

Please ensure that **all questions** are answered by making an **X** in the following blocks, *disagree strongly, disagree, not sure, agree, agree strongly*.

SECTION A: Bio-graphical information**QUESTION: 1**

Specify your gender.

Male	1
Female	2

QUESTION: 2

From which province do you come?

Western Cape	1
Northern Cape	2
Eastern Cape	3
Gauteng	4
Free State	5
KwaZulu-Natal.	6
Limpopo	7
Mpumalanga	8
North West.	9

QUESTION: 3

What is your educational level?

Grade 12	1
University Degree	2

QUESTION: 4

What is your age?

18 – 20 years	1
21 – 22 years	2
23 – 25 years	3
Over 25 years	4

SECTION B: BASIC KNOWLEDGE AND VIEWS ON HIV/AIDS**QUESTION: 5**

Items	Disagree strongly	Disagree	Not sure	Agree	Agree strongly
	1	2	3	4	5
1.HIV damages the immune system of a person					
2.AIDS is when a person becomes sick through a later stage of HIV					
3. HIV/AIDS can be cured					
4.A person can only get HIV through infected blood, body fluids, breast milk and semen					
5.A person with HIV can give the virus to another person through unprotected sex even though he/she has no symptoms of the disease					

QUESTION: 6

Items	Disagree strongly	Disagree	Not sure	Agree	Agree strongly
	1	2	3	4	5
6.It is easy to get the HI virus					
7.A person cannot get HIV infection through coughing, sneezing, hugging, shaking hands and swimming with another person who has HIV					
8.A person can get HIV through a mosquito bite					
9.A person cannot get HIV when living with another person in the same house					
10.A person with HIV who is not sick cannot give the virus to another person through unprotected sex					

SECTION C: KNOWLEDGE AND VIEWS ON HIV/AIDS VOLUNTARY TESTING AND COUNSELLING

QUESTION: 7

Items	Disagree strongly	Disagree	Not sure	Agree	Agree strongly
	1	2	3	4	5
11.HIV testing counselling gives important information to a person regarding his/her health status and how to protect oneself against HIV					
12.HIV testing is voluntary and confidential					
13.A person do not have to wait until they develop symptoms from HIV to get tested for HIV					
14.The window period is the period between HIV infection and when the HIV test can detect the virus in a person's bloodstream					
15.A person with HIV cannot give the virus to another person through unprotected sex during the window period					

SECTION D: KNOWLEDGE AND VIEWS ON HIV/AIDS DIAGNOSIS AND MANAGEMENT

QUESTION: 8

Items	Disagree strongly	Disagree	Not sure	Agree	Agree strongly
	1	2	3	4	5
16.A person can have HIV without testing for HIV					
17.A person who gets very sick from HIV in a later stage, has AIDS					
18.It is important for people living with HIV/AIDS to go to a health facility					
19.It is not necessary for people living with HIV to tell the Doctor or Nurse about their HIV status					
20.There is medication to treat HIV infection to reduce the amount of HIV in the bloodstream					

SECTION E: KNOWLEDGE AND VIEWS ON HIV/AIDS RISK AND HARM REDUCTION

QUESTION: 9

Items	Disagree strongly	Disagree	Not sure	Agree	Agree strongly
	1	2	3	4	5
21.A person using condoms correctly and consistently during sexual relations cannot get HIV easily					
22.Unprotected sex is the main reason for getting HIV infection					
23.Male and female condoms give the same protection against HIV infection					
24.A person with HIV must still use condoms during sexual relations					
25.Alcohol and drugs increase the risks of getting HIV					

QUESTION: 10

What would you suggest can be done to learn more about HIV/AIDS during military training?

QUESTION: 11

What other concerns do you have relating to HIV/AIDS?

Thank you for completing the questionnaire and for being part of this study.