STIGMATIZATION OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) POSITIVE PATIENTS BY HEALTH CARE WORKERS AT KING EDWARD VIII HOSPITAL, DURBAN, KWA-ZULU NATAL

By

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DECLARATION

"I, FAMOROTI TEMITAYO OLUWABUSOLA, declare that this dissertation hereby submitted for the Masters in Public Health at the National School of Health Care Sciences University of Limpopo, Medunsa Campus is my own independent work and that I have not previously submitted this work for a qualification at/in another university/faculty".

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Thank you all.

ABSTRACT

INTRODUCTION:

The human immune deficiency virus (HIV) leads to the acquired immune deficiency syndrome (AIDS). AIDS was first identified in the 1980's and since then has spread globally causing one of the most dreaded pandemics of modern time. The issue of stigma is very important in the battle against HIV/AIDS as it affects attendance at health centres for obtaining ARV and regular medical check-ups, adherence of patients to ARV treatment. The fear of stigma further helps to fuel a culture of secrecy, silence, ignorance, blame, shame and fear of victimization.

AIM:

The aim of this study was to determine if there was any external stigmatization of HIV positive patients by health care workers (HCWs) at King Edward VIII Hospital.

OBJECTIVES:

To determine if the knowledge of HCWs regarding HIV/AIDS and its transmission affect the way they supply a service towards HIV positive patients at King Edward VIII Hospital and to determine the comfort level and the attitude of the HCWs in rendering care to a HIV positive patient.

METHODOLOGY:

This was a cross sectional survey where data was collected using an anonymous self-administered structured questionnaire with closed ended questions on personal and professional characteristics, disease knowledge, and discriminatory practices such as attitudes and comfort levels towards people living with HIV/AIDS (PLWHA). A total of three hundred and thirty four HCWs from different units at the King Edward VIII hospital participated in this study.

FINDINGS

Overall the HCWs have an above average knowledge about HIV/AIDS and its transmission with only 1.8% scoring below average in the knowledge questions regarding HIV and its transmission, although some knowledge gaps were identified regarding occupational exposure

risks. Evidently from the results is that HCW with higher levels of education are more knowledgeable on issues relating to HIV/AIDS. The implication is that a HCW with a better education is better equipped with the cognitive knowledge to deal with HIV/AIDS, highlighting the importance of education related to external stigmatization. Even though HCWs were knowledgeable about HIV/AIDS most still felt uncomfortable in performing some occupational duties on PLWHA like assisting a woman in labour and performing invasive surgical operations. Most of the HCWs showed a positive attitude towards PLWHA believing that they are not to be blamed for their condition but that individuals in the community who are perceived to be promiscuous men or women are the ones responsible for the spread of HIV/AIDS. Procedures like patients being tested without their consent and patients required to do a HIV/AIDS test before surgery that could be perceived as stigmatization have been observed in King Edward VII hospital. Patient confidentiality is also compromised in that gossiping by HCWs about the HIV/AIDS results of patients has been noted. Fortunately a significant number of HCWs are willing to report their colleagues to a higher authority if any form of stigmatization or discrimination towards PLWHA is seen at King Edward VIII Hospital.

CONCLUSION

Although the knowledge, attitude and comfort of the HCWs at King Edward VIII Hospital was above average continuing medical education and continuing professional development should be mandatory in the management of HIV/AIDS so that HCWs can have the needed knowledge to keep up with the changing world of HIV/AIDS medicine and also about universal precautions to take so as to reduce occupational exposures. Psychological support to the HCW is needed in dealing with PLWHA so that patients can be provided with quality and compassionate care irrespective of their HIV/AIDS status as this will eventually help in the reduction of stigma.

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LIST OF ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral
CDC	Centre for disease control
CEO	Chief executive officer
CME	Continuing medical education
CPD	Continuing professional development
HCT	HIV counselling and testing
HCWs	Health care workers
HIV	Human Immune deficiency Virus
HR	Human resource
HRSA	Health resource and services administration
ICU	Intensive care unit
KEH	King Edward VIII hospital
MREC	Medunsa research and ethics committee
PLWHA	People living with HIV and AIDS
PMTCT	Prevention of mother to child transmission
UN	United Nations
UNAIDS	United nations program on HIV /AIDS
WHO	World Health Organisation

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CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The human immune deficiency virus (HIV) leads to the acquired immune deficiency syndrome (AIDS). AIDS was first identified in the 1980's and since then has spread globally causing one of the most dreaded pandemics of modern time. The initial response to this scourge was led by both the public and private sectors, with mobilization of both human and financial resources to combat the disease and presently there is still no known available cure known to mankind.

HIV infection damages a person's body by destroying the immunity and specifically the CD4 (T cells) that helps in fighting against diseases which is further compounded by the fact that HIV infection predisposes to life threatening opportunistic infections. The virus is also associated with many other diseases such as pulmonary tuberculosis, cryptococcal meningitis and tuberculous meningitis. HIV infection also affects the cardiovascular system, renal system, hepato-biliary system and it also an associative cause of cancer such as cervical cancer and Kaposi sarcoma (CDC, 2010).

HIV is primarily spread by sexual contact with an infected person through unprotected sex which can either be vaginal (among heterosexuals) or anal (among men who have sex with men). Other ways of contracting the virus include the sharing of needles and/or other sharps with someone who is infected, or through transfusions of infected blood or blood components such as clotting factors though this is now more remote due to rigorous blood testing. Babies born to HIV-infected women may become infected during pregnancy or through breast-feeding after birth though this route of infection has been reduced drastically with the introduction of the prevention of mother to child transmission (PMTCT) (CDC, 2010).

A cure is yet to be established for HIV/AIDS but an increase in life expectancy and quality of life has been made possible by the development and use of anti retroviral drugs (ARVs). Availability of these drugs has changed the course of HIV/AIDS from a rapidly fatal disease to a chronic and more manageable disease which invariably improves the quality of life of people living with HIV/AIDS (PLWHA).

1.2 HIV AND AIDS SITUATION IN SUB SAHARAN AFRICA

The number of people living with HIV worldwide continued to grow in 2008 and reached an estimated 33.4 million with an estimated 2.7 million new infections in 2008. About 5.2 million PLWHA are having access to ARVs in middle and low income countries with 80% of this number living in sub Saharan Africa .(WHO, 2010). In 2008, an estimated 1.9 million people living in sub-Saharan Africa became newly infected with HIV, bringing the total number of people living with HIV in 2009 up to 22.4 million worldwide (UNAIDS, 2009).

While the incidence of new HIV infections in sub-Saharan Africa has slowly declined from 4 million in 2000 to 1.9 million new infections in 2007, the number of people living with HIV in sub-Saharan Africa has slightly increased in 2008. This can in part be contributed to increased longevity stemming from improved access to HIV treatment (CDC, 2001; UNAIDS, 2009).

According to the UNAIDS Epidemic Update (2008) an estimated 2.2 million AIDS-related deaths occurred in sub-Saharan Africa in 2005 as compared to 2 million in 2007 and this decline is attributable to the substantial increase in access to anti-retroviral medication.

1.3 HIV AND AIDS SITUATION IN SOUTHERN AFRICA

In Africa, Southern Africa is the epicentre of the HIV/AIDS epidemic with countries of the region registering the highest HIV/AIDS prevalence rates in the world. South Africa is one of the countries most severely affected by the AIDS epidemic, with the largest number of HIV infections in the world. UNAIDS estimated that in 2009, the

total number of persons living with HIV in South Africa was 5.7 million (UNAIDS, 2010).

South Africa's generalised HIV epidemic is defined as being hyper-endemic due to the high rate of HIV prevalence and the modes and drivers of HIV transmission. Heterosexual sex is recognized as the predominant mode of HIV transmission in the country followed by mother-to-child transmission and drivers of the epidemic include migration, low perceptions of risk, and multiple concurrent sexual partnerships (UNAIDS, 2010).

1.4 LITERATURE REVIEW

1.4.1 THE ISSUE OF HIV/AIDS AND STIGMA

HIV /AIDS are commonly associated with stigma and discrimination where stigma relates to the beliefs and attitudes of the people and discrimination to the actions. Both are based on negative views like prejudice, negative attitudes, abuse and maltreatment directed at people simply because they are seen as belonging to a particular group, in this case people with HIV/AIDS. The result can be poor treatment at health care settings which can negatively affect voluntary testing for HIV/AIDS and access to treatment. Other forms of stigma and discrimination in the health care setting that people with HIV can experience is being refused medicines or access to facilities, receiving HIV testing without consent, and a lack of confidentiality. Such responses are often fuelled by ignorance of HIV transmission routes amongst doctors, midwives, nurses and hospital staff (AVERT 2010).

There are also other forms of discrimination or stigma that the HIV/AIDS patient can experience. "Internal" or "felt" stigma refers to the personal shame, blame, guilt and fear of being discriminated against because of their status and "external" stigma which is referring to any measure or distinction amongst other people based on their confirmed or suspected HIV status or state of health (USAID, 2006).

Goffman (1963) also defined stigma as "an attribute that is deeply discrediting" that results in the reduction of a person or group "from a whole and usual person to a

tainted, discounted one". A further expansion on Goffman's work is that "stigma is a dynamic process occurring within the context of power" (Link and Phelan, 2001). According to the secretary general of the United Nations (UN) Ban Ki Moon (2005) he said and I quote: 'Stigma remains one of the single most important barriers to public action as it is the main reason why many people are afraid to seek the services of a doctor to determine their HIV status or to seek the necessary treatment if positive. This attitude due to fear of stigmatization helps make AIDS the silent killer because people fear the social disgrace of speaking about it or taking available precautions or treatment for the disease'.

The issue of stigma is very important in the battle against HIV/AIDS as it also affects the government's effort in curtailing the spread of the disease. According to the Health Resource and Services Administration (HRSA) Care Action (2003) it affects:

- Attendance at health centres for obtaining ARV and regular medical check-ups.
- Adherence of patients to ARV treatment.
- Behavioural attitudes towards patients by HCW and the community, perceived as stigmatization by the patient.
- Poor health seeking behaviour by the patient or community which includes disclosure of the result to family members, friends, employers and colleagues, accessing health facilities and this may ultimately impact on access to support and care and expose such individuals to potential stigmatization.

The fear of stigma further helps to fuel a culture of secrecy, silence, ignorance, blame, shame and fear of victimization. According to (UNAID, 2010) this can be perceived by PLWHA as internal stigma, when they are being delayed in hospitals; having to do repeated and perceived unnecessary tests; sometimes receiving delayed medical attention and often non-admission in hospitals although their medical condition warrants admission; and sometimes been separated from other patients either in the out–patient unit or the in-patient unit.

All these actions by HCWs towards the patient have an impact on the patient's perception of his/her illness and these perceptions impacts on his/ her behaviour towards receiving care for the illness. This situation is worsened if there is hindrance to the provision of effective treatment by members of the health sector (Taylor, 2001).

The attitude (external stigma) of the HCWs such as doctors and nurses towards those who are infected or affected by the disease can include factors or situations like: refusal to provide medical care for PLWHA; refusal to operate on or admit PLWHA and physical isolation in the ward by placing their beds away from other patients so that they do not infect other in-patients in the ward (Avert, 2010).

Other factors regarded as external stigma includes the mandatory testing of patients for HIV before surgery or during delivery in the labour ward; the unnecessary use of protective gear even for routine examinations and casual contact; lack of confidentiality in terms of status disclosure to third parties without consent; or discussing the illness of PLWHA with other staff of the hospital in a demeaning manner. All these circumstances can affect the way the infected person see themselves (internal stigma) (Nyblade *et al,* 2009).

