CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Cancer is an inexorably progressive disease and a favourable outcome in its management often depends on early intervention (Mackillop, Zhou and Quirt, 1995: 532). Early detection of the disease is therefore important for a favourable outcome to be achieved. When the disease is diagnosed at a late stage, the treatment that is offered is only palliative. Palliative treatment is only offered with the aim to relieve the local symptoms of advanced disease. The treatment intent is therefore not curative but only to give the patient a better quality of life, which sometimes is not possible especially for very advanced disease.

In KwaZulu-Natal the incidence of Zulu speaking patients presenting with a late stage disease to the major cancer treatment centres is very high with the result that the majority of these patients can only be offered palliative treatment (Pervan, Cohen and Jaftha, 1995 : 162). The authors have shown that late presentation is more common amongst those patients who come from the rural areas. Late presentation of these patients may be a result of many factors which could possibly include the following :

- inaccessibility of the cancer treatment centre due to its location (i.e. distance) and the referral system used,
- negligence of patients as a result of ignorance and lack of faith in western medicine,

- ignorance and lack of education in both health-care professionals and communities (Pervan, Cohen and Jaftha, 1995 : 162).

Currently, the KwaZulu-Natal province (within the public sector) uses the centralised radiotherapy system. There are only two major cancer treatment centres with a few satellite departments which function only for follow-up of patients, administration of chemotherapy, consultation of new patients and sometimes treatment with a deep x-ray machine which does not require detailed / computerised planning. The major treatment centres offer all of the above and megavoltage radiation machines (cobalt-60 and linear accelerators) with detailed / computerised treatment planning. The two major treatment centres are located in close proximity to each other in the same region (eThekwini Municipality). Also, the satellite centres are not scattered into rural areas, rather they are closer to the major treatment centres and only located in the urban areas. It is therefore possible that the current centralised radiotherapy system used in KwaZulu-Natal does have a role to play in the delay that leads to Zulu speaking patients presenting with a late stage disease.

Much research has been done in other countries on the impact of delay in the treatment of cancer (Mackillop, **et al**., 1994 : 221; Mackillop, **et al**., 1996 : 243). Mackillop, **et al**. (1996 : 243) conducted a study in Canada to investigate the effect of delay in treatment on local control of cancer by radiotherapy. They concluded that the delay in the initiation of treatment may be associated with a clinically

important deterioration in local control rates of tumours. This deterioration impacts negatively on the quality of life and life expectancy of the patient. From this study a recommendation was made that the interval between referral and consultation should not exceed two weeks for treatment to be effective (Mackillop, **et al**., 1994: 221).

A similar impact on patients in KwaZulu-Natal has been found, as patients tend to have a poor prognosis (treatment failure) and poor quality of life due to late stage presentation. This failure may not be due to poor treatment methods but the fact that these patients present with the disease at its incurable stage (Pervan, Cohen and Jaftha, 1995 : 162). The cost-effectiveness of treatment of incurable disease is significant as it may result in limited use of the available resources for patients that are curable.

During the researcher's own experience in the clinical environment there have been several cases of patients that hinted at the complexity of the nature of the problem / challenge related to the late presentation. In some cases, patients stated that they presented to a doctor/primary health care centre when the disease was still very early. However, they kept receiving continuous treatment in spite of the fact that the disease was not responding to treatment given. They were only referred to the major cancer treatment centre when the disease had already advanced very far and therefore required palliative management. Some patients reported that they were scared that if they presented to the hospital they would be

operated upon, which could make them physically impaired or they may not have survived the surgical procedure / anaesthesia. These were just a few examples of what the patients related (NB: Patients referred to here were not part of the study). These cases / examples provided evidence that there could be various reasons or factors that contribute to the late presentation by these patients.

1.2 Motivation for the study

In order to eliminate this problem of late presentation of patients with cancer, the sources of delay have to be identified and appropriate measures taken. Elimination of this problem may benefit the government, as available resources will be used more for radical treatments. The patients could also benefit as they will be offered the treatment with the curative intent giving them a better quality of life and better life expectancy.

1.3 THE PROBLEM AND IT'S SETTING

1.3.1 Aim of the study

To investigate the factors that contribute to the late presentation of rural Zulu patients with cancer to the two major provincial cancer treatment centers in KwaZulu-Natal (prior to December 2002).

1.3.2 Objectives of the study

1.3.2.1 The first objective

To assess the knowledge and perception of rural Zulu patients receiving treatment

in the two major provincial cancer treatment centers for one or more of the following cancers: head and neck, or cervix, in order to determine their attitude towards cancer and its treatment.

1.3.2.2 The second objective

To assess the accessibility of the provincial health-care service that is provided to rural Zulu patients for cancer treatment.

1.3.2.3 The third objective

To assess the extent of involvement of professional nurses in the assessment and referral of patients being investigated for one or more of the following cancers: head and neck, or cervix, for treatment in the provincial health-care service.

1.3.2.4 The fourth objective

To assess the professional nurses' perception and attitude towards the investigation and treatment of the following cancers: head and neck, or cervix.

1.4 Study design

The study design was quantitative. The study utilized primary and secondary data. Primary data was in the form of interview of patients and professional nurses using semi-structured questionnaires. Patients selected were those diagnosed with either cancer of the cervix or head and neck cancer who were Zulu speaking. Random sampling was used for the selection of these patients for inclusion in the

study. Patients were interviewed at King Edward VIII and Addington Hospitals.

Convenience sampling was used for the selection of professional nurses. Professional nurses were interviewed from seven hospitals in KwaZulu-Natal including Addington, King Edward VIII, Madadeni, Ngwelezane, Eshowe, Mosvold and Edendale. Professional nurses interviewed were those who function in the medical outpatients departments. The sample sizes were 300 and 63 for patients and professional nurses, respectively.

Secondary data was in the form of a review of patient's oncology files to confirm the diagnosis and the stage of the disease. All respondents had to give an informed consent before completing the questionnaire. Data analysis was done using the SPSS package. Descriptive statistics were used to describe the variables identified in the form of frequencies and cross tabulations. Where indicated, Cramer's V test and Chi-square will be used to indicate the strength and direction of the relationship between variables and the level of significance.

1.5 Outline of chapters

This dissertation is divided into the following chapters:

Chapter two - literature review that contains the theoretical framework that informed this study. This chapter reviews relevant research done nationally and internationally. It also reviews the South African situation before 1994 and the current situation post 1994 with regards to health-care delivery. This chapter also

reviews the effect of treatment delay on local control rates of cancer. The summary of this chapter concludes by highlighting the possible benefits from the results of this study.

Chapter three - this chapter outlines the research design and methodology that was used. It highlights the type of data collected, the selection of research participants, data collection procedures, ethical considerations and the statistical methods employed.

Chapter four - presents the results of the study.

Chapter five - contains the discussion of the results.

Chapter six - is the conclusion and recommendations made from the results of the study. This chapter is then followed by the list of references and the appendices.

1.6 Summary

This chapter highlighted the background information that led to this research work to be undertaken. This was supported by relevant literature. It also presented the aim and objectives of this research including a brief discussion on the study design. The outline of chapters was also presented.

CHAPTER TWO

2.0 REVIEW OF THE RELATED LITERATURE

2.1 Introduction

This chapter contains the theoretical framework that has informed the study. It covers aspects of literature that are pertinent to the research topic. It begins very broadly by highlighting the nature of cancer with specific reference to the benefits of detecting the disease early, including the detection of the disease in asymptomatic people. The outcomes of failure to detect and treat the disease early are then discussed. The outcomes are discussed with specific reference to type of treatment and care that needs to be offered and the general effects of undiagnosed cancer. In each level of the discussion a link is made with the situation in KwaZulu-Natal. The discussion is then narrowed down to specifically look at the current situation of health care in South Africa and KwaZulu-Natal, using the pre and post apartheid era as the focus of the discussion.

Since literature has shown that the meaning of cancer and illness is culture bound, the discussion then covers the cultural aspects of cancer contextualizing it to the South African situation. The chapter ends with a summary, which highlights the gaps discussed in this chapter and the potential benefits if the existing gaps could be addressed.

2.2 Background

Cancer is still one of the leading causes of death worldwide (Grand-Cameron,

1999 : 52). NCI (2004) has shown that early detection and early treatment of cancer reduces mortality. It is important also to note that cancer is a disease that has been shown to be an inexorably progressive disease and a favorable outcome often depends on early intervention (Mackillop, Zhou and Quirt, 1995 : 532). The fact that a favorable outcome often depends on early intervention has led into considerable progress made over the past years in early detection of cancer (La Marca, **et al**. 1996 : 1633). This progress has mainly been observed in developed countries where the mortality rate has mainly been reduced by effective screening programs (Martin, 1998 : 284). Developing and undeveloped countries are still faced with the problem of a lack of screening programs. It is, however, important to remember that screening programs are only effective when adequate therapy facilities are available to absorb the increased workload (Martin, 1998 : 283).

