DECLARATION

I   Owens Mgawi declare that this thesis is my own work and the study has not previously been submitted for academic examination towards any qualification.

Furthermore, it represents my own opinion and not necessarily those of the institution I belong to, The University of the Witwatersrand.

Signed________________ Date______________

DEDICATION

I dedicate this work to God Almighty my creator, my strongest pillar, wisdom, knowledge and understanding. He has been the source of my strength throughout this course. I also dedicate this work to my wife; Nia who has encouraged me all the way and whose encouragement has made sure that I give it all it takes to complete what started. To my beloved son (little O) Theo, who have been affected in every way possible by this quest. Thank you. My love for you all can never be measure. God bless you.

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ABSTRUCT

Background: Cancer is a public health problem worldwide (Globocan, 2012). In developing countries cancer is one of the three leading causes of death and responsible for 12.5% of all deaths. This is higher than the total combined number of deaths caused by HIV/AIDS, tuberculosis and malaria (WHO, 2012). According to South African National Cancer Registry data (2015), one in six South African men and one in seven South African women will get cancer during their lifetime little is known about the knowledge, understanding and health seeking behaviour of South African men pertaining to cancer.

Objectives: The objectives of the study were to describe what men living in Muldersdrift, South Africa know and understand about cancer as well as their health seeking behaviour should they suspect that they might have cancer.

Method: The setting was Ward 23, also known as Video, a poor resource area, in Muldersdrift. The convenience sampling method was used on a sample size of n=205. Data were collected by means of structured interviews and a questionnaire served as the data collection instrument. The data were analysed by means of descriptive statistics and the Chi-Square Test was used to calculate statistical significant differences between the variables.

Results: The ages of the sample (n=205) ranged from 18 to above 60 years, the average age was 35, SD ± 24.6 and median 31 years. The highest percentage (21.5%; n=44) belonged to the Zulu cultural group and attended school up to Grade 11 to 12 (49.8%; n=102). Most were unemployed and unmarried. Approximately a third (32.7%; n=67) confirmed knowing what cancer is, 30.2% (n=62) did not know what cancer is; 37.1% (n=76) were unsure. Only 33.8% (n=45) of the respondents had ever been taught or made aware of cancer with radio being the major source of information. Most of the respondents (76.6%; n=157) had not gone for cancer screening.

Conclusion: The study provided evidence that men living in the study setting had limited knowledge and understanding of cancer. Consistent with limited knowledge and understanding of cancer, the screening uptake among men was extremely low. Educational level was statistically significantly associated with knowledge of what cancer is. There is need to scale up health education to the community to enhance cancer related knowledge and understanding as well as improve health seeking behaviour.

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CHAPTER ONE

OVERVIEW FOR THE STUDY

1.1 INTRODUCTION

This chapter provides an overview of the study and summarizes the background and research methods.

1.2 BACKGROUND OF THE STUDY

Cancer remains one of the leading causes of death around the world, and is accounting for an estimated 9.6 million deaths in 2018 (WHO, 2018). Globally, nearly one in six deaths is due to cancer. In low and middle income countries, cancer is also among the three leading causes of death, responsible for 70% of all deaths (WHO, 2018). It is expected that both cancer incidence and mortality will rise by 70% over the coming two decades (Ferlay et al., 2014). This is significantly outpacing the total number of deaths caused by Malaria, HIV/AIDS and tuberculosis combined (Parkin et al., 2014).

Cancer incidence and mortality among men is reported to be higher compared to women. According to the 2012 Globocan statistics (IARC., 2014) found that men face~~s~~ significantly higher risk of developing cancer and dying from nearly all the common cancers .The most commonly cancers diagnosed in men are are prostate, lung, gastric, liver and colorectal cancer (Bray et al., 2018). Similarly, in men living in Africa the most common diagnosed cancers are prostate, liver cancer, Kaposi sarcoma, lung cancer, and colorectal cancer, whereas breast, cervical, liver, colorectal, and ovarian cancers are the most common cancers diagnosed in women in Africa (Parkin et al., 2014).

In sub-Saharan Africa cancer persist as a major public health problem. Factors such as population growth, aging, physical inactivity as well as increased prevalence of key risk factors, including those associated with social and economic transition have been linked to the rise (Parkin et al., 2014).In South Africa, prostate cancer, Kaposi sarcoma, lung, oesophagus and colorectal cancer are known to be top leading types of cancer in men

(CANSA, 2017). It is further projected that one in six men in South Africa will develop some type of cancer in their lifetime compared to one in every eight women (CANSA, 2017).

Jemal et al.(2012), in a review on cancer burden in Africa, highlighted that preventive strategies and early detection may reduce the risk of cancer as well as improving the disease outcome. The paper further stated that for preventive strategies to be effective, knowledge, understanding and health seeking practices of the targeted population should be understood. However, not many studies have been done to investigate men's knowledge of cancer worldwide. Similarly, in South Africa little is known about what men know regarding cancer. There is evidence that the majority of cancer patients report to the hospital with advanced disease, when cure may no longer be possible (Jemal et al.,2012).

In addition, health seeking behaviour of men has been implicated in the health differences between men and women. The literature indicates that men seek health care less often than their female counterparts (Kim, 2015) . Moreover, men less likely to participate in preventive health care activities including routine medical check-ups and often ignore symptoms or delay seeking health care when sick or even when their lives are in grave danger. This is contrary to cancer prevention policies, where any delay in seeking health care when cancer is suspected is not helpful for early detection and management (Saab et al., 2018).

1.3 PROBLEM STATEMENT AND SIGNIFICANCE OF THE STUDY

The research problem for this study relates to knowledge, understanding and health seeking behaviour of men in terms of cancer. Cancer related knowledge and understanding plays a pivotal role in health seeking behaviour, as presenting with cancer when it is still in an early stage, improves the possibility of a cure. Unfortunately studies investigating these phenomena focus primarily on women (Rwamugira, Maree and Mafutha, 2017).

In addition, most research conducted in both the developing and developed world indicates there are gender inconsistencies in seeking health care as well as the general view and understanding of health and illness (WHO, 2017). However, how cancer, a life-threatening disease, influences health seeking behaviour is not known. This study will investigate men's cancer related knowledge, understanding as well as health seeking behaviour in its attempt to address the identified knowledge gap.

1.4 RESEARCH QUESTION AND OBJECTIVES OF THE STUDY

To address the research problem, the following research question was formulated:

What is the knowledge and understanding of cancer and the health seeking behaviour of men living in Muldersdrift?

The objectives of the study were to describe:

- the knowledge and understanding of cancer in men living in Muldersdrift
- the health seeking behaviour of men living in Muldersdrift

1.5 RESEARCH DESIGN AND METHODS

A descriptive cross-sectional design was selected for this study (Creswell, 2015). The study setting was Muldersdrift Ward 23 also known as Video, a semi-urban community situated northeast of Johannesburg. The target population was all men living within Video. The Raosoft sample calculator (Raosoft.com, 2018) was used to calculate and determine the required sample size (n=205), and convenience sampling was used to select to sample (Burns and Grove, 2010). Structured interviews were conducted to collect the data. The data were collected by means of structured interviews, and a questionnaire served as the data collection instrument. The data collection instrument was an adapted version of a questionnaire developed for an enquiry into cancer related knowledge, understanding and health seeking behaviour of urban black women in Tshwane, South Africa (Maree and Wright, 2010). The questionnaire had both open and closed ended questions with sections allowing the researcher to collect socio-demographic data in Section A, Section B focused on knowledge and understanding of cancer, and Section C focused on health seeking behaviour. The data were captured onto an Excel spreadsheet and analysed using descriptive statistics. Chi-Square was used to determine whether there was a relationship between the categorical variables (Grove and Sutherland, 2017). The open-ended questions were analysed using quantitative content analysis (Elo and Kyngäs, 2008).

1.6 OPERATIONAL DEFINITIONS

Definitions for the purpose of this study are as follows:

Knowledge is the awareness of familiarity gained by experiences of a fact or situation (Oxford dictionary, 2018). For the purpose of this study, knowledge will refer to men's awareness of cancer, including risk factors, major symptoms and early detection.

Health seeking behaviour is defined as "ways in which individuals go about obtaining information, including information about their health, health promotion activities, risks to one's health, and illness"(Lambert and Loiselle, 2007)

1.7 THE STUDY OUTLINE

The study is divided into the following chapters:

Chapter 1: Overview of the research study
Chapter 2: Literature review
Chapter 3: Research design and methods
Chapter 4: Results
Chapter 5: Discussion, Justification, limitations and recommendations

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

In Chapter One, an orientation to the study was provided. Chapter Two presents an overview of the literature applicable to the study.

2.2 CANCER AS WORLDWIDE HEALTH PROBLEM

Cancer now ranks as the leading cause of death around the world, responsible for an estimated 9.6 million deaths in 2018 (WHO, 2018). In the developed world, cancer is the second leading cause of death and amongst the three leading causes of death in the developing world. According to the 2012 cancer statistics of the International Agency for Research on Cancer (IARC) and the WHO (2014), fourteen million people were newly diagnosed with cancer whilst 8.2 million died from cancer and 32.6 million were living with cancer in the same year (Torre et al., 2015).