The perceived fear of work related infection of HCWs is also influenced by the fact that HIV is more strongly associated with already socially marginalized groups such as men who have sex with men, injection drug users and sex workers. This 'double stigma' influences the attitudes of service providers and affects all PLWHA regardless of their infection routes (Li *et al*, 2006).

According to Nyblade *et al*, (2009) and UNAIDS (2001) HCWs also have this attitude because of the unavailability of protective equipment, which will further fuel the fear of HIV, while for some it is due to poor knowledge about the disease.

Some health care workers out rightly have a low opinion of PLWHA considering the believe that they deserve what they have because they are sometimes seen as sex

workers or those who have deviant societal behaviours such as homosexuals or intravenous drug abusers (Massiah *et al*, 2004).

Stigmatization of PLWHA is worsened due to the perceived prejudice of sexism which is associated with the route infection because PLWHA are sometimes seen as promiscuous and as such are sometimes unfairly treated due to such notions as 'you acquired HIV through having sex, therefore you must be a prostitute' (Deacon *et al*, 2005).

All these forms of external stigmatization can all impact on the health behaviour of PLWHA leading to the feeling of isolation, depression, anxiety, distrustful relationships, denial of support and care. This can affect drug adherence and attendance at the clinic which will eventually affect the treatment outcome of patients or outright preventing patients from accessing the health care centres for medical assistance (Nyblade *et al,* 2009; UNAIDS, 2001).

1.4.2 POSSIBLE FACTORS THAT COULD CONTRIBUTE TO STIGMATIZATION IN THE WORKPLACE

Knowledge

In a Nigerian study (Adetoyeje *et al*, 2007) where 211 physicians working in a teaching hospital were questioned, it was found that only 90.5% had previous HIV training and 83.45% were satisfied with the HIV training they received. The overall mean knowledge on AIDS among these physicians was 27, out of a possible score of 34 (range 19-32), which was interpreted as a moderate level of knowledge.

Attitude

For this same Nigerian study the mean attitude score was 110.6 out of a possible score of 175, which was an indication that this cohort of physicians harboured a negative attitude towards patients with HIV/AIDS. This finding of a negative attitude towards patients with HIV/AIDS was confirmed by the fact that 95.3% of the participants had refused previously to provide care for HIV positive patients (Adetoyeje *et al*, 2007).

Further results from this Nigerian study showed that men were less prejudiced to HIV positive patients when compared to women which could also be associated with the socio-cultural norm that males show less fear compared to females (Adetoyeje *et al*, 2007).

Li *et al* (2006) reported that health care workers in China who had more HIV related training tended to show significantly lower prejudicial attitudes towards AIDS patients. The same study indicated that when compared to nurses, doctors were more willing to have social interactions with HIV/AIDS patients, i.e. strike up a conversation, attend the same party or work in the same office.

According to reported literature (Gerbert *et al*, 1991; Weinberger *et al*, 1992) some of the reasons for the negative attitude of health care providers towards HIV-positive patients are fear of contagion while other studies (Herek *et al*, 1998) have reported that health care professionals are not always knowledgeable about appropriate procedures for maintaining patient confidentiality.

Education

A Polish study (Ganczak, 2007) compared the education level of doctors regarding HIV and reported that doctors with a comprehensive HIV education showed less prejudice and to a lesser extent did not support mandatory HIV testing of patients without consent when compared to their counterparts with a lesser amount of training. The same phenomena was observed amongst nurses where the trained nurses also showed less prejudice (59%) compared to their colleagues with less training (Ganczak, 2007)

Breach of confidentiality

Mahandra and co-workers (2007) reported on the situation in India, indicating that in certain cases confidentiality is breached where beds are labelled as “danger” for HIV positive patients; and it was also found to be a common practice for nurses to wear gloves for casual contacts, like giving medication when dealing with HIV positive patients.

Fear of infection

The same study by Mahandra and co-workers (2007) reported that the fear of infection even extend to the situation that linen used by HIV positive patients was burnt and cutlery were discarded after use by these patients . Furthermore only 41% of the HCWs were found to be willing to share a meal with an HIV-infected person.

Personal judgement

The Indian study of Mahandra and co-workers (2007) reported that 68% of the HCWs were judgemental in that they believe that HIV is spread due to immoral behaviour such as promiscuity, extramarital affairs and common in drug users.

Ethical issues

A total of 90% of health workers who participated in this Indian study (Mahandra et al, 2007) endorsed the practice of conducting mandatory HIV testing prior to surgery and 61% disagreed with the need for seeking patient's informed consent prior to testing.

Mahandra *et al* (2007) concluded that HCWs with more knowledge regarding HIV /AIDS showed less prejudice to people living with HIV and that doctors were less prejudice when compared to nurses in their attitude towards people living with HIV/AIDS.

1.4.3 STIGMATIZATION IN THE SOUTH AFRICAN CONTEXT

No literature was found on stigmatization of both doctors and nurses in South Africa, making the information of this study very valuable. The reviewed literature from South Africa (Delobelle *et al*, 2009) focused on the HIV/AIDS knowledge, attitudes, practices and perceptions of rural nurses in South Africa. This cross sectional survey of Delobelle *et al* (2009) was conducted in the Limpopo province during 2005 and enrolled a total of 140 nurses (69 nurses from hospitals and 71 nurses from primary health care clinics). This survey utilized both a quantitative and a qualitative approach by making use of questionnaires, in depth interviews and focus group discussions.

The results of this South African study showed that HIV/AIDS knowledge can be correlated with professional rank, level of education and previous HIV training received which in turn was correlated to the nurse's attitude towards HIV/AIDS patients. The opinion of 98.6% (137/140) of the nurses was that HIV patients deserve to be treated with the same respect as other patients. A total of 58.6% (82/140) of the participants indicated that they have negative feeling towards HIV positive patients because of the fear of occupational exposure which is compounded by work overload, lack of resources, lack of management support and emotional stress by having to deal with these potentially infectious patients (Delobelle *et al*, 2009).

1.5 RATIONALE FOR DOING THE STUDY

Based on the extensive literature reports on stigmatization of HIV patients and the consequences of discrimination and stigmatization on the health seeking behaviour of HIV/AIDS patients, it is important to determine if there are practices by HCWs in King Edward VIII hospital that could be perceived as external stigmatization by the HIV positive patient.

It is possible that the HIV/AIDS-related stigma that Health Care Workers (HCWs) practice regarding HIV patients can spill over in the delay in testing of individuals who are at high risk of being infected (Myers *et al*, 1993) and thus aid in the further transmission of HIV (Chesney and Smith, 1999) or it may even lead to the reluctance of those known to be HIV positive to seek for medication (Stall *et al,* 1996*).*
Once practices that could lead to external stigmatization are identified, it would be easier to offer the needed solution(s) to ensure that there is no discrimination of any HIV positive patient at the King Edward VIII hospital in Durban, Kwa-Zulu Natal.

1.6 RESEARCH QUESTION

The question that this study wants to address is if it is possible to link the knowledge of HCW's (defined as doctors and nurses) regarding HIV and it's transmission to their level of comfort and attitude and also discrimination (perceived as stigmatization) by patients accessing the King Edward VIII Hospital. With questions to be asked:

1) Do HCWs at King Edward VIII Hospital have adequate knowledge regarding HIV/AIDS and its transmission?

2) Are the HCWs at King Edward VIII Hospital comfortable in rendering care to a HIV positive patient?

3) What is the attitude of HCWs towards rendering services to HIV positive patients at King Edward VIII Hospital?

4) Can any discriminatory practices of HCWs be identified in their rendering of a service towards HIV positive patients at King Edward VIII Hospital?

1.7 AIM OF STUDY

The aim of this study was to determine and identify any factors that could contribute to external stigmatization of HIV positive patients by HCWs at the King Edward VIII Hospital.

1.9 OBJECTIVES

The objectives of this study were:

1) To determine the level of knowledge of HCWs regarding HIV/AIDS and its transmission at King Edward VIII Hospital.
2) To determine if the HCWs at King Edward VIII Hospital are comfortable in rendering care to a HIV positive patient.
3) To find out what the attitude of HCWs is towards rendering services to HIV positive patients at King Edward VIII Hospital.
4) To highlight the discriminatory practices by HCWs towards HIV positive patients at King Edward VIII Hospital.

CHAPTER TWO
RESEARCH METHODOLOGY

2.1 STUDY DESIGN

This study aiming to determine if there was any external stigmatization of HIV positive patients by HCWs at the King Edward VIII Hospital was a descriptive cross-sectional quantitative survey.

2.2 SETTING FOR THE STUDY

The study was carried out in the King Edward VIII hospital (KEH) which is the second largest hospital in the Southern hemisphere, providing regional and tertiary services to the whole of Kwa-Zulu Natal and Eastern Cape. King Edward VIII hospital is a 922 bedded hospital with +/-360 000 patients visiting the Outpatient Department annually. This hospital has a Nursing College attached; it also acts as a teaching hospital for the University of Kwa-Zulu Natal's Nelson R Mandela School of Medicine (Kwa-Zulu Natal Dept of Health website, 2009).

2.3 STUDY POPULATION

The study population consisted of doctors and nurses working in different units and are classified under 5 categories namely the Medical unit, Surgical unit, Paediatric unit, Obstetrics and gynaecological Unit and other specialised clinics in the hospital such as the anti-retroviral clinic, casualty, theatre unit, intensive care unit were grouped as 'others' in the study in King Edward VIII Hospital in Durban.

2.4 DETERMINATION OF SAMPLE SIZE

According to the Department of Human Resources (HR) of the King Edward VIII Hospital, there are a total of 39 doctors and 1499 nurses working in the different units (Personal communication with HR unit).

A representative sample size for this population was calculated using the published table of the University of Florida, IFAS extension 2009 (Glenn, 2009) this gives a study population of 333 participants. Due to the small number of doctors all 39 doctors were included in the study, while the rest of the participants (294) were represented by the nurses. This was an approximate 1:7 ratio of doctors to nurses, when using a precision level of +/-5% at a 95% confidence interval.

With an assumption of a 10% non response the number of participants were increased to compensate for this which brought the sample size to 366 which was rounded up to be 370.

In getting the health professionals to participate in this study, a notice explaining the aim and objectives and requesting respondents for the study was posted and circulars were sent out so that all health professionals were notified and aware of the study. The questionnaires were made available for volunteers who consented to participate (during the tea/ lunch breaks and also during the evenings to also capture the nurses and doctors on night shifts).

2.5 DATA COLLECTION

Data was collected by the use of an anonymous self-administered structured questionnaire (**Appendix 1**) written in English with closed ended questions with personal and professional characteristics, disease knowledge it also included sections testing the attitudes and comfort levels of HCWs toward PLWHA. The questionnaire used was adapted from the USAID'S working report measuring HIV stigma: results of a field test in Tanzania (commonly referred to as the "Blue Book" available at (**http://www.icrw.org/publications/measuring-hiv-stigma**). The questionnaire consisted of five sections: (1) Demographic data (2) Comprehension of HIV and its transmission (3) Practices towards HIV positive patients (4) View on HIV positive patients and (5) Observation and experiences at King Edward VIII Hospital. After requesting for permission form the hospital authorities (**Appendix 3**) and obtaining permission (**Appendix 4**) the questionnaires were distributed.