Early detection of cancer is associated with a better prognosis, and any delay in the diagnosis or initiation of treatment may be associated with a clinically important deterioration in local control of cancer (Mackillop, **et al**. 1996 : 243; Bomford, Kunkler and Sheriff, 1993 : 235). Local control in this context refers to complete remission of cancerous cells. Early diagnosis of the disease will lead to early initiation of treatment and consequently increased cure rate. Cancer in its early stage may be asymptomatic and may therefore be undiagnosed unless screening programs are in place.

2.3 Cancer screening and accessibility of health-care facilities

Early detection of the disease is a pre-requisite for better results of local control rates (NCI, 2004). Early detection can be enhanced by the implementation of screening programs which aim at finding cancer in asymptomatic people. Cancer screening identifies individuals that are at risk for the presence of cancer and therefore warrants further evaluation (NCI, 2004). With every screening program there is always cost and benefit attached. If the program for cancer detection is effective, the benefit will always outweigh the cost. The total cost for screening may include initial screening, rescreening, treatment and initial construction of the detection centre program. Direct benefits include the reduction of cost in patient treatment and also the improved quality of life because the patients are treated with early disease (NCI, 2004).

It therefore becomes important that before any screening procedure is recommended, there should be good evidence that it is effective and that treatment initiated earlier as a consequence of screening results in an improved outcome (NCI, 2004).

Effective screening programs are only possible when health facilities are easily accessible. In KwaZulu-Natal there is still a lack of clear referral system, which affects both the quality of care and the detection of disease (Strachan, 1999 : 8). In rural areas the lack of transport and communication also makes it difficult to refer patients due to the dislocation between the hospitals, the clinics and the

mobile units which weakens the referral chain. Rural areas also still lack medical doctors which means that referring a patient to a hospital does not necessarily ensure that the patient will get proper medical care (Strachan, 1999 : 8).

Access to health services is not only a medical problem. Love (1994 : 1418) has shown that social problems of unemployment, poverty, and limited education, significantly influence access to services and good health in poorly understood ways. For example, a person who lacks education and therefore lacks the information about the disease progression - does not see a need to visit a doctor unless he/she has visible evidence of a serious disease. Also an unemployed person, could see it as a waste of limited available financial resources to visit a doctor instead of using the finances for something else.

In some areas of KwaZulu-Natal, patients still need to be transported to access health facilities where there are sufficiently trained personnel and suitable equipment for diagnostic investigations and treatment. The level of distrust for physicians, as opposed to traditional healers, may also affect some of the patients (Pervan, Cohen and Jaftha,1995 : 163). Patients could therefore prefer to consult a traditional healer initially and in the process the disease may be progressing. There may also be a stigma associated with cancer such that communities may have negative attitude towards being investigated / screened for cancer.

Effective prevention is much the most economic method of controlling cancer

(Martin, 1998 : 283). In a review of cancer in developing countries, it has been shown that four of the eight most common cancers (breast, colorectal, cervix, and mouth) known to be curable - are not cured. This is not happening because of two important reasons: the inadequacy of cancer resources and the late presentation of the patients with cancer (Martin, 1998 : 283).

Adequacy of cancer resources and therefore regular screening and early detection of cancer, can prevent significant morbidity and mortality due to cervical cancer (Provost, 1996 : 1598). It is possible that this is applicable to most cancers as it has been shown in the introduction of this chapter that the delay in initiation of treatment reduces the chances of cure for cancer and patients have to be offered palliative treatment. Any endeavour to detect cancer early should be balanced with the availability of adequate facilities to absorb the increased workload. Correspondingly, if established treatment facilities are to have any impact on mortality, they must be linked with the search for the earlier referral and diagnosis of cancer patients, otherwise patients will have to be offered palliative care (Martin, 1998 : 283).

2.4 Palliative care

Effective palliative care is only possible if there is a well-structured program and it is practised as prescribed. It is care offered with an aim to relieve the symptoms of the disease but without cure (Neal and Hoskin, 1997 : 17). Research has revealed that palliative care is practised badly in many countries and very few health

professionals are involved in it (Martin, 1998 : 286). The same author also reveals that palliative care requires adequate financial support, adequate training of health-care professionals, good co-operation amongst the health-care professionals, good support for the family from the health care professionals especially from the physicians, and involvement of the patient including his/her family.

Martin (1998 : 284) has proposed that cancer prevention is an important aspect that needs to be considered in an endeavour to reduce the need for palliative care. He proposes that cancer prevention can be addressed with specific reference to the following areas :

- tobacco smoking control
- dietary modification
- removal of carcinogenic chemicals in the workplace
- excessive alcohol intake
- viruses that are associated with cancer.

All these areas must be addressed hand in hand with cancer education to include both health-care professionals and the public (including children). Addressing these areas will limit the occurrence of cancer, which will have an influence on presentation with a late stage disease (Martin 1998 : 284).

2.5 The effect of delay in treatment on local control rates

The delay in the initiation of treatment can be a result of different factors that may

occur during the diagnosis process or post diagnosis of cancer during referral and preparation of the patient for treatment. In a study done in Canada to provide a detailed description of the magnitude of the problem of the delay in the initiation of treatment for cancer, the interval between diagnosis and initiation of treatment was calculated for patients treated for cancer of the larynx, cervix, prostate and lung between 1982 and 1991. From this study, a recommendation was made that the interval between referral and consultation should not exceed two weeks, and neither should the interval between consultation and initiation of treatment exceed two weeks (Mackillop, **et al**. 1994 : 221). With this recommendation, it should be noted that Canada is a developed country and therefore generally sees patients with early stage disease.

In KwaZulu-Natal, South Africa, the waiting periods for radiotherapy far exceed the recommended two weeks interval especially in the public sector. The waiting periods in KwaZulu-Natal, between consultation and initiation of treatment, generally range between one month and ten months (refer to Appendix A). Mackillop, **et al**. (1994 : 221) state that waiting lists for radiotherapy develop whenever the demand for a medical service exceeds its supply. In privately funded health-care systems the problem of long waiting lists usually does not exist. This is because market forces usually ensure that the supply of any medical service is adequate to meet the demands of all those who are able and willing to pay for it.

Waiting lists can develop due to various reasons. One of these, lack of staffing, leads to a reduced number of patients that can be accommodated at a time for treatment, with the result of delay in treatment initiation (Mathurine, 2001)(refer to Appendix A). It may also sometimes lead to inaccurate treatment delivery. Delay in the initiation of treatment and the fact that these patients generally present with a late stage disease may result into treatment failure.

The long waiting periods for radiotherapy treatment have direct and indirect effects that impact both on the patient and the health-care providers and these may adversely affect the quality of care of cancer patients (Mackillop, **et al**., 1996 : 243). These effects may include:

- decreased effectiveness of curative radiotherapy,
- decreased quality of life while waiting for treatment – disease progression,
- altered patterns of practice of radiation oncology,
- decreased efficiency of radiotherapy programs, and
- decreased radiotherapy usage (refer to Appendix B).

Such long waiting periods greatly reduce the probability of cure especially if the waiting period exceeds the doubling time of the cancer. The size of the tumour will greatly affect the local control of the disease as the two are related (refer to Appendix C).

2.6 The relationship between tumour volume and local control

Radiation kills cells by mechanisms that depend on chance events at the molecular level (Mackillop, **et al**. 1996 : 244). Late presentation of patients is usually associated with a bigger or advanced tumour at presentation. Animal studies have confirmed that there is an inverse relationship between tumour volume and local control rates. Also, treatment delay may permit metastasis beyond the original site of primary disease (Mackillop, **et al**. 1996 : 248). Clinical experience with many human cancers also provides overwhelming evidence that, for a given dose of radiation, the probability of local control is lower for larger tumours than for smaller ones (Mackillop, **et al**. 1996 : 244). Since these patients in KwaZulu Natal present with a late stage disease (i.e. bigger tumours or advanced disease) the probability of local control rate is reduced. If the rate of human tumour growth can be calculated or at least estimated, it may be possible to estimate the probability of local control as the size of the tumour can be linked to local control (Mackillop, **et al**. 1996 : 244).

2.7 Estimating the rate of human tumour growth

The potential doubling times of human cancers may be an important determinant of the impact of overall treatment time on local control. It is important to note that that in assessing the impact of delay in treatment, it is actual doubling times that are relevant rather than potential doubling times. Currently available literature reveals two important facts:

a. Tumour growth is exponential in the clinical phase of the illness,

b. Tumour doubling times vary widely, such that even within a given histological type of tumour, the distribution of doubling times is log normal (Mackillop, **et al**. 1996 : 245).

This means that as long as the patient remains untreated, the disease continues to grow - usually exponentially. Such growth will not be the same for all types of tumours.

2.8 The effect of delay on the probability of local control of an individual tumour

It has been shown that a favourable outcome in the treatment of cancer often depends on early intervention (Mackillop, Zhou and Quirt, 1995 : 532). Treatment delays that may exceed the doubling times of some common malignancies decrease the probability of local control (refer to Appendix C) and increase the probability of metastasis outside the treatment field (Mackillop, **et al**. 1994 : 227).

