

**KNOWLEDGE ON HIV/AIDS AND ATTITUDE OF PHYSIOTHERAPISTS TOWARDS
PATIENTS WITH HIV/AIDS IN THE KINGDOM OF SWAZILAND**

by

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MINI- DISSERTATION

Submitted in (partial) fulfilment of the requirements for the degree of

MASTERS

in

Public Health

in the

FACULTY OF HEALTH SCIENCES

(School of Public Health)

at the

UNIVERSITY OF LIMPOPO

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DECLARATION

I declare that the mini-dissertation hereby submitted to the University of Limpopo, for the degree of Masters in Public Health has not previously been submitted by me for a degree at this or any other university; that it is my own work in design and in execution, and that all material contained herein has been duly acknowledged.

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23 August 2017

Date

DEDICATION

This mini-dissertation is dedicated to my only daughter Natasha N.Ncube, my mother Mrs R.Ndlovu and all my sisters and brothers for their love and support.

ACKNOWLEDGEMENTS

First and foremost I would like to thank the Almighty God for enabling me this opportunity to enrol into this programme and for guiding me and protecting me as I undertook this degree to the end. My sincere gratitude goes to my supervisor Prof Nonceba Mbambo-Kekana for the guidance, input and support that she gave me throughout this research, may God bless her so abundantly. I would like to thank Prof. Linda Skaal for the guidance and support that she gave me on my research project, may the Almighty God bless you so much. I also would like to thank my informants for allowing this study to be a success, without their cooperation the study was not going to take place, I would also like to thank the CEOs and Directors of physiotherapy practices for allowing me to do the study with their physiotherapists. My sincere gratitude goes to my beloved daughter, Natasha N.Ncube who helped me in distribution and collection of the questionnaires as she always accompanied me and supported me throughout the research study . I thank my mother (Mrs R. Ndlovu) for instilling the attitude of the importance of education in my life and also my sisters for their constant support and encouragement. I would also like to thank my church Elder Ajao for constantly checking on my progress and encouraging me to soldier on. I thank my friends especially Rudo Chiwutsi and Sithembakuye Moyo who always encouraged me, my colleagues at work especially Charles Makwarimba most particularly for his information technology expertise and encouragement. I would also like to thank my brother Bhekimpilo Nhlabano Moyo for his constant encouragement and always telling me that I am his source of inspiration as far as studies are concerned, May you all be richly blessed.

ABSTRACT

INTRODUCTION: Since the introduction of Anti-retroviral therapy, People Living With HIV/AIDS (PLWHA) now live longer and present with various opportunistic neuro-musculoskeletal and cardio-pulmonary conditions among other complications. This has led to a surge in the number of patients that visit the physiotherapy department presenting with many complications which include mobility problems, neurological deficits, muscle weakness and developmental delay in children among others as experienced by the researcher in the work place.

AIM: To determine the knowledge of physiotherapists with regard to HIV/AIDS and their attitude towards HIV/AIDS patients in the Kingdom of Swaziland.

METHOD: In this study a quantitative, descriptive cross-sectional survey was used to determine the knowledge and attitudes of Physiotherapists in the management of HIV/AIDS in the Kingdom of Swaziland.

RESULTS: The results of the study revealed that physiotherapists in the Kingdom of Swaziland have a good knowledge and a positive attitude towards people living with HIV/AIDS. Amongst other attributes that were looked at in the study it was reported that 100% of the participants were knowledgeable on the complications associated with HIV/AIDS and 94% of the physiotherapists reported that they are familiar with complications that will benefit from physiotherapy. On the attributes related to attitude of physiotherapist towards HIV/AIDS patients the study found that 100% of the physiotherapists reported that they would take precautions and continue seeing the patients. There was no statistical significant relationship between years of experience and attitude (Pearson chi-square =0.25, p-value =0.61), familiarity with commonly used ARVS (Pearson chi square =1.13, p-value =0.76) and familiarity with Universal Precautions (Pearson chi-square =2.55, p-value =0.46). There was no statistically significant relationship between knowledge and attitude (Pearson chi square =1.000, p-value =0.61).

CONCLUSION: The study revealed that the physiotherapists have good knowledge on HIV/AIDS and they also have positive attitude towards managing People Living with HIV/AIDS at their respective departments. There is need for the physiotherapy training schools to include HIV/AIDS in their curricula since some of the schools of physiotherapy where the participants trained did not include it during their time of training and the practising physiotherapists need continuing health education on HIV/AIDS. There is a need for the work setting libraries where

physiotherapists work to have current books and journals for the physiotherapists to update themselves on issues pertaining to HIV/AIDS and internet access in the departments. The physiotherapists are also encouraged to take the initiative to utilise the libraries in their work settings and get information on HIV/AIDS.

Keywords: Knowledge; attitudes; Physiotherapists; HIV/AIDS; Patients

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DEFINITION OF TERMS

Physiotherapist: Is a specialist in human activity and movement. They help people maximise their quality of life, looking at physical, psychological, emotional and social well-being. They work in the health spheres of promotion, prevention/intervention, habilitation and rehabilitation. (World Confederation for Physical Therapy, 2016)

Knowledge is a familiarity, awareness or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering or learning, (Wikipedia,2016). In this study, knowledge will mean a physiotherapist who have knowledge of HIV/AIDS in the context of management.

Attitude is a predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation. (Business dictionary,2016). In this study, attitude will mean the belief and opinions of a physiotherapist who manages HIV/AIDS patients.

LIST ABBREVIATIONS

- AIDS : Acquired Immunodeficiency Syndrome
- ARVS : Anti-Retroviral Therapy
- HIV : Human Immunodeficiency Syndrome
- OI : Opportunistic Infections
- PLWHA : People Living With HIV/AIDS
- PWA : People with AIDS
- TB : Tuberculosis
- WCPT : World Confederation for Physical Therapy
- UP : Universal Precautions

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CHAPTER ONE

1.1 BACKGROUND AND INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) occurs following infection with the human immuno deficiency virus (HIV) which is an acquired contagion. It is estimated that 42 million people infected globally and the first deaths reported in early 1980s and around 20 million people have since died of AIDS. Therefore, HIV/AIDS remains a major public health problem (Cekin et al, 2013). Swaziland has a population of 1.25 million and has seen itself being affected by the surge of HIV/AIDS where 1 in 4 adults are living with HIV (UNAIDS, 2013). Since the first case of HIV/AIDS was reported in the country in 1986 the virus has spread at an alarming rate and now Swaziland has the highest Human-Immuno Virus /Acquired Immuno-Deficiency Syndrome prevalence rate of 26.5% in the world, a much higher rate than in any Sub-Saharan African region (UNAIDS, 2013).

A survey done in Swaziland suggested that HIV prevalence rates in Swaziland continue to rise. As of 2003, there was an estimated 220, 000 people living with HIV/AIDS in Swaziland or almost 4 in 10 adults (Kaiser Family Foundation, 2005).The high prevalence rates of HIV/AIDS in S Swaziland mean that there is also an increase in the number of people on Anti-retroviral therapy and hence more people that have complications of HIV/AIDS that are referred for physiotherapy (Mercer, 2009). Given this increase of referral to physiotherapy the researcher then sought to determine the knowledge on HIV/AIDS and attitude of Physiotherapists towards people living with HIV/AIDS. Physiotherapy is a health profession concerned with helping to restore function to people following injury, pain or disability (WCPT,2012).

Physiotherapist take a primary role in relation to prevention and management of all diseases that

are associated with low levels of physical activity including HIV/AIDS because they are experts in body movement and exercise. Physiotherapists are involved in the management of HIV/AIDS patients during the acute and chronic stages of their illness. In the acute stages, physiotherapists are involved in prevention and management of complications of prolonged bed rest and then in the chronic stage they manage pain, maintain range of movement of joints, encourage active mobilization through to independent walking, provision of assistive devices (e.g. crutches, walking sticks etc.), health promotion advice, postural correction to prevent deformities (Simfukwe,2014).

Since the introduction of Anti-retroviral therapy, People Living With HIV/AIDS (PLWHA) now live longer and present with various opportunistic neuro-musculoskeletal and cardio-pulmonary conditions among other complications. This has led to a surge in the number of patients that visit the physiotherapy department presenting with many complications which include mobility problem, neurological deficits, muscle weakness and developmental delay in children among others as experienced by the researcher in the work place. A multidisciplinary approach is needed in the management of HIV/AIDS because of its manifestation in multi-organ systems. This therefore does not single out physiotherapy as part of the multidisciplinary team in the management of HIV/AIDS patients. By nature of their practice, physiotherapists have physical contact with patients during their day-to-day management of different manifestations that are a result of HIV/AIDS related complications such as neurological deficits, chest complications like pneumonias and tuberculosis. The researcher sought to focus on the knowledge on HIV/AIDS and attitude of physiotherapists when managing patients with HIV/AIDS.

Despite the fact that physiotherapists are at low risk of getting infection whilst treating patients that have HIV/AIDS the present study seeks to ascertain their knowledge about HIV transmission in the work setting and their attitudes towards those patients that require physiotherapy and have HIV/AIDS and their fears of contracting HIV infection during their management of these patients. There is little that has been done on the attitude and knowledge of physiotherapy on HIV/AIDS globally. Furthermore there is paucity of data in Africa, especially in Swaziland.

1.2 RESEARCH PROBLEM

HIV/AIDS is a condition with progressive and debilitating effects and is known to cause medical complications because it affects all body systems especially the Central Nervous System and Peripheral Nervous System (P.N.S), resulting in different types of disabilities. With the increase in HIV/AIDS globally and more so in Southern Africa, physiotherapy has become part of multidisciplinary therapies in providing good quality care to the patients living with HIV/AIDS. A survey done in Swaziland suggests that HIV prevalence rates in Swaziland continue to rise. As of 2003, there was an estimated 220, 000 people living with HIV/AIDS in Swaziland or almost 4 in 10 adults (Kaiser Family Foundation, 2005). The high prevalence rates of HIV/AIDS in Swaziland mean that there is also an increase in the number of people on Anti-retroviral therapy and hence more people that have complications of HIV/AIDS that are referred for physiotherapy (Mercer, 2009). Given this increase of referrals to physiotherapy the researcher then sought to determine the knowledge on HIV/AIDS and attitude of Physiotherapists towards people living with HIV/AIDS.

Negative attitudes may affect the willingness and capacity of the physiotherapist to provide good quality care for people with HIV/ AIDS (Oyeyemi et al, 2008) .The researcher has observed such negative attitudes (such as fear to treat patients with HIV/AIDS) over the years of experience as a physiotherapist and this attitude could be attributed to inadequate knowledge on HIV and AIDS. Some extensive research has been done globally on the knowledge and attitude of healthcare providers towards HIV/AIDS patients but not much has been done among physiotherapists globally. Furthermore, there is paucity in Swaziland hence the purpose of this study was to determine the knowledge on HIV/AIDS and attitudes of physiotherapists towards people living with HIV/AIDS.

1.3 RESEARCH QUESTIONS

1. What is the knowledge of physiotherapists with regards to HIV/AIDS?

2. What is the attitude of physiotherapists in the Kingdom of Swaziland towards patients with HIV/AIDS?

1.4 AIM OF STUDY

To determine the knowledge of physiotherapists with regard to HIV/AIDS and their attitude towards HIV/AIDS patients in the Kingdom of Swaziland.