Primary data was collected with responses such as: 'yes or no' or "don't know". The completed anonymous questionnaires were returned to a designated "drop box" in the matron's office in each unit, and was collected within two weeks of distribution.

2.6 DATA ANALYSIS

Raw data were coded (**Appendix 5**).

The cleaned, coded response data was captured on a Microsoft Excel 2007 spreadsheet and imported to the interactive data analysis statistical packages STATA 10 and SPSS 17.0 for analysis.

For the questions on knowledge of HIV and its transmission a correct answer received 2 points while incorrect answers and 'don't know' received no points because during the stage of analysis "incorrect" answers will be analysed together as "don't know" answers. The total scores were added and percentages worked out. A percentage above 75% was taken as an indication of the correct knowledge regarding HIV and its transmission.

For the questions on attitude and comfort in providing a service towards HIV positive patients; view on HIV positive patients and observation and experiences at King Edward VIII Hospital, a response of "yes" received 2 points while "no" and 'don't know' received no points. The scores were then added and percentages worked out. A percentage above 75% was taken as an indication of and action or practise that could be interpreted as discrimination by HIV positive patients.

The analyses of the results of the participants' demographic data were summarized using descriptive summary measures: where the continuous variables were expressed as mean (standard deviation) or median (minimum-maximum) and as a percentage for categorical variables. The two sample t-test at the 0.05 level of confidence was used. The Spearman's bivariate correlation test was used to test the strength of association between knowledge, attitude, and comfort in rendering service and P values less than 0.05 were considered to be significant.

2.7 RELIABILITY AND VALIDITY

The questionnaire was an adaptation from the validated USAID'S working report measuring HIV stigma. A pre-test study was done to check for validity of the research tool where 16 voluntary participants consisting of two doctors and fourteen nurses were asked to complete the questionnaire to check for ease of understanding so that any form of ambiguity which might impact negatively on the responses from the participants in the study could be removed and corrected from the questionnaire.

In the initial questionnaire where designation indicated as 'medical ward', 'surgical ward', paediatrics, 'O&G' and 'others' was used, after the pilot study it was found that the inscription of medical ward and surgical ward caused some confusion as some participants did not work in wards but in medical or surgical clinics therefore the word 'ward' was subsequently removed from the questionnaire that was distributed to the participants during the study and replaced with 'unit'. The data obtained from the HCWs that participated in the pre-test were excluded from the main study. These HCWs were also excluded from the main study.

Volunteer bias exists since only those that agree to participate did complete the questionnaire. The possibility exists that different results could have been obtained from those who did not participate. By keeping the questionnaire anonymous this was minimized.

Due to **selection bias** where only volunteers from one hospital participated; it would not be possible to extrapolate the results about the stigmatization of HCWs in general in South Africa. This also affect the external validity where the results given by this study is not are transferable to other Health Care Institutions in South Africa.

In this study on a sensitive issue like stigmatization, information bias was likely to occur as HCWs may not give correct answers to some of the questions or where respondents would not like to admit that they are discriminating against patients who

are HIV positive. This was minimized by ensuring anonymity by asking them not to write their names on the questionnaire.

2.8 ETHICAL CONSIDERATIONS

Approval from the Medunsa Research and Ethics Committee (MREC) was obtained before starting with this project (Project reference number MREC/H/51/2010: PG) (**Appendix 2**).

A letter of application for permittance to do the study was written to the management/ CEO of the King Edward VIII Hospital (**Appendix 3**). This letter also explained that there will be no coercion with any of the participants, that there will be no financial gains as it is primarily a research towards the awarding of a Masters degree this letter also contained information about the importance of the study and a document stating the purpose of this study was handed to each of the participants. This study was approved by the Chief executive officer (CEO) /Medical manager of King Edward VIII Hospital (**Appendix 4**).

The introductory part of the questionnaire (**Appendix 1**) that was given to possible participants was explaining the aim and objectives of this study, as well as the assurance their identities will not be revealed as names will not be put on questionnaire and that information given will be kept and used by only the researcher and by no one else and for no other reason.

CHAPTER THREE

RESULTS

3.1 INTRODUCTION

In this chapter the findings of the data collected through the quantitative research methods as well as the demographic characteristics of the participants will be presented in the form of tables and figures, starting from the socio-demographic profile of the participants followed by the description of their knowledge concerning HIV/AIDS, attitudes, and comfort level of HCW towards rendering a service to PLWHA.

3.2 SOCIO- DEMOGRAPHIC PROFILE OF PARTICIPANTS

The participants for the study were doctors and nurses in King Edward VIII hospital Durban, Kwa- Zulu Natal they were drawn from different units in the hospital.

3.2.1 GENDER CHARACTERISTICS OF RESPONDENTS

Out of the 334 HCWs that responded to the questionnaire more females 293 (87.7%) compared to males 41 (12.3%) participated in this study (Table 3.2)

Table 3.1: GENDER DISTRIBUTION

Gender	Frequency	Percent %
Male	41	12.3
Female	293	87.7
Total	334	100.0

3.2.2. AGE CHARACTERISTICS OF RESPONDENTS

The participants were aged between 20 and 75 years, with a mean age of 39, median age of 37 years and standard deviation of 10.68. The highest proportion of participants were in the age bracket 30yrs (6.2%), followed by 32yrs (5.7%) and 29yrs

(5.7%) while participants aged between 65 and 75yrs years (0.2%)comprised the least proportion (Figure 3.2)

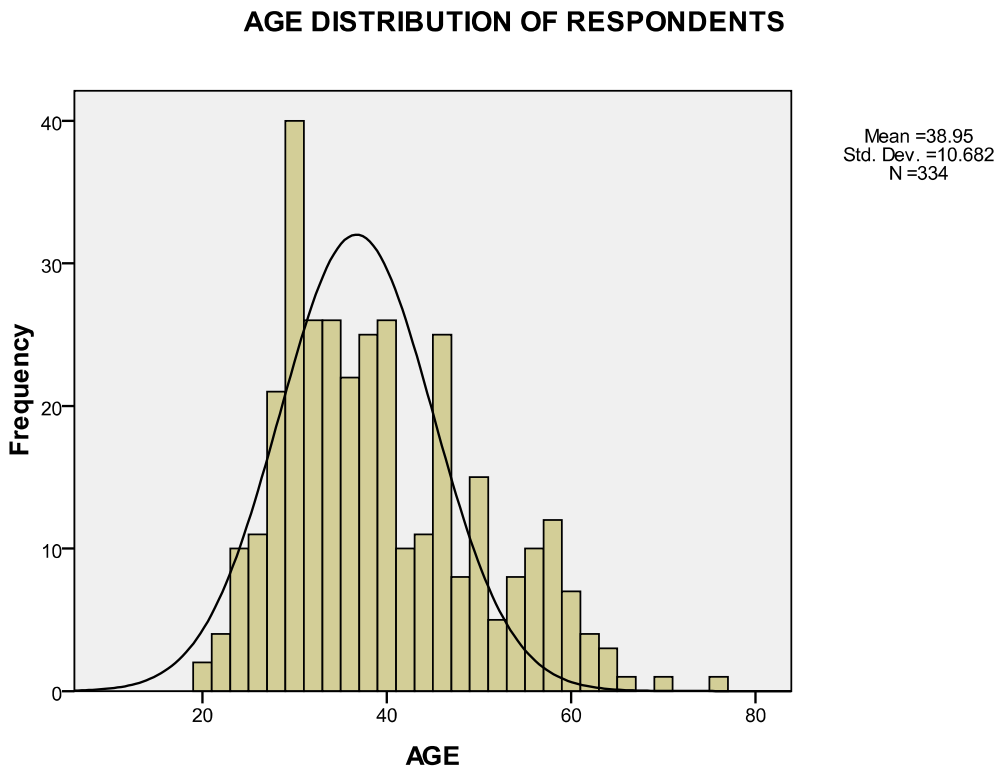

Figure 3.1: AGE DISTRIBUTION

3.2.3 LEVEL OF EDUCATION OF RESPONDENTS

Out of the 334 participants in the study most qualified with a diploma 198 (59.3%) a total of 45 (13.5%) had degrees, 17 had post graduate degrees (5.1%) while 74 (22.2%) indicated that they have obtained other qualifications (Table 3.2).

Table 3.2: EDUCATIONAL LEVEL

Education	Frequency	Percent %
Diploma	198	59.3
Degree	45	13.5
Post grad	17	5.1
Others	74	22.2
Total	334	100.0

3.2.4 OCCUPATION AND DESIGNATION OF RESPONDENTS

Out of the 334 participants in the study only 39 (11.7%) were represented by doctors and 295 (88.3%) were nurses (Table 3.3).

Table 3.3: OCCUPATION OF RESPONDENTS

Occupation	Frequency	Percent %
Doctor	39	11.7
Nursing	295	88.3
Total	334	100.0

The proportion working in the different units in the hospital were as follows: 83 in the medical unit (24.9%), 71 in the surgical unit (21.3%), paediatrics 45 (13.5%), obstetrics unit 50 (15%) and 85 (25.4%) selected others as their designation (Table 3.4)

Table 3.4: DESIGNATIONS OF RESPONDENTS

Occupation	Frequency	Percent %
Medical	83	24.9
Surgical	71	21.3
Paediatrics	45	13.5
O&G	50	15.0
Others	85	25.4
Total	334	100.0

3.2.5 YEARS OF EXPERIENCE

As can be seen in Table 3.5 out of the 334 respondents the majority, 117 (35%) of the HCW had between 1-5 yrs of experience which was followed by a total of 91 (27.2%) with between 6-10 yrs of experience. A total of 45 (13.5%) had between 11-15 years of experience and 81 (24.3%) indicated that they had more than 15 years of experience.

Table 3.5: YEARS OF EXPERIENCE OF RESPONDENTS

Years of experience	Frequency	Percent %
1-5 years	117	35.0
6-10 years	91	27.2
11-15 years	45	13.5
> 15 years	81	24.3
Total	334	100.0

3.3 KNOWLEDGE OF HIV/AIDS AND ITS TRANSMISSION

This section of the questionnaire was meant to test the knowledge of the participating HCW regarding HIV/AIDS and its transmission which would ultimately affect the way the HCWs supply a service towards HIV positive patients at King Edward VIII Hospital.

A series of 14 different questions were asked. Responses from participants were scored using yes, no or don't know and only correct answers received a score of 2 while incorrect answers and "don't know" responses were scored as 0, with a possible maximum score of 28 points (100%). Percentages and the frequency of the scores obtained from the responses of the respondents were calculated..

The answers obtained from the section in the questionnaire on the knowledge of HIV and its transmission (Section 2) is presented in Table 3.6.