It has been shown that a tumour with a high intrinsic cellular radio resistance and a high proportion of clonogenic cells may undergo the transition from high to low probability of local control early in the course of the disease before the tumour is clinically detected (Mackillop, **et al**. 1996 : 246). On the other hand, a tumour with low intrinsic cellular radio resistance and a low proportion of clonogenic cells may not undergo this transition until much later on during the clinical phase of the illness. It is therefore evident that when a patient presents with a late stage

disease, the probability of local control is very low. A low probability of control may result in compromised quality of life as the disease is most unlikely to be cured (Mackillop, **et al**. 1996 : 244). Among the methods to deal with the problem of late presentation, is the identification of the predictors of delay and follow up with appropriate action.

2.9 Predictors of delay

As noted above, treatment delay reduces local control rate of cancer. If predictors of delay are identifiable, these can then be modified to reduce the delay. It is, however, wise to consider and summarise some of the predictors of delay identified in other countries as these may possibly be applicable in the South African setting. One of the predictors of delay is the system that is used to offer radiotherapy since it contributes to the delay in the initiation of treatment leading to long waiting periods (Benk**, et al**. 1998 : 109).

The province of KwaZulu-Natal is currently using the centralized radiotherapy system. This system involves two major public hospitals that offer cancer treatment and get referrals from all other hospitals in the province. Apart from the two public sector hospitals, there are also two private practices that offer cancer treatment but these are only affordable to a few i.e. those that are on medical aid and those who can afford to pay cash for the services rendered. Such a system has been shown to fail to provide adequate or equitable access to care in a research study that was done in Canada. This research was done to investigate whether a

centralized radiotherapy system does provide adequate or equitable access to care (Mackillop, **et al**. 1997: 109). Four significant recommendations were made from this research:

a. That a registry-based audit of access to care should be a routine aspect of the operations of publicly funded cancer programs,

b. That an active outreach program should be considered mandatory when radiotherapy facilities are centralised,

c. That targets for radiotherapy use should be reviewed and restated in terms that are amenable to direct audit, and

d. That the medical and economic consequences of decreasing radiotherapy use should be investigated.

The province of Ontario where the above research was conducted has a population of eleven million people and eight regional cancer treatment centers. In KwaZulu-Natal there is no known evidence of programs aimed at addressing the above recommendations with regards to the adequacy of a centralized radiotherapy system. For example, active outreach programs to the rural community, possibly to the urban community as well, are lacking. Also, the four available cancer treatment centers (including private two practices), are all located in the same municipality – eThekwini Metropolitan Municipality, and serve a population of about nine million (Barron and Asia, 2002 : 34). Of the nine million, only three million comes from within the eThekwini Metropolitan Municipality. Also, within this nine million population a high percentage cannot afford private practice

treatment due to lack of medical aid.

The centralized radiotherapy system used in KwaZulu-Natal is a system that was part of the apartheid health service offered before 1994. This health service was a reflection of a system that focused primarily on supporting the Apartheid State, rather than on improving health or providing an efficient and effective health service (Buch, 2000 : 56). During the apartheid era there were policies that led to consequences that damaged the mental, physical and social health of South Africans (The African National Congress, 1994 : 42). Resources, and with them access to health care, were distributed along racial lines. This resulted in the inefficient and inadequate health-care delivery especially to those people who were disadvantaged in the rural community. First level curative care was often only available at a distant hospital outpatient department (Buch, 2000 : 56). Individuals from the low-income group could not afford the costs of the health-care service. The costs included paying for the medical service, transport to get to remote health-care facility and cost of time spent away from work / home.

2.10 The current situation

Since 1994, the democratically elected government committed itself to focus on primary health-care and the curtailing of tertiary care. Such a commitment was part of the Reconstruction and Development Programme (RDP) of the African National Congress (ANC). One of the aims of this program was to ensure that all South Africans get infinitely better value for the money spent on health, and that

their mental, physical and social health improves both for its own sake and as a major contribution to increasing prosperity and quality of life for all (The African National Congress, 1994 : 43). This programme led to much progress being made with regards to health for all South Africans. Buch (200 : 57) highlights the following amongst the achievements derived: establishment of a unitary health system, removal of structural racism, upgrading of many clinics and health centres with the building of new ones, introduction of free primary health care, establishment of a District Health System (DHS), community service for newly qualified professionals (doctors, pharmacists and radiographers), contracting Cuban doctors to the under-doctored areas, important efforts to improve public health and the launch of the Patient's Charter to serve as a benchmark of how patients could expect to be treated. This also resulted in a revised referral structure and the functional level of different hospitals.

The commitment and implementation of such a program addressed other aspects that affect the status of the community, such as socio-economic conditions. This is important, as some diseases have been shown to be linked to poor socio-economic conditions. For example, cancer of the cervix is the most common cancer for women in developing countries and poor socio-economic conditions are amongst the factors that have been shown to contribute to this (CANSA, 2001a : 1). In South Africa cervical cancer is the most prevalent cancer in Black females. In the Black population amongst males, the leading cancers are cancers of the oesophagus and those of the head and neck regions. Head and neck cancers

include: larynx, mouth, nasopharynx, oropharynx, tongue, salivary glands, gum (CANSA, 2001b : 1- 2). The high incidences of these cancers occur mainly amongst the previously disadvantaged rural Black population (Mdletshe and Mavundla, 1998 : 14). These patients also tend to present with a late stage disease that can only be offered palliative treatment with an aim to relieve the symptoms of the disease but without cure. Martin (1998 : 283) describes his 80 : 20 rule, which applies to cancers of the cervix, mouth and breast. His rule of thumb states that in these three sites in Western countries 80% of cases present in stages I and II with a survival of about 80% whereas in developing countries 80% of patients present in stages III and IV with a survival of 20%. The latter being the possible situation in KwaZulu-Natal.

Late presentation may be due to a combination of many factors that affect the access of the health-care service and how it is delivered. Pervan, Cohen and Jaftha (1995 : 164) state that services for early detection of cancer are few and far between in most African countries and many nurses and doctors lack desirable attitudes towards cancer prevention, which may interfere with the application of cancer nursing to other cultures (refer to Appendix D). The nurse plays a very important role especially in the prevention of disease (Pervan, Cohen and Jaftha,1995 : 727). The role of the nurse includes primary, secondary and tertiary prevention. Strachan (1999: 8) states that nurses normally know where to refer a patient to, the problem is that they do not have the proper protocol/s to know in what cases and conditions to refer. There is also a problem of lack of clear

referral systems and lack of medical doctors in rural areas. This means that even if patients get referred to a hospital, they are not guaranteed proper medical care. It is important to note that access to services and good health are significantly influenced by social problems of unemployment, poverty and limited education (Love, 1994 : 1418). These problems impact on the social attitudes towards cancer, such as poor participation in early detection and screening programs.

Unemployment and poverty may result in failure to access the health-care service as it has been mentioned that the first level curative care may be available at a distant hospital. Also, limited education results in limited knowledge about sickness and the perception of disease. Navon (1999 : 40) has shown that social attitudes towards cancer participation in early detection and screening programs, patient compliance with treatment and cultural beliefs and norms also affect the patient's coping strategies. This possibly explains why, in South Africa the four different population groups – White, Black, Colored and Asian, show very different incident rates of certain cancers (CANSA, 2001c : 1).

2.11 Cultural aspects of cancer

Delbar (1999 : 45) has shown that the meaning of cancer and the meaning of illness are culture bound. Pervan, Cohen and Jaftha (1995 : 162) have described culture as one's values, attitudes, habits and customs acquired by learning. Culture influences one's attitude and beliefs, thus it would affect one's understanding of health, disease and curing. For example, in the African culture

the hospital is viewed as an isolated, strange, sterile environment with very little communication and few visitors or none at all if they come from far away (Pervan, Cohen and Jaftha, 1995 : 312). In contrast, traditional healing takes place in the familiar home environment of the sick person or in the home of the healer. Also, with traditional healing the family is actively involved in the process of healing from diagnosis to the treatment stage, and it is believed that the ancestors also participate in the process. This healing method is also believed to be empowered by supernatural forces that guide the healer for the selection and the use of treatment methods. This is important in the Zulu culture because disease or illness may be perceived as being imposed by magic, thus any medical intervention could be rejected (Pervan, Cohen and Jaftha, 1995 : 312). Cancer care therefore has to be culture relevant and this may need certain strategies to be in place (Navon, 1999 : 42) (refer to Appendix E). Lack of understanding of trans-cultural aspects of sickness may lead to misconceptions about sickness and its management which may in turn lead to poor treatment results (Navon, 1999 : 43) (refer to Appendix F).

In order to avoid poor treatment results, strategies have to be put in place to address the above areas. At the same time, as these strategies are implemented, care has to be ensured that there are no misinterpretations attached to culture.

2.12 Summary

This chapter has highlighted the importance of early detection and early initiation

of treatment of cancer. It argued that any delay in the detection and initiation of treatment may lead to poor prognosis. The problem with long waiting periods for radiotherapy was also highlighted. This chapter also presented a brief review of the health care delivery pre and post the apartheid era. This chapter also highlighted factors that may have a profound impact on the stage of disease at presentation, which in turn may determine the possible outcome of treatment.