The incidence and mortality related to cancer are higher among men in comparison to women, accounting for 33% of deaths among men compared to approximately 20% among women (Ferlay et al., 2014); two in five deaths due to cancer occurs in men, compared to just over one in four cancer deaths in women. The most commonly diagnosed cancers in men are lung, prostate, colorectal, gastric, and liver cancer (Jemal et al., 2011).

2.3 CANCER IN DEVELOPING COUNTRIES

In developing countries cancer is ranked as one of the three leading causes of death and accounting for 12.5% of all deaths. This is outpacing mortality rates for HIV/AIDS, malaria, and tuberculosis combined (Jemal et al., 2011). The cancer burden continues to rise because of aging, population growth alongside increased prevalence of risk factors associated with economic transition (including smoking, alcohol, obesity, physical inactivity, and reproductive behaviors) (F. Bray et al., 2018).

Despite this growing burden, cancer in developing continues to face various challenges. These include lack of awareness among the public and policy makers regarding the magnitude of the cancer problem as well as limited resources (Parkin et al., 2014). In addition, poor infrastructure, insufficient numbers of health-care workers, , reliance on traditional therapies, and poor compliance to cancer treatment have been associated with the rise in cancer burden (Farmer et al., 2010).

However, more than one third of the cancer burden could be reduced by modifying key lifestyle risk factors such as tobacco use, obesity, unhealthy diet, inadequate physical inactivity, alcohol consumption, and exposure to infections (Ott et al., 2011). The common cancers diagnosed in men living in developing countries are prostate, Kaposis sarcoma, lung, liver and colorectal cancer. Notably, Men’s higher death rates are also influenced by poor cancer awareness, lower screening uptake, delays in seeking health information, and lower healthcare utilization (White et al., 2010).

2.4 CANCER IN SOUTH AFRICAN CONTEXT

Cancer deaths around the world are estimated at over 25 000 per day for 2017, of which over two thirds occur in developing countries. South Africa is one of these countries (Stefan, 2015). In 2012, cancer was South Africa’s fifth leading cause of death, accounting for approximately 8.7% of all deaths (Moodley et al., 2016). The proportion of deaths attributed to cancer in South Africa has increased steadily over the past few years, from 7.3% in 2011 to 7.8% in 2012 and 8.3% in 2013 (Statistics South Africa, 2012). The most common cancers diagnosed amongst men living in south Africa are lung , esophagus, colorectal , bladder and prostate cancer which is also ranked as number one cancer among men (CANSA, 2016). In addition, one in six men in South Africa compared to one in seven women will get cancer diagnosis during their life time (Singh et al., 2015). Similar to the rest of Africa, the majority of men in South Africa present with advanced disease, which is associated with poor outcomes.

2.5. BARRIERS TO CANCER CONTROL

Cancer control focuses on reducing the number of deaths from all cancers as well as improving the quality of life of people diagnosed with cancer through the systematic implementation of evidence-based interventions for prevention, early detection, diagnosis, treatment, and palliative care (WHO, 2006). Furthermore, cancer control is necessary in its use to respond to the cancer needs in the population by preventing cancer, detecting it early, curing it and caring for the people who are affected by cancer. In 2012 the World Health Organization (WHO) estimates that cancer still kills more people than tuberculosis, Malaria and HIV/AIDS combined (WHO, 2012). The greater impact of cancer is reported in low and middle income countries where approximately more than 70% of all cancer deaths occurs (WHO, 2018). In addition to limited resources, the disproportionate distribution of cancer burden has contributed to poor cancer control (Nwogu et al., 2014).

Additionally, WHO indicated that 30% of cancer deaths can be prevented by adhering to the preventive screening measures and minimizing exposure to the modifiable risk factors (WHO, 2014) . However, the uptake of preventive measures to control cancer, remains consistently poor (Morhason-Bello et al., 2013). This might be because of various barriers such as lack of knowledge and understanding of cancer, demographic and socioeconomic factors that affect health and health seeking behaviour.

2.5.1 Cancer Related Knowledge and Understanding

Knowledge and understanding of cancer are described as general awareness and familiarity with the common facts and information relevant to a topic of interest. This factual and interpretive information is useful in establishing an understanding of a phenomenon, and necessary for an individual to take informed action (Berkman, Davis and McCormack, 2010). According to Cancer Association of South Africa (2016), the most effective weapon against cancer is knowledge and it is powerful in reduction, prevention and early detection.

Knowledge about the cancer burden allows for the development, implementation, monitoring and evaluation of cancer strategies that prevent cancer and improves cure. The Cancer Research UK as well as (IARC) (2012), indicate that knowledge related to cancer prevention and screening options are low and that the majority of men in both low and middle-income countries are unaware of cancer risks as well as screening options available for both gender specific and gender nonspecific cancers. The lack of knowledge of cancer and low uptake of cancer screening makes cancer control effects less effective. According to a study carried out in Uganda by Nakandi et al. (2013) revealed that half of men who were part of the study were not aware of cancer symptoms and could not identify predisposing factors related to the disease. Furthermore, a study conducted by Ikuerowo and Ogundele (2015) in Nigeria support the same sentiment when stating there is poor knowledge of cancer among male population which result in low screen uptake. In addition, disbelief and misconception among African men concerning cancer has also been reported as a contributing factor to late reporting to healthcare and poses as a barrier to cancer control (Ikuerowo and Ogundele, 2015). Similarly, health care professionals need to focus on the prevention of cancer similar to other non-communicable diseases (Reidy et al., 2018).

Another prominent reason for men limited knowledge and low participation in any cancer preventative measures is the feeling that they cannot get cancer, which is accompanied by a lack of knowledge and understanding and avoidance of fear and anxiety of the disease (Kabore et al., 2014).

In the South African context, little is known about cancer related knowledge and understanding in men. However, CANSA (2016), confirms that knowledge of cancer among men is a pre-requisite for the correct interpretation of cancer related signs and symptoms. This statement is supported by few studies conducted locally. For instance, the study conducted in South Africa among Black African men also revealed poor knowledge of cancer (Mofolo et al., 2015; Heyns et al., 2011). In addition, a study conducted in South Africa by Maree et al. (2011), highlighted that men’s lack of knowledge of cancer may contributes to their in ability to protect themselves against the disease as well as protect their partners and motivate them to be screened for cancer.

2.5.2 Health seeking behaviour

According to Lambert and Loiselle (2007), described health-seeking behaviour as “ways in which individuals go about obtaining information, including information about their health, health promotion activities, risks to one’s health, and illness”. Seeking health care is commonly undertaken when people no symptoms of the disease are, with a view to prevent disease (Cornally and Mccarthy, 2011). Over the past decade various studies were carried out focusing on this concept, although some were predominantly either too broad or narrow in scope. For instance, a review conducted in United Kingdom by Galdas and Marshall (2005) found evidence from male-specific literature that traditional masculinity as a key factor influencing health seeking behaviour. The authors also highlighted that much of the ill-health amongst men is a result of their lifestyle, and these are issues can be address by health providers in their role as health educators. These findings correspond with results from a systematic review conducted by Yousaf et al. (2015) which found anxiety, embracement, fear of knowing that one is not well as well as lack of knowledge or awareness of cancer symptoms as the barriers to seek healthcare. According to Leone and Rovito (2013), this negatively affect men’s engagement with health services and increase the health gap between both genders. In fact, men are less likely to seek health care ,including cancer screening compared to women, and are known to delay seeking health care (Saab et al., 2017).

Arguably, health-seeking behaviour when cancer is suspected may be distinctive due to perceptions about disease severity and the ambiguity of some warning signs (Fish et al., 2015). However, Näslindh-Ylispangar et al. (2008), states that health-seeking behaviour among men may be enhanced by the perceived threat that predicts the likelihood of a person taking recommended preventative health measures. When a person does not see any change as threatening, there is no stimulus to act. For example, a healthy 60-year-old man might not think that he is at risk of suffering prostate cancer, hence would not go for screening.

Buckley and Ó Tuama (2010), in a study carried out in Ireland showed that recognition of symptoms and appraisal are commonly associated with timely health-seeking behaviour among men. Furthermore, symptom mildness or a gradual progression of symptoms especially in chronic illness like cancer has been linked to delay in seeking health care. However, any delay in diagnosis or treatment of cancer may result in poor outcome (Corner et al., 2006).

Symptom misinterpretation is another barrier associated with delay in seeking health care. These findings were similar to reports from cancer specific studies which revealed that uncertainty regarding the signs and symptoms (Teo et al., 2016), sporadic symptoms (Shahid et al., 2016), and poor recognition of body changes (Hajdarevic et al., 2011) may contribute to delay in seeking healthcare among men.

Socioeconomic status, particularly cost of healthcare and employment status emerged as a barrier to health-seeking behavior in various studies. The poor are the most vulnerable and often affected by these health inequalities which affect health access both an individual and community as a whole (Ferrer, 2018). According to the World Health Organization (WHO) (2006), the poor who are sick face a high financial burden hence unable to access healthcare services. This is supported by Pearson and Makadzange (2008), in a study conducted in Zimbabwe who stated that even when health services are available, the costs of health care are often higher which poor patients and households cannot afford hence result in delay seeking healthcare or disrupt treatment whilst others opt for alternatives such as traditional remedies. They further highlighted that people who live in remote areas have less access to health care facilities compared to those living in the townships and suburbs (Pearson and Makadzange, 2008).