Table 3.6: RESPONSE TO QUESTIONS ON KNOWLEDGE

QUESTIONS ON KNOWLEDGE	RESPONSE FREQUENCY (%)	
	CORRECT ANSWER	INCORRECT ANSWER
Knowledge of different routes of HIV transmission	**327 (97.9%)**	**7 (2.1%)**

Can a mother infect her unborn baby with HIV?	**325 (97.3%)**	**9 (2.7%)**
Can HIV be transmitted by social contacts?	**6 (1.8%)**	**328 (98.2%)**
Can HIV be transmitted by sharp objects?	**330 (98.8%)**	**4 (1.2%)**
Can you identify a positive patient by looking at them?	**74 (22.2%)**	**260 (77.8%)**
Can mosquitoes transmit HIV?	**28 (8.4%)**	**306 (91.6%)**
Can the HIV virus live in the open air?	**28 (8.4%)**	**306 (91.6%)**
Do you only have to wear gloves when examining a PLWHA?	**89 (26.6%)**	**245 (73.4%)**
***Risk of HIV transmission following needle prick is approx 1 in 300**	**161 (48.2%)**	**173 (51.8%)**
***Risk of HIV transmission following a splash of blood to non-intact skin or mucus membrane is approx 1 in 1,000**	**153 (45.8%)**	**181 (54.2%)**
Standard sterilization procedures are sufficient when sterilizing instruments used on an HIV-positive patient	**229 (68.6%)**	**105 (31.4%)**
***To prevent the transmission of HIV and other blood-borne infections in the health care setting HCW should wear latex gloves for every patient**	**64 (19.2%)**	**270 (80.8%)**
Most frequent mode of contracting HIV among health workers is through work-related exposure	**154 (46.1%)**	**180 (53.9%)**
Most HIV-positive health care workers get infected at work	**111 (33.2%)**	**223 (66.8%)**

Overall 97.9% (327/334) of the respondents scored correctly the routes of HIV transmission and 97.3% (325/334) knew that mothers can infect their babies' in-utero. A total of 98.2% (328/334) were aware that social contacts such as hand shaking are not routes of HIV infection while 98.8% (330/334) knew that sharp objects can be a source of HIV infection. Though 77.8% (260/334) are of the opinion that they cannot identify a positive patient by just looking at them, a good number of the participants 91.6% (306/334) know very well that mosquitoes cannot transmit HIV from their bites.

From the knowledge questions on HIV/AIDS the modal score for questions 9, 10 and 12 was 0 which is an indication that most of the HCW answered these questions incorrectly. The questions asked were related to the risk of HIV transmission after

needle injury, risk of HIV transmission after blood splash on an intact skin and also issues relating to wearing of gloves for every patient in order to reduce the risk of blood borne infection.

A total of 51.8% respondents did not answer the question of the level of risk of infection after a needle prick injury correctly; 54.2% incorrectly answered question on the level of risk after blood slash on an intact skin while 80.8% have the opinion that wearing latex gloves for every patient is a means of preventing HIV and other blood borne infections in the health care setting.

In summary, the majority of respondents scored above average on questions testing their level of knowledge of HIV/AIDS as only 6 respondents received a score less than 50% (Table 3.7). The mean score of the respondents out of a possible 28 marks was 20.6 (73.6%); the median score was 20 (71.4%) with a standard deviation of 3.4 and the most common score i.e. modal score was also 20 (71.4%) which was obtained by 23.6% (79/334) of the respondents. The lowest score was 10/28 (35.7%) which was obtained by 2 (0.6%) of the participants while the maximum score was 28/28 (100%) which was obtained by 7 of the respondents representing 2.1% of the total population of 334 participants (Table 3.7).

Table 3.7: SCORES OF PARTICIPANTS ON KNOWLEDGE REGARDING HIV/AIDS AND ITS TRANSMISSION

Score out of 28	% Score for knowledge	Frequency	% of participants
10/28	35.7%	2	0.6%
12/28	42.9%	4	1.2%
14/28	50%	14	4.2%
16/28	57.1%	26	7.8%
18/28	64.3%	56	16.8%
20/28	71.4%	79	23.7%
22/28	78.6%	71	21.3%
24/28	85.7%	51	15.3%
26/28	92.9%	24	7.2%
28/28	100%	7	2.1%
Total		334	100

3.3.1 RELATIONSHIP BETWEEN KNOWLEDGE AND GENDER, OCCUPATION, LEVEL OF EDUCATION AND YEARS OF PRACTICE

The relationship between level of knowledge and the demographic characteristics was determined to know if other variables affect the level of knowledge of HCWs concerning the issue of HIV/AIDS in KEH.

The independent t test was used to determine the level of significance of such relationship (if they do exist). The p score was determined using the SPSS 17.0 for Windows statistical software package with knowledge as the dependent variable and the demographics as independent variables and were the independent variables had more than two groups a test of ANOVA was done to calculate the p score.

A relationship was deemed significant if the p score was < 0.05.

KNOWLEDGE AND GENDER

The mean knowledge of the male HCW was found to be 22.0 (they represent 41/334) when compared to the female HCWs who had a score of 20.4 (293/334) (Table 3.8). This was statistically significant with a p-value of 0.004 (Table 3.12) which is an indication that there was a difference in knowledge between males and females regarding HIV and its transmission.

Table 3.8: KNOWLEDGE COMPARED TO GENDER

Gender	Frequency	Mean knowledge score
Male	41	22.00
Female	293	20.38
Total	334	

KNOWLEDGE AND OCCUPATION

The mean score for total knowledge between doctors and nurses were also found to be statistically significant the mean score of doctors in the knowledge question is 23.18

(39/334) for nurses it is 20.24 (295/334) (Table 3.9) and a p-value of 0.000 (Table 3.12) which means the difference in average scores between doctors and nurses is significant.

Table 3.9: KNOWLEDGE COMPARED TO OCCUPATION

Occupation	Frequency	Mean knowledge score
Doctors	39	23.18
Nurses	295	20.24
Total	334	

KNOWLEDGE AND LEVEL OF EDUCATION

The mean score for total knowledge for respondents with a post graduate qualification was 22.35 (17/334) as compared with those with degree 22.09 (45/334) and diplomas 20.42 (198/334) (Table 3.10) and there is statistical significance between the levels of education with p score of 0.000 (Table 3.12) with higher scores by participants with higher levels of education.

Table 3.10: KNOWLEDGE COMPARED TO LEVEL OF EDUCATION

Level of education	Frequency	Mean knowledge score
Diploma	198	20.42
Degree	45	22.09
Post graduate	17	22.35
Others	74	19.68
Total	334	

KNOWLEDGE AND YEARS OF EXPERIENCE

The mean score for total knowledge for respondents with 1-5 yrs of practice is 20.91 (117/334) as compared with those with 6-10 yrs 20.33 (91/334) and for those with > 15yrs it is 20.27 (81/334) (Table 3.11). When comparing the years of practise to the level of knowledge of the respondents it was found that there was no significant difference in the years of practice and the level of knowledge (p= 0.497) (Table 3.12).

Table 3.11: KNOWLEDGE COMPARED TO YEARS OF PRACTICE

Years of practice	Frequency	Mean knowledge score
1-5 yrs	117	20.91
6-10 yrs	91	20.33
11-15 yrs	45	20.80
> 15 yrs	81	20.27
Total	334	

SUMMARY OF RELATIONSHIP BETWEEN KNOWLEDGE AND GENDER, OCCUPATION, LEVEL OF EDUCATION AND YEARS OF PRACTICE

The relationship between level of knowledge and the demographic characteristics was determined and a summary of the results obtained by using the independent t test where a p score of < 0.05 was deemed significant is presented in Table 3.12.

Table 3.12: SUMMARY OF T TEST P VALUES OF KNOWLEDGE AND THE DEMOGRAPHICAL VARIABLES

Knowledge	
Variables	**Significant t-test (p score)**
Gender	0.004
Level of education	0.000
Years of practice	0.497
Occupation	0.000

Significance is p< 0.05

3.4 COMFORT LEVEL IN RENDERING CARE TO PLWHA

A series of 13 different questions were asked regarding the comfort of the HCW in providing a service towards a HIV positive patient. Responses from participants were scored using 'yes', 'no' or 'don't know' and only answers that indicate a high level of comfort received a score of 2 while answers indicating a high level of discomfort and don't know responses were scored as 0, with a possible maximum score of 26 (100%). Percentages and the frequency of the scores obtained from the responses of the respondents were calculated.

The answers obtained from the section in the questionnaire on the comfort in rendering care towards a HIV positive patient (Section 3) is presented in Table 3.13.

Table 3.13: RESPONSE TO QUESTIONS ON COMFORT

QUESTIONS ON COMFORT	RESPONSE FREQUENCY (%)		p score
	POSITIVE FEELING	NEGATIVE FEELING	
Comfort in giving injections to PLWHA	220 (65.9%)	114 (34.1%)	0.010
***Comfortable in assisting a woman in labour with HIV or AIDS?**	152 (45.5%)	182 (54.5%)	0.005
Comfortable dressing wounds of PLWHA	215 (64.4%)	119 (35.6%)	0.000
***Comfortable when conducting surgery on or suturing a person with HIV/ AIDS**	149 (44.6%)	185 (55.4%)	0.030
Comfortable in setting up an IV drip for PLWHA	194 (58.1%)	140 (41.9%)	0.007
Comfortable in touching the sweat of PLWHA	227 (82.9%)	57 (17.1%)	0.000
Comfortable in touching saliva of PLWHA	252 (75.4%)	82 (24.6%)	0.001
Comfortable when drawing blood of PLWHA	183 (54.8%)	151 (45.2%)	0.01
Are you afraid of getting HIV when caring for PLWHA	91 (27.2%)	243 (72.8%)	0.000
Comfortable assisting or being assisted by a colleague who is HIV infected?	196 (58.7%)	138 (41.3%)	0.608
***Comfortable when performing surgical or invasive procedure on clients whose HIV status is unknown**	156 (46.7%)	178 (53.3%)	0.049
Comfortable providing health services to PLWHA	256 (76.6%)	78 (23.4%)	0.000
Comfort in sharing bathroom with a colleague who is HIV infected	240 (71.9%)	94 (28.1%)	0.052

The mean score of the respondents feeling on comfort was 16.4 (63%), median score was 18 (69%) with a standard deviation of 6.9 the most common score i.e. modal score was 26 (100%) obtained by 12.3% (41/334) of the respondents. The lowest

score was 0/26 which was obtained by 1 of the participants representing 0.3% of the total study population (Table 3.14).

Table 3.14: SCORES OF PARTICIPANTS ON COMFORT RENDERING CARE TOWARDS HIV POSITIVE PATIENTS

Score out of 26	% Score for comfort	Frequency	% of participants
0/26	0%	1	0.3%
2/26	7.7%	6	1.8%
4/26	15.4%	8	2.4%
6/26	23.1%	24	7.2%
8/26	30.8%	23	6.9%
10/26	38.5%	31	9.3%
12/26	46.2%	23	6.9%
14/26	53.8%	15	4.5%
16/26	61.5%	33	9.9%
18/26	69.2%	37	11.1%
20/26	76.9%	28	8.4%
22/26	84.6%	29	8.7%
24/26	92.3%	35	10.5%
26/26	100%	41	12.3%
TOTAL		334	

3.4.1 RELATIONSHIP BETWEEN COMFORT AND GENDER, OCCUPATION, LEVEL OF EDUCATION AND YEARS OF PRACTICE

The relationship between comfort and the demographic characteristics was determined to know if other variables affect the feeling of comfort of HCWs in rendering care towards HIV positive patients at KEH.

The independent t test was used to determine the level of significance of such relationship (if they do exist). The p score was determined using the SPSS 17.0 for Windows statistical software package with knowledge as the dependent variable and the demographies as independent variables and were the independent variables had more than two groups a test of ANOVA was done to calculate the p score.

A relationship was deemed significant if the p score was < 0.05.

COMFORT AND GENDER

The mean score in comfort questions by males was 19.32 (41/334) while for females it was 15.95 (293/334) and the mean difference was 3.37 (Table 3.15) and this is statistically significant as the p-value obtained was 0.003 (Table 3.19) which is an indication that males are more comfortable with patients who are HIV infected.