1.5 OBJECTIVES OF THE STUDY

1. To determine the knowledge that the Physiotherapists in the Kingdom of Swaziland have on HIV/AIDS
2. To determine the attitude of Physiotherapists on treating patients with HIV/AIDS.
3. To establish whether knowledge has an influence on attitude of Physiotherapists on treating patients with HIV/AIDS.

1.6 SIGNIFICANCE OF THE STUDY

Since HIV/AIDS is a chronic disease managed by the use of ARVs which prolong life, physiotherapists assist these patients on a daily basis. There is little research that has been done on the knowledge on HIV/AIDS and attitude of physiotherapists towards PLWHA around the globe. Furthermore, there is a paucity of data in Africa including Swaziland hence there is need to find out how much knowledge physiotherapist have on HIV/AIDS and their attitudes towards HIV/AIDS patients in the Kingdom of Swaziland. The results of this study may influence the recommendations to the respective policy makers and stakeholders.

1.7 OUTLINE OF THE MINI-DISSERTATION

Chapter One presents the background, introduction, research problem, research questions, aim, objectives, and definition of terms and significance of the study.

Chapter Two reviews literature from previous studies on the concepts on HIV/AIDS,

physiotherapy and HIV/AIDS, knowledge and attitudes of healthcare providers towards people living with HIV/AIDS.

Chapter Three discusses the research methodology used in the study.

Chapter Four presents the results of the study.

Chapter Five discusses the results.

Chapter Six presents the summary, limitations, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews literature on the concepts relating to HIV/AIDS, physiotherapy and HIV/AIDS and the knowledge and attitude of healthcare providers on managing PLWHA in the workplace. The literature was sourced from journals, websites (URLs), theses and research papers. The literature that was reviewed ranged from 1994 to 2016.

Since 1981, a lot of research has been done on HIV/AIDS and there is wealth of literature in this regard. A lot of research has been done on HIV pathophysiology, transmission and complications and opportunistic infections associated with the infection. The literature reviewed in this study confined itself to a brief overview of HIV/AIDS and its prevalence, complications, role of physiotherapy, knowledge and attitudes of Health Care Workers.

2.2 OVERVIEW OF HIV/AIDS

According to Mercer (2009) HIV prevents the immune system from rendering its normal defence mechanism to the body against infections and this can lead to the development of AIDS. AIDS is a term used to describe the result of damage to the immune system when somebody's immune system drops to a very low level that is the CD4 count has been reduced or they develop an illness because the body's immune system is weakened. HIV weakens the immune system thereby causing it to fail to fight infections leading to opportunistic infections developing which then cause illness and disability. HIV can also affect the body cells directly causing damage to cells.

Gayle (2000) and Kaizer Family Foundation (2005) state that HIV/ AIDS epidemic is a global human tragedy especially in Sub-Saharan Africa. The pandemic affects people in the prime of their lives moving from at risk populations to broader cross-sections of society. There has been

more than 47million adults and children infected globally since the beginning of the epidemic and more than 18. 8 million people have died (Kaizer Family Foundation, 2005). Over 95% of the global total of all AIDS cases are in the developing world with prevalence among adults at less than 1% in India and Europe to more than 10% in several African countries of which Swaziland is included. (Kaizer Family Foundation, 2005) Swaziland has the highest Human-Immuno-Virus/Acquired Immuno-Deficiency Syndrome prevalence rate of 26.5% in the world, a much higher rate than in Sub-Saharan African region overall which stands at 7.5% (UNAIDS,2013).

A survey done in Swaziland suggested that HIV prevalence rates in Swaziland continue to rise (Mercer, 2009).Anti-retroviral therapy (ARV) improves the immune system but can have side effects that can affect the body. Due to the introduction of drug treatment (anti-retroviral therapy), people with HIV are living longer. Therefore, HIV is becoming a chronic illness with emerging illnesses and disabilities (Mercer, 2009).

2.2.1 PATHOGENESIS OF HIV

The pathogenesis of HIV infection includes the depletion of the total body CD4+ T-cell pool and this leads to immunodeficiency. This effect is accompanied by activation of numerous elements of immune system that leads to a functional immunosuppression and a state inflammation and coagulation that appears to underlie the increased risk of no opportunistic complications observed in patients with HIV infection (International AIDS Society-USA, 2016)

2.2.2 CLINICAL MANIFESTATIONS OF HIV

When an individual has been exposed to the virus, they may be asymptomatic or may have a glandular fever type acute infection. The symptoms may include fever, malaise, sore throat, lymphadenopathy and muscle and joint pains. After seroconversion illness, the infected individual may remain symptom free for several years. The individual can infect others during this latest stage through the exchange of body fluids such as blood or semen (Coates 1990)

The stages of HIV infection have been classified as follows according to CDC (Centres for Disease Control) in the United States -:

Stage 1: Acute infection. This occurs in newly infected people who may show symptoms of an acute, transitory illness.

Stage 2: Asymptomatic HIV infection

This group includes all persons who are found to be HIV antibody positive but have no apparent illness but are infective to others.

Stage 3: Persistent generalized lymphadenopathy .These people have persistent lymph gland enlargement that cannot be explained by others.

Stage 4: Aids and related conditions. These people have one or more of the serious illnesses that have become most commonly associated with AIDS, such as Pneumocystis Carinii Pneumonia, Kaposi Sarcoma and meningitis. This group include all cases sometimes described as “full blown AIDS.” This group is subdivided into many groups such as those with neurological deficits, secondary infection and systemic symptoms (Coates, 1990).

2.3 COMPLICATIONS OF HIV/AIDS

Many body systems can be affected by illnesses that develop because of a weakened immune system and in turn can cause impairment and disability (Schoub, 1999). The following are some of the e complications resulting from the opportunistic infections that attack HIV/AIDS patients.

2.3.1. GENERAL COMPLICATIONS OF HIV/AIDS

- HIV-associated Dementia is an AIDS defining condition involving deficits in at least two cognitive ability domains for example memory, attention, attention and abnormalities in motor or neurobehavioral function that impair activities of daily living (Carolyn et al (2011). Toxoplasmosis is a disease that results from infection with the Toxoplasma gondii parasite and it can lead to seizures and it also affects the brain and causes also speech impairments. Cryptococcosis can lead to confusion, seizures, abnormal behaviour, hallucinations and psychiatric symptoms. (World Bank, 2010; McGuire, 2003:Mayo Clinic,2015)
- Cytomegalovirus occurs in people with advanced HIV illness and can lead to loss of sight,

even blindness by damaging the back of the eyes and it has been also found to be cause of the painful sensory neuropathy. The herpes virus can also endanger vision and cryptococcosis can lead to blindness.(World Bank,2010;Salati,2004; McGuire, 2003,)

- Candidiasis is a common HIV-related infection. It causes inflammation and a thick white coating on the mucous membranes of your mouth, tongue, oesophagus or vagina .Candida grows in white clumps that can be scraped away or it can cause red patches called erythema. It becomes more common with lower CD4 counts and recurrent infections can be a sign of HIV disease progression (Mayo clinic, 2015,Carter ,2012).
- Kaposi Sarcoma is a tumour of the blood vessels walls, this cancer is rare in people not infected with HIV but common in HIV – positive people. Kaposi Sarcoma results in invisible purplish black patches or lesions on the skin, mucous membrane or internal organs. It can affects people at all stages of HIV infection but it is unlikely to be serious as long as the CD4 cell count is above 250.It is now seen less often since the introduction of ARVS (Mayo clinic, 2015;Carter,2012)
- Lymphomas is a type of cancer that originates in white blood cells and usually first appears in the lymph nodes .The neurological problems that are seen in Central Nervous System lymphoma can include headaches,confusion,memory loss, partial paralysis, loss of speech and seizures (Mayo clinic, 2015;Carter,2012).

2.3.2 COMPLICATIONS OF HIV/AIDS THAT REQUIRE PHYSIOTHERAPY INTERVENTION

- The virus affects the healthy function of the nerve cells causing inflammation, which damages the brain and spinal cord. As the result, an infected person develops symptoms such as behavioural changes, progressive weakness, stroke or cerebral palsy (Schoub, 1999).
- The infection or treatment of complications may cause neurological complications such as peripheral Neuropathy, neuralgia, in coordination, anxiety disorders, depression and gait disorders. The neurological involvement may be caused by Opportunistic Infections, tumours or the primary neurological effects of HIV destroying cells in the Central Nervous System. The neurological manifestations of AIDS generally start with cognitive changes. The commonly seen

motor symptoms associated with HIV/AIDS are loss of balance, weakness in the lower limbs, ataxic gait and deterioration in hand writing and temporary facial palsy has been reported as well (Coates, 1990).

- Toxoplasmosis of the brain and progressive multifocal leukoencephalopathy, both of which affect only people with HIV, can cause stroke, seizures and affect mobility. Peripheral neuropathy which causes painful tingling in the feet and hands can also impair movement. Dementia can also cause loss of movement, motor clumsiness and even paralysis. (World Bank, 2010; McGuire, 2003).

- Bacteria, viruses and fungus can cause opportunistic infections affecting the lungs for example severe Pneumonia (Pneumocystis Carinii) and Tuberculosis (TB). Patients with Pneumocystis Carinii (PCP) classically presents with fever, progressive exertional dyspnoea and non-productive cough (Carolyn et al ,2011). Pneumocystis Carinii is the most commonest type of pneumonia found in patients with HIV/AIDS and it accounts for 85% of all AIDS-related lung infections whilst Tuberculosis and bacterial pneumonia accounts for the remaining 15% of the lung infections (Coates, 1990). There are very serious infections that can occur as a result of not breathing properly and if not urgently managed can lead to death. As the patient recovers their ability to do activities of daily living become limited by breathlessness (World Bank, 2010).

2.4 PHYSIOTHERAPY AND HIV/AIDS

There is a role of Physiotherapists and Rehabilitation workers in caring for people with HIV/AIDS in the areas of prevention and intervention acute medical management, rehabilitation and palliative care and symptoms management (Mercer, 2009). World Bank (2010) states that HIV/AIDS can cause disability. This occurs when a particular Opportunistic Infection (OI) such as Toxoplasmosis impairs the physical, sensory or mental capacity of HIV positive persons to such an extent that their day to day functioning is compromise (World Bank, 2010) Such OI conditions affect speech, sight, physical mobility, mental functioning and mental health.

Some ethical considerations have been explored by Voors (2000) in relation to HIV/AIDS patients and it has been stated that duty to treat is fundamental ethical principle within healthcare. Literature suggests that physiotherapists do not have the right to refuse to treat HIV/AIDS patients based on the ethical principles of beneficence, non-beneficence and justice. It is argued that while healthcare is not value free, the role of the therapist is not to judge but treat according to need rather than merit. Moreover the risk of infection involved in treating HIV/AIDS patients is minimal for physiotherapists (with universal precautions instated) and does not warrant the abrogation of duty (Voors, 2000).

Physiotherapy intervention has been beneficial as shown in a study done by Gale (2003) on two males with HIV-related peripheral neuropathy who presented with decreased functional ambulation. Physiotherapy intervention such as joint mobilizations, soft tissue mobilization, micro current, stretching and instruction in self-management were done. The treatment continued for two to four times per month for 12months and 18months respectively. Both patients showed increased functional abilities and independency after physiotherapy intervention. One patient returned to community ambulation and other returned to full-time employment (Gale, 2003).