Unemployment amongst men and their participation in minimum paying jobs was also identified as a barrier to health care service utilization (Carroll et al., 2009). Vogel and Heath (2016), support the fact that economic disparity hinders health care utilization. In addition, people without medical insurance coverage are less likely to use health services. Saab et al. (2017), support these statements and add that unemployment results in many men failing to have routine health assessments and often ignore symptoms or delay seeking healthcare when sick or in pain. In addition, employed men were also highly unlikely to use health services because of the fear of being viewed as weak, sickly and incompetent workers.

Educational status plays an important role in men knowledge regarding cancer (Kabore et al., 2014). According to Hooper (2016), education increases opportunities for employment, improves knowledge and understanding about preventative measures as well as assists in the decisions to seek proper health care in-time. However, low levels of education contribute to poor utilization of health care services and disease prevention. According to Ferrante et al. (2011), in a study conducted in the USA amongst highly educated men, revealed that men who were educated and employed were likely to seek health care compared to those with lower educational levels even if they have visible symptoms of illness, seeking health care was not an option until very late stages of illness.

Spirituality and religion acted as both barriers and facilitators to the health-seeking behaviour amongst men. For instance, a focus group used in investigating the attitudes and behaviors of Black men towards prostate cancer prevention, participants reported different views of the influence of religion on their health practices (Blocker et al., 2006). Some men considered their body as God's temple and required to be taken care of hence more likely to visit healthcare providers regularly and comply with the health promotion measures. Whilst, those who consider illness as God's will or as punishment for bad deeds are less likely to seek healthcare (Teo et al., 2016). In addition, Allen et al. (2014), in a survey conducted in churches of various sizes and socio-economic strata, dimensions on religiousness and cancer screening behaviour among church-going Latinos in the United States of America, found that 89% of men know of screening services for prostate cancer. The researchers added that religions usually influence beliefs and cultural values and this in turn influences health seeking behaviour of men towards cancer.

Letsela and Ratele (2009), in a South African study investigating health seeking behaviours of men, found a similar trend and report the lack of medical aid, distrust of public health services, the view that visiting health services is a waste of their time, fear of finding out that one is unwell, and the idea that health check-ups are for others who are weaker, affected health seeking. These findings support other reports which indicate that men see visiting health facilities as a feminine activity (Letsela and Ratele, 2009).

Buckley and Ó Tuama (2010), point out that a radical change in clinical practice imperative, the clinical setting should be more gender sensitive and should be able to cater for male patients. They added that health providers must improve men's accessibility to health services and promote men’s health seeking, considering the role played by societal inequalities in further exacerbating some men ‘s lack of access. Furthermore, lack of cancer related knowledge and understanding, religious beliefs, access to hospitals, financial constraints and fear are the most common barriers for not seeking health care for cancer related symptoms among men in Africa (Rebbeck at al., 2011).

2.6 SUMMARY

This chapter discussed the literature focusing on the incidence of cancer globally, and Africa in particular. Barriers to cancer control with focus on knowledge, understanding as well as health seeking behaviour were presented. Chapter Three will present the design and methods used in the study.

CHAPTER THREE

RESEARCH METHODS AND DESIGN

3.1 INTRODUCTION

Chapter two focused on the literature review, Chapter three will describes the research design and methods, study setting, sampling and population, process of data gathering, data management and storage, validity and reliability and finally the ethical considerations for the study.

3.2 RESEARCH DESIGN AND METHODS

According to Burns and Grove (2010), the research design of a study serves as the blueprint and the plan utilised to address the research question and the aim of the study. A quantitate approach and cross-sectional design was used to answer the research question. A quantitative approach deals with numbers and anything that is measurable in a systematic way through investigation of phenomena and their relationships (Creswell, 2014) .The researcher used this approach since it allows the establishment of correlations and relationships (Polit and Beck, 2010).

Cross-sectional design involves the collection of data at a certain point in time through direct questioning (Polit and Beck, 2012). The researcher chose this design since it provides accurate information and data can be collected from a large population in an economical manner (LoBiondo-Wood and Haber, 2014). In addition, the design has the ability to compare the association between two variables, but the causes of these variables are not determined (Creswell, 2012).

3.3 RESEARCH SETTING

A research setting is described as a physical location in which data collection takes place (Burns and Grove, 2009). The setting for this study was Ward 23 in Muldersdrift, a semi-rural settlement also known as Video. Muldersdrift is situated northeast of Johannesburg and forms part of the west Rand District Municipality. Muldersdrift is part of economically significant metropolitan municipalities, the City of Johannesburg and the City of Tshwane. Ward 23 consists of an established informal settlement with 214 Reconstruction and Development Programme (RDP) houses adjacent to an informal settlement. The exact number of the informal dwellings is not known as these homes are constantly erected.

According to Rwamugira et al. (2017), Muldersdrift has a population of approximately 19,959, with a high number of residents between the ages 20 to 34. According to the South African Community Profile Database (Frith, 2012), Ward 23 has 436 males; most are between 20 to 35 years old with some secondary education. The population living in this area speaks different languages, but the most common spoken languages are IsiZulu, English and SiSwati.

The informal houses have no running tap water and residents use communal taps, which provide safe and clean water for drinking. In addition, residents from informal houses use pit latrines, although it is not clear how many yards have them. The informal homes have no electricity; however some have illegal electricity connections, which are connected from the small brick houses constructed by the Government; the illegal electricity lines are seen in the small passages of the informal settlement (Baaitse, 2018).

The residents of Ward 23 are served by the Muldersdrift Primary Health Clinic to meet their healthcare needs. The clinic is nurse-led and provides a wide range of services, such as awareness of non-communicable diseases, health education focusing on prevention of diseases, antenatal care, family planning, HIV testing, counselling and treatment, as well as emergency services. A Community Health Nurse and health promotion volunteers visit Ward 23 daily to provide health education to its residents.

3.4 POPULATION AND SAMPLING

The population is the total number of people that the researcher is interested to study (Polit and Beck, 2012). The population was all men living in Muldersdrift, whilst the target population was all men living in Ward 23 in Muldersdrift who met the sampling criteria (Polit and Beck, 2012).

3.4.1 Sampling, sample size and recruitment

Sampling is defined as a process used to select a small group of people who represent the entire population for the study (Polit and Beck, 2012). The researcher used convenience sampling, which allowed the researcher to include all men who were readily available during the time of data collection (Gray, Grove and Sutherland, 2017). Convenience sampling is less expensive, utilise community members that are easily accessible based on geographical proximity and willing to participate in the study (Etikan, 2016).

The Raosoft sample size calculator ® was used to calculate the sample size (Raosoft, 2018). The population was 436, margin error 5%, confidence interval 95% and response distribution 50%, which resulted in a sample size of 205 (n=205).

The researcher went into the community door by door inviting men 18 years and older to be part of the study. Recruitment went on until the sample size (n=205) was realized. During the recruitment of participants, the researcher was accompanied by the Community Health Nurse responsible for health education in the community, a field worker and the community leader. However, data were collected by the researcher and field worker.

3.4.2 Data collection method and instrument

According to Burns and Grove (2010), data collection is a process of collecting information with the intention of addressing the research question and answering the research objectives. The researcher used structured interviews to collect the data. Structured interviews gives the researcher control over the content of the interview and allow for the rephrasing of the questions asked in order that the respondent can better understand. It also allows the researcher to ask the same questions to all respondents and have an advantage of not excluding the elderly or respondents who are not able to express themselves as a result of low literacy level (Levashina et al., 2014).

According to Burns and Grove (2010), a questionnaire is an instrument utilized by the researcher to record the responses of the respondents. Using a questionnaire, data can be collected quickly from a big sample size, it is time efficient and affordable. However, it does not allow the respondents to elaborate on the subject matter.

The data collecting instrument (Annexure A) was adapted from a study conducted by Maree and Wright (2010) in Tshwane, South Africa with permission from developers. The questionnaire (**Annexure A**) containing both open- and closed ended questions and was divided into sections. The sections allowed the researcher to gather socio-demographic data in Section A; Section B focused on knowledge and understanding of cancer, and Section C focused on health seeking behaviour. Since the instrument was used before and shown to be applicable and clear, no pre-test was done. The data were collected between August and September 2018 with the assistance of a field worker under the supervision of the researcher.

3.4.3 The process of data collection

The data collection were conducted as follows:

- Two weeks after the study was approved by the Wits Human Research Ethics Committee (HREC) with the ethics reference number: M180443, the researcher contacted the Manager of the Muldersdrift Primary Health to set up a meeting to explain the study and obtain their support.
- During the meeting the researcher was introduced to the Community Health Nurse responsible for Video as well as the community representatives. The study was presented to them and their support was obtained.
- The community Nurse from Muldersdrift Clinic assisted with recruitment of one health field worker from where the study was conducted.
- The field worker was given basic training on cancer and health seeking behavior. The field worker was introduced to the questionnaire and guided on how to complete it. Thereafter, the researcher and field worker agreed on suitable days for data collection and it was agreed that the fieldworker would also assist the researcher with language during data collection should it arise.
- During data collection the researcher approached men in their homes as well as those chatting in groups and introduced himself and the field worker and explained the study to them.
- Due to the social structure it not possible to interview the respondents in private.