Table 3.15: COMFORT COMPARED TO GENDER

Gender	Frequency	Mean comfort score
Male	41	19.32
Female	293	15.95
Total	334	

COMFORT AND OCCUPATION

The average comfort score of doctors was 17.13 (39/334) as compared to 16.25 (295/334) for nurses with a mean difference of 0.864 (Table 3.16) and a p-value of 0.464 (Table 3.19) which is not statistically significant. The indication is that there is no significant difference in comfort level between doctors and nurses

Table 3.16: COMFORT COMPARED TO OCCUPATION

Occupation	Frequency	Mean comfort score
Doctors	39	17.13
Nurses	295	16.26
Total	334	

COMFORT AND LEVEL OF EDUCATION

The average comfort score of diploma holder was 16.66 (198/334) as compared to 17.24 (45/334) for degree holders and 16.94 (17/334) for post graduate holders (Table 3.17). The p-value calculated was 0.219 (Table 3.19) which is not statistically significant. The indication is that there is no significant difference in comfort level of education.

Table 3.17: COMFORT COMPARED TO LEVEL OF EDUCATION

Level of education	Frequency	Mean comfort score
Diploma	198	16.66
Degree	45	17.24
Post graduate	17	16.94
Others	74	14.92
Total	334	

COMFORT AND YEARS OF EXPERIENCE

The mean score for total comfort for respondents with 1-5 yrs of practice is 15.88 (117/334) as compared with those with 6-10 yrs 17.49 (91/334) and for those with > 15yrs at 15.65 (81/334) (Table 3.18).

When comparing the years of practise to the level of comfort of the respondents it was found that there was no significant difference in the years of practice and the level of comfort (p= 0.271) (Table 3.19).

Table 3.18: COMFORT COMPARED TO YEARS OF PRACTICE

Years of practice	Frequency	Mean comfort score
1-5 yrs	117	15.88
6- 10 yrs	91	17.49
11- 15 yrs	45	16.62
> 15 yrs	81	15.65
Total	334	

SUMMARY OF RELATIONSHIP BETWEEN COMFORT AND GENDER, OCCUPATION, LEVEL OF EDUCATION AND YEARS OF PRACTICE

The relationship between feeling of comfort and the demographic characteristics was determined and a summary of the results obtained by using the independent t test where a p score of < 0.05 was deemed significant is presented in Table 3.19.

There was no significant change in the levels of feeling comfortable in relation to level of education, designation and years of practice as the p values were 0.219, 0.468 and 0.271 respectively (Table 3.19). However there was a significant relationship (P=0.003) between gender and the feeling of comfort in rendering care towards a HIV positive patient. A relationship was deemed significant if the p score was < 0.05.

Table 3.19: SUMMARY OF T TEST P VALUES COMPARING DEMOGRAPHIC VARIABLES WITH COMFORT LEVEL

Comfort	
Variables	**Significant t-test (p score)**
Gender	0.003
Level of education	0.219
Designation	0.468
Years of practice	0.271
Occupation	0.464

Significance is p< 0.05

3.5 ATTITUDE OF HCW TOWARDS PLWHA

The section summarises the attitude of HCWs at King Edward VIII Hospital in rendering care to a HIV positive patient questions response of HCW who participated in the study.

A series of 9 different questions were asked. Responses from participants were scored using yes, no or don't know and only answers indicative of a positive attitude received a score of 2 while answers indicative of a negative attitude and "don't know" responses were scored as 0, with a possible maximum score of 18 points (100%).

The answers obtained from the section in the questionnaire on the attitude of HCWs towards HIV positive patients (Section 4) is presented in Table 3.20.

Table 3.20: RESPONSE TO QUESTIONS ON ATTITUDE

QUESTIONS ON ATTITUDE	RESPONSE FREQUENCY (%)		P score
	POSITIVE ATTITUDE	NEGATIVE ATTITUDE	
*Women prostitutes are responsible for the spread of HIV in our community	24 (7.2%)	182 (54.5%)	0.000
People with HIV should not be ashamed of themselves	310 (92.8%)	24 (7.2%)	0.035
I will feel ashamed if a family member is HIV positive	305 (91.3%)	29 (8.7%)	0.784
*Promiscuous men are the ones who spread HIV in our community	105 (31.4%)	229 (68.6%)	0.049
*Promiscuous women are the ones who spread HIV in our community	111 (33.2%)	223 (66.8%)	0.015
HIV is a punishment from God	296 (88.6%)	38 (11.4%)	0.006
I will feel ashamed if I am infected with HIV	225 (67.4%)	109 (32.6%)	0.666
HIV is a punishment for bad behaviour	301 (90.1%)	33 (9.9%)	0.146
People with HIV/AIDS are to be blamed for bringing the disease to the community	286 (85.6%)	48 (14.4%)	0.277

The answers given (Table 3.20) were an indication that the HCWs have a tolerant attitude towards PLWHA as 92.8% (310/334) believe PLWHA should not be ashamed of themselves and 91.3% (305/334) also answered that they will not be ashamed if any of their family members were to be infected with HIV/AIDS. A total of 67.4% (225/334) answered that they will not be ashamed if they were to be infected with HIV/AIDS. A further 85.6% (286/334) did not believe that PLWHA should be blamed for the infections in the community neither did they see HIV infection as a reward of bad punishment as answered by 90.1% (301/334) and 88.6% (296/334) does not believe that HIV infection is a punishment from God.

The mean score of the respondents was 12.52, median score of 12 with a standard deviation of 3.9 the most common score i.e. modal score was 12 with (26.6% of respondents) while the lowest score was 0, (obtained by 1 of the participants

representing 0.3% of respondents) and maximum was 18 (by 60 of the respondents representing a total of 18%) (Table 3:21).

Table 3.21: SCORES OF PARTICIPANTS ON ATTITUDE TOWARDS HIV POSITIVE PATIENTS

Score out of 18	% Score for attitude	Frequency	% of participants
0/18	0%	1	0.3%
2/18	11.1%	2	0.6%
4/18	22.2%	12	3.6%
6/18	33.3%	19	5.7%
8/18	44.4%	19	5.7%
10/18	55.6%	48	14.4%
12/18	66.7%	89	26.6%
14/18	77.8%	54	16.2%
16/18	88.9%	30	9.0%
18/18	100%	60	18%
Total		334	

3.5.1 RELATIONSHIP BETWEEN ATTITUDE AND GENDER, OCCUPATION, LEVEL OF EDUCATION AND YEARS OF PRACTICE,

The relationship between attitude and the demographic characteristics was determined to know if these variables affect the attitude of HCW have towards PLWHA in KEH.

The independent t test was used to determine the level of significance of such relationships (if they do exist). The p score was determined using the SPSS 17.0 for Windows statistical software package using attitude as the dependent variable and the demographies as independent variables and where the independent variables had more than two groups a test of ANOVA was done to calculate the p score.

A relationship was deemed significant if the p score was < 0.05.

ATTITUDE AND GENDER

The mean attitude of the male HCW was 13.61 (41/334) when compared to the female HCW at 12.37 (293/334) (Table 3.22) and it was not statistically significant with a p- value of 0.0568 which shows that there is no difference in attitude between males and females. (Table 3.26)

Table 3.22: ATTITUDE COMPARED TO GENDER

Gender	Frequency	Mean attitude score
Male	41	13.61
Female	293	12.37
Total	344	

ATTITUDE AND OCCUPATION

The average attitude score of doctors was 13.74 (39/334) as compared to 12.36 (295/334) for nurses (Table 3.23) and a p-value of 0.037 (Table 3.26) which was statistically significant. The indication is that there is a significant difference in the attitude level between doctors and nurses

Table 3.23: ATTITUDE COMPARED TO OCCUPATION

Occupation	Total number	Mean attitude score
Doctor	39	13.74
Nurses	295	12.36
Total	344	

ATTITUDE AND LEVEL OF EDUCATION

The mean attitude score of respondents with diploma was 12.07 (198/334), for those with degree it was 13.29 (45/334) and 13.18 (17/334) for those with post graduate qualifications (Table 3.24) and a p value of 0.87 (Table 3.26) which was not statistically significant. The indication is that there is no difference in attitude among the different levels of education.

Table 3.24: ATTITUDE COMPARED TO LEVEL OF EDUCATION

Level of education	Frequency	Mean attitude score
Diploma	198	12.07
Degree	45	13.29
Post graduate	17	13.18
Others	74	13.11
Total	344	

ATTITUDE AND YEARS OF PRACTICE

The mean score for total attitude for HCWs with 1-5 yrs of practice was 12.38 (117/334) as compared with those with 6-10 yrs 13.12 (91/334) and for those with > 15yrs at 11.63 (81/334). (Table 3.25)

When comparing the years of practise to the level of attitude of the respondents it was found that there is significant difference in the years of practice and the level of comfort (p= 0.039) (Table 3.26).

Table 3.25: ATTITUDE COMPARED TO YEARS OF PRACTICE

Years of practice	Frequency	Mean attitude score
1-5 yrs	117	12.38
6- 10 yrs	91	13.12
11- 15 yrs	45	13.29
> 15 yrs	81	11.63
Total	334	

SUMMARY OF RELATIONSHIP BETWEEN ATTITUDE AND GENDER, OCCUPATION, LEVEL OF EDUCATION AND YEARS OF PRACTICE

The relationship between level of attitude and the demographic characteristics was determined and a summary of the results obtained by using the independent t test where a p score of < 0.05 was deemed significant is presented in Table 3.26.

There was no significant change in the levels of attitude in relation to gender, level of education and designation as the p values were 0.058, 0.87 and 0.216 respectively. However there was a significant relationship between years of practice (p value 0.039) and occupation (p value 0.037) in the attitude of the HCWs towards HIV positive patients.

Table 3.26: SUMMARY OF T TEST P VALUES COMPARING DEMOGRAPHIC VARIABLES WITH ATTITUDE LEVEL

ATTITUDE	
Variables	**P score**
Gender	0.058
Level of education	0.87
Designation	0.216
Years of practice	0.039
Occupation	0.037

3.6.CORRELATION BETWEEN KNOWLEDGE, COMFORT AND ATTITUDE

The Spearman's bivariate correlation test was used to determine if there was a relationship between the level of knowledge and the comfort levels of the HCW in KEH and it was shown that that there is a positive but weak correlation between knowledge scores and the comfort level with a correlation coefficient of 0.229 and a p- value of 0.000. There was also a weak but positive correlation between knowledge and attitude of HCW to PLWHA with a correlation coefficient of 0.139 and p-value of 0.011 (Table 3.27)

Table 3.27: CORRELATIONS BETWEEN KNOWLEDGE ATTITUDE AND COMFORT

			Comfort	**Attitude**
Spearman's rho	**Knowledge**	**Correlation coefficient**	0.229**	0.139*
		Sig. (2- tailed)	0.000	0.011

There was also a positive but weak correlation between attitude and comfort with a correlation co-efficient of 0.191 and a statistically significant p-value of 0.000. (Table 3.28). This is an indication that HCW who have more tolerant attitudes towards PLWHA are more comfortable with providing health services to patients who are living with the HIV infection

Table 3.28: CORRELATION BETWEEN ATTITUDE AND COMFORT

Spearman's rho			**Comfort**
	Attitude	**Correlation coefficient**	0.191**
		Sig. (2- tailed)	0.000

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

*. Correlation is significant at the 0.05 level (2-tailed).