CHAPTER THREE

3.0 Materials and methods

3.1 The data

This study had data of two kinds: primary data and secondary data. Primary data was obtained from the responses of the patients and professional nurses to the questionnaires. Patients and professional nurses had to complete different questionnaires, one designed for each group. The questionnaire was chosen, as a method of data collection to provide important information about the behavior, attitudes, beliefs and characteristics of both the study populations. It would also allow easy processing of data as the data would be readily available.

Secondary data were in the form of review of the patients' oncology files where the details of the disease and its management are documented. Patients' oncology files were reviewed in order to confirm diagnosis and stage of the disease. Permission to review the oncology files was obtained from the patients in the form of an informed consent.

3.2 The criteria governing the admissibility of the data

Only the response of Zulu speaking patients already diagnosed with either head and neck cancer or cancer of the cervix was used in this study. This group of patients was selected because their response should yield true information with regards to cancer knowledge, as they would have personal experience. Only data from professional nurses who function in the medical out patient departments,

however, some hospitals did not have a separate medical outpatient department. Data for the professional nurses was collected from the following hospitals: Addington, King Edward VIII, Madadeni, Mosvold, Eshowe, Ngwelezane and Edendale. Only the data from the questionnaires completed in full was used and incomplete questionnaires were disregarded. The questionnaires were constructed by the researcher and reviewed by the supervisor and the statistician.

3.3 Permission to conduct study

Written permission to conduct the study was obtained from the Secretary General of Health, KwaZulu Natal and the medical superintendents / managers of the participating hospitals. Collection of data only commenced after permission had been granted (refer to Appendices G(i) - G(x)).

3.4 Pilot study

Piloting of the study was done in two phases. The two groups were chosen such that they will not be part of the study sample in order to avoid data contamination. The first phase was the piloting of the professional nurses' questionnaire. The questionnaire for the professional nurses was piloted on a group of professional nurses, from Addington and King Edward VIII Hospitals, before being used for the study sample. These professional nurses were not included in the study sample.

The second phase was the piloting of the patients' questionnaire. The questionnaire for the patients was piloted on a group of patients that were

receiving cancer treatment at Addington Hospital. These patients were not included in the study population. Piloting of the questionnaires was done in order to ensure that the respondents would be able to understand and answer questions. Piloting also indicated whether the questionnaires as research instruments had been designed adequately (Mouton, 2001 :103). After piloting, the questionnaires were revised, corrected and fine-tuned by the researcher. The corrections that were necessary included improving grammar to allow easy understanding and improving the sequence of questions.

3.5 Sample selection

3.5.1 Ethical considerations

Informed consent was obtained from all respondents. Patients had to sign two consent forms, one for participating in the study and the other for permission to review their oncology files in order to verify the stage of disease. Both questionnaires were accompanied by a covering letter that highlighted the importance of the study, confidentiality, the risk and benefits of participating in the study as proposed by Mouton (2001 : 244) and Berg (1995 : 212) (refer to Appendices H and I). Confidentiality was maintained at all times, as the researcher personally collected all the data (Mouton, 2001 : 243). All the data gathered were securely locked and only accessible to the researcher. Patients were also assured that they would not miss their turn to see the oncologist or to receive treatment. All respondents were ensured that there were no risks with participation in the study. Patient names were not used on the questionnaire but

patients were number coded for easy processing of the data (Berg, 1995 : 213). Only the researcher knew the coding system used. A different coding system was used for professional nurses. No coercion was used to get people to participate in the study. All respondents were free to withdraw from the study at any time if they wanted to.

3.5.2 Selection of patients

Systematic random sampling, as discussed by Berg (1995 : 178), was used for the selection of patients for inclusion in the study. Selection of patients was limited to those with one or more of the following cancers: head and neck, or cervix (males with head and neck cancer and females with either head and neck cancer or cervix cancer or both). Patients selected were those already diagnosed with cancer and had already been informed about their diagnosis. A list of patients with either one of these cancers was obtained on the day of the interview. The list contained patients who were due to see the oncologist on the day of the interview. From the list of patients obtained, patients listed as odd numbers (for example 1; 3; 5; 7; etc.) were selected for participation in the study. Patients who were due to see the oncologist were interviewed first so that they would not be delayed when they had finished with the oncologist. A separate list of patients on treatment was also compiled in order to select patients for inclusion in the study.

Some patients had to be interviewed from the hospital ward, if they had been selected from the list but were not in the oncology department. Obtaining these

lists of patients was easily achieved since there is a database of patients with their type of cancer and their status, for example, whether they are on treatment or they are due to see the oncologist for follow-up or initial consultation. Also, oncology clinics for specific cancers were held on specific days, for example, head and neck cancer patients were seen every Thursday at King Edward VIII hospital. Interviewing of both patients that were on treatment and those that were due to see the oncologist ensured that all patients with that type of cancer had an equal opportunity of being included in the study.

The researcher obtained informed consent from individual participants for the interview as well as to review their oncology files. Patients were interviewed as they were waiting to see the oncologist or to have treatment on the radiotherapy treatment unit and a few were interviewed in the oncology ward at Addington Hospital. In order to ensure that patients did not miss their turn to see the oncologist or to receive treatment, the process of patient interview was done in liaison with the radiographer / nurse running the oncology clinic or administering treatment. At the end of each interview, the oncology file of the patient interviewed was reviewed to determine the stage of the disease.

The sample size consisted of three hundred (300) patients since on average 550 new cases of cancer of the cervix and 450 new cases of head and neck cancers are seen annually in the two major provincial cancer treatment centers (Appendix J). The sample size was designed using a guide proposed by Welman and Kruger

(1994 : 63) and in consultation with the statistician. The authors propose that the following should be considered when determining the sample size:

- The size of the population (N),
- The fact that the number of units of analysis from which we eventually obtain usable data may be much smaller than the number that was drawn originally and
- The variance (heterogeneity) of the variables (Welman and Kruger, 1994 : 64)

The study was limited to black patients who are Zulu speaking in order to be able to complete the questionnaire. To avoid bias the questionnaire was administered in Zulu only. The researcher personally interviewed all the patients using a structured questionnaire and this was done since some patients were illiterate and therefore would not be able to complete the questionnaire on their own. Patients under the age of eighteen (18) were not included in the study for ethical reasons. The researcher had planned to refer to the social worker those patients who were considered to be anxious or in need of psychological counseling, but there were no patients who needed referral.

Addington Hospital and King Edward VIII Hospital were chosen because, at the time the research was designed and data collected, they were the major provincial cancer treatment centers in KwaZulu-Natal. King Edward VIII Hospital has, since end of November 2002, ceased to be a major cancer treatment centre and Inkosi

Albert Luthuli Central Hospital (IALCH) has become the major cancer treatment centre (Mathurine, 2003). The number of respondents selected from each of the two hospitals was proportionate depending on the ratio of patients seen in each hospital. The number of respondents selected from each hospital was therefore unequal due to the fact that the number of cases seen in each hospital was different. Approximately 80% of these were seen at King Edward VIII Hospital (refer to Appendix J). These two hospitals also received referrals from all the health districts of KwaZulu-Natal.

Other provincial centers that offer cancer treatment e.g. Grey's Hospital, were excluded from the study since they only function as satellite departments for the two major cancer treatment centers. The provincial centers that were excluded also refer their patients to the two major cancer treatment centers i.e. Addington and King Edward VIII Hospital. The two private practices that offer cancer treatment were not included in the study since the number of Black patients who are treated for cancer in these practices is still very small. Of the total number of patients treated in private practice, only 5 – 10 % are Zulu speaking Blacks (Dr Hacking, Consultant Oncologists - Netcare Oncology, 2001). This may be thought to be due to the socio-economic factors since most Black patients, especially those from the rural community, cannot afford the cost of medical care in private practice as probably most of them are not on medical aid.

3.5.3 Selection of professional nurses

Convenience (purposive) sampling was used for the selection of health-care professionals (Berg, 1995 : 178). Selection was limited to professional nurses who function in the medical out-patients department (MOPD). Professional nurses in this study refer to any nurse who has qualified as a general nurse with or without additional qualification(s) in the following: community nursing, psychiatric nursing, midwifery, primary health-care nursing or occupational health nursing. Professional nurses were chosen because they are involved in the initial work-up and referral of patients for further management of cancer. The professional nurses played a very important role, as the data gathered from them was used to identify their extent of involvement in the assessment and referral of patients for cancer treatment. Their responses were also used to identify the barriers, problems and challenges in the referral of patients for cancer treatment.

Professional nurses for the inclusion in the study were selected from seven hospitals in KwaZulu Natal - Addington, Edendale, Eshowe, Ngwelezane, Madadeni, Mosvold, and King Edward VIII. These hospitals were chosen as they are more involved in receiving patients referred from primary health-care centers/local clinics and are involved on deciding further management of patients. They were also chosen to try and include the different health regions of the KwaZulu-Natal Province.