- Written consent (Annexure B) was obtained before the questionnaire was completed which took between 15 to 25 minutes.

3.4.4 Data management and analysis

The questionnaires which were completed were placed in a secured box and the individual data collected were numbered sequentially from 01 to 205. Data were cleaned and entered onto an Excel spreadsheet. Cross tabulation and grouping of the data were performed using statistical software STATA version 14.0. According to Grove et al.(2017), statistical softwares are commonly used worldwide for data analysis and are easy to access and use. Data were also analysed in consultation with a statistician. Descriptive statistics, which involves organizing data in ways that provide meaning and insight, were used to analyze the data (Burns and Grove, 2009). Content analysis was used to analyze the open-ended questions. The Chi-square Test was used to test the significance of associations between variables. According to Burns and Grove (2011),Chi-Square is a statistical test used to compare the observed data and the expected data in all categories.

3.5 VALIDITY AND RELIABILITY

The quality of a research instrument is determined by its validity and reliability. Validity Validity is defined as the extent to which the data collection instrument is able to measure what was intended to be measured (Burns and Grove, 2009). Validity entails whether the data presents the true picture of what is being studied and ensures that the results are accurate and well interpreted.

Reliability is defined as the extent to which a data collection instrument is able to obtain the same result when used repeatedly (Lai, 2013). This was maintained by ensuring consistency with the data collection instrument by using the same questionnaire throughout the data collection. Measures taken to increase the validity and reliability of study findings were as follows:

- Involvement and permission from Muldersdrift Primary Health Clinic ensured access and cooperation of the community members to take part in the study.

- The researcher, an oncology nursing student, collected the data with the assistance of a field worker.
- The same questionnaires were used to collect data throughout the data collection exercise and no problems were experienced.
- The statistical data analysis was done with support of a statistician and the Chi-Square test was used to determine significance between variables.

3.6 ETHICAL CONSIDERATIONS

In accordance with the Belmont report (Polit and Beck, 2012), ethical conduct in nursing research is intended to safeguard the integrity of respondents and the research process. The following measures were applied to ensure the study was conducted in an ethical manner.

- The research proposal was presented and assessed by the peer review process of the Department of Nursing Education to ascertain its feasibility.
- The research proposal was then submitted to the Postgraduate Committee of the School of Therapeutic Sciences for further assessment and approval by assessors.
- Thereafter the proposal was submitted to the Human Research Ethics Committee (HREC) for ethical clearance application and approval. Ethical clearance was obtained (Clearance certificate number: (M180443), (Annexure C).

  Informed consent: An information sheet was first given to the respondents (Annexure D) and then informed consent in writing was obtained (Annexure E).
- The right to self-determination was upheld as respondents were free to withdraw from the study without being harmed in any way.
- Anonymity of respondents: Anonymity refers to protecting the respondents' identify and this occurs when there is no direct link between the data and the respondents (Polit and Beck, 2010).
  - Anonymity was enhanced by not using the respondents' actual names during the collection of the data. The researcher used numbers on the

questionnaires and not names. The signed consent forms were not attached to the questionnaires but kept separately.

- Confidentiality: Confidentiality is the promise of not divulging the information obtained but only using it for the intended purpose (Polit and Beck, 2012). The following measures were considered to ensure confidentiality;
    - All data sheets and flash drives were placed in a safe lockable drawer in the Department of Nursing and will be destroyed three years after publishing the report.
    - Questionnaires were numbered sequentially, and respondents’ information was not discussed with other people.

3.7 SUMMARY

This chapter provided the details of the research design and method used. Described first was research design followed by research setting, population, sampling, sample size and recruitment, data collection process, data collection instrument, data analysis, validity, reliability and the ethical considerations of the study. The next chapter focuses on the findings of the study.

CHAPTER FOUR

RESULTS

4.1 INTRODUCTION

Chapter Three described the research design and methods used, while this chapter will describe the results of the study, including general information, knowledge and understanding of cancer and health seeking behavior.

4.2 GENERAL CHARACTERISTICS OF THE SAMPLE

The sample consisted of 205 respondents (n=205) with an age range from 18 to older than 60 years. The average age was 35, SD ± 24.6 and median 31 years. Slightly less than a third of the respondents (30.73%; n=63) were between the ages 20 to 29. The highest percentage (21.5%; n=44) belonged to the Zulu cultural group and attended school up to Grade 11 to 12 (49.8%; n=102). In addition, the majority were unemployed (49.8%; n=102), not married (58.5%; n=120) and had a monthly income between R1 and R2400 (55.1%; n=113). The general characteristics of the study sample are summarized in Table 4.1.

Table 4.1 The general characteristics of the sample (n=205)

Age groups	**n**	**%**
18-19	27	13.2
20-29	63	30.7
30-39	57	27.8
40-49	35	17.1
50-59	10	4.9
60+	13	6.3
Socio-cultural group		
Setswana	33	16.1
Northern Sotho	43	20.9
Southern Sotho	15	7.3
Zulu	44	21.2

Other	70	34.2
Level of education		
Never went to school	9	4.4
Up to grade 7	18	8.8
Grade 8 to 10	60	29.3
Grade 11 to 12	102	49.8
Tertiary education	16	7.8
Employment status		
Employed	79	38.5
Unemployed	102	49.8
Self- employed	23	11.2
On disability grant	1	0.5
Marital status		
Single	120	58.5
Married	78	38.1
Divorced	1	0.5
Separated	4	2.0
Widower	1	0.5
Other	1	0.5
Monthly income		
R1 to R2400	113	55.1
R2401 to R6000	84	50.0
R6001 to R12000	7	3.4
More than R12000	1	0.5
Religious affiliation		
Roman Catholic	17	8.3
Lutheran	3	1.5
Anglican, Methodist, Presbyterian	14	6.8
Dutch Reformed	1	0.5
ZCC/other African initiated	87	42.4

Charismatic	27	13.2
Muslim	1	0.5
Rastafarian	1	0.5
No religious affiliation	35	17.1
Other religions	19	9.3

4.3 HEALTH-SEEKING BEHAVIOUR

When asking the respondents whether they were encouraged by their partners or family to go to the clinic or the doctor, the majority (52.2%; n=107) reported they were encouraged; only 9.8% (n=20) reported not being encouraged.

When asking the respondents whether they think should spend money on their health, 39.0% (n=80) responded positively whilst 10.7% (n=22) stated they don’t think they should spend money on their health. When asking whether the respondents would feel guilty if they spend money on their health, 34.2% (n=70) reported they would not feel guilty at all whilst 17.1% (n=35) reported that they would indeed feel guilty.

The respondents were asked how valuable or important they are in their own eyes and how valuable they think they are in the eyes of their families. The majority (86.3%; n=177) indicated they consider themselves very important to themselves and 81.5% (n=167) to their families. When further asked whether they require permission to go to a clinic or doctor when ill, most (71.7%; n=147) responded negatively, whilst 28.3% (n=58) indicated they require such permission; 11.2% (n=23) of those who required permission indicated getting permission from their partners.

When the respondents were asked whether they are able to decide where they want to go for health care, the majority (83.4%; n=171) responded positively, whilst 16.6% (n=34) reported not being able to decide on their own. For those who were unable to decide, were asked who decide for them and the greatest percentage 39.0% (n=23) indicated partners, followed by parents (30.5%; n=18) (Table 4.2).

Table 4.2 Health seeking behaviour (n=205)

Question	n	%
When you are ill, do your partner /family encourage you to go to the clinic or doctor?		
Very much	107	52.2
Most probably	28	13.7
Not really	50	24.4
Not at all	20	9.8
Do you think that you should spend money on your health?		
Very much	80	39.0
Most probably	34	16.6
Not really	69	33.7
Not at all	22	10.7
Do you feel guilty if you have to spend money on your health?		
Very much	35	17.1
Most probably	33	16.1
Not really	67	32.7
Not at all	70	34.2
In your own eyes, how valuable/important are you to yourself?		
Very much	177	86.3
Much	27	13.2
Not really	1	0.5
Not at all	0	0.0
How important or valuable do you think you are to your family?		
Very much	167	81.5
Much	36	17.6
Not really	2	1.0
Not at all	0	0.0

When you are ill, do you need permission to go to the doctor or clinic?		
Yes	58	28.3
No	147	71.7
If yes, who must give permission?		
Partner	23	39.0
Parents	18	30.5
In laws	0	0.0
Children	4	6.8
Other	14	23.7

When cross-tabulating marital status and being encourage by the partner or family to go to the clinic or the doctor, it was found that 53.2% (n=57) of the respondents who responded positively to being encouraged by their partners or families were single whilst 42.1% (n=45) were married. There was no statistically significant difference between marital status and being encouraged by partner or family to go to the doctor or clinic when ill, *p*=0.236 (Table 4.3).