Pullen et al (2014) in a case study on the effect of a 12-week exercises and manual therapy intervention on morphology, pain, cardiopulmonary fitness, strength, neurological balance, immune markers (CD4 count) and quality of life in a 43 year old woman living with HIV concluded that physiotherapy consisting of manual therapy and exercise appeared to be beneficial in several areas as an adjunct therapy in HIV management. A similar conclusion was also drawn from a study by Singh (2012) where six adults aged 15-30 years of both genders without regular physical activity who had been diagnosed with HIV/AIDS where the muscle strength of major groups increased with corresponding improvement in sit-standing and walking 2.4 metres tests. Resistance training increased strength, improved physical fitness, reduced upper and lower limb skin folds in HIV positive elderly patients without significant side effects. Anandh et al (2014) in their study on 24 subjects of both sexes with HIV infection concluded that progressive resistance training (3 days per week for 3 months of 1hr per session) improves functional capacity, immune system and Quality Of Life of PLWHA. Physiotherapists take a primary role in relation to prevention and management of all diseases that are associated with

low levels of physical activity, including HIV/AIDS. As experts in movement and exercises and with thorough knowledge of pathology and its effects on all systems, physiotherapists are ideal professionals to promote, guide, prescribe and manage exercise activities that enable people living with the disease to maintain or improve their level of physical activity. (Anandh et al, 2014)

Exercise provides many benefits to people living with HIV/AIDS some of which are increasing muscle strength, strengthen the bones increases lung capacity, lowers stress and can improve depression, reduces risks of high blood pressure, diabetes and also improves cardiovascular and nervous system function. In fact it is a strategy used to reduce disabling consequences from chronic health problems caused by HIV infection. Physical therapists tend to work in inter-professional teams that provide rehabilitation services to individuals with HIV/AIDS (WCPT, 2010).

In a study by Munishi et al (2009) that explored the global, regional and local existing literature concerning knowledge, attitude and roles of physiotherapy in the management of PLWHA they concluded that there is some evidence that exercise is safe and beneficial to PLWHA. A study done by Useh (2013) concluded that physiotherapists in all spheres of clinical practice require an enormous amount of professional specific HIV and AIDS education for effective clinical practice.

Similar conclusions were made in a study conducted by Salati (2004) which concluded that physiotherapists do not have sufficient knowledge about specific aspects of HIV/AIDS. However in a study done by Pukree et al (2002), the perception of Physiotherapists and their knowledge about HIV/AIDS was not satisfactory. The physiotherapists showed positive attitude towards HIV/AIDS patients and showed a willingness to treat but expressed fear of contracting the infection at workplace. In contrary a study by Sadoh et al (2006) concluded that the healthcare workers that they studied manifested certain attitudes that are potentially discriminatory of PLWHA. Reis et al (2005) concluded that while most healthcare professionals surveyed reported being in compliance with their ethical obligation despite the lack of resources, discriminatory behaviour and attitude towards patients with HIV/AIDS were reported.

It has been noted that the length of stay in hospital for patients with HIV/AIDS is longer due to the multisystem pathology of the disease. This has led to complications of bedrest such

contractures, muscle wasting, pressure sores and hypostatic pneumonia. A disability can result from either the HIV/AIDS as a disease or secondary to side effects of the treatment. This then establishes the need for physiotherapeutic care (Simfukwe, 2014)

Literature reveals that physiotherapy is part of the multidisciplinary team in the management of HIV/AIDS patients and hence a positive attitude and adequate knowledge are reportedly to be of paramount importance in the care of HIV/AIDS patients (Useh, 2013). The researcher then seeks to determine the knowledge on HIV/AIDS and attitudes of physiotherapists on patients with HIV/AIDS in the Kingdom of Swaziland.

2.5 THE KNOWLEDGE AND ATTITUDE OF HEALTHCARE WORKERS.

Discrimination against PLWHA has a profound impact on the care and support required for their optimal management, particularly in resource-constrained settings. A fair number of studies have been done on the knowledge and attitudes of Health Care Workers. The literature in this section looks into the studies done on different healthcare providers in different countries. These studies point to the knowledge and attitude of healthcare workers towards PLWHA and mixed attitudes (that is negative and positive) have been reported, as well as unsatisfactory and satisfactory knowledge amongst the physiotherapists and other health care providers. In a study conducted by Oyeyemi et al (2008) on knowledge, attitude and willingness of Nigerian physiotherapists to treat PLWHA. The study concluded that physiotherapists showed unsatisfactory knowledge about AIDS, harboured negative attitude towards PLWHA and some were unwilling to provide care for them. In a similar study by Oyeyemi et al (2011) on Nigerian Physiotherapists the researchers concluded that physiotherapists in Nigeria showed unsatisfactory knowledge of universal precautions and AIDS pathophysiology. In the same study, many physiotherapists did not feel comfortable and showed low ethical disposition regarding caring for People living With AIDS (PWA) and they were less willing to evaluate and provide intervention to people living with AIDS (PWA) with open wounds or pulmonary conditions than those with musculoskeletal or neurological impairments. On the contrary, a study in Nigeria by Mbada (2012) on the knowledge, attitude and willingness of physiotherapists to provide care for PLWHA in Nigeria demonstrated satisfactory knowledge, positive attitude and willingness to provide care for PLWHA and that years of clinical experience is an important determinant of quality of care given by physiotherapists to PLWHA.

A satisfactory level of knowledge about HIV/AIDS and positive attitudes towards PLWHA were also reported among Radiographers in Enugu State in Nigeria (Okaro et al, 2010).The same study reported that there is a small segment of physiotherapists with negative attitudes towards PLWHA. The researchers recommended that consistent and adequate education about HIV/AIDS will help change physiotherapists' attitude. Adebajo et al (2003) in their study on the attitude of healthcare professionals to PLWHA in Nigeria, reported that almost all the respondents (96.3%) had moderate to good knowledge about HIV/AIDS. Respondents' level of knowledge was

influenced by the level of formal education, length of practice, gender and attendance at refresher courses on HIV/AIDS ($p=0.05$). In contrast, respondents' age, occupation and religion did not significantly influence the level of knowledge. Attitudes towards PLWHA were poor. About half (55.9%) of the healthcare professionals felt PLWHA are responsible for their illness, while 35.4% felt that they deserve the punishment for their sexual misbehaviours. Only 52.8% of the respondents expressed willingness to work in the same office with PLWHA, while 18.0% accepted to visit or encourage their children to visit PLWHA probably because of the fear of contagion. Therefore, it is essential that healthcare professionals be properly informed in order to improve their quality of care for PLWHA.

Puckree et al (2002) conducted a study among physiotherapists in Durban, South Africa on physiotherapists and HIV/AIDS, on their knowledge and prevention. The study reported that out of the 98% of the physiotherapists who believed that physiotherapy is an integral component of the management of AIDS patients, only 38% were completely at ease when treating HIV/AIDS patients. It was concluded that the knowledge of physiotherapists about HIV/AIDS does not stand up to scrutiny, hence the need for educational programmes on HIV/AIDS for physiotherapists at the work place. Similar conclusions were made in a study conducted by Salati (2004) which concluded that physiotherapists do not have sufficient knowledge about specific aspects of HIV/AIDS.

The physiotherapists showed positive attitude towards HIV/AIDS patients and showed a willingness to treat them but expressed fear of getting infections at the workplace. On the contrary but in contrary a study by Sadoh et al (2006) concluded that the healthcare workers that they studied manifested certain attitudes that are potentially discriminatory of PLWHA. Reis et al (2005) concluded that while most healthcare professionals surveyed reported being in compliance with their ethical obligation despite the lack of resources, discriminatory behaviour and attitude towards patients with HIV/AIDS and lack of protective and treatment material appear to contribute to these practices and attitudes.

In a study conducted on knowledge, attitude and practices of healthcare workers with regard to HIV/AIDS in Tamatave, Madagascar by Hentigen et al (2002), the findings showed that 79% of healthcare workers believed that they were at risk of acquiring AIDS, mainly through

occupational exposure. Negative attitudes towards HIV-positive patients were noted. In the same study 20% of healthcare workers mentioned that AIDS patients should be isolated in quarantine. Scientific knowledge about transmissibility of HIV infection was poor. Similar findings were also noted in a study conducted by Faris et al (1994) on the knowledge and attitude of Egyptian healthcare workers. The study showed that out of a study sample of 346 healthcare workers, 72.8% believed that they are in great danger of acquiring AIDS through occupational exposure, whereas 0.6% thought there was no danger. In this same study 67% of healthcare workers had wrong ideas about the transmission of HIV (toilet seats, droplet infection, touching patients).

The literature reveals that physiotherapy is part of the multidisciplinary team in the management of HIV/AIDS patients and hence a positive attitude and adequate knowledge are reported to be of paramount importance in the care of HIV/AIDS patients. The researcher then seeks to determine physiotherapists' knowledge on HIV/AIDS and their attitudes of patients with HIV/AIDS in the Kingdom of Swaziland. Knowledge and attitudes of physiotherapists have been reported in a number of studies and these have an impact on their role as service providers. (Munishi et al, 2009). Good knowledge and attitude have been found to be positively correlated as reported by Gatsi et al (1994) in their study which assessed the attitude of behaviours of physiotherapists working with PLWHA in Zimbabwe.

Similar findings were reported in a study by Useh et al (2003) where they compared the level of knowledge, roles and attitudes of physiotherapists to PLWHA in Nigeria and Zimbabwe and they also concluded that a good level of knowledge correlated with positive attitudes. Worthington et al (2008) in their study that described the role of physiotherapists and the importance of rehabilitation professionals' practices, knowledge and training for PLWHA also concluded that a good level of knowledge correlated with positive attitudes.

2.6 SUMMARY

This chapter reviewed literature on the concepts related to HIV/AIDS, physiotherapy and HIV/AIDS and then the knowledge and attitudes of healthcare workers towards managing People Living with HIV/AIDS. Both negative and positive attitudes have been reported in the previous studies on healthcare workers including physiotherapists, hence the need for the researcher to carry out

such a study in the Kingdom of Swaziland to investigate the knowledge on HIV/AIDS and attitudes of physiotherapists towards patients with HIV/AIDS. The methodology used in this study will be discussed in the next chapter. Some of the physiotherapists (about 59 %) trained during the era when HIV/AIDS was not yet integrated into their training and there is also some paucity in literature on the knowledge and attitude amongst physiotherapists towards people living with HIV/AIDS globally and no such studies have been done in the Kingdom of Swaziland and this has prompted the researcher to undertake such a study.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter describes the methodology that was used in the study. The chapter focuses on the study design and describes the research settings where the study will be conducted. This chapter also explores the study population, sampling method, data collection instrument, exclusion criteria and data analysis method that will be used in the study. In conclusion ethical considerations regarding the study are going to be explained.