It was planned that the sample size be limited to seventy (70) professional nurses

as the total population size of professional nurses who function in the MOPD of the chosen hospitals ranges between seventy (70) and ninety (90). However, only sixty three (63) professional nurses were interviewed (see section 3.6.2). The same criteria as those used for patient selection were used in determining the sample size for the professional nurses (see paragragh 3.5.2). Each of the chosen hospitals had a different number of professional nurses allocated in the MOPD, this being dependent on the functional level / size of the hospital. The lower level hospitals had fewer professional nurses and the tertiary hospitals had more. The researcher telephonically consulted with King Edward VIII Hospital and Eshowe Hospital nursing services managers to obtain their average figures of professional nurses who function in MOPD. From these figures, the averages for other hospitals were calculated as a ratio based on the functional level of the hospital. Due to this, the number of professional nurses interviewed in each hospital was not equal and this was determined by the number of professional nurses who function in the MOPD for that particular hospital. For the lower level hospitals it was not just the MOPD but the outpatients department (OPD).

3.6 Data collection

As stated earlier, questionnaires were used to collect data and there was a separate questionnaire for patients and for professional nurses.

3.6.1 Data collection from patients

Interviews were done using a structured questionnaire that had been designed and translated into Zulu for the purpose of data collection. The researcher did the translation from English into Zulu. The translated version was then checked for correctness and accuracy by a Zulu expert who is teacher by profession at Sithengile High School in Clermont - West of Durban.

The structured questions were in the form of dichotomous and multiple choice questions. The questionnaire was designed to be able to obtain the following information from the patients: patient demographics, accessibility of health care facilities where they stay, educational background, knowledge and perceptions regarding cancer; attitudes and beliefs about Western-style medicine and traditional healers (refer to Appendix H). These data were needed as they have been shown to affect the perception about cancer in terms of prevention, early detection and its management.

As stated above, the questionnaire contained a section that was specifically related to the knowledge and perception about cancer. The statements included were adopted from the 'the cancer myths among Latinos' in an article by Granda-Cameron (1999 : 55). These statements were revised in order to fit the context of the study and the type of population. There were twenty-one (21) statements that the respondents had to answer by rating on a 1 - 5 Likert scale (Welman and Kruger, 1994 : 153). The scale was as follows:

- 1 = strongly disagree
- 2 = disagree
- 3 = uncertain
- 4 = agree
- 5 = strongly agree

The questionnaire was designed such that responses 1 and 2 (strongly disagree and disagree respectively) will indicate good knowledge, 3 - 5 (uncertain, agree and strongly agree respectively) will indicate poor knowledge. Therefore the results will be presented under two categories i.e. good knowledge / positive attitude and poor knowledge / negative attitude (see chapter four). The statements related to different aspects of cancer knowledge and perception. These aspects included the following:

i) Concepts of cancer

ii) Causes of cancer

iii) Prevention and early detection of cancer

iv) Cancer treatments and

v) Attitudes towards cancer.

The statement on chemotherapy was not considered for data analysis since most respondents were not knowledgeable as to what chemotherapy is.

All questionnaires completed were screened to ensure that they were adequately completed before being considered for analysis. Questions that required a yes or no answer followed by further questions only if the respondent answered yes, were left to appear as missing data for those respondents who had answered no. For example, there was a question on whether the respondent's clinic has doctors. The respondents who answered 'no' then did not have to answer the next question which required them to indicate the frequency of availability of these doctors in the clinic.

A total of 300 patients were interviewed between King Edward VIII (KEH) and Addington hospitals. 207 (69%) patients were interviewed at KEH and the balance of 93 (31%) patients was interviewed at Addington. The difference in numbers is accounted for by the fact that KEH saw the highest number of patients for cancer of the cervix and head neck amongst the Black population. Even the patients that were interviewed at Addington, most of them were transfers from KEH and were attending at Addington to receive treatment. The difference in the number of patients interviewed from each hospital was not considered to be of value for this research.

At the end of each interview, the oncology file of the patient interviewed was reviewed to determine the stage of the disease at presentation. With regards to the stage of disease, subjects were staged from stage one (I) to four (IV) (for cancer of the cervix) using the FIGO staging system (Bomford, Kunkler and

Sheriff, 1993 : 405). The TNM (T1 - T4) staging system was used for the head and neck cancer (Bomford, Kunkler and Sheriff, 1993 : 313) (refer to Appendix K). For this research, during data analysis, stages one and two (I and II for cancer of the cervix or T1 and T2 for head and neck cancer) were classified as early stage disease. Stages three and four (III and IV for cancer of the cervix or T3 and T4 for head and neck cancer) were classified as late stage disease.

3.6.2 Data collection from professional nurses

A different questionnaire was distributed to the professional nurses. Due to time constraints and the simplicity of the questionnaire, explanation and completion of the questionnaire was done in-groups i.e. tea breaks, lunch breaks or morning meetings. The questionnaire contained both structured and unstructured questions and was designed by the researcher. It was designed to obtain the following information: previous training and experience, extent of involvement in the diagnosis and referral of patients for cancer, attitudes and beliefs about cancer and it's management; knowledge of the possible management approach to be used; knowledge of the action to follow if signs and symptoms that are suspicious of cancer are observed, general knowledge with regard to cancer; barriers to cancer management and referral of patients (Appendix I). The questionnaire also contained a section where respondents were required to list what they considered to be the signs and symptoms of cancer of the cervix and head and neck cancer. Each respondent could list more than one factor / item and therefore the total count of responses was 183 and 216 for cancer of the cervix and cancer of the

head and neck, respectively. There was a total of 30 different items that were listed for cancer of the cervix as signs and symptoms and there was a total of 34 different items listed for head and neck cancer.

The questionnaire also contained a section on the knowledge and attitudes of professional nurses with regards to cancer and its management. This section of the questionnaire was similar to that of the patient questionnaire but it had 23 statements which had to be rated on a 1 - 5 Likert scale which was similar to that of the questionnaire administered to the patients (refer to 3.6.1). The statements for this section were also obtained from the same source as that used for the patient questionnaire (see paragraph 3.6.1).

The researcher personally explained the questionnaire and handed it out. Each respondent was requested to complete the questionnaire for collection soon after completion to avoid a necessity to post them and also to ensure that all questions were answered. All questionnaires were personally completed by the respondents after being handed out and explained by the researcher. A total of 63 professional nurses were interviewed instead of 70 due to that some hospitals had very small out patient departments. The total number of professional nurses interviewed was determined by the size of the hospital and hence the medical out patient department (MOPD). For some hospitals the MOPD was not a separate department on its own but it was part of out patients department which could have included any of the following: gynaecology, paediatric, surgical, etc. Interviews of

the professional nurses at Addington Hospital included the Primary Health Care Centre.

The total number of professional nurses interviewed from each hospital was as follows:

Addington Hospital	-	13 (20.6%)
King Edward VIII Hospital	-	16 (25.4%)
Edendale Hospital	-	12 (19.0%)
Madadeni Hospital	-	6 (9.5%)
Eshowe Hospital	-	6 (9.5%)
Ngwelezane Hospital	-	6 (9.5%)
Mosvold Hospital	-	4 (6.3%)

Completed questionnaires were then screened to ensure that they were adequately completed before being considered for data analysis. Questions that required a 'yes' or 'no' answer followed by further questions only if the respondent answered 'yes', were entered as missing data for respondents who had answered 'no.'

3.7 Statistical analysis

Incorrectly / incompletely answered questionnaires were not considered for analysis. The Statistical Package for Social Sciences (SPSS) version 9. and later version 11.0 was used to analyze data collected during the study. Analysis of data was done using descriptive statistics in the form of frequencies and cross

tabulations to describe the variables identified, and where necessary charts and tables were presented. Cramer's V test and Chi-square will be used to indicate the strength and direction of the relationship between variables and the level of significance. Professional nurses' data only employed descriptive statistics in the form of frequency distributions. Where respondents could give more than one response for the same question, multiple response data analysis was done. Some questions from the research tool were left out in the presentation of results. These are questions that do not directly inform the research objectives but had been included should there have been a need to validate certain aspects of the study.

3.8 Summary

This chapter highlighted the research methodology that was used in this study. Sample sizes were also highlighted specifying the hospitals that were used and the number of subjects from each hospital. Relevant literature was used to validate the methodology used.

CHAPTER FOUR

4.0 Results

4.1 Introduction

This chapter presents the results of this research project. Tables, graphs and charts will be used where necessary to display results. Descriptive statistics will be used in the presentation of results based on the results from frequency distributions and cross tabulations. Where indicated, inferential statistics will be used to indicate the strength and direction of the relationship between variables and the level of significance. As indicated earlier, Cramer's V test and Chi-square will be used to indicate the strength and direction of the relationship between variables and the level of significance. Professional nurses' data was analysed using descriptive statistics in the form of frequency distributions only. In the presentation of results where the actual count is bigger than the sample size, it suggests that each respondent could give more than one answer.

The results will be presented in the light of the aim and objectives of this research as presented in the first chapter. Patient data will be used to answer objectives one and two and part of objective three. The professional nurses' data will be used to answer objectives three and four and part of objective two. Both questionnaires for professional nurses and patients contained questions that underpin the research objectives. Questionnaires also contained demographic data, which will be presented briefly in order to give an understanding of the sample, its characteristics and the nature of the findings.

4.2 Patient data

4.2.1 Demographic data

Of the 300 respondents interviewed, 210 (70%) had cancer of the cervix and 90 (30%) had head and neck cancer. Head and neck cancer included various anatomical sites in this area as displayed in the table below (Table 4.1).