Table 4.3 Association between marital status and being encouraged by the partner or family to go to the clinic or doctor when ill (n=205)

Variable	**Being encouraged by partner/ family to go to clinic or doctor when ill**								***p*-value**
	Very much (n=107)		Most probably (n=28)		Not really (n=50)		Not at all (n=20)		0.236
Marital status	n	%	n	%	n	%	n	%	
Single	57	53.2	11	39.3	37	74.0	15	75.0	
Married	45	42.1	17	60.7	11	22.0	5	25.0	
Divorced	1	0.9	0	0.0	0	0.0	0	0.0	
Separated	2	1.9	0	0.0	2	4.0	0	0.0	
Widower	1	1.9	0	0.0	0	0.0	0	0.0	

Other	1	1.9	0	0.0	0	0.0	0	0.0	

Key: *p*-value <0.05 is considered statistically significant

When cross tabulating think you should spend money on your own health and monthly income, the majority of the respondents who indicated they are not willing at all (77.3%; n=17), earned between R1 to R2400 per month. The Chi- Square Test, showed no statistically significant difference between the variables *p* = 0.154 (Table 4.4).

Table 4.4 Association between think you should spend money on own health and monthly income (n=205)

Variable	**Think should spend money on own health**								***p*-value**
	Very much (n=80)		Most probably (n=34)		Not really (n=69)		Not at all (n=22)		
Monthly income	n	%	n	%	n	%	n	%	
R1-R2400	40	50.0	13	38.2	43	62.3	17	77.3	0.154
R2401-R6000	35	43.8	19	55.9	25	36.2	5	22.7	
R6001-R12000	4	5.0	2	5.9	1	1.5	0	0.0	
more than R12000	1	1.2	0	0.0	0	0.0	0	0.0	

Key: *p*-value <0.05 is considered statistically significant

When cross-tabulating marital status, employment status, age group and need permission to go to the doctor or clinic, the majority (55.2%; n=35) of the respondents who reported they need permission were not married and within age range of 18 to 19 years (24.1%; n=14). In addition, most of the respondents (60.3%; n=35) who indicated a need for permission were unemployed. However, Chi-Square found no statistically significant difference between marital status and employment status and need for permission to go to the clinic or doctor, (*p*= 0.169) and (*p*= 0.083) respectively.

The association between age group and need for permission to go to the doctor or clinic, showed a statistically significance, (*p*= 0.000) (Table 4.5).

Table 4.5 Association between marital status, employment status, age group and need for permission to go to the doctor or clinic (n=205)

Variable	Need for permission to go to the doctor or clinic				*p*-value
	Yes (n=58)		No (n=147)		
Marital status	n	%	n	%	0.169
Single	32	55.2	88	59.9	
Married	22	37.9	56	38.1	
Divorced	1	1.7	0	0.0	
Separated	1	1.7	3	2.0	
Widower	1	1.7	0	0.0	
Other	1	1.7	0	0.0	
Employment status					
Employed	21	36.2	58	39.5	0.083
Unemployed	35	60.3	67	45.6	
Self-employed	2	3.5	21	14.3	
On disability grant	0	0.0	1	0.7	
Age group					
18-19	14	24.1	13	8.8	0.000
20-29	14	24.1	49	33.3	
30-39	14	24.1	43	29.3	
40-49	5	8.6	30	20.4	
50-59	2	3.5	8	5.4	
+60	9	15.5	4	2.7	

Key: *p*-value <0.05 is considered statistically significant

4.4 KNOWLEDGE AND UNDERSTANDING OF CANCER

When respondents were asked whether they knew what cancer was, approximately a third (32.7%; n=67) confirmed, whilst 30.2% (n=62) reported they did not know what cancer is; 37.1% (n=76) were unsure. When comparing age group, level of education and knowing what cancer is, the greatest percentage of the respondents 40.3% (n=25) who reported not knowing what cancer is, were less than 30 years old, followed by the age group 30 to 39 years. However, the majority of men who indicated they knew what cancer is, were within the Grade 11 to 12 of school group. In addition, Chi-Square Test showed statistically significant difference between level of education and knowing what cancer is (*p*= 0.003). However, there was no statistically significant difference found between age group and knowing what cancer is (*p*= 0.085) (Table 4.6).

Table 4.6 Association between educational level and age group and knowing what cancer is and (n=205)

Variable	**Know what cancer is**						***p*-value**
	Yes (n=67)		**No (n=62)**		**Unsure (n=76)**		0.003
Educational level	n	%	N	%	n	%	
Never went to school	5	7.5	2	3.2	2	2.6	
Up to grade 7	5	7.5	10	16.1	3	4.0	
Grade 8 to 10	11	16.4	18	29.0	31	40.8	
Grade 11 to 12	37	55.2	26	41.9	39	51.3	
Tertiary	9	13.4	6	9.7	1	1.3	
Age group							
18-19	8	11.9	9	14.5	10	13.2	0.085
20-29	20	29.9	25	40.3	18	23.7	
30-39	19	28.4	16	25.8	22	29.0	
40-49	9	13.4	9	14.5	17	22.4	
50-59	3	4.5	0	0.0	7	9.2	
60+	8	11.9	3	4.8	2	2.6	

Key: *p*-value <0.05 is considered statistically significant

When asking the respondents to indicate what they understood cancer is, the majority (71.2%; n=146) indicated they were unable to say as they did not know. The respondents who indicated they understood what cancer is (28.8%; n=56), were asked to explain what they understand what cancer is and various explanations were provided. More than 20% (22.6%; n=14) reported cancer as a very dangerous disease, whilst 14.5% (n=9) indicated cancer is caused by smoking, drinking too much alcohol and certain food. The respondent’s explanations are provided in Table 4.7.

Table 4.7 Understanding of what cancer is (n=62)

Understanding of cancer	**n**	**%**
Is very dangerous	14	22.6
Is a disease for women, children and white people	4	6.5
Is a skin disease causing wounds	2	3.2
It has no cure if found late	8	12.9
Cancer has different types affecting body parts	2	3.2
It is caused by smoking, drinking too much alcohol, the sun and certain foods	9	14.5
It is passed on in the family	1	1.6
A killer	6	9.7
What cause cancer is unknown	1	1.6
It is a blood disease	2	3.2
Is difficult to treat	5	8.1
It is curable if you are not late to go to hospital	3	4.8
Is common in old people	1	1.6
It is worse than HIV	1	1.6
Painful disease	3	4.8

When asking what changes in their body would make them think that they might have cancer, 75.1% (n=154) were not able to identify any change suggestive of cancer.

When those who indicated knowing body changes suggestive of cancer, were asked to list such body changes suggestive of cancer, several answers were given (Table 4.8). However, 34.0% (n=16) reported feeling very sick, followed by body swelling (27.7%; n=13).

Table 4.8 Body changes suggestive of cancer (n=47)

Body changes suggestive of cancer	**n**	**%**
Feeling very sick	16	34.0
Change in skin colour	7	14.9
Difficult to eat	4	8.5
Pain	5	10.6
Foul smell	1	2.1
Body swelling	13	27.7
Bleeding	1	2.1

When asking respondents who and how long they would wait to tell if they suspect that they might have cancer, the greatest percentage (23.9%; n=49) opted for their partner/wife, 17.1% (n=35) their male family member and 5.9% (n=12) repoted nobody. In addition, 77.6% would wait less than one week to tell and 3.9% would wait longer than one month (Table 4.10).

Table 4.9 Who and how long the respondents would wait to tell if they suspect they have cancer (n=205)

Question	**n**	**%**
If you think that you might have cancer, who will you tell about it first?		
Male friend	34	16.6
Male family friend	35	17.1
Partner/wife	49	23.9
Nobody	12	5.9
Others	75	36.6

How long will you wait before you tell the person that you think you might have cancer?		
Less than one week	159	77.6
One to two weeks	19	9.3
Two to four weeks	12	5.9
Longer than one month	8	3.9
Longer than six months	1	0.5
Longer than a year	6	2.9

To ensure respondent’s knowledge of warning signs of cancer, the question “if you discover the following, how serious do you think it is?” was asked. Cancer warning signs were outlined, and respondents were asked to choose between four categories (not serious at all, not serious, serious and very serious). The majority (79.5%; n=163) of the respondents indicated a sole that does not heal as serious whilst 44.4% (n=91) considered unusual bleeding or discharge from elsewhere in the body as very serious. Pain when passing urine (26.3%; n=54) and change in size of a mole or a wart (20.9%; n=43) were also perceived very serious compared to lump in the armpits or groin (69.3%; n=142), swelling anywhere in the body (66.3%; n=136) and difficulties in swallowing (58.5%; n=120) as were as indigestion (56.1%; n=115) as serious (Table 4.10).