3.2 RESEARCH DESIGN

In this study a quantitative approach was explored, where by a descriptive cross-sectional survey was used to determine the knowledge of physiotherapists on HIV/AIDS and their attitudes towards patients living with HIV/AIDS in the Kingdom of Swaziland. According to Cohen (1980), quantitative research is defined as social research that employs empirical methods and empirical statements. He states that an empirical statement is defined as a descriptive statement about what “is” the case in the “real world” rather than what “ought” to be the case. Typically, empirical statements are expressed in numerical terms, another factor in quantitative research is that empirical evaluations are applied. Empirical evaluations are defined as a form that seeks to determine the degree to which a specific program or policy empirically fulfils or does not fulfil a particular standard or norm. A descriptive cross-sectional study is a study in which the disease or condition and potentially related factors are measured at a specific point in time for a defined population. Cross-sectional studies can be thought of as a "snapshot" of the frequency and characteristics of a condition in a population at a particular point in time (NEDARC, 2012).

3.3 RESEARCH SETTING

The study was conducted in different types of settings where the physiotherapists are practicing in the Kingdom of Swaziland. Swaziland is divided into four regions that are Hhohho, Manzini,

Lubombo and Shiselweni. There are six Government hospitals and two Mission hospitals in the Kingdom of Swaziland each with at least one Physiotherapist working there except the Psychiatric Government Hospital. These hospitals are Raleigh Fitkin Memorial Hospital (Manzini region), Mbabane Government Hospital (Hhohho region), Good Shepherd Hospital (Lubombo region), Hlathikhulu Government Hospital (Shiselweni region), Mankayane Government Hospital (Manzini region), and Piggs Peak Government Hospital (Hhohho region) and TB Hospital (Manzini region). There are four Physiotherapists who are running Private Practices and there is also one Rehabilitation Centre that is Cheshire Homes.

3.4 RESEARCH PARTICIPANTS AND SAMPLING

The population that was studied was all the physiotherapists practicing in the Kingdom of Swaziland that manage patients living with HIV/AIDS. A total population sample was used where all the practicing physiotherapists in the Kingdom were eligible to take part in the study. The study involved all physiotherapists because of the small number of physiotherapist in the country. There are 22 physiotherapists in the whole country. The study sample comprised of all physiotherapists practicing in the Kingdom of Swaziland, 4 physiotherapists partook in the pilot study and 18 Physiotherapists were eligible to participate in the main study.

3.5 INCLUSION CRITERIA

Physiotherapists who are practising in Swaziland.

3.6 EXCLUSION CRITERIA

Physiotherapists that are not practicing in any of the work settings. The settings refers to places where physiotherapists are working for example, hospitals, rehabilitation centres and private practices.

3.7 DATA COLLECTION

The data was collected in the Kingdom of Swaziland; a self-administered questionnaire (**APPENDIX A**) was hand-delivered to the physiotherapists participating in the study. Participants were given two weeks to complete the questionnaire. The completed questionnaires were collected directly from the participants. Out of the 18 questionnaires that were distributed to the eligible participants, 17 questionnaires came back from the respondents. The questionnaire was adapted from other questionnaires that have been used by other researchers (Cupido, 2011; Oyeyemi, Oyeyemi and Abegunde, 2011; Useh et al, 2003) and it consisted of a section on

demographic data, a section on the attitude of Physiotherapists when managing HIV/AIDS patients and another on their level of knowledge about HIV/AIDS and its transmission methods and a section on the sources of information on HIV/AIDS.

The level of knowledge about HIV/AIDS amongst the participants was categorized as good, fair and poor according to the options they selected from the listed items (**APPENDIX A**). The scales were developed to determine these categories as shown on Table 4.2 where for instance for question H, the participants were classified as having a “good” knowledge if they were familiar with five and above items out of the nine listed items, a “fair” knowledge was for those that got three to four out of nine items and their knowledge was said to be poor if they were familiar with less than three out of nine items on the list. The scales for attitude were based on the positive answers that the participants gave. It was categorized as good or bad. Those that responded negatively were classified as having a bad attitude and vice versa. For example a question asked “how would you react if you discovered that your patient is HIV positive?” those that responded by saying “yes” will just take precaution and continue seeing the patient were regarded as having a positive attitude and those that answered “No” were regarded as having a bad attitude.

3.8 RELIABILITY AND VALIDITY OF THE DATA COLLECTING INSTRUMENT

3.8.1 RELIABILITY

The reliability of an instrument is the degree of consistency with which it measures the attributes it is supposed to measure according to Bless & Higson-Smith (2000). A measurement is said to be reliable or consistent if the measurement can produce similar results if used again in similar circumstances. A pilot study was conducted. This was done so as to assess the clarity and internal consistency of the instrument. The reliability of the questionnaire was assured through the use of one rater who managed all the administration of the questionnaire and data capturing.

3.8.2 PILOT STUDY

The pilot study seeks to answer the question, does the questionnaire consistently measure what it seeks to measure? (Radhakishna, 2007). In this study four physiotherapists were selected and given the questionnaire to complete after they gave consent and they were informed that confidentiality shall be maintained. There were 4 physiotherapists that consented to the pilot study and they gave feedback on the structure of the questionnaire and clarity on some questions was highlighted and

the researcher adjusted the questionnaire accordingly. The physiotherapists who participated in the pilot study were not part of the main study.

3.8.3. VALIDITY

This means that a tool measures what it sets out to measure (Twycross & Shields, 2004).

3.8.4 CONTENT VALIDITY

Content validity refers to whether the instrument fully assesses the construct of interest (Twycross & Shields, 2004). In this study the questionnaire has a set of questions that seek to establish the domains of knowledge and attitude of physiotherapists towards management of patients with HIV/AIDS. In this study content validity was examined by a physician, two medical officers attached to ART Clinic and an occupational therapist who have some experience and knowledge on the construct of interest. The criteria for selecting the panel to validate the instrument was based on their experience in managing patients with HIV/AIDS and also having more than 10 years working experience in their respective fields. They were given the sometime to go through the questionnaire and a face to face discussion was conducted. The physicians gave feedback on the complications associated with HIV/AIDS and the researcher added “Cytomegalovirus and Cryptococosis” which were not on the list of complications. The occupational therapist also gave feedback on the conditions associated with HIV/AIDS that need rehabilitation and “incoordination” was added to the list.

3.8.5 FACE VALIDITY

Is a component of content validity and is established when an individual reviewing the instrument concludes that it measures the characteristic or trait of interest (Twycross & Shields, 2004). In this study the face validity of the instrument was established by the Physician, two medical officers who were attached at ART Clinic and the Occupational Therapist who looked through it and they concluded that it was valid and it seemed to measure what it is intended to measure at face value.

3.9 DATA ANALYSIS

Data was captured and verified whilst the field work was going on using Microsoft Excel. Preliminary analysis involved checking data for consistency and these data was then transferred to a statistical software namely SPSS (Statistical Package for Social Science) and analysis was performed for descriptive statistics to establish frequencies. Correlation analysis using Pearson's Chi-square was undertaken to establish the relationship between knowledge and attitude, years of experience and the familiarity with commonly used ARVS and Universal Precautions. Statistical tests were assessed at the 5% level of significance; as such a p-value of less than 0.05 would indicate statistical significance.

3.10 ETHICAL CONSIDERATIONS

The research proposal was submitted for approval to various research and other committees in the University of Limpopo and the Kingdom of Swaziland and it was granted. Permission to conduct the study was sought and obtained from Medunsa Research and Ethics Committee(MREC) (**Appendix E**), Swaziland Research and Ethics Committee (**Appendix F**), Letter of Permission to the Chief Executive Officers/Directors (**Appendix B**), Letter of authorisation from the Chief Executive Officers/ Directors of different institutions (**Appendix G**). A letter to participants requesting (**Appendix C**) them to participate in the study and explaining about the study was given to participants together with the consent form (**Appendix D**). Individual written consent and there was an accompanying letter to the participants explaining the purpose of the study, confidentiality of the information they will give and that they are free to participate and withdraw if they feel like doing so at any given point in time. Anonymity was maintained, no names were required from participants hence they were not be written on questionnaires.

3.11 SUMMARY

This chapter dealt with the methodology used in this study. The study was conducted among the Physiotherapists practicing in the Kingdom of Swaziland and self-administered questionnaire was used to collect data. The results of the study are going to be presented in the next chapter

CHAPTER FOUR

RESULTS

4.1 INTRODUCTION

This chapter presents the findings of the study that was done amongst 17 physiotherapists in the Kingdom of Swaziland who are the total population who were involved in the study. A self-administered semi-structured questionnaire was used as a data collection tool. The results will be mainly presented in tables, bar charts and pie charts.

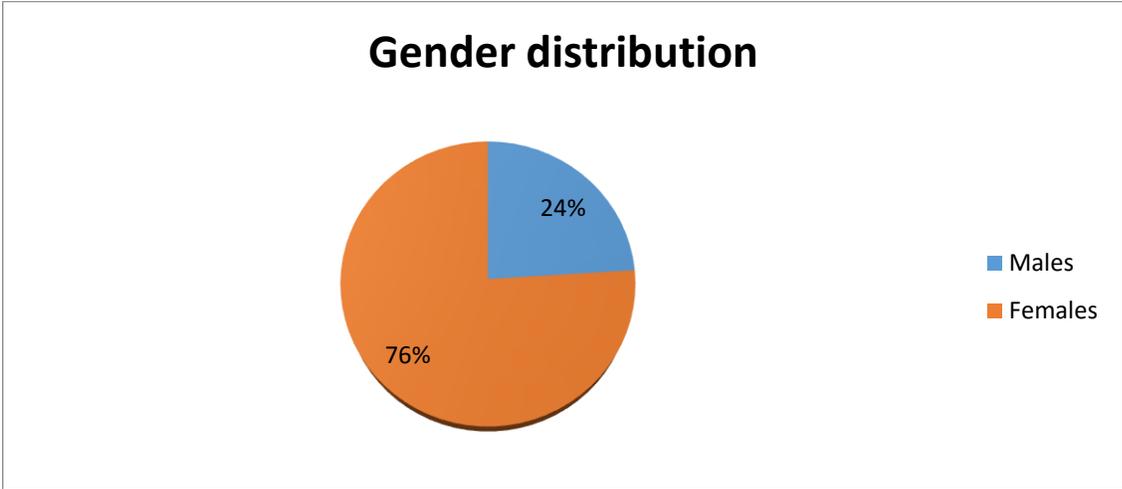


Figure 4.1: Gender distribution of respondents

Figure 4.1 above shows that 76% of respondents were females compare to 24% males.

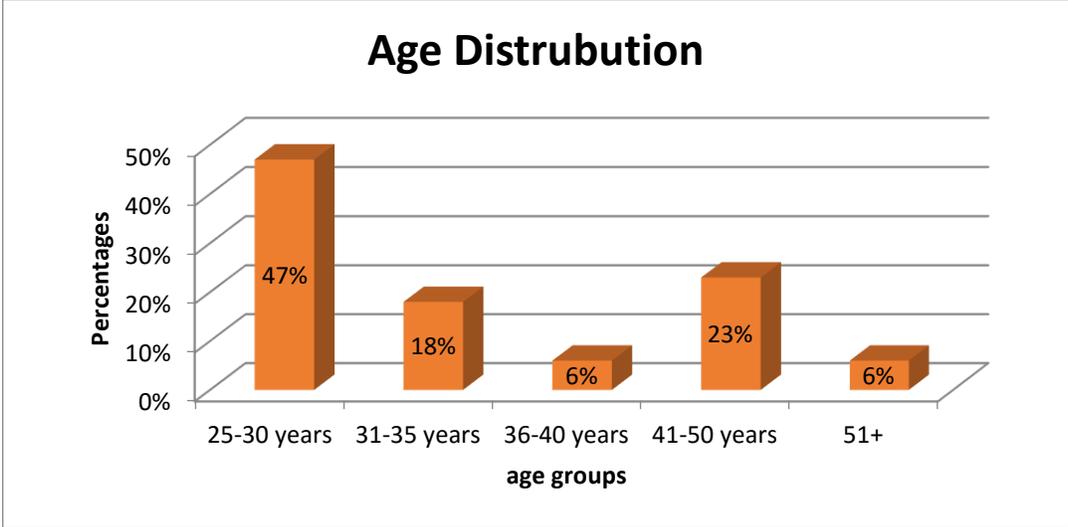


Figure 4.2: Age distribution of respondents

Figure 4.2 shows that most of respondents were 25-30yrs; followed by 23% 41-50 yrs and the least >51yrs.