3.7 LEVEL OF DISCRIMINATION AT KING EDWARD VIII HOSPITAL

The HCWs were asked a series of 8 different questions on the observed or experienced scenarios at King Edward VIII Hospital that known or suspected HIV/AIDS positive patient could perceived as stigmatization by HCWs. Responses from participants were scored using 'yes', 'no' or 'don't know' and only answers indicative of a reported incidence received a score of 2 while answers of no and don't know were scored as 0.

The answers obtained from the HCWs to determine the frequency of incidents that could be perceived as discrimination in King Edward VIII hospital (Table 3.29) showed that only 16.2% (54/334) have seen patients being tested without their consent and also 37.7% (126/334) answered that they have seen extra precaution being used in the sterilization of instruments used on PLWHA. Furthermore 33.5% (112/334) have overheard other HCW gossiping about the HIV status of patients ; only 9.0% (30/334) have seen a senior HCW pushing patients who are HIV positive to a junior HCW and the majority of the HCW have not seen PLWHA receiving less care as answered by 90.7% (303/334) of the respondents.

Also 50.6% (169/334) have seen gloves been used on PLWHA or suspected of being infected with HIV/ AIDS even when such examinations are not invasive in nature. A total of 64.4% (215/334) of the HCWs were also willing to report discriminatory experiences to higher authority in King Edward VIII hospital.

Table 3.29: RESPONSE TO QUESTIONS ON INCIDENCE OF DISCRIMINATION

QUESTIONS ON LEVEL OF STIGMATIZATION TOWARDS PLWHA IN KING EDWARD VIII HOSPITAL	RESPONSE FREQUENCY (%)		P score
	POSITIVE	NEGATIVE	
Patients being tested without consent	54 (16.2%)	280 (83.8%)	0.112
Requiring patients to be tested before surgery	153 (45.8%)	181 (54.2%)	0.032
*Using latex gloves for performing non-invasive examinations on patients suspected of HIV	169 (50.6%)	165 (49.4%)	0.248
Extra precaution in sterilization of instruments used on PLWHA	126 (37.7%)	208 (62.3%)	0.079
HCW gossiping about patients HIV status	112 (33.5%)	222 (66.5%)	0.477
Senior HCW pushing HIV positive patients to junior HCW	30 (9.0%)	304 (91.0%)	0.231
PLWHA receiving less care	31 (9.3%)	303 (90.7%)	0.509
*Willingness of HCW in KEH to report cases of stigmatization of PLWHA to higher authority?	215 (64.4%)	119 (35.6%)	0.132

CHAPTER FOUR
DISCUSSIONS

This chapter discusses the findings from the study, draws conclusions based on these findings and makes recommendations to reduce stigmatization of PLWHA.

The response rate was approximately 90% with 334 respondents who completed the questionnaire and returned them at the appointed designations out of a total 370 questionnaires that were given out which was in keeping with the presumed 10% non response at the beginning of the research study.

The research was to determine the knowledge of HCWs regarding HIV/AIDS and its transmission, the attitude and comfort of supplying a service towards HIV positive patients at King Edward VIII Hospital and to also survey if any discriminatory practices could be identified.

4.1 KNOWLEDGE

On the knowledge scale most of the HCW are deemed to have a good score with only 6 (1.8%) out of 334 respondents scoring below average. This finding is similar to the South African study of Delobelle *et al*, (2009) where HIV/ AIDS knowledge was also found to be moderately adequate. The Nigerian study by Adetoyeje *et al*, (2007) also reported a satisfactory knowledge of HIV/AIDS amongst the participants.

In this research study some gaps in the knowledge of the HCWs at King Edward VIII Hospital concerning the HIV/AIDS and its transmission were identified as this can ultimately lead to discrimination and a higher level of discomfort of HCW's when treating PLWHA in the hospital and this will affect health service delivery. Regarding the questions on the routes of HIV/AIDS transmission 51.8% of the participants did not know the risk exposure level to HIV infection after a needle stick injury, while 54.2% did not know that the risk involved in a blood splash accident to a non- intact

skin and 80.8% believed that wearing latex gloves on all patients will prevent HIV and other blood infections. These incorrectly answered questions can affect the level of comfort and it can also mould a negative attitude of the HCW's towards PLWHA in KEH.

The mean score of male HCW for knowledge was 22.0 while for females total mean knowledge score was 20.58 and there was statistical significance between the knowledge of male and female respondents with a p value of 0.004. This could be probably due to the fact that most of the male respondents were doctors who are expected to have a better knowledge about HIV/AIDS and its transmission.

Though 97.9% and 97.3% answered correctly that they know the different routes of HIV transmission and also that a mother can infect her unborn baby this is important because the knowledge of PMTCT will help in the reduction of pre-natal and neonatal infections and this is similar to the study by Sadoh *et al*, (2006) which indicated that a significant number of their participants 88.4% answered correctly that mothers can infect their unborn babies.

On the question if mosquitoes can transmit HIV 91.6% of the participants answered correctly that mosquitoes cannot transmit HIV this is similar to the study by Adetoyeje *et al* (2007) in Nigeria where 94% of their respondents also answered that mosquitoes cannot transmit HIV/AIDS.

In the KEH study 98.2% answered that social contacts such as hand shakes are not routes of infection this in turn would make the HCW's have a higher level of comfort when around PLWHA and this could make the HCW's develop positive attitudes towards PLWHA and an overall increase in the quality of health care service provided this is similar to results of the Nigerian study by Sadoh *et al* (2006) where 97.4% answered correctly. A total of 98.8% of the HCW at King Edward VIII hospital knows that sharp instruments are one of the ways by which HIV can be transmitted.

There was a statistical significant difference (p value < 0.05) between the different levels of education of the HCW and their total knowledge on HIV/AIDS transmission meaning that the HCW's who had higher scores in the knowledge questions had

higher levels of education compared to their colleagues who had basic levels of education and in this study it was found to have impacted on their knowledge of HIV/AIDS knowledge and its transmission. The same statistical significance between education and knowledge was observed in the South African study by Delobelle *et al* (2009) with a p value of < 0.001 the same South African study also found an association with professional ranking and level of knowledge but in my study in King Edward VIII hospital there is no statistical relationship found between the years of practice and the level of knowledge with a p value of =0.497.

There was also was a statistical relationship (p value of 0.000) between occupation and total knowledge when doctors and nurses were compared. This can be explained by the fact that the average level of education of doctors is a degree compared to most nurses where the average qualification was a diploma which as explained above by the fact that those who got higher scores had higher levels of education.
From the results of this study there was no correlation between the years of experience of HCW and knowledge (p-value of 0.497) as corroborated with the study by Delobelle *et al*, (2009).

Generally the HCW in King Edward VIII hospital has an above average knowledge on the various routes of HIV/AIDS transmission as the mean score of the respondents out of a possible 28 marks was 20.6 (73.6%);

4.2 COMFORT

There was a correlation between comfort level and gender (p-value of 0.03) meaning that males were more comfortable (mean comfort score of 19.32) than females (mean score of 15.95) in caring for PLWHA. These results are similar to the results published by Adetoyeje *et al*, (2007) where male physicians where more comfortable than female physician in the care of PLWHA. This was explained by societal norms that males should be less fearful and this is probably also the case in the King Edward VIII Hospital study.

Though there was no statistical significance difference found between the levels of education, years of practice and occupation which is an indication that there was also no correlation between these variables to affect the outcome i.e. level of comfort. There was a weak correlation between knowledge and comfort levels with a correlation coefficient of 0.229 and a p value of 0.000 which shows that the level of knowledge has a positive impact on the comfort level of HCW at King Edward VIII Hospital which is a reflection on the fact that HCW's who have higher levels of knowledge about HIV/AIDS and its transmission scored higher in questions about comfort levels in rendering care to PLWHA and this means they have a higher level of comfort in taking care of HIV patients. These results differ from the Nigerian study by Adetoyeje *et al* (2007) which was attributable to the pervasive fear of HIV/AIDS in the community where the HCWs live.

In the King Edward VIII Hospital study most of the HCWs (65.9%) answered that they were comfortable with giving injections to PLWHA, 82.9% said they were comfortable to touch the sweat of PLWHA and 75.4% said they were comfortable coming in contact with the saliva. These findings could be attributed to the fact that the HCWs understands the different routes of HIV/AIDS transmission (p-value <0.05 between level of knowledge and comfort). Of the respondents 71.9% indicated that they were comfortable to share a bathroom with a HIV/AIDS positive individual. This finding when measuring the association with the knowledge of the HCW, was not statistically significant (p-value = 0.052), but is similar to the Indian study by Mahendra *et al* (2007) where 87% of the respondents indicated they will be willing to work with a colleague who is HIV positive.

In the King Edward VIII Hospital study 54.5% of the HCWs were not comfortable in delivering a woman in labour with HIV/AIDS; 55.4% were not comfortable in conducting surgery on PLWHA while a further 53.3% were not comfortable in performing invasive procedures on patients whose HIV status is unknown. It was found that the HCWs who scored higher in knowledge questions were also the ones found to be more comfortable in rendering a service to a HIV/AIDS positive person and the responses of some of the participants can be linked to the knowledge gaps

identified in the HIV/AIDS transmission question as the responses to this question which shows a high level of discomfort could be due to the knowledge gaps this is similar to the study by Sadoh *et al* (2006). In the Sadoh *et al*, (2006) study 56% of the respondent indicated that they will not operate on a HIV/AIDS positive and 67.3% who would not assist during such an operation due to the fear of occupational risk injuries. This fear of occupational exposure to HIV/AIDS was also confirmed by Delobelle *et al* (2009) were 58.6% of the respondents were found to be worried about occupational exposure. The fear of occupational exposure to HIV/AIDS is most probably one of the reasons behind the relatively low comfort levels of HCW in performing invasive surgeries on PLWHA at the King Edward VIII Hospital.

4.3 ATTITUDE

The attitudinal behaviour towards PLWHA was measured on a scale of 0-18 and the mean score for the HCW in this study was 12.52. There was no significant relationship between gender and attitude, but there was a weak but positive correlation between level of knowledge and attitude of HCWs to PLWHA with a correlation coefficient of 0.139 and a p-value of 0.011 which is an indication that HCW with a higher knowledge score will have more positive attitudes to PLWHA which reflects on previous statements that the participants in the study who scored higher in questions relation to their attitudes towards PLWHA have a more positive attitude towards HIV patients and they will most likely give better care as they will less discriminate against such patients .

This same pattern was seen in the South African study by Delobelle *et al* (2009) where attitude correlated with knowledge, as well as in the Nigerian study by Adetoyeje *et al* (2007) study where it was shown that HCW with a higher knowledge of HIV/AIDS and its transmission showed a more positive attitude towards PLWHA (statistically significant with a p-value < 0.05)

In the King Edward VIII Hospital study no association was found between educational level (p-value 0.087), designation (p-values 0.216) and attitude towards people with HIV/AIDS though analytically it was the HCW's who scored higher in

the attitude questions who also scored high in questions relating to HIV/AIDS knowledge and its transmission which still meant that HCW'S who have more knowledge have a more positive attitudes compared to their colleagues with less knowledge. The same was observed in the study by Delobelle *et al* (2009) where there was no correlation between attitude and level of training.

There was an association between occupation and years of experience in the KEH study with p-values of 0.0046 and 0.039 respectively which means that HCW who have more years at work are more likely to have a more positive attitude towards PLWHA. This could probably be due to the repeated and constant contact with patients who are HIV positive in the South African setting by the HCW's. These findings are also similar to the outcome in the study by Delobelle *et al* (2009) where 98.6% of HCWs had a high degree of empathy with the belief that PLWHA should be treated with the same dignity and respect as other patients. The difference in relationship between attitude levels and occupation can be attributable to the difference in the level of knowledge of doctors and nurses about HIV/AIDS transmission in this King Edward VIII Hospital study.