Table 4.10 Perceived seriousness of the warning signs of cancer (n=205)

Warning signs	**Perceived seriousness of warning signs of cancer**							
	Very serious		Serious		Not so serious		Not serious at all	
	n	%	n	%	n	%	n	%
Pain when passing urine	54	26.3	121	56.0	28	13.7	2	1.0
Lump in the armpit/groin	28	13.7	142	69.3	33	16.1	2	1.0

Swelling elsewhere in the body	38	18.5	136	66.3	29	14.2	2	1.0
Change in the color of a mole or wart	37	18.1	130	63.4	25	12.2	13	6.3
Change of size of mole or wart	43	20.9	106	51.7	37	18.1	19	9.3
Change in bowel habit	37	18.1	100	48.8	47	22.9	21	10.2
Change in bladder habits	43	21.1	104	51.0	41	20.1	16	7.8
Indigestion	40	19.5	115	56.1	36	17.6	14	6.8
Difficult to swallow	42	20.5	120	58.5	37	18.2	6	2.9
Nagging cough	38	18.5	124	60.5	37	18.2	6	2.9
Hoarseness of voice	22	10.7	97	47.3	57	27.8	29	14.2
A sore that does not heal	40	19.5	163	79.5	2	1.0	0	0.0
Unusual bleeding or discharge elsewhere in the body	91	44.4	114	55.6	0	0.0	0	0.0

When respondents were asked to whom they would like to go to if they find one of these changes in the body, the majority 74.2% (n=152) indicated the clinic, followed by 18.1% (n=37) who indicated a private doctor whilst only 3.4% (n=7) reported would go to a traditional healer (Table 4.11).

Table 4.11 Preferred health care facility (n=205)

Question	**n**	**%**
If you find one of these changes in your body, who would you like to go to?		
Private doctor	37	18.1
Clinic	152	74.2
Traditional healer	7	3.4
Faith healer	8	3.9
Other	1	0.5

When the respondents were asked whether they had ever been taught or made aware of cancer before, the majority (62.4%; n=128) responded positively, whilst 37.6% (n=77) reported they have not been taught or made aware of cancer before. When comparing age and having been taught or made aware of cancer, the greatest percentage (35.2%; n=45) who indicated they had ever been taught or made aware of cancer were younger than 30 years, followed by the group between 30 to 39 years (26.5%; n=34); only 6.1% (n=8) aged 60 and older reported having ever been taught or made aware of cancer.

When further cross tabulating level of education with having ever been taught or made aware of cancer before, it was found that more than 50% (51.6 %; n=66), had 11 to 12 years of schooling, whilst only 10.2% (n=13) with tertiary education reported being taught or made aware of cancer. However, Chi-Square showed no statistically significant difference between age, level of education and having been taught or made aware of cancer before (*p*= 0.164) and (*p*= 0.373) respectively (Table 4.12).

Table 4.12 Association between age groups, educational level and having been taught or made aware of cancer before (n=205)

Variable	**Having been taught or made aware of cancer before**				***p*-value**
	Yes (n=128)		**No (n=77)**		
Age group	n	%	n	%	0.164
18-19	17	13.3	10	13.0	
20-29	45	35.2	18	23.4	
30-39	34	26.6	23	29.9	
40-49	16	12.5	19	24.7	
50-59	8	6.1	2	2.6	
60+	8	6.1	5	6.5	
Educational level					
Never went to school	5	3.9	4	5.2	0.373
Up to grade 7	11	8.6	7	9.1	
Grade 8 to 10	33	25.8	27	35.1	
Grade 11 to 12	66	51.6	36	46.8	
Tertiary	13	10.2	3	3.9	

Key: *p*-value <0.05 is considered statistically significant

When asking the respondents who reported positively about been taught or made aware of cancer before on who taught or made them aware, 33.8% (n=45), indicated they heard about cancer on the radio, 19.6% (n=26) heard about cancer by means of the television whilst only 5.3% (n=7) indicated a primary health care professional.

When asked whether the information they received changed the way the respondents would react if they think they have cancer, the majority (85.1%; n=114) responded positively whilst only 14.9% (n=20) reported negatively (Table 4.13).

Table 4.13 Having been taught or made aware of cancer before (n=205)

Questions	**n**	**%**
Have you been taught or made aware of cancer before?		
Yes	128	62.1
No	77	37.6
If yes, by who?		
Radio	45	33.8
Television	29	19.6
Primary health care clinic	7	5.3
Cancer campaign	11	8.3
Health care professional	20	15.0
Other	24	18.1
If yes, did the information that you received change the way you that you will react if you think you might have cancer?		
Yes	114	85.1
No	20	14.9

When asking whether they go to the clinic for cancer screening majority of the respondents (76.6%; n=157) reported they had not gone for cancer screening. When asking those who said they had gone to the clinic for cancer screening, how often they go (n=48), the majority (63.8%; n=30) reported once a month (Table 4.15).

Table 4.14 Going to the clinic for cancer screening (n=205)

Cancer screening	**n**	**%**
Do you go to the clinic for cancer screening?		
Yes	48	23.4
No	157	76.6
If **yes**, how often?		
Once a month	30	63.8

Less than once a month	17	36.2

When cross-tabulating knowing what cancer is with going to the clinic for cancer screening, it was found that the highest percentage (52.1%; n=25) of the respondents who indicated knowing what cancer is, had ever gone for cancer screening at the clinic. In addition, Chi-Square found a statistically significant difference between going to the clinic for cancer screening and knowing what cancer is (*p*= 0.004) (Table 4.15).

Table 4.15 Association between knowing what cancer is and going to the clinic for cancer (n=205)

	Going to the clinic for cancer screening				
	Yes (n=48)		**No (n=157)**		***p*-value**
Knowing what cancer is	**n**	**%**	**N**	**%**	
Yes	25	52.1	42	26.8	0.004
No	12	25.0	50	31.85	
Unsure	11	22.9	65	40.4	

Key: p-value <0.05 is considered statistically significant

4.5 SUMMARY

This Chapter presented the results of the study. The general information, health seeking behavior and knowledge and understanding were presented. The next Chapter focuses on discussion of results, justifications, limitations, recommendations and conclusions of the study.

CHAPTER FIVE

DISCUSSION, JUSTIFICATION, LIMITATIONS, RECOMMENDATIONS AND CONCLUSIONS

5.1 INTRODUCTION

Chapter four presented the findings of the study. Chapter five will discuss the findings, presents the justification, limitations, recommendations and conclusions of the study.

5.2 DISCUSSION

The study provided evidence that, the respondents had limited knowledge of cancer. Not only did they not know what cancer is, but the majority (75.1%) of the respondents were not able to mention body changes that would be suggestive of cancer. These findings are similar with other studies conducted in Africa, where researchers also found a lack of knowledge among men. For instance, a study conducted by Kabore et al. (2014),in Burkina Faso, revealed that 62% of the men had never heard of the prostate cancer. Similarly, a study conducted in Uganda by Nakandi et al. (2013), found 45.9% of the men who were part of the study were unaware of the cancer, whilst in the South Africa, a study carried out by (Mofolo et al. (2015), showed more than half (54.4%) of men were unaware of cancer and those who reported ever heard of it had moderate level of knowledge. This finding can serve as explanation to why men poorly utilize cancer screening services.

Results from this study indicate that partners and family members play a pivotal role in health seeking behavior as the majority (52.2%) of the respondents reported being encouraged by their partners or families to go to the clinic or doctor when ill. Various studies report the same trend. For instance Forbat et al.(2014), in a study conducted in Scotland, found encouragement and support from spouses and family members was commonly associated with timely health-seeking behaviour. Similarly, Hale et al.(2010), in a study conducted in England , also found that encouragement from female partners to consult with a healthcare professional provides men with an acceptable excuse for seeking healthcare and may prevent men from feeling that their masculinity role is compromised.

It was interesting to find that despite being poor, more than a third of the men indicated that they would spend money on their health and not feel guilty about it. However, these results might not be positive if the number of respondents who would most probably not spend money on their health is considered. Therefore, the current study supports the findings reported by Mofolo et al. (2015), in a study conducted in South Africa, that showed unemployment amongst men and their participation in minimum paying jobs poses as a barrier to health service utilization. Similarly, Letsela and Ratele (2009) in a study conducted in South Africa investigating men's health seeking behaviors', also support the current findings. These authors highlighted the lack of medical aid and low socioeconomic as reasons for delaying healthcare seeking. However, feeling guilty to spend money on own health can only worsen the situation and add to the number of men delaying seeking healthcare.

The study also provides evidence that the respondents considered themselves valuable, both to their families and self. These findings corresponds with results from a study conducted by Maree and Wright (2010), involving South African women which revealed that 89.3% of the respondents considered themselves valuable and slightly more (90.7%) were of the opinion that their families regarded them to be very important.

It was interesting to note that nearly a third of the men had to ask permission to visit a health care facility. Unemployment which result in low monthly income can serve as explanation why men in this study would ask for permission to visit the clinic or doctor when ill. On the contrary, Nzama (2013),in a study conducted in South Africa showed that newly employed men may be unlikely to ask for permission to use health services because of the fear of being viewed as weak, sickly and incompetent workers and this may lead to ignoring symptoms and delay in seeking healthcare.

The results showed that higher level of education, more than ten years of studying, was associated with knowing what cancer is. This finding is supported by study conducted in United States of America by Winterich et al.(2011) ,which also found that low level of education is associated with low knowledge of cancer, whilst advancement in education was linked to strong association with cancer related knowledge. Therefore, it was quite reasonable to expect men with a higher educational level to have more knowledge of cancer as reported in the study conducted by (Kabore et al., 2014) in Burkina Faso.