Table 4.1 Types of cancers in respondents

Diagnosis		Frequency	Percent	Cumulative Percent
Cervix		**210**	**70.0**	**70.0**
Head And Neck	Ear	2	0.7	70.7
	Epiglottis	2	0.7	71.3
	Ethmoid	1	0.3	71.7
	Floor of mouth	5	1.7	73.3
	Hypopharynx	3	1.0	74.3
	Karposi sarcoma	6	2.0	76.3
	Larynx	8	2.7	79.0
	Lip	1	0.3	79.3
	Mandible	4	1.3	80.7
	Maxilla	3	1.0	81.7
	Nasal cavity	1	0.3	82.0
	Nasopharynx	5	1.7	83.7
	Neck	1	0.3	84.0
	Nostril	1	0.3	84.3
	Oral cavity	1	0.3	84.7
	Palate	9	3.0	87.7
	Parotid	7	2.3	90.0
	Post nasal space (PNS)	1	0.3	90.3
	Pyriform fossa	1	0.3	90.7
	Salivary glands	1	0.3	91.0
	Skin	2	0.7	91.7
	Submandibular gland	1	0.3	92.0
	Sublingual area	1	0.3	92.3
	Tongue	11	3.7	96.0
	Tonsil	12	4.0	100.0
	Subtotal for head and neck	**90**	**30**	**30.0**
Total		**300**	**100**	**100.0**

With regards to the stage of disease at presentation, 103 (34.3%) presented with stage 2, 96 (32%) were stage 3, 71 (23.7%) were stage 4, 17 (5.7%) were not staged and 13 (4.3%) presented with stage one (Fig 4.1).

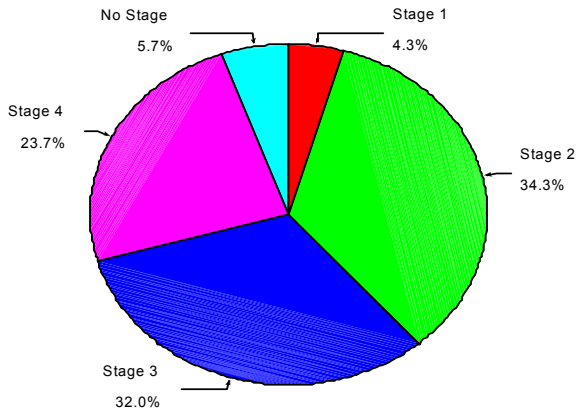

Fig 4.1 Frequency distribution by stage of disease (stage 1 - 4).

When this is classified into early and late stage disease it translates into 167 (55.7%) late stage (stages three and four) and 116 (38.7%) early stage (stages one and two) disease (Fig 4.2).

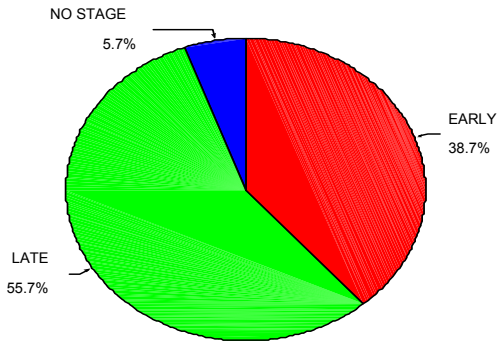

Fig 4.2 Frequency distribution by stage of disease (early and late stage)

With regards to age, a high percentage of the respondents were old with 92 (30.7%) older than 59 years, 88 (29.3%) aged between 49 - 58 years, 73 (24.3% aged between 39 - 48 years, 33 (11.7%) aged between 29 - 38 and 12 (4.0%) aged between 18 - 28 years (Fig 4.3). Respondents were not required to state their exact age and therefore the mean age could not be calculated.

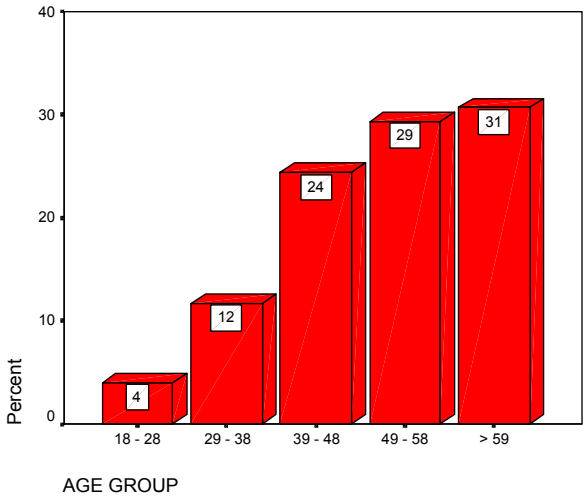

Fig 4.3 Frequency distribution by age

The Cramer's V test was used to test for statistically significant associations between the age and the main variables of patient data. A value of sigma closest to 1 indicates a strong association and that closest to 0 indicates an absence or a weak association. The following variables had a strong association: delay before referral (0.970), delay before initial consultation (0.866), distance to the clinic (0.972) (Table 4.2). These strong associations indicated that the older the

respondents were, the longer was the delay before initial consultation. The strong associations also indicated that the older the respondents were, the longer was the delay before referral. Also, the older the respondents were, the more they felt that the local clinic required transport to be accessible.

Table 4.2 Cramer's V correlation of the main variables and age

Variable	Sigma
Educational background	.000
Employment status	.001
Previous treatment by a traditional	.136
Monthly income	.000
Availability of cancer support groups	.134
Availability of cancer educational groups	.370
Distance to the clinic (walking distance/requires transport)	.972
Distance to the hospital (walking distance/requires transport)	.076
Delay before visiting doctor/clinic/hospital	.866
Delay before referral	.970
Difficulties with referral	.125

A high percentage of the respondents were females, hence the high percentage of cancer of the cervix as shown above (see Table 4.1). 241 (80.3%) were females and only 59 (19.7%) were males (Fig 4.4). Of the 241 female respondents interviewed only 31 (12.9%) had head and neck cancer. All male respondents presented with head and neck cancer.

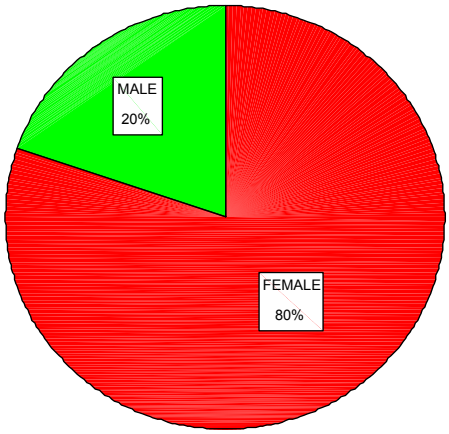

Fig 4.4 Frequency distribution by sex (male/female)

Crosstabulation of stage at presentation versus sex (male or female) revealed that more males tend to present with a late stage disease. The Chi-square test indicated that the differences between males and females with respect to stage of disease at presentation were statistically significant, with sigma being 0.000 (Table 4.3). Therefore, males presented more with a late stage disease.

Table 4.3 Chi-square test for sex (male/female) and stage of disease

	SEX M/F	STAGE OF DISEASE
Chi-Square	110.413	116.340
df	1	2
Asymp. Sig.	.000	.000

Percentage count within sex showed that 116 (48.1%) of female respondents presented with a late stage disease and 112 (46.5%) presented with early stage disease. The count on males revealed that 51 (86.4%) presented with a late stage disease and 4 (6.8%) presented with an early stage disease. Within the female respondents there was therefore a small percentage difference. With regards to the stage of disease within the head and neck diagnosis, a higher percentage of male respondents still presented with late stage disease when compared to female respondents (Table 4.4).

Table 4.4 Crosstabulation of stage of disease versus sex (male/female)

CLASSIFICATION OF DIAGNOSIS				STAGE OF DISEASE			Total
				EARLY	LATE	NO STAGE	
CERVIX	SEX M/F	FEMALE	Count	111	98	1	210
			% within SEX M/F	52.9%	46.7%	.5%	100.0%
			% within STAGE OF DISEASE	100.0%	100.0%	100.0%	100.0%
	Total		Count	111	98	1	210
			% within SEX M/F	52.9%	46.7%	.5%	100.0%
			% within STAGE OF DISEASE	100.0%	100.0%	100.0%	100.0%
HEAD AND NECK	SEX M/F	FEMALE	Count	1	18	12	31
			% within SEX M/F	3.2%	58.1%	38.7%	100.0%
			% within STAGE OF DISEASE	20.0%	26.1%	75.0%	34.4%
		MALE	Count	4	51	4	59
			% within SEX M/F	6.8%	86.4%	6.8%	100.0%
			% within STAGE OF DISEASE	80.0%	73.9%	25.0%	65.6%
	Total		Count	5	69	16	90
			% within SEX M/F	5.6%	76.7%	17.8%	100.0%
			% within STAGE OF DISEASE	100.0%	100.0%	100.0%	100.0%

The Cramer's V test was used to test for statistically significant associations between the sex (male/female) and the main variables of patient data. A value of sigma closest to 1 indicates a strong association and that closest to 0 indicates an absence or a weak association. The following variables had a stronger association: delay before referral (0.755), difficulties with referral (0.972), delay before initial consultation (0.785), monthly income (0.714) and employment status (0.790)(Table 4.5). These associations indicated that female respondents had a longer delay before referral, more difficulties with referral, a longer delay before initial consultation, a better monthly income and a better employment status.