Table 4.1 Illustration of Demographic Data

Variables	Number of Physiotherapists	Percentage (%)
Qualification		
Diploma	1	6%
Degree	14	82%
Masters	2	12%
Other	0	0
Years of Experience		
0-2 years	4	24%
3-6 years	5	29%
7-10 years	2	12%
11+	6	35%
Employment Type		
Full Time	16	94%
Part time	1	6%
Clinical Settings		
Public Hospital	6	35%
Private Clinic	7	41%
Rehabilitation Centre	4	24%

Table 4.1 above shows that the majority (82%) of respondents had degrees, and only 6% had diplomas. Also, most of respondents had worked for less than 6 years (53%); 94% had fulltime employment and most worked in private clinic (41%).

Table 4.2 Association between familiarity with Universal Precautions, commonly used ARVS, attitude and years of experience

	Familiarity with Universal Precautions		Commonly used ARVS		Attitude	
	Pearson Chi Square	Chi p-value	Pearson Chi Square	Chi p-value	Pearson Chi Square	Chi p-value
Variable						
Years of experience	1.13	0.76	2.55	0.046	0.70	1.40

Table 4.2 above shows that there was no statistical relationship between familiarity with Universal Precautions and attitude (p= 0.76 and 0.70 respectively); and there was a statistically significant relationship between knowledge on commonly used ARVS and years of experience (p = 0.046).

4.2 KNOWLEDGE

The physiotherapists were asked about their knowledge on HIV/AIDS.

Table 4.3. Responses of respondents on training on HIV management

	Yes	No
A. Was HIV/AIDS part of your curriculum during training?	7(41.0%)	10(59.0%)

B. Have you ever attended continuous education lectures?	8 (47.0%)	9(53.0%)
C. Are you familiar with the commonly used ARVS combinations?	17(100%)	0
D. Are you familiar with the side effects associated with ARVS that lead to patients being referred for physiotherapy?	8(47%)	9(53.0%)

Table 4.3 above shows that 59% of the physiotherapists reported that HIV/AIDS was not part of their curriculum during their training. Forty-seven percent of the Physiotherapists reported that they had attended continuous education lectures on HIV/AIDS during their years in practice and 47% also reported that they were not familiar with side effects of commonly used ARVs that lead to patients being referred for physiotherapy. Despite the fact that 47% of physiotherapists were not familiar with the side effects associated with commonly used ARVs that lead patients to be referred for physiotherapy, all physiotherapists (100%) were familiar with the commonly used ARVS combinations.

4.2.2 UNIVERSAL PRECAUTIONS

Table 4.4 Responses of respondents with regard to universal precautions

Variables	Yes N (%)	No N (%)
Do you take precautions on a day to day basis when handling HIV/AIDS patients?	17(100%)	0
are you familiar with the Universal Precautions (UP) against HIV/AIDS	12 (76%)	5(24%)
Do you adhere to the Universal Precautions when managing HIV/AIDS patients	10(59%)	7(41%)

Managing patients with HIV/AIDS	I Wear gloves	10(59%)
	I will avoid treating patients with HIV/AIDS.	2(11%)
	No response	5(29%)

Table 4.4 above shows that all participants (100%) reported that they do take precautions on a day to day basis when handling HIV/AIDS patients. In the same study 76% of the participants reported that they are familiar with the Universal Precautions (UP) against HIV/AIDS but 59% of the physiotherapists reported that they adhere to the Universal Precautions when managing HIV/AIDS patients. When asked how they would protect themselves from contracting HIV/AIDS, 59% reported that they would wear gloves when managing patients with HIV/AIDS and 11% reported that they will avoid treating patients with HIV/AIDS.

4.2.3 COMPLICATIONS ASSOCIATED WITH HIV/AIDS

Table 4.5 Knowledge of respondents about HIV

	Knowledge Category	Number of physiotherapists	Percentage (%)
Which of the complications would benefit from Physiotherapy?			
5/9 items above	Good knowledge	16	94
3-4/9 items	fair knowledge	1	6
<3/9 items	poor knowledge	0	
Are there some of the complications of HIV/AIDS that you know?			
5/9 items above	Good knowledge	17	100
3-4/9 items	fair knowledge	0	
<3/9 items	poor knowledge	0	

Which of the following stages of HIV/AIDS progression are you familiar with?			
4/6 items and above	Good knowledge	9	53
3/6 items	Fair knowledge	3	18
<3/6 items	Poor knowledge	5	29

All participants (100%) reported that they are aware of the complications of HIV/AIDS. For knowledge about complications associated with HIV/AIDS, 100% of the participants had good knowledge as they were familiar with all the listed complications associated with HIV/AIDS. Also, on knowledge about complications that would benefit from physiotherapy, 94 % of the participants had a good knowledge and only 6% of the participants were categorized as having a "fair knowledge".

Furthermore, 53% of the participants had "good knowledge" of stages of HIV/AIDS progression; 18% had fair knowledge and 29 % had poor knowledge on the subject.

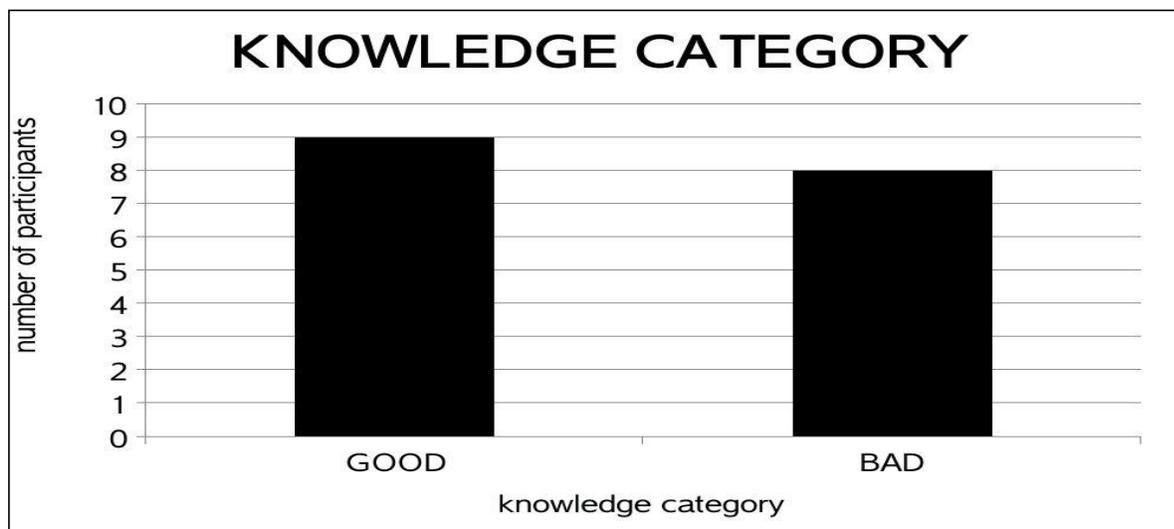


Figure 4.3 : Showing the summary knowledge of participants on the stages of HIV/AIDS progression.

Figure 4.3 above shows that 9(53%) respondents had good knowledge of stages of HIV/AIDS and 8(47%) had bad knowledge

4.2.6 MODES OF HIV TRANSMISSION AT THE WORKPLACE

Regarding the modes of transmission of HIV in the workplace, 82% of the participants reported that being in contact with body fluids and being pricked by a needle were cited as the most common modes of transmission as shown in **Fig 4 .4** below and 18% of the participants did not respond to the question.

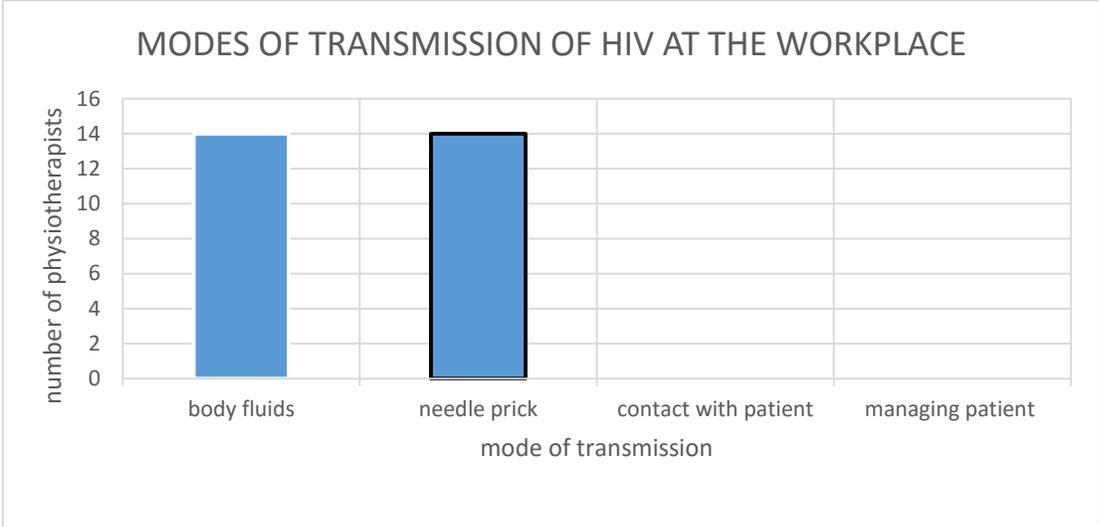


Figure 4.4: showing the modes of transmission of HIV at the work place

4.3 ATTITUDE

This section looked at the responses of the participants as regard their attitude towards HIV/AIDS patients.

4.3.1 WILLINGNESS TO TREAT PATIENTS WITH HIV/AIDS

Table 4.6 below shows that 100% of respondents had ever treated a patient with HIV/AIDS before; 47% reported that they had concerns when treating people with HIV/AIDS. Furthermore, 71% of respondents reported that they would seek more knowledge on HIV and continue seeing HIV/AIDS patients (table 4.6 below).

4.3.2 REACTION TO MANAGEMENT OF HIV/AIDS PATIENTS

Table 4.6: illustrating the responses of physiotherapists to the management of HIV/AIDS patients.