Results of this study show that 92.8% of HCW believed that PLWHA should not be ashamed of themselves which had a significant relationship with knowledge (p-value = 0.035); 88.6% believed that HIV/AIDS was not a punishment from God and 90.1% believed that HIV/AIDS was not a punishment for bad behaviour. The HCWs who scored higher in the knowledge questions also had a more positive attitude towards PLWHA (p-value 0.006) which could also be because the HCW's who had a more positive attitude were the ones who scored higher in the questions on the knowledge about HIV/AIDS and its transmission routes and they have more empathy based on the higher scores in the questions on attitude towards PLWHA.

Interestingly there was no significant correlation between knowledge and those who answered that HIV is a punishment for bad behaviour (p-value 0.146). The study by Mahendra *et al*, (2007) where 68% of the respondents where of the opinion that HIV/AIDS is spread by immoral behaviour. The South African study by Delobelle *et al* (2009) also reported that 63% disagreed that PLWHA have to be blamed for their

condition. The Nigerian study of Sadoh *et al* (2006), have published that as long as the route of infection cannot be associated with any form of immoral behaviour then the HCWs are more tolerant towards the PLWHA where the results indicated a high tolerance towards the following situations: transfusion with infected blood (74.5%), vertical transmission from mother to babies (72.8%) and infection of perceived innocent partners (71.0%).

In this King Edward VIII Hospital study the blame for the spread of HIV/AIDS was mostly directed towards people in the community perceived to have deviant behavioural patterns. This was seen in the results where (1) 54.5% blame women prostitutes for the spread of HIV/AIDS, (2) 68.8% believe promiscuous men as spreading HIV and (3) 66.8% perceive promiscuous women as the ones spreading HIV/AIDS. The responses to the three scenarios were statistically related to the level of knowledge as HCW with higher knowledge scores had a more tolerant attitude towards PLWHA with p scores of 0.000, 0.049 and 0.015 respectively.

These findings are similar to the study by Mahendra *et al* (2007) where 44% believe men who patronise sex workers only have to worry about HIV and 43% also believe that sex workers are the women who should worry about HIV/AIDS infection. The same pattern was also noted in the study by Adeyojoye *et al* study (2007) where there was a negative attitude towards PLWHA especially those who got infected through sexual routes as evidenced by 34.2% of the respondents who believe they deserve what they got because of their perceived bisexual indiscression.

4.4 LEVEL OF DISCRIMINATION IN KING EDWARD VIII HOSPITAL

At the King Edward VIII Hospital only 16.2% of the respondents have seen patients being tested without their consent and this a breech of the fundamental human right of the patient that is being infringed upon as consenting to being tested is important before a patient is tested for HIV/AIDS though in the Mahendra *et al* (2007) study 61% believed that the issue of pre-test and consent is over-exaggerated and that it should be handled like any other blood test results. In the Polish study by Ganczak

(2007) 39% of HCW believed that HIV/AIDS testing should be made mandatory because there is an assumption that there will be a reduced risk of occupational exposure if the status of the patients is known.

At the King Edward VIII Hospital 45.8% (153/334) of the respondents said they have observed or experienced patients being required to be tested before surgery in KEH though this is a highly contentious area because there is no added advantage when pre-operative patients are tested before being operated as the norm is that universal precautionary measures should be taken for every patient booked for surgery, while in the study by Mahendra *et al* (2007) reported that 86% agree with this action of pre-operation testing. In the study by Sadoh *et al* (2006) 56% indicated that they were not prepared to operate on PLWHA and this finding could be traced back to the negative attitude some HCW were having towards PLWHA with the believe that those infected with HIV/AIDS deserve what they have.

Results of this study show that at King Edward VIII Hospital it is also common practice for the HCW to discuss the HIV status of patients with 33.5% answering 'yes' to the question which was also the case in India (Mahendra *et al,* 2007). Of the respondents in the King Edward VIII Hospital survey only 9.0% have seen senior HCW allocating patients who are HIV infected to junior HCW and 9.3% have observed PLWHA receiving less care in King Edward VIII Hospital. This could probably be due to the fear of occupational exposure to the infected patients.

Another practice commonly seen by 50.6% of the HCW in King Edward VIII Hospital is the use of latex gloves for non invasive procedures in PLWHA or suspected to be infected with HIV/AIDS. This confirms the fear of occupational exposures as an important issue, despite the fact that on average the HCW scored high on questions relating to HIV transmission routes and this could also be because of the gaps noted earlier on in the aspect of HIV/AIDS knowledge and its transmission.

Among the HCWs in King Edward VIII Hospital the majority (64.4%) showed a willingness to report any form of maltreatment or discrimination towards PLWHA to

the necessary authorities though 35.6% were not prepared to report their colleagues. This could either be due to their perception that HIV/AIDS PLWHA deserve what they have as they are seen as promiscuous men and women, the women as outright prostitutes coupled with the negative attitude some HCW's have towards PLWHA or simply because they might not be willing to report colleagues and friends to authority based on the sometimes close 'knit' structure of the medical fraternity and fear of being victimized later for doing so.

4.5 STUDY LIMITATIONS

This study was carried out in King Edward VIII hospital Durban in Kwa-Zulu Natal which is a large teaching hospital in an urban area. Therefore the results may only apply to similar study setting and may not be representing what is happening in the rural hospitals. This study was done in a government tertiary institution so it may not be a reflection of what goes on at the other levels of care such as the primary and secondary health care centres or even at the private health care levels.

As this study probed personal questions about HIV/AIDS knowledge, attitude towards people with HIV/AIDS, comfort in providing a service to people with HIV/AIDS and discrimination towards people with HIV/AIDS the possibility exist that the respondents did not answer truthfully and rather what they perceived the best answer would be. This inability to rule out social desirable bias and interviewer bias was minimized through the use of self administered confidential questionnaire.

In this study most of the participants (87.7%) were females. As there was no equal distribution between the genders this could have influenced the results.

The small sample size of doctors in the study may affect the estimates and outcomes where in general it is expected that doctors should have a better knowledge about the issues surrounding HIV/AIDS.

The possibility exist that HCW who were either on leave or not on duty at the time the questionnaire was administered could have influenced the results.

The problem of recall does exist where participants were asked questions about observed stigma which might lead to inaccuracies and incompleteness in the study findings.

CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

This section summarises the results with emphasis to those that are directly related to the research objectives and also by offering recommendations that may assist in the reduction of stigma by HCW towards PLWHA.

Based on the study done at King Edward VIII Hospital and the reviewed literature it is obvious that stigma, as it affects PLWHA, is a major health set back in the fight against the scourge of HIV/AIDS.

5.1 CONCLUSIONS

Overall the HCW in King Edward VIII hospital have an above average knowledge about HIV/AIDS and its transmission.

Knowledge gaps were identified in the health care setting regarding the risk of transmission of the HIV infection after a needlestick injury and occupational exposure to blood and body fluids and this could be some of the reasons why some of the HCW's who participated in the study have a higher level of discomfort towards PLWHA and also this could in effect make them have a negative attitude towards PLWHA and invariably affect the quality of the health service to this group of patients.

. Even though HCW were knowledgeable about HIV/AIDS most still felt uncomfortable in performing occupational duties on PLWHA like assisting a woman in labour and some were not comfortable in performing invasive surgical operations.

HCW with a better education (degree versus diploma) is better equipped with the cognitive knowledge to deal with HIV/AIDS. This will invariable improve the cognitive understanding of HIV/AIDS and its different routes of transmission so that

the HCW's will have a higher level of comfort when treating PLWHA and they will also have a positive attitude towards them.

Gaps were also identified on the community level where there was the believe from the respondents that promiscuous men or women are the ones responsible for the spread of HIV/AIDS because most of the respondents believe that individuals in the community who are perceived to be promiscuous men or women are the ones responsible for the spread of HIV/AIDS. This could be from the believe that people who get infected are those who are promiscuous and that they deserve what they got and since HCW's are also members of the community such believe will only increase the level of discomfort and also fuel the negative attitudes towards PLWHA.

Procedures like patients being tested without their consent and patients required to do a HIV/AIDS test before surgery, that could be perceived as discrimination have been observed in King Edward VII hospital. Patient confidentiality is compromised because gossiping by HCWs about the HIV/AIDS results of patients has been noted and the use of gloves have been observed to have been used by some HCW's when performing non invasive surgery.
This is an infringement on the rights of the patient because safety measures in the hospital are be standardized standard and there should not be any form of discriminatory testing of patients in order to reduce occupational risks of HCW's

Although certain discriminatory procedures have been observed in King Edward VII hospital the findings were that these were localized incidences and not the norm at the hospital. Furthermore most of the participants indicated that they were prepared to report such incidences to the higher authoroties.

5.2 RECOMMENDATIONS

TRAINING

As some gaps in the knowledge of HIV/AIDS and its transmission were identified, these findings suggest the need to upgrade, implement and monitor the medical and the nursing school curriculum in South Africa so that HCW will be equipped with the necessary skills needed to address the growing problem of HIV/AIDS.

This can also be buffered by sending HCWs for regular seminars/ courses and programs about HIV/AIDS because HIV/AIDS medicine keeps changing.

A certain percentage of the mandatory continuing medical education (CME)/ continuing professional development (CPD) points should be on the management of HIV/AIDS so that HCWs can keep up with the changing world of HIV/AIDS medicine.

PSYCHOLOGICAL MANAGEMENT OF HCW

Apart from the cognitive aspect of training HCWs they also needs to receive emotional support as it relates with management of PLWHA. Such support will help them deal as individuals with the specific prejudices they have against PLWHA because such prejudices affects their attitude towards PLWHA and consequently the quality of care and comfort of HCW towards PLWHA.

ETHICS

HIV/AIDS training should include teachings on ethics on which the health industry is based upon. HCWs should be made more aware of the rights of patients such as a right to care, right to privacy, and rights of autonomy.

POLICY TRAINING

HCW should also be trained about policy guidelines about such issues regarding HIV/AIDS pre and post test counselling, HIV/AIDS testing, confidentiality of results and disclosure as it directly relates to HIV/AIDS and the concerns of the HCWs. Such

guidelines should include continued advocacy and insistence on the provision of quality and compassionate care for all patients irrespective of their HIV/AIDS status as this will eventually help in the reduction of stigma.

TRAINING ON UNIVERSAL PRECAUTIONS

More emphasis should be placed on the training of HCWs on prevention, universal precautionary methods, so as to reduce occupational injuries at work and thereby also reduce the risk of HIV/AIDS infections. Attention should be given to safer injection policies and sharp practices which should include sharp disposals and the availability of post exposure prophylaxis (PEP) for those who sustain exposure injuries at work making medications available and accessible at all times of the day.

Adequate provision and use of protective materials such as gowns and gloves will lead to a safer environment for the HCW and a healthy and safe environment will empower HCW to provide adequate and quality health care service to PLHWA.