Table 4.5 Cramer's V correlation of the main variables with sex (male/female)

Variable	Sigma
Educational background	.616
Employment status	.790
Previous treatment by a traditional	.126
Monthly income	.714
Availability of cancer support groups	.525
Availability of cancer educational groups	.546
Distance to the clinic (walking distance/requires transport)	.551
Distance to the hospital (walking distance/requires transport)	.023
Delay before visiting doctor/clinic/hospital	.785
Delay before referral	.755
Difficulties with referral	.972

With regards to place of stay, a high percentage of respondents (68.3%) came from the rural areas and only 31.7% were from urban areas (Fig 4.5).

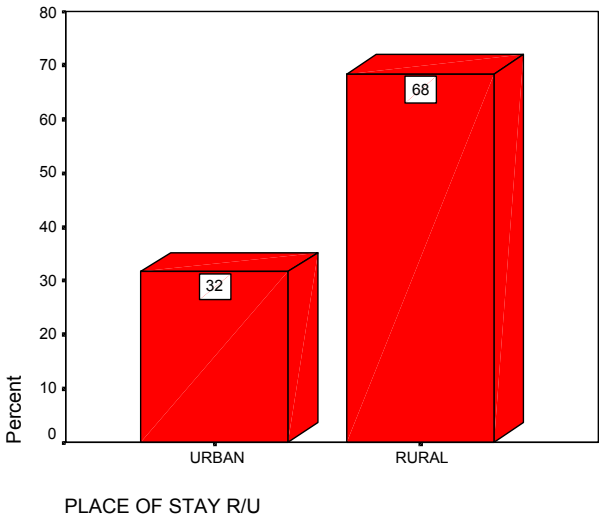

Fig 4.5 Frequency distribution by place of stay

The percentage count within place of stay revealed that within the urban respondents, 49 (53.3%) presented with a late stage disease, 43 (46.7%) presented with early stage disease. From the rural respondents, the percentage count within place of stay showed that 118 (61.8%) presented with a late stage disease, 73 (38.2%) presented with an early stage disease (Table 4.6). The percentage count within the stage of disease, revealed that 70.7% of the rural respondents presented with a late stage disease and 53.3% of the urban respondents presented with a late stage disease (Table 4.6). This indicates the rural patients presented more with a late stage disease.

Table 4.6 Crosstabulation of place of stay versus stage of disease

			STAGE OF DISEASE		
			EARLY	LATE	Total
PLACE OF STAY R/U	URBAN	Count	43	49	92
		% within PLACE OF STAY R/U	46.7%	53.3%	100.0%
		% within STAGE OF DISEASE	37.1%	29.3%	32.5%
	RURAL	Count	73	118	191
		% within PLACE OF STAY R/U	38.2%	61.8%	100.0%
		% within STAGE OF DISEASE	62.9%	70.7%	67.5%
Total		Count	116	167	283
		% within PLACE OF STAY R/U	41.0%	59.0%	100.0%
		% within STAGE OF DISEASE	100.0%	100.0%	100.0%

The Chi-square test indicated that the differences between the rural and urban respondents with respect to stage of disease were statistically significant with sigma being 0.000 and 0.002, respectively (Table 4.7). Therefore, it can be stated that rural respondents presented more with a late stage disease.

Table 4. 7 Chi-square test of place of stay and stage of disease.

	STAGE OF DISEASE	PLACE OF STAY R/U
Chi-Square	9.191	40.333
df	1	1
Asymp. Sig.	.002	.000

4.2.2 Data related to the first objective

The first objective assessed patient knowledge and perception with regards to cancer. Variables that were included in the data collection tool also included those that would impact on knowledge and perception of these patients.

4.2.2.1 Knowledge regarding cancer

Multiple response data analysis for the 21 statements revealed that 54.3% of responses were uncertain, 29.3% strongly disagreed, 13.8% strongly agreed, 1.6% agreed and 0.9% disagreed. This shows that a total of 69.7 % of responses indicated lack of knowledge regarding cancer (Table 4.8)

Table 4.8 Multiple response data - knowledge of patients

Category label	Code	Count	% of Responses	% of Cases
STRONGLY DISAGREE	1	1848	29.3	616.0
DISAGREE	2	59	.9	19.7
UNCERTAIN	3	3421	54.3	1140.3
AGREE	4	100	1.6	33.3
STRONGLY AGREE	5	871	13.8	290.3
Total responses		6299	100.0	2099.7

Results also showed that there was generally a higher degree of lack of knowledge within the rural patients (Table 4.9). Statements included in the questionnaire covered the following areas: causes of cancer, concepts of cancer, prevention and early detection of cancer and treatment of cancer.

Table 4.9 Summary of cross-tabulation of knowledge of patients versus place of stay .

Knowledge question applicable	PLACE OF STAY			
	URBAN (% of responses)		RURAL (% of responses)	
	*Good Knowledge	*Poor Knowledge	*Good Knowledge	*Poor Knowledge
A (fatality of cancer)	55.8	44.2	44.4	55.6
B (cancer produces great)	7.4	92.6	1.0	99
C (cancer in the elderly)	43.2	56.8	24.9	75
D (cancer causes)	11.6	88.4	2.0	98
E (contagious)	41.1	58.9	19.5	80.5
F (infections predispose)	27.4	72.6	14.6	85.4
G (punishment from God)	22.1	77.9	11.3	88.7
H (hereditary)	20	80.0	7.9	92.1
I (open wounds predispose)	4.2	95.8	3.5	96.5
J (difficult to prevent)	7.4	92.6	4.9	95.1
K (no benefit from early consultation)	73.7	26.3	64.4	35.6
L (treatment worsens condition)	94.8	5.2	96.6	3.4
M (radiotherapy causes cancer)	3.2	96.8	0.5	99.5
N (chemotherapy does not work)	10.5	89.5	3.4	96.6
O (surgery fails to remove cancer)	21.1	78.9	19.6	80.4
P (surgery causes spread)	25.3	74.7	12.2	87.8
Q (traditional healers)	49.5	50.5	40.0	60.0
R (preferable not to know about diagnosis)	98.9	1.1	94.2	5.8
S (patients not to be informed	98.9	1.1	94.2	5.8
T (family involvement)	95.8	4.2	89.3	10.7
U (cancer curability)	32.7	67.3	28.3	71.7

*Good Knowledge (combination of strongly disagree and disagree) and poor Knowledge (combination of uncertain, agree and strongly agree).

4.2.2.2 Level of education

The educational background of the respondents was also poor which may be contributing to the level of lack of knowledge within these respondents. 213 (71%) had education that is below the senior certificate / matric, only 10 (3.3%) had post matric education (certificate / diploma) (Table 4.10).

Table 4.10 Frequency distribution of level of education

Level of education	Frequency	Percent	Cumulative Percent
None	98	32.7	32.7
Std 1 - 5	9	3.0	35.7
Std 6 - 9	106	35.3	71.0
Senior certificate	77	25.7	96.7
Certificate	4	1.3	98.0
Diploma	6	2.0	100.0
Total	300	100	

The degree of lack of education appeared to be higher within the rural respondents. Within the rural respondents 42.4% had no education, with only 1% diploma level education (Table 4.11).

Table 4.11 Crosstabulation of place of stay versus educational level.

Place of stay		None	Std 1 - 5	Std 6 - 9	Senior certificate	Certificate	Diploma	Total
Urban	Count	11	6	35	35	4	4	95
	% within place of stay	11.6	6.3	36.8	36.8	4.2	4.2	100.0
Rural	Count	87	3	71	42	0	2	205
	% within place of stay	42.4	1.5	34.6	20.5	0.0	1.0	100.0
Total	Count	98	9	106	77	4	6	300
	% count within place of stay	32.7	3.0	35.3	25.7	1.3	2.0	100.0

The Chi-square test indicated that the differences between the rural and urban respondents with respect to education were statistically significant, with sigma being 0.000 (Table 4.12). Therefore, there was a greater lack of education within the rural respondents.