Question	Yes	No
Have you ever treated patients with HIV/AIDS before?	17 (100%)	0
Patients with HIV/AIDS should be given the same care given to all other patients?	17 (100%)	0
Do you have concerns when treating people with HIV/AIDS	8 (47.0%)	9 (53.0%)
HIV/AIDS patients deserve all the respect	17 (100%)	0
How would you react if you discovered that your patient is HIV positive?		
Will just take precautions and continue seeing them?	17 (100%)	0
If you are to regularly attend HIV/AIDS patients, what would be your reaction?		
i. Not different from other patients	5 (29%)	12 (71%)
ii. Leave the profession	0	100%

iii. Seek more knowledge on HIV and continue seeing the patients	12 (71%)	5 (29%)
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Table 4.6 above shows that all participants (100%) reported that patients with HIV/AIDS should be given the same care given to all other patients. 47% (n=8) of the participants reported that they have concerns when treating people living with HIV/AIDS which was termed a bad attitude and the rest of the participants said they have no concern when treating people with HIV/AIDS and that was termed a good attitude. All participants (100%) reported that HIV/AIDS patients deserve all respect like any other patient. When asked how they would react when they discovered that their patient had HIV/AIDS, 100% of the participants reported that they would just take precautions and continue seeing them. When asked what their reaction would be if they regularly attended to HIV/AIDS patients, 71 % of participants responded by saying that they would seek more knowledge on HIV /AIDS and continue seeing the patients and 29% of the participants reported that their reaction would not be different from other patients and all this was termed good attitude.

Table 4.7 Showing the statistical relationship between knowledge and attitude.

	Attitude	P -values
Variable	Pearson Chi Square	p-value
knowledge	1.000	0.614

Table 4.7 There was no statistical significant association between years of experience and attitude ($p=0.25$) and between knowledge and attitude ($p=0.61$) as shown in table 4.7.

4.4 SOURCES OF INFORMATION ON HIV/AIDS

Fig 4.5 below shows that with regards to the sources of HIV/AIDS information to update their knowledge the internet was used by the majority (71%) followed by journals (35%), workshops (12%), 12% of the participants reported that they use nothing at all as shown in Fig 4.5 below.

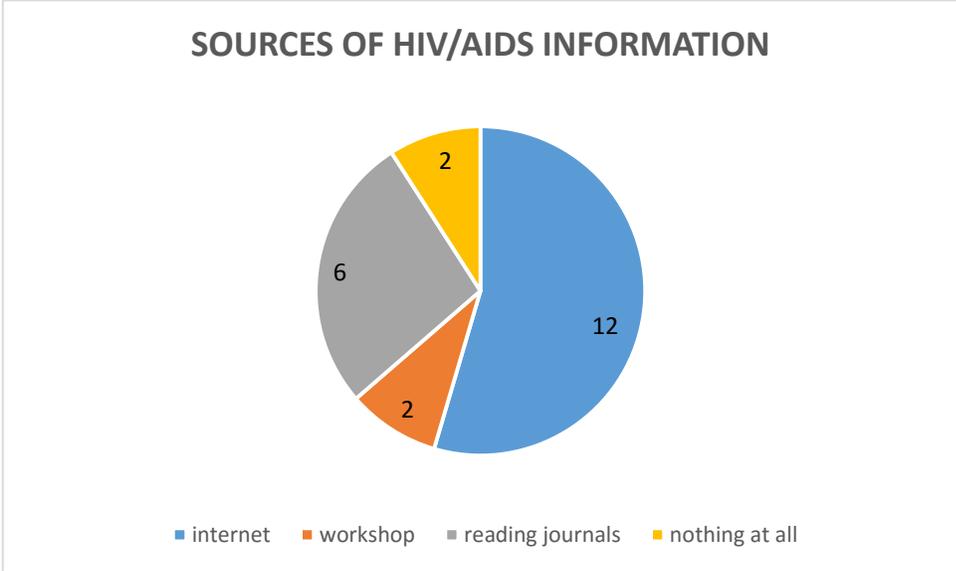


Fig 4.5: The distribution of sources of HIV/AIDS information as reported by the participant.

4.5 AREAS IN WHICH PHYSIOTHERAPISTS NEED MORE INFORMATION ON

When asked a question on which areas the participants needed more knowledge and information on, the participants responded by having the majority (64%) of respondents reporting that they needed more information on ARVS followed by those (58%) that reported that they need more information on everything pertaining to HIV/AIDS as shown in **Fig 4.6** below.

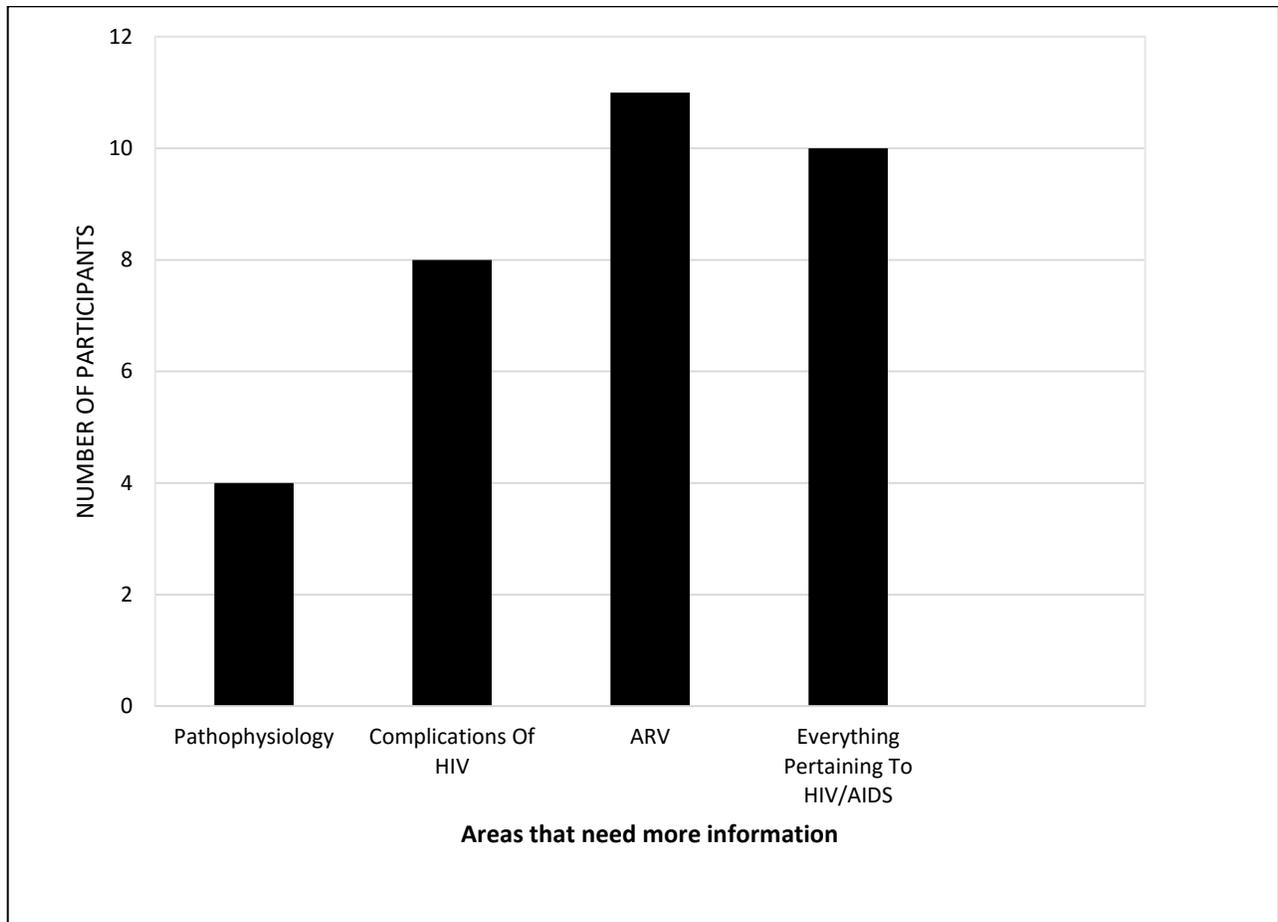


Fig 4.6: Responses of participants on the areas where they need more knowledge and information

CHAPTER FIVE

DISCUSSION

5.1 INTRODUCTION

In this chapter the study results are discussed in relation to the objectives and relevant literature. The study examined the knowledge and attitude of physiotherapists towards people living with HIV/AIDS in the Kingdom of Swaziland.

5.2 KNOWLEDGE OF PHYSIOTHERAPISTS

This section discusses the various aspects of knowledge of physiotherapists on HIV/AIDS as outlined below. More than half of the physiotherapists reported that HIV/AIDS was not part of their curriculum during their training. Some physiotherapists reported that they attended Continued Medical Education during their practice. In a study conducted by Salati (2004) insufficient knowledge on specific aspects of HIV/AIDS amongst physiotherapists was reported. The recommendation was that it is of paramount importance that physiotherapists should be up to date in their knowledge of HIV/AIDS as it has been noted that there was already an increase in the number of disabilities associated with HIV/AIDS. It has been reported that there is low risk of HIV transmission among physiotherapists when dealing with patients that have HIV/AIDS if they adhere to Universal Precautions at the work place (King and Okoli, 1993). Puckree et al (2002) conducted a study among physiotherapists in Durban, South Africa, on Physiotherapists knowledge and prevention of HIV/AIDS. The study reported that out of 98% of the physiotherapists that believed that physiotherapy is an integral component of the management of AIDS patients only 38% were

completely at ease when treating HIV/AIDS patients. It was concluded that the knowledge of physiotherapists about HIV/AIDS does not stand up to scrutiny hence the need for educational programmes on HIV/AIDS for physiotherapists at work place.

In a study done by Adebajo et al (2003) on attitudes of Healthcare professionals to PLWHA in Nigeria reported that most of the respondents (96.3%) had moderate to good knowledge about HIV/AIDS. Respondents' level of knowledge was influenced by the level of formal education, length of practice, gender and attendance at refresher courses on HIV/AIDS ($p=0.05$). In contrast respondents' age, occupation and religion did not significantly influence the level of knowledge. Attitudes towards PLWHA were poor. Some (55.9%) of healthcare professionals felt PLWHA are responsible for their illness, while 35.4% felt that they deserve the punishment for their sexual misbehaviours. Only 52.8% of the respondents expressed willingness to work in the same office with PLWHA while only 18.0% accept to visit or encourage their children to visit PLWHA probably because of the fear of contagion therefore it is essential that healthcare professionals be properly informed in order to improve their quality of care for PLWHA.

5.3 MEDICATION

Forty-seven percent of the physiotherapists were not familiar with commonly used ARVS but all of them were familiar with the side effects associated with ARVs and were also familiar with those side effects that lead to patients being referred for physiotherapy. The physiotherapists should know the side effects of ARVs since they maybe treating patients who present with conditions that could be due to the debilitating side effects of these drugs (Salati, 2004).

5.4 MODES OF TRANSMISSION AT THE WORKPLACE

In the current study, the physiotherapists were knowledgeable about the modes of transmission of HIV at the workplace. Contact with body fluids and being pricked by a needle were cited as the most common modes of HIV transmission. The fear of infection was earlier reported in a study conducted by Gatsi et al (1994) among rehabilitation workers in Zimbabwe where out of 119 respondents enrolled for the study, 54.6% expressed fear of becoming infected whilst treating patients that have HIV/AIDS.

In a study conducted on knowledge, attitude and practices of Healthcare workers with regard to HIV/AIDS in Tamatave, Madagascar by Hentigen et al (2002) it reported that 79% of healthcare workers believed that they were at risk of acquiring AIDS, mainly through occupational exposure. Negative attitudes towards HIV positive patients were noted. In the same study 20% of healthcare workers mentioned that AIDS patients should be quarantined.