What was interesting to find is that the men indicated they would inform their partner or wife first should they suspect they might have cancer. In addition, the fact that they would tell them in less than one week is also positive. These findings are congruent with results reported by Macleod et al. (2009) in a study conducted in United Kingdom, which stated that men's disclosure of symptoms to spouses is considered acceptable whilst informing healthcare professionals is considered a threat to masculinity. A study conducted mong women in south Africa by Maree and Wright (2010), also found that women were ready to communicate their suspicion of cancer with a female family member within a period of less than a week. However, the challenge lies with the knowledge of the person with whom the suspicion is shared. It is doubtful if the partner or wife's knowledge of cancer would assist the person to timely seek appropriate health care.

Taking into consideration of the small number of respondents who were able to identify common warning signs of cancer as serious and very serious, it comes as no surprise that their knowledge of warning signs of cancer was also low. Men would therefore not be suspicious of cancer should they be confronted with these warning signs. This finding corresponds with Iranian study done by Feizi et al. (2011), which also found low level of knowledge about warning signs of cancer among men (41.7%) and the inability to identify the seriousness as well as mildness of cancer warning signs are associated with delayed health seeking behaviour.

The study also found that majority of the respondents had ever been taught or made aware of cancer whilst the radio served as primary information sourse for those who were informed. It was inteseting for find that less than 5% of the respondents received information about cancer at the primary health care clinic. In addition, the majority of the respondents who were taught or made aware of cancer were of the opinion that the information they received would change the way they would react if they suspect the might have cancer. It seems as if the media plays an important role in disseminating information that improves health. In a study carried out in Jordan by Ahmad et al. (2015)

found most of the respondents indicated that they had watched health segments on television while few respondents used the radio or internet to seek information about cancer. Similar finding is reported in Kenyan study conducted by Wachira et al. (2018), which showed that the majority of their respondents received information about cancer via the media while only 6.4% were informed by a health care worker. However, these findings differ from a study conducted in Italy which reported that the majority of the men had heard about cancer from their physicians which resulted in 29% taking up screening for cancer symptoms (Morlando et al,. 2017). Why such a small number of respondents in the current study reported they received information about cancer at the primary health clinic is not clear and need to be investigated before conclusions can be made.

It is doubtful whether the respondents who reported they had gone for screening at the primary health clinic indeed went, as population-based cancer screening available at these clinics is limited to cervical cancer. In addition, these results are not congruent with other studies conducted in Africa. For instance, a study conducted in Kenya found only 1.3% of the respondents had ever been screened for cancer (Morlando, Pelullo and Di Giuseppe, 2017). Similar, findings were reported in studies carried out among African men where cancer screening rates of 4.1%, 4.5% and 10% were reported in Kenya, Nigeria and Namibia respectively (Ajape, Babata and Abiola, 2010; Oladimeji et al., 2010; Kangmennaang, Mkandawire and Luginaah, 2016). In addition, Conde et al., (2011) reported that underserved populations and black men tend to record low levels of screening for gender specific cancers which supports the researcher’s doubts whether honest answers were provided. However, this is mere speculation and needs to be investigated further before definite conclusions could be made.

5.3 JUSTIFICATION

The objectives of the study were to describe what men living in Muldersdrift know and understand about cancer as well as their health seeking behaviour should they suspect that they might have cancer. In Chapter Three the research design and methods were described in detail, whilst Chapter Four and Five presented the results and discussed the study findings. It can therefore be stated that this study is justified in that the objectives have been achieved.

5.4 LIMITATIONS OF THE STUDY

The study has several limitations. First, the study was conducted within one semi-rural area in a resource poor community, hence making it difficult to generalize the findings to all men in South Africa. Secondly, even though the sample was adequate for analysis, convenience sampling was used limiting extrapolations to the greater community. In addition, using a questionnaire could have led to recall bias and socially desirable answers as suspected in the answers to the question on having had cancer screening. Lastly, a survey tends to reflect relatively superficial knowledge and not deep understanding of the subject investigated. However, the researcher believes that the results of the study provides baseline data allowing conclusions and further investigations.

5.4 RECOMMENDATIONS

Based on the findings of the study, the researcher wishes to recommend the following:

- Education programmes targeting both men and women on the warning signs of cancer and site-specific cancer in men should be developed, implemented and evaluated.
- Cancer prevention interventions should acknowledge and encourage women involvement since they serve as motivators to encourage men to seek healthcare.
- Media should be utilized to provide regular cancer talks especially using popular radio stations since it appears to be a primary source of health information.
- The study should be done again in other rural areas of South Africa, so that generalisation can be made to the whole population.

5.5 CONCLUSION

The study provided evidence that the level of knowledge and understanding regarding cancer were limited. Only a small percentage of the men had ever been taught or made aware of cancer with the main source of the information being the radio. Consistent with limited level of knowledge and understanding of cancer, their health seeking behaviour was poor since majority of men reported never gone for cancer screening. In addition, those who indicated they had been taught or made aware of cancer could not explain what it was correctly. The level of education was significantly associated with knowledge and this should be considered in education campaigns. The researcher recommend education in the community regarding cancer to improve knowledge and understanding as well as health seeking behaviour should they suspect cancer.

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ANNEXURE A:
QUESTIONNAIRE

KNOWLEDGE AND UNDERSTAND OF CANCER AND HEALTH SEEKING BEHAVIOUR

Date: ………………………. Participant’s Number: ………………...

	Official use
Informed consent obtained by: ………………………………………………………………	

A. GENERAL AND DEMOGRAPHIC INFORMATION

1. Age:

18 - 19 years	1
20-29 years	2
30-39 years	3
40-49 years	4
50-59 years	5
+60 years	6

Q1=

2. Socio cultural group

Setswana	1
Northern Sotho	2
Southern Sotho	3
Zulu	4
Other (specify) ……………………	5

Q2=

3. What is the highest standard that you have passed?

Q3=

Never went to school	1
Up to grade 7	2
Grade 8 to 10	3
Grade 11 and 12	4
University/Technikon/College	5

4. Are you

Employed	1
Unemployed	2
Self-employed	3

Q4=

	On a disability grant	4		
				Office use
5. Marital status	Single	1		**Q5=**
	Married	2		
	Divorced	3		
	Separated	4		
	Widower	5		
	Other	6		
6. Monthly income	R1 – R 2400	1		**Q6=**
	R2401 – R6000	2		
	R6001 – R 12 000	3		
	More than R12 000	4		
7. What is your religious affiliation?	Roman Catholic	1		**Q7=**
	Lutheran	2		
	Anglican, Methodist, Presbyterian	3		
	Dutch Reformed	4		
	ZCC / Other African initiated	5		
	Charismatic	6		
	Muslim	7		
	Hindu	8		
	Buddhist	9		
	Rastafarian	10		
	No religious affiliation	11		
	Other (please specify) …………………………………	12		

B. HEALTH SEEKING BEHAVIOURS			**Office use**
8. When you are ill, does your partner/family encourage you to go to the clinic or doctor?			**Q8=**
	Very much	4	
	Most probably	3	