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APPENDIX 1: QUESTIONNAIRE

STIGMATIZATION OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) POSITIVE PATIENTS BY DOCTORS AND NURSES AT KING EDWARD VIII HOSPITAL, DURBAN, KWA-ZULU NATAL

The aim and objectives of the study has been sufficiently explained to me. I have not been pressurized to participate in any way. I understand that participation in this study is completely voluntary and that I may withdraw from it at any time and without any adverse consequences.
I know that this study has been approved by the Research, Ethics and Publications Committee of the University of Limpopo, Medunsa Campus and the Management of King Edward VIII Hospital**,**
I am fully aware that the results of this study will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.
By completing this questionnaire, I consent to participate in this Study.

Please indicate your response by means of "√"

1	**DEMOGRAPHY**						
1.1	**What is your gender?**					Male	Female
1.2	**What is your age?**						
1.3	**Education**	Diploma	Degree	Post grad	Others		
1.4	**Occupation**	Medical doctor			Nursing staff		
1.5	**Designation**	Medical Ward	Surgical Ward	Pediatrics	Obs & Gyn	Other	
1.6	**Years of practice in this capacity**	1-5Years	6-10 Years	11-15 Years	>15Years		
2	**KNOWLEDGE OF HIV AND ITS TRANSMISSION**						
2.1	Do you know the routes of HIV transmission?					Yes	No	Don't know
2.2	Can a mother give her baby HIV?					Yes	No	Don't know
2.3	Can HIV be transmitted though social contacts e.g. hand shaking, hugging etc?					Yes	No	Don't know

2.4	Can HIV be transmitted by sharing sharp objects like used needles?	Yes	No	Don't know
2.5	Can you identify a HIV positive patient by just looking at them?	Yes	No	Don't know
2.6	Can HIV be transmitted by mosquito bites?	Yes	No	Don't know
2.7	Can the HIV virus live in the open air (outside the human body)?	Yes	No	Don't know
2.8	Do you only have to wear gloves when examining a HIV patient?	Yes	No	Don't know
2.9	The risk of HIV transmission following needle prick or sharps injuries is small, approximately 1 in 300?	Yes	No	Don't know
2.10	The risk of HIV transmission following a splash of blood to non-intact skin or mucus membrane is very small, approximately 1 in 1,000	Yes	No	Don't know
2.11	Standard sterilization procedures are sufficient when sterilizing instruments used on an HIV-positive patient	Yes	No	Don't know
2.12	To prevent transmission of HIV and other blood-borne infections in the health care setting, staff should wear latex gloves for every patient	Yes	No	Don't know
2.13	Most frequent mode of contracting HIV among health workers is through work-related exposure	Yes	No	Don't know
2.14	Most HIV-positive health care workers get infected at work	Yes	No	Don't know
3	**COMFORT IN RENDERING CARE TOWARDS HIV POSITIVE PATIENTS**			
3.1	Are you afraid of getting HIV when giving an injection to a person with HIV or AIDS?	Yes	No	Don't know
3.2	Are you afraid of getting HIV when assisting in the delivery of a woman with HIV or AIDS?	Yes	No	Don't know
3.3	Are you afraid of getting HIV when dressing the wounds of a person living with HIV or AIDS?	Yes	No	Don't know
3.4	Are you afraid of getting HIV when conducting surgery on or suturing a person with HIV or AIDS?	Yes	No	Don't know
3.5	Are you afraid of getting HIV when putting a drip in someone who is showing signs of AIDS?	Yes	No	Don't know
3.6	Are you afraid of touching the sweat of a person with HIV or AIDS?	Yes	No	Don't know
3.7	Are you afraid of getting HIV when touching the saliva of a person with HIV or AIDS?	Yes	No	Don't know
3.8	Are you afraid of getting HIV when drawing blood of a person with HIV or AIDS?	Yes	No	Don't know
3.9	Are you afraid of getting HIV when caring for a person living with HIV or AIDS?	Yes	No	Don't know

3.10	Are you comfortable assisting or being assisted by a colleague who is HIV infected?	Yes	No	Don't know
3.11	Are you comfortable performing surgical or invasive procedure on clients whose HIV status is unknown?	Yes	No	Don't know
3.12	Are you comfortable providing health services to clients who are HIV-positive?	Yes	No	Don't know
3.13	Are you comfortable sharing a bathroom with a colleague who is HIV infected?	Yes	No	Don't know
4	**ATTITUDE TOWARDS HIV POSITIVE PATIENTS**			
4.1	Women prostitutes are responsible for the spread of HIV in our community	Yes	No	Don't know
4.2	People with HIV/AIDS should be ashamed of themselves	Yes	No	Don't know
4.3	I would feel ashamed if someone in my family had HIV/AIDS	Yes	No	Don't know
4.4	Promiscuous men are the ones who spread HIV in our community	Yes	No	Don't know
4.5	Promiscuous women are the ones who spread HIV in our community	Yes	No	Don't know
4.6	HIV is a punishment from God	Yes	No	Don't know
4.7	I would feel ashamed if I was infected with HIV	Yes	No	Don't know
4.8	HIV is a punishment for bad behavior	Yes	No	Don't know
4.9	People with HIV/AIDS are to blame for bringing the disease to the community	Yes	No	Don't know
5	**LEVEL OF DISCRIMINATION AT KING EDWARD VIII HOSPITAL**			
In the past 12 months, have you observed or experience any of the following scenarios at King Edward VIII Hospital due to the fact that a patient was known or suspected of having HIV/AIDS?				
5.1	Testing a patient for HIV without their consent	Yes	No	Don't know
5.2	Requiring some patients to be tested for HIV before scheduling surgery	Yes	No	Don't know
5.3	Using latex gloves for performing noninvasive examinations on patients suspected of HIV	Yes	No	Don't know
5.4	Extra precautions being taken in the sterilization of instruments used on HIV-positive patients	Yes	No	Don't know
5.5	Health providers gossiping about a patient's HIV status	Yes	No	Don't know
5.6	Because a patient is known to be HIV-positive, a senior health provider pushing the patient to a junior provider	Yes	No	Don't know

5.7	Known and suspected HIV patients receiving less care/attention than other patients	Yes	No	Don't know
5.8	If you ever saw any of the above (types of enacted stigma) happening to a client because s/he is a person living with HIV/AIDS would you be willing to report to higher authority?	Yes	No	Don't know

APPENDIX 2: MREC CLEARANCE CERTIFICATE

UNIVERSITY OF LIMPOPO
Medunsa Campus

MEDUNSA RESEARCH & ETHICS COMMITTEE

CLEARANCE CERTIFICATE

P.O Medunsa
Medunsa
0204
SOUTH AFRICA

Tel: 012 - 521 4000
Fax: 012 - 560 0086

MEETING: 03/2010

PROJECT NUMBER: MREC/H/51/2010: PG

PROJECT :

Title: Stigmatization of Human Immunodeficiency virus (HIV) positive patients by health care workers at King Edward VII Hospital, Durban, Kwa-Zulu Natal

Researcher: Dr TO Famoroti
Supervisor: Mrs L Fernandes
Department: Public Health
School: Health Care Sciences
Degree: MPH

DECISION OF THE COMMITTEE:

MREC approved the project.

DATE: 09 April 2010

PROF GA OGUNBANJO
CHAIRPERSON MREC

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 3: REQUEST TO CONDUCT STUDY

Dear **King Edward VIII Hospital** Board members,

RE- REQUEST TO CONDUCT RESEARCH STUDY

This letter serves to request permission to conduct a study in your hospital as part of fulfillment of the Masters in Public Health program of the National School of Public Health at the University of Limpopo.

The study focuses on stigmatization of (HIV) positive patients by doctors and nurses at this hospital. The participants of the study will be asked to complete an anonymous questionnaire testing their knowledge, attitude and practice regarding people living with HIV/AIDS. The study will take approximately two months.

This study has been authorized by the Medunsa Ethics and Research Committee (number). In addition informed consent will be obtained from the participants.

We would appreciate your consideration in this regard.

Yours sincerely,

Temitayo Oluwabusola Famoroti (student)
Student number: 200813918

Mrs L Fernandes (Supervisor)
Tel number: 012 521 5031

APPENDIX 4: PERMISSION OBTAINED

HEALTH
KwaZulu-Natal

KING EDWARD VIII HOSPITAL
Private Bag X02, CONGELLA 4013
Corner of François & Sydney Road
Tel: 031-3603853. Fax: 031-2061457
Email: rejoice.khuzwayo@kznhealth.gov.za
www.kznhealth.gov.za

Enq.:Miss. R.Khuzwayo
Ref.: KE 2/7/1/ (16/2010)
Research Programming

28April 2010

Dr. TO Famoroti
C/O ARV Clinic
KING EDWARD VIII HOSPITAL

Dear Dr. Famoroti

Protocol : "Stigmatization of Human Immunodeficiency virus [HIV] positive patients by Health Care Workers at King Edward VIII Hospital- Durban KZN"

Permission to conduct research at King Edward VIII Hospital is provisionally granted, pending approval by the Provincial Health Research Committee, KZN Department of Health.

Kindly note the following:-

- The research will only commence once confirmation from the Provincial Health Research Committee in the KZN Department of Health has been received.
- Signing of an indemnity form at Room 8, CEO Complex before commencement with your study.
- King Edward VIII Hospital received full acknowledgment in the study on all Publications and reports and also kindly present a copy of the publication or report on completion.

The Management of King Edward VIII Hospital reserves the right to terminate the permission for the study should circumstances so dictate.

Yours faithfully

~~SUPPORTED/NOT SUPPORTED~~

DR. O.S.B. BALOYI
MEDICAL MANAGER

30/04/2010
DATE

~~SUPPORTED /NOT SUPPORTED~~

MR. M. BHEKISWAYO
CHIEF EXECUTIVE OFFICER

30/04/2010
DATE

HEALTH
KwaZulu-Natal

Health Research & Knowledge Management sub-component
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg
3200
Tel.: 033 – 3952805
Fax.: 033 – 394 3782
Email.: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

Reference : HRKM067/10
Enquiries : Mr X Xaba
Telephone : 033 – 3952805

10 May 2010

Dear Mr T Famoroti

Subject: Approval of a Research Proposal

1. The research proposal titled **'Stigmatization of HIV positive patients by Health Care Workers (HCW) at King Edward VIII Hospital (KEH)'** was reviewed by the KwaZulu-Natal Department of Health.

   The proposal is hereby **approved** for research to be undertaken at **King Edward VIII Hospital.**

2. You are requested to take note of the following:
   a. Make the necessary arrangement with the identified facility before commencing with your research project.
   b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.

3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Mr X Xaba on 033-3952805.

Yours Sincerely

Dr S.S.S. Buthelezi
Date: 12.05.10
Chairperson, Health Research Committee
KwaZulu-Natal Department of Health

APPENDIX 5: CODING SHEET

CODING

GENDER: MALE= 1 FEMALE= 2

EDUCATION: DIPLOMA=1, DEGREE=2, POST GRADUATE=3, OTHERS=4

OCCUPATION: DOCTORS=1, NURSING=2

DESIGNATION: MEDICAL= 1, SURGICAL = 2, PEDIATRICS= 3,
OBS AND GYNE= 4, OTHERS =5

YEARS OF PRACTICE IN DESIGNATION: 1-5 Y= 1; 6-10Y=2; 11-15 Y=3; >15Y = 4

KNOWLEDGE: CORRECT ANSWER=2, INCORRECT/ DON'T KNOW=0

COMFORT IN RENDERING CARE: YES =2, NO/ DON'T KNOW=0

ATTITUDE TOWARDS HIV POSTIVE PATIENTS: YES =2, NO/ DON'T KNOW=0

LEVEL OF DISCRIMINATION AT HOSPITAL: YES =2, NO/ DON'T KNOW=0