Scientific knowledge about transmissibility of HIV infection generally poor. Similar findings were also noted in a study conducted by Faris et al (1994) on the knowledge and attitude of Egyptian healthcare workers concluded that out of a study sample of 346 healthcare workers, 72.8% believed that they are in great danger of acquiring AIDS through occupational exposure whereas 0.6% thought there was no danger. In this same study 67% of healthcare workers had wrong ideas about transmission of HIV (toilet seats, droplet infection, touching patients).

5.5 UNIVERSAL PRECAUTIONS

Most of the physiotherapists were familiar with the universal precautions (UP) and some of the physiotherapists reported that they do not adhere to them. All of the physiotherapists reported that they do take precautions on a day to day management of patients with HIV/AIDS. This will reduce their chances of contracting HIV as reported by King and Okoli (1993) in their study on Attitudes towards people with HIV/AIDS which reported that there is low risk of HIV transmission among physiotherapists when dealing with patients that have HIV/AIDS if they adhere to Universal Precautions at the work place.

5.6 STAGES OF HIV/AIDS PROGRESSION

More than half of the physiotherapists were categorized as having a good knowledge on the stages of HIV/AIDS progression .Poor and fair knowledge were also reported on the same subject amongst the physiotherapists and these findings were similar to those found in a study by Oyeyemi et al (2008) which reported that Nigerian physiotherapists showed unsatisfactory knowledge of Universal Precautions and AIDS pathophysiology.

5.7 COMPLICATIONS OF HIV/AIDS

All physiotherapists seemed to be aware of the complications associated with HIV/AIDS and had a good knowledge of the complications. Most of the physiotherapists were knowledgeable about the complications that would benefit from physiotherapy although a few were categorized as having a bad knowledge on the same subject.

The knowledge of physiotherapists on HIV/AIDS seems to be good according to the findings of the study, which is commensurate with the findings of Adebajo et al (2003) in their study on attitude of health professionals towards PLWHA in Nigeria where most of the participants reported moderate to good knowledge. Similar findings were also reported in a study by Mbada (2012) on knowledge and attitude of Nigerian Physiotherapists towards HIV/AIDS patients where it was concluded that the physiotherapists had a satisfactory knowledge.

In contrary in a study by Salati (2004) and Pukree et al (2002) both concluded that the knowledge of physiotherapists is not sufficient on specific aspects of HIV/AIDS and their knowledge does not stand up to scrutiny hence the need for educational programs on HIV/AIDS for physiotherapists at work place. Oyeyemi et al (2008) also reported that Nigerian physiotherapists showed unsatisfactory knowledge of Universal Precautions and AIDS pathophysiology.

5.8 ATTITUDES

There was generally a positive attitude among physiotherapists towards HIV/AIDS patients no discrimination was reported in this study which yielded similar results to the study done by Mbada (2012) on Nigerian physiotherapists where positive attitudes were reported amongst the participants. Most of the physiotherapists had previously managed patients with HIV/AIDS during their practice. In a study conducted by Kambole (2007), the conclusion was that there were positive attitudes among physiotherapists during management of HIV/AIDS patients although some negative attitudes and fear of occupational-related infection was reported in the same study. The negative and discriminatory attitudes were also reported amongst health workers with regards to HIV/AIDS patients by Sadoh et al (2006) and Hentigen et al (2002).

5.8.1 WILLINGNESS TO TREAT PATIENTS WITH HIV/AIDS

All physiotherapists reported that patients with HIV/AIDS deserve to be given the same treatment

as any other patient this was in contrary to a study by Oyeyemi et al, 2008 on Nigerian physiotherapists where it was reported that they were less willing to treat HIV/AIDS patients. Some physiotherapists reported that they have concerns when managing patients with HIV/AIDS. All physiotherapists reported that patients that have HIV/AIDS deserve all respect like any other patient .When asked how they would react if they discovered that their patient has HIV/AIDS, all physiotherapists reported that they would take precautions and continue seeing the patient. The physiotherapists reported a good reaction towards management of HIV/AIDS by reporting that they will seek more knowledge and continue seeing the patients if they had to regularly manage these patients.

5.8.2 SOURCES OF INFORMATION

Most of the physiotherapists reported that they use internet and journals, attending workshops was also used by some to keep themselves updated with knowledge on HIV/AIDS. They were some (12%) who did not update their knowledge on HIV/AIDS at all.

5.8.3 AREAS THAT NEED MORE INFORMATION

The physiotherapists reported that they need more information on ARVS and on HIV/AIDS in general despite the fact that the study reported that their knowledge was found to be good.

5.9 CONCLUSION

There is generally good knowledge on HIV/AIDS amongst the physiotherapists practicing in the Kingdom of Swaziland and also positive attitudes towards PLWHA has been reportedly amongst physiotherapists. The study also concludes that knowledge has an influence on attitude as seen in the study where most physiotherapists had a good knowledge on HIV/AIDS and hence had generally a positive attitudes towards PLWHA.

The knowledge of physiotherapists on HIV/AIDS seem to be generally good although there are some areas that physiotherapists cited that they would need more knowledge on. The attitude of Swaziland physiotherapists seemed to be generally good attitude towards people living with HIV/AIDS although some negative/bad attitude have been reported in some physiotherapists.

CHAPTER SIX

INTRODUCTION, SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter presents the summary, conclusion and recommendations based on the results of the study.

6.2 SUMMARY

The study investigated knowledge and attitudes of physiotherapists towards people living with HIV/AIDS and it was found that generally, the physiotherapists have a good knowledge and a positive attitude towards PLWHA. Some negative attitudes (47%) were reported in a few physiotherapists as well as fair and poor knowledge on some of the aspects of HIV/AIDS. From the results, more than half (59%) of the physiotherapists reported that HIV/AIDS was not part of their curriculum during their training and despite that they seemed to be knowledgeable about HIV/AIDS. It was also found that some Physiotherapists (47%) were not familiar with the side effects of the commonly used ARVs that led to patients being referred for physiotherapy.

The physiotherapists were knowledgeable about the modes of transmission of HIV at the workplace. Most physiotherapists (76%) were familiar with the Universal Precautions and some (41%) reported that they do not adhere to them.

Positive attitudes were reported amongst physiotherapists, no discrimination was reported by physiotherapists in the study. Most of the physiotherapists reported that when managing PLWHA they would take precautions and continue to see the patients. They also reported that they would seek more knowledge and continue treating the patients.

Physiotherapists reported that there are some areas where they need more information on that is on ARVs and general information pertaining to HIV/AIDS.

6.3 CONCLUSION

In conclusion the study managed to meet the set objectives. The study managed to determine the knowledge and attitude of physiotherapist towards the people living with HIV/AIDS and to determine if knowledge has an influence on attitudes of physiotherapists on treating patient with HIV/AIDS. It was found that generally the physiotherapists have a good knowledge on HIV/AIDS and also they had good attitude towards PLWHA. Knowledge was found not to influence attitude from the results of the study.

6.4 RECOMMENDATIONS

With the surge in the number of patients that have HIV/AIDS physiotherapy is part of the management of some of these patients since they now live longer due to ARVs, physiotherapists need to be knowledgeable on issues pertaining to HIV/AIDS and also they are expected to show a positive attitude as they manage these patients. Therefore I would like to make the following recommendations based on the results of the study:

1. Inclusion of HIV/AIDS in physiotherapy school/departments/divisions curricula. It is recommended that all the schools/divisions of physiotherapy should include HIV/AIDS in the school curricula for physiotherapists since more than half of the participants (59%) did not have HIV/AIDS information in their curricula during their training.
2. It is also a recommendation that physiotherapists should be trained in basic counselling skills as they now deal with HIV/AIDS patients on a daily basis and some of them have psychosocial challenges.
3. Programmes should be in place for physiotherapists issues pertaining to HIV/AIDS so that they are kept updated on the different aspects pertaining to the pandemic.
4. There is need for physiotherapists to attend the workshops that talk about HIV/AIDS which are organized for other healthcare providers to keep them up to date with the information pertaining to HIV/AIDS.
5. There is a need for the work setting libraries where physiotherapists work to have current books and journals for the physiotherapists to update themselves on issues pertaining to HIV/AIDS and internet access in the departments. The physiotherapists

are also encouraged to take the initiative to utilise the libraries in their work settings and get information on HIV/AIDS.

6. Further research on the subject using qualitative methods like focused group discussions to get more views to explore further the subject of knowledge and attitude of physiotherapists towards patients with HIV/AIDS at the workplace.
7. Further research can be done and incorporate other rehabilitation workers such as the occupational therapists, speech therapists and rehabilitation technicians to investigate their knowledge and attitude towards people living with HIV/AIDS in the Kingdom of Swaziland.

6.5 LIMITATION OF STUDY

6.5.1 QUESTIONNAIRE

1. There was a need to include some open ended question to actually get the detailed views of the participants.
2. Some questions needed to be included such as those that could explore the risks of contracting HIV at workplace for physiotherapists whilst managing HIV/AIDS patients.

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APPENDIX A: QUESTIONNAIRE

INFORMATION SHEET

(Dear Physiotherapists, please read and understand the document before signing it)

RESEARCH TITLE: KNOWLEDGE ON HIV/AIDS AND ATTITUDES OF PHYSIOTHERAPISTS TOWARDS PATIENTS LIVING WITH HIV/AIDS.

INTRODUCTION

This is an invitation to participate in the study voluntarily. This is to help you decide if you would like to participate and should there be any questions please feel free to ask the researcher.

THE PURPOSE OF THE STUDY

The purpose of the study is to determine the knowledge on HIV/AIDS and attitudes amongst physiotherapists in the Kingdom of Swaziland. The sample of this study were 18 Physiotherapists who were eligible to participate in the study.

Before the study you will need to complete:

- Consent form during the study the participants will be expected to complete the questionnaire on their own.

WHY THE STUDY IN THE KINGDOM OF SWAZILAND IS: Because no such studies have been done on the knowledge and attitude of physiotherapists in the Kingdom of Swaziland and the researcher works and resides in Swaziland.

The researcher would like to determine the knowledge on HIV/AIDS and attitudes of Physiotherapist when managing people living with HIV/AIDS in the Kingdom of Swaziland.

To also determine if knowledge has an influence on the attitudes of Physiotherapists towards PLWHA.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study will commence upon approval from the University of Limpopo, Medunsa Research and Ethics Committee and other relevant authorities in the Kingdom of Swaziland.

RIGHTS AS PARTICIPANTS IN THE STUDY

Participation is voluntary and you have a right to refuse participation in the study. Refusal to participate will not in any way influence any future relationships with the school or the researcher.

ARE THERE ANY RISKS There are no risks attached to this study,

DISCONTINUATION OF PARTICIPANTS IN THE STUDY

No pressure will be exerted on the participant to consent to participate in the study and the participant may withdraw at any stage without penalization or prejudice.

ANY FINANCIAL ARRANGEMENTS

There are no financial resources that participants can benefit from the study.

CONFIDENTIALITY

All information provided to the research team will be treated as confidential.