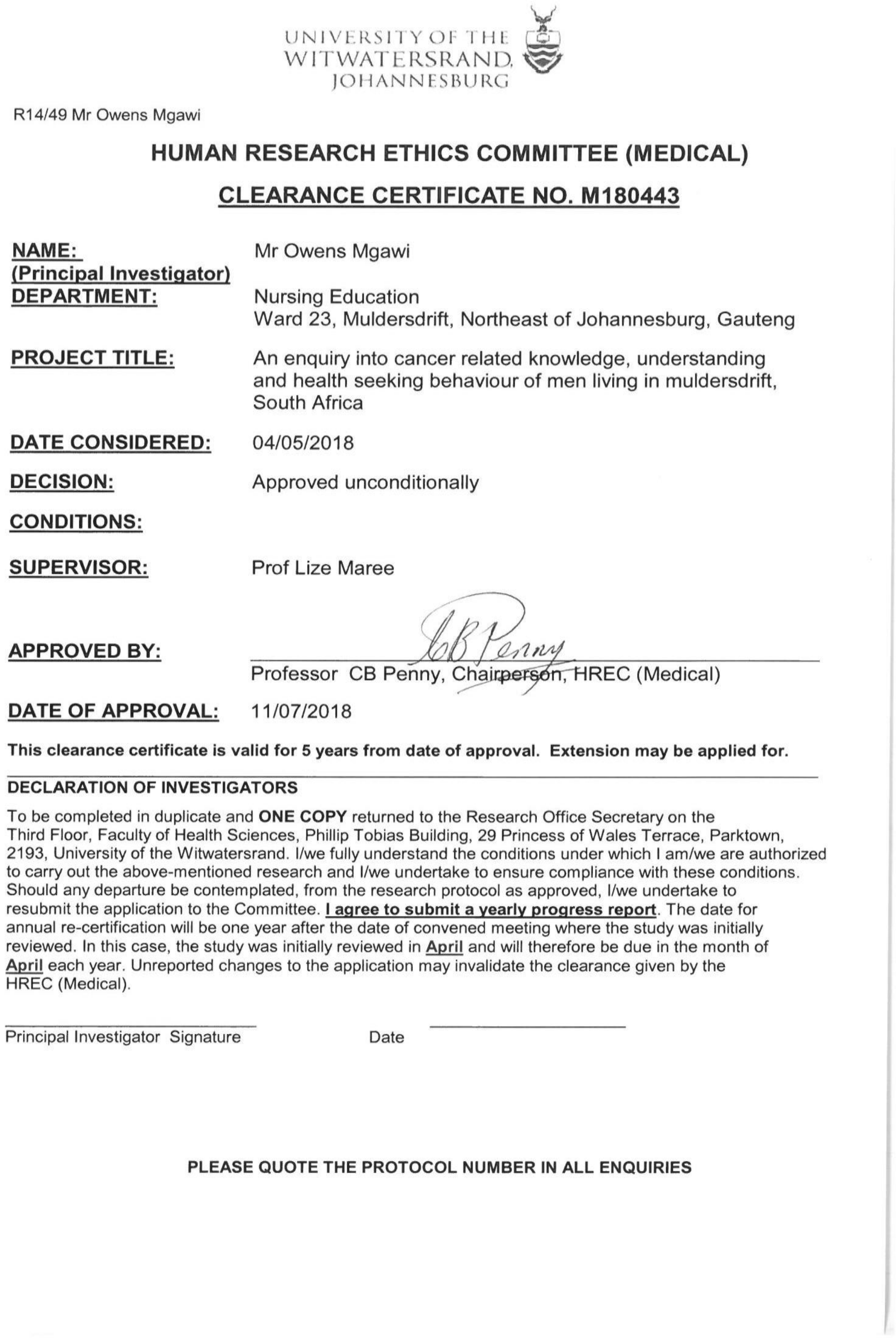
	Not really	2	
	Not at all	1	
9. Do you think that you should spend money on your health?			**Q9=**
	Very much	4	
	Most probably	3	
	Not really	2	
	Not at all	1	
10. Do you feel guilty if you have to spend money on your health?			**Q10=**
	Very much	4	
	Most probably	3	
	Not really	2	
	Not at all	1	
11. In your own eyes, how valuable/important are you to yourself?			**Q11=**
	Very much	4	
	Much	3	
	Not really	2	
	None at all	1	
12. How important or valuable do you think you are to your family?			**Q12=**
	Very much	4	
	Much	3	
	Not really	2	
	Not at all	1	
13. When you are ill, do you need permission to go to the doctor or clinic?			**Q13=**
	0=no	1=yes	
If yes, who must give you permission?			**Q14=**
	partner	1	
	Parents	2	
	In laws	3	
	Children	4	
	Other (specify)	5	

				Office use
14. If you are ill, can you decide where you want to go for health care (e.g. doctor, clinic, traditional healer?)				**Q15=**
	0=no	1=yes		
If no, who decided where you must go for health care?				**Q16=**
	partner	1		
	Parents	2		
	In laws	3		
	Children	4		
	Other (specify) …………………..	5		
If no, is the person chosen for you the one that you would like to go to?				**Q17=**
	Always	1		
	Most of the time	2		
	Occasionally	3		
	Never	4		
C. KNOWLEDGE AND UNDERSTANDING OF CANCER				
15. Do you know what cancer is?	0=no	1=yes	unsure =3	**Q18=**
16. Can you please tell us what you understand cancer is?				**Q19=**
17. Which changes in your body will make you think that you might have cancer?				**Q20=**

					Office use
18. If you think that you might have cancer, who will you tell about it first?					**Q21=**
	Male friend	1			
	Male family member	2			
	Partner /wife	3			
	Nobody	4			
	Other (please specify) ……………………………	5			
12. How long will you wait before you tell the person that you think you might have cancer?					**Q22=**
	Less than one week	1			
	One to two weeks	2			
	Two to four weeks	3			
	Longer than one month	4			
	Longer that six months	5			
	Longer than a year	6			
13. If you discover the following, how serious do you think it is?					**Q23=**
	1= Not serious at all	2= Not so serious	3= Serious	4= Very serious	
Pain in passing urine					
Lump in the armpit/ groin					
Swelling elsewhere in the body					
Change in the colour of a mole or wart					
Change in the size of a mole or wart					
Change in bowel habits					
Change in bladder habit					
Indigestion					
Difficulty to swallow					
Nagging cough					
Hoarseness of voice					
A sore that does not heal					
Unusual bleeding or discharge elsewhere in the body					

			Office use
14. If you find one of these changes in your body, who would you like to go to?			**Q24=**
	Private doctor	1	
	Clinic	2	
	Traditional healer	3	
	Faith healer	4	
	Other (specify)	5	
15. Have you been taught or made aware of cancer before?			**Q25=**
	Yes=1	No=2	
16. If yes, by whom?			**Q26=**
	Radio	1	
	Television	2	
	Primary health care clinic	3	
	Cancer campaign	4	
	Health care professional (specify) …………	5	
	Other (specify) ………………………………..	6	
17. If yes, did the information that you received change the way that you will			**Q27=**
react if you think that you might have cancer?	Yes=1	No=2	
18. Do you go to the clinic for cancer screening?	Yes=1	No=2	**Q28=**
19. If yes, how often?	Once a month	1	**Q29=**
	Less than once a month	2	

ANNEXURE B



UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

R14/49 Mr Owens Mgawi

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M180443

NAME: **(Principal Investigator)**	Mr Owens Mgawi
DEPARTMENT:	Nursing Education Ward 23, Muldersdrift, Northeast of Johannesburg, Gauteng
PROJECT TITLE:	An enquiry into cancer related knowledge, understanding and health seeking behaviour of men living in muldersdrift, South Africa
DATE CONSIDERED:	04/05/2018
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Prof Lize Maree
APPROVED BY:	CB Penny Professor CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	11/07/2018

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on the Third Floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in **April** and will therefore be due in the month of **April** each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature ______________________________

Date ______________________

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

ANNEXURE C
INFORMATION SHEET

Title of Study: An enquire into cancer related knowledge, Understanding and Health seeking behaviour of Men living in Muldersdrift.

Introduction

Good day, my name is Owens Mgawi, I would like to invite you to take part in this study. I am required to conduct research as part of my studies towards a Master of Science in Nursing degree at the University of the Witwatersrand, Faculty of Health Sciences, in the Department of Nursing Education. It is important for you to understand the information below regarding the purpose of the study, risks, benefits and your rights before you agree to participate in the study. If you have any questions, please feel free to ask me. You should only accept to participate if you are comfortable with the procedures involved in the study. You will be given a copy of this information sheet to keep.

purpose

You have been asked to participate in this study as a resident of this location (ward 23). The purpose of the study is therefore to describe what men living in Muldersdrift know and understand about cancer as well as their health seeking behaviour when cancer is suspected. The results from the study, will provide vital baseline data to facilitate the development of tailored interventions to enhance screening and early detection of cancer in men.

Procedure

If you agree to participate in this study, you will be required to spare at least 10 minutes interview, where using a questionnaire you will be asked to answer a few questions related to cancer in terms of knowledge, understanding and health seeking behaviour. The interviews will be done in a private place to ensure that no one will hear your responses apart from the interviewer.

Risks

In my view, there should be no risks to you in participating in this study. However, if some questions are found to be distressful, you will be referred appropriately to the healthcare professionals for help and support within reach.

Benefits

This study may not have direct benefit for you as a respondent, however the information will help health professionals in planning of cancer screening and early detection services

Reimbursement

You will not be paid to participate in this study but could be given a cold drink and a snack.

Your Rights

Your participation in this study is absolutely voluntary, your decision not to take part will not attract any penalty or denial of any privileges. If you decide to participate, you will be given this Information Sheet to keep and you will be asked to sign an informed consent form. Should you decide to discontinue participation, you may do so freely at any time and without giving a reason.

Confidentiality

All information obtained during this study will be kept confidential. You will be assigned a number which will used during the study and in the report to maintain your privacy and confidentiality. Data will be kept for two years if published and six years if not published, after that period it will be destroyed.

Funding

This study is self- funded and will not be used for commercial gain**.**

Contact

If you would like more information, have any problems, concerns, or questions about the study, please contact me (Owens Mgawi) on Tel: 0738413232 or Email:1256958@students.wits.ac.za. or alternatively my supervisor Prof. Lize Maree on Tel:0114884272 or Email:Lize.maree@wits.ac.za. you can also contact Human Research Ethics Committee (Medical), University of the Witwatersrand HREC (Medical). Contact details: Prof C Penny, Tel 011 717 2301, email Clement.Penny@wits.ac.za Ms Z Ndlovu and Mr Rhulani Mkansi Administrative Officers 011 717 1234/1252/2656/2700 zanele.ndlovu@wits.ac.za; Rhulani.mkansi@wits.ac.za;

ANNEXURE D
CONSENT FORM

I………………………………………………… (name), give permission to be included in the study.

I have read and understood the information sheet and I have been given the opportunity to ask questions I might have regarding the procedure and my consent to me being included in the study.
In view of the requirements of research, I agree that the data gathered during this study can be accessed by the supervisor.
I may, at any stage, without prejudice, withdraw my consent and participation in the study. I have had enough opportunity to ask question and (of my own free will) declare myself prepared to participate in the study

Date Signature

………………….. ………………………………….

(Witness)

…………………………….