QUESTIONNAIRE

Please complete the questionnaire and answer all questions

SECTION A: DEMOGRAPHIC DATA

Please indicate your response with a cross (X)

1. GENDER

Male	1
Female	2

2. AGE

25-30	1
30-35	2

35-40	3
40-50	4
50+	5

3. QUALIFICATION

Diploma in Physiotherapy	1
Degree in Physiotherapy	2
Master in Physiotherapy	3
Other	4

4. YEARS OF EXPERIENCE

0-2yrs	1
2-6yrs	2
6-10yrs	3
11+	4

5. EMPLOYMENT TYPE

Full	1
Part-time	2

6. CLINICAL SETTING OF EMPLOYMENT

Public hospital	1
Private clinic	2
Private Hospital	3
Domiciliary visits	4
Rehabilitation Centre	5

SECTION B: KNOWLEDGE

The questions in this section seek to establish the knowledge of physiotherapists about HIV/AIDS

7. Please indicate your response with a cross (X):

		YES	NO
A)	Was HIV/AIDS part of your curriculum during your training?	1	2
B)	Have you ever attended continuous education lectures on HIV/AIDS during your practice?	1	2
C)	Are you familiar with the most commonly used ARVS combinations?	1	2
D)	Are you familiar with any side-effects associated with ARVS that lead to patients being referred for Physiotherapists?	1	2
E)	In your day to day management of patients do you take precautions?	1	2
		YES	NO
F)	(i) Are you familiar with Universal Precautions against HIV?	1	2
(ii)	If YES, do you adhere to them?	ALWAYS	SOMETIMES
		1	2
			NEVER
			3
(iii)	If NO, why?	Do not know them	Do not want to
		1	2
		YES	NO
G)	Are there some of the complications of HIV/AIDS that you know?	1	2

Please indicate the complications of HIV/AIDS that you are familiar:

G (i) toxoplasmosis	1
ii)Cytomegalovirus	2
iii)Tuberculosis	3
iv)Pneumonia	4

v)Gait disorders	5
vi)Peripheral neuropathy	6
vii)Cryptococcosis	7
viii)Neuralgia	8
`ix)In co-ordination	9

H) Which of the complications would benefit from physiotherapy?

i) toxoplasmosis	1
ii)Cytomegalovirus	2
iii)Tuberculosis	3
iv)Pneumonia	4
v)Gait disorders	5
vi)Peripheral neuropathy	6
vii)Cryptococcosis	7
viii)Neuralgia	8
ix)In co-ordination	9

D) How do you protect yourself from contracting HIV during your management of HIV patients?

i. By wearing gloves when treating patients with HIV/AIDS	1
ii. By avoiding treating patients with HIV/AIDS	2
iii. By adhering to the stipulated universal precautions	3

J) What would you say are the modes of transmission of HIV in the workplace?

i. Contact with body fluids	1
ii. Being pricked by a needle	2
iii Being in contact with a patient living with HIV/AIDS	3
iv. Managing patients with HIV/AIDS	4

K) Which of the following stages of HIV/AIDS progression are you familiar with?

i. Infection	1
ii. Window period	2
iii. Seroconversion	3
iv. Asymptomatic Period	4
v. HIV/AIDS-related illness	5
vi. AIDS	6

SECTION C: ATTITUDE

The questions in this section seek to determine the attitude of physiotherapists towards people with HIV/AIDS.

Please indicate your response with a cross (x)

		YES	NO
L)	Have you ever treated patients with HIV/AIDS before	1	2
M)	Patients with HIV/AIDS should be given the same care given to all other patients.	1	2
N)	(i) Do you have any concerns when treating people with HIV/AIDS?	1	2

O)	Yes	No
	1	2
HIV/AIDS patients deserve a the respect		

P) How do you or would you react if you discover that your patient is HIV positive?

i. Stop treating them	1
ii. Will continue to see them	2
iii. Will refer them elsewhere	3
iv. Will just take precautions and continue seeing them	4

Q) If you have to attend to HIV/AIDS patients regularly, what would be your reaction?

SECTION D: SOURCES OF HIV/AIDS INFORMATION

R) How do you keep yourself updated on issues of HIV and AIDS?

i. Internet	1
ii. Workshop	2
iii. Reading journals	3
iv. Nothing at all	4

S) Which areas regarding HIV/AIDS would you like to get more knowledge on?

i. Pathophysiology	1
ii. HIV transmission	2
iii. Complications of HIV/AIDS	3
iv. Anti-retroviral therapy	4
everything pertaining to HIV/AIDS	5

**APPENDIX B: LETTER OF PERMISSION TO THE CHIEF EXECUTIVE OFFICERS/
DIRECTORS OF INSTITUTIONS
LETTER OF PERMISSION**

University of Limpopo

Turf loop Campus

Health Sciences

School of Public Health

Private Bag X1106

Sovenga 0727

28 April 2015

.....
.....
.....
.....

Dear Sir/Madam,

RE: REQUEST FOR PERMISSION TO DO A RESEARCH

I am a postgraduate student of Master of Public Health at the University of the Limpopo, Turfloop Campus, South Africa. I plan to carry out research on ‘The knowledge on HIV/AIDS and attitudes of Physiotherapists towards patients with HIV/AIDS in the Kingdom of Swaziland. This is in partial- fulfilment of the requirement for a Master Degree in Public Health.

I write to ask if you would allow your physiotherapists at this institution to participate in the study and give their views on the subject.

The details of the study are explained in the abstract attached to the letter. I am hoping to commence with data collection as soon as I get the approval of the study from the University Research and Ethics Committee.

I look forward to your favourable consideration.

Yours Faithfully,

Siluzile Ndlovu

APPENDIX C: LETTER TO PARTICIPANTS

LETTER TO PARTICIPANTS

University of Limpopo
Health Sciences,
Private Bag X1106,
Sovenga, 0727
South Africa.

.....
.....
.....

28 April 2015

Dear Sir/Madam,

Re: REQUEST FOR YOUR PARTICIPATION IN A RESEARCHU

I am a postgraduate Master of Public Health student at University of Limpopo. I intend to Carry out a research on the knowledge on HIV/AIDS and Attitudes of physiotherapists towards patients with HIV/AIDS in the Kingdom of Swaziland.

This is in partial-fulfilment of the requirements for a Masters of Public Health Degree. The aim of the research is to determine the knowledge on HIV/AIDS and attitudes of physiotherapists towards the patients with HIV/AIDS and appropriate recommendations shall be made after the study.

I am requesting for your participation so that you can give your views on the subject.

The study requires you to complete a Semi-Structured Questionnaire that will take 15-20 minutes

Confidentiality will be ensured in the reporting of any information you provide to the researcher.

Your participation is voluntary. You are free to withdraw from the study at any stage, should you feel the need to do so during the study.

Thanking you in anticipation,

Yours Faithfully,

Siluzile Ndlovu (Master of Public Health student)

**APPENDIX D: LETTER OF CONSENT
CONSENT FORM**

I.....freely and voluntarily consent to participate in a research

Under the supervision of Ms S. Ndlovu

I understand the aim of the study is to establish the knowledge on HIV/AIDS and attitudes of physiotherapist towards patients with HIV/AIDS in the Kingdom of Swaziland.

I understand that the study will identify the knowledge and attitudes of physiotherapists and recommendations shall be made as appropriate.

I understand that I might withdraw my consent and discontinue participation in this Study at any stage without prejudice to me. I have read the contents of this form and I Have received a copy.

WITNESS

DATE

.....

.....

PARTICIPANT

DATE

.....

.....

I HAVE EXPLAINED THE RESEARCH PROCEDURE TO WHICH THE
PARTICIPANT HAS CONSENTED TO PARTICIPANT

APPENDIX E: LETTER OF APPROVAL FROM MEDUNSA RESEARCH AND ETHICS COMMITTEE



MEDUNSA RESEARCH & ETHICS COMMITTEE

CLEARANCE CERTIFICATE

MEETING: 09/2013
PROJECT NUMBER: MRECIHS/324/2013: PG
PROJECT:
Title: Knowledge on HIV/AIDS and attitude of physiotherapists towards patients with HIV/AIDS in the Kingdom of Swaziland
Researcher: Miss S Ndlovu
Supervisor: Prof M Mbambo-Kekana
Hospital Superintendent: Mr LS Dlamini (Church of the Nazarene, Raleigh Fitkin Memorial Hospital)
Department: Medical Sciences, Public Health & Health Promotion
School: Health Sciences
Degree: MPH

DECISION OF THE COMMITTEE:

MREC approved the project.

DATE: 07 November 2013


PROF G. GQUNBANJO
CHAIRPERSON MREC

The Medunsa Research Ethics Committee (MREC) for Health Research is registered with the US Department of Health and Human Services as an International Organisation (JDR0004319), as an Institutional Review Board (IRB0005122), and functions under a Federal Wide Assurance (FWA00009415)
(Expiry date: 11 October 2016)

Note:

- i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
- ii) The budget for the research will be considered separately from the protocol. PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.



APPENDIX F: LETTER OF APPROVAL FROM SWAZILAND ETHICS COMMITTEE

Telegrams:
Telex:
Telephone: (+268 404 2431)
Fax: (+268 404 2092)



MINISTRY OF HEALTH
P.O. BOX 5
MBABANE
SWAZILAND

THE KINGDOM OF SWAZILAND

April 21st, 2015

Ms. Siluzile Ndlovu
Principal Investigator
MBABANE

REF: MH/599C/FWA 000 15267/ IRB 000 9688

Dear Ms. Ndlovu,

RE: KNOWLEDGE, ATTITUDES AND PERCEPTIONS OF PHYSIOTHERAPISTS TOWARDS PATIENTS WITH HIV/AIDS IN THE KINGDOM OF SWAZILAND

The committee thanks you for your submission to the Swaziland Scientific and Ethics Committee, an expedited review was conducted.

In view of the importance of the study and the fact that the study is in accordance with ethical and scientific standards, the committee grants you authority to conduct the study. You are requested to adhere to the specific topic and inform the committee through the chairperson of any changes that might occur in the duration of the study which are not in this present arrangement.

The committee requests that you ensure that you submit the findings of this study (**Electronic and hard copy**) and the data set to the Secretariat of the SEC committee.
The committee further requests that you add the SEC Secretariat as a point of contact if there are any questions about the study on 24047712/24045469.

Yours Sincerely,


RUDOLPH T.D. MAZIYA
THE CHAIRMAN, SEC
cc: SEC members



APPENDIX G: AUTHORISATION FROM HOSPITALS/PRACTICES CEO/DIRECTORS



CHURCH OF THE NAZARENE

Raleigh Fitkin
Memorial Hospital

P.O. Box 14,
Manzini, Swaziland
Southern Africa.
Phone: Manzini
(09268) 2505 2211
Fax: (09268) 2505 5077
Telex: 2356 WD

28 August 2013

Siluzile Ndlovu
University of Limpopo
Turf Loop Campus
Health Sciences
School of Public Health
Private Bag X1106
Sovenga 0727

Dear Madam

RE: AUTHORIZATION TO CARRY OUT A RESEARCH IN THE HOSPITAL

Your application on the fore mentioned endeavors has been duly considered and Authorization granted on the following conditions please;

- a). That confidentiality is strictly observed
- b). That the hospital receives a copy of the report on the proposed research.

Again thank you for considering the Institution for such a task and wishing you all The best.

Sincerely yours

A handwritten signature in black ink, appearing to be 'L. Dlamini'.

Leonard S. Dlamini (Mr.)
HOSPITAL ADMINISTRATOR

CC: Chief Medical Officer
Matron 1