Table 4.12 Chi-square test between place of stay and educational status

	EDUCATION	PLACE OF STAY R/U
Chi-Square	238.040	40.333
df	5	1
Asymp. Sig.	.000	.000

4.2.2.3 Availability of cancer support groups and cancer educational programs

A high percentage of the respondents indicated that their local communities have no cancer support groups 296 (96.3%) had no cancer support groups, 6 (2.0%) were not sure if any cancer support groups existed in their local communities and 5 (1.7%) indicated the availability of the cancer support groups (Fig 4.6)

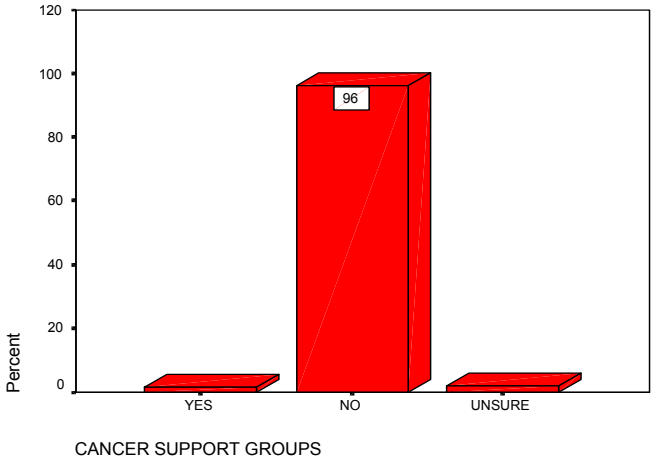

Fig 4.6 Frequency distribution of availability of cancer support groups

With regards to cancer educational programs, 284 (94.7%) respondents indicated the unavailability cancer educational programs, 14 (4.7%) respondents indicated the availability of such programs and 2 (0.7%) were not sure (Fig 4.7)

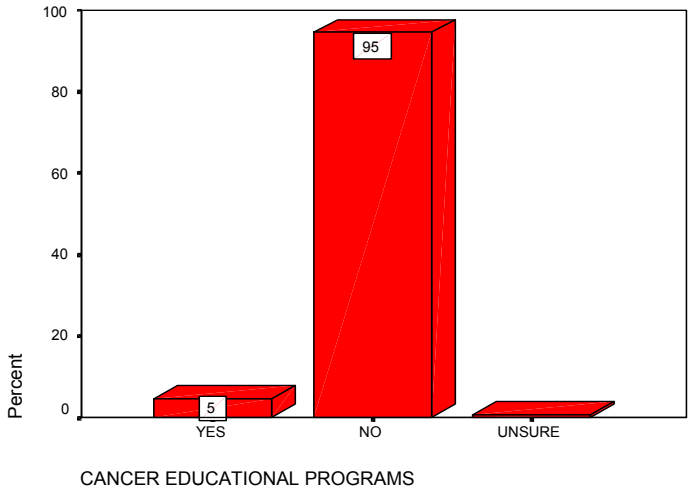

Fig 4.7 Frequency distribution of availability of cancer educational programs

The percentage difference between the rural and urban respondents with regards to the availability of cancer support groups, was very small. Within the urban respondents 89 (93.7%) reported unavailability of cancer support groups and 1 (1.1%) reported the availability of cancer support groups. Within the rural respondents, 200 (97.6%) had no cancer support groups and 4 (2.0%) had cancer support groups. This means that both rural and urban areas are faced with the lack of cancer support groups (Table 4.13).

Table 4.13 Crosstabulation of place of stay versus availability of cancer support groups

			CANCER SUPPORT GROUPS			
			YES	NO	UNSURE	Total
PLACE OF STAY R/U	URBAN	Count	1	89	5	95
		% within PLACE OF STAY R/U	1.1%	93.7%	5.3%	100.0%
	RURAL	Count	4	200	1	205
		% within PLACE OF STAY R/U	2.0%	97.6%	.5%	100.0%
Total		Count	5	289	6	300
		% within PLACE OF STAY R/U	1.7%	96.3%	2.0%	100.0%

With regards to cancer educational programs there was a similar trend. Within the urban respondents, 90 (94.7%) had no knowledge of the existence of any cancer educational programs, 3 (3.2%) had knowledge of existing cancer educational programs and 2 (2.1%) were unsure. Within the rural respondents 194 (94.6%) had no cancer educational programs and 11 (5.4%) had cancer educational programs (Table 4.14).

Table 4.14 Crosstabulation of place of stay versus availability of cancer educational progammes

			CANCER EDUCATIONAL PROGRAMS			
			YES	NO	UNSURE	Total
PLACE OF STAY R/U	URBAN	Count	3	90	2	95
		% within PLACE OF STAY R/U	3.2%	94.7%	2.1%	100.0%
	RURAL	Count	11	194		205
		% within PLACE OF STAY R/U	5.4%	94.6%		100.0%
Total		Count	14	284	2	300
		% within PLACE OF STAY R/U	4.7%	94.7%	.7%	100.0%

The Cramer's V correlation indicated a weak association between place of stay with the availability of both cancer support groups and cancer educational programs. The value for sigma was 0.020 for the cancer support groups and it was 0.082 for the cancer educational programmes therefore very close to 0 in both cases (Table 4.15). The lack of cancer educational programmes and cancer support groups is therefore not influenced by place of stay.

Table 4.15 Cramer's V correlation of place of stay with the availability of cancer support groups and cancer educational programmes.

Variable	Approx. Sigma
Cancer support groups	0.020
Cancer educational programmes	0.082

4.2.2.4 Delay in seeking medical help

When comparing the rural and urban respondents with regards to the delay in seeking medical help, a delay of longer than six weeks was considered a long delay. Within the rural respondents, 116 (56.6%) had a delay longer than six weeks whereas within the urban respondents only 46 (48.4%) had a delay of longer than six weeks (Table 4.16) (see also section 4.2.3.6).

Table 4.16 Crosstabulation of place of stay versus delay before initial consultation

			TIME BEFORE VISITING DOCTOR / CLINIC / HOSPITAL				
			1 - 2 WEEKS	3 - 4 WEEKS	5 - 6 WEEKS	> 6 WEEKS	Total
PLACE OF STAY R/U	URBAN	Count	29	13	7	46	95
		% within PLACE OF STAY R/U	30.5%	13.7%	7.4%	48.4%	100.0%
	RURAL	Count	35	27	27	116	205
		% within PLACE OF STAY R/U	17.1%	13.2%	13.2%	56.6%	100.0%
Total		Count	64	40	34	162	300
		% within PLACE OF STAY R/U	21.3%	13.3%	11.3%	54.0%	100.0%

The Chi-square test indicated that the observed differences in proportions of cases in cells were shown to be statistically significant with sigma being 0.000. (Table 4.17). There was therefore a greater proportion of rural patients who presented who had a long delay (delay of more than 6 weeks).

Table 4.17 Chi-square test of place of stay and delay before initial consultation.

	PLACE OF STAY R/U	TIME BEFORE VISITING DOCTOR / CLINIC / HOSPITAL
Chi-Square	40.333	141.280
df	1	3
Asymp. Sig.	.000	.000

This delay did not seem to be related to a previous consultation by a traditional healer. The percentage difference between rural and urban respondents was very small. 67.4% of urban respondents and 62.9% of rural respondents had no history

of previous treatment by a traditional healer (Table 4.18).

Table 4.18 Crosstabulation of place of stay versus previous treatment by a traditional healer

			TREATED BY A TRADITIONAL HEALER		
			YES	NO	Total
PLACE OF STAY R/U	URBAN	Count	31	64	95
		% within PLACE OF STAY R/U	32.6%	67.4%	100.0%
	RURAL	Count	76	129	205
		% within PLACE OF STAY R/U	37.1%	62.9%	100.0%
Total		Count	107	193	300
		% within PLACE OF STAY R/U	35.7%	64.3%	100.0%

The Chi-square test indicated that the differences between early and late stage disease with respect to previous treatment by a traditional healer, was statistically significant with sigma being 0.002 and 0.000, respectively (Table 4.19). Therefore, respondents who had no previous treatment by a traditional healer presented more with a late stage disease.

Table 4.19 Chi-square test between stage of disease and previous treatment by a traditional healer.

	PREVIOUSLY TREATED BY A TRADITIONAL HEALER	STAGE OF DISEASE
Chi-Square	24.653	9.191
df	1	1
Asymp. Sig.	.000	.002

4.2.3 Results related to the second objective

The second objective assessed the accessibility of the provincial health care provided to the rural Zulu speaking patients.

4.2.3.1 Employment status

On conducting the interviews the researcher explained to the respondents that the employment status/level of income on the questionnaire had nothing to do with the hospitalization / hospital fees. This was done in order to try and ensure that the respondents were honest about their employment status.

The results of this research identified that 252 (84%) respondents were unemployed and 48 (16%) employed (Fig 4.8).

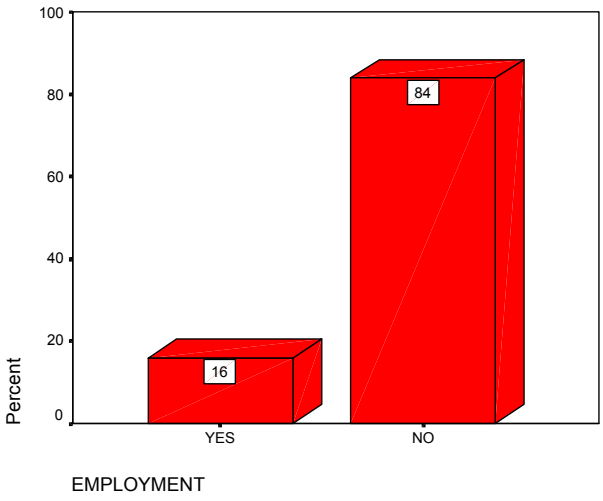

Fig 4.8 Frequency distribution of employment status

With regards to employment there was not much difference between the rural and the urban respondents. Within the rural respondents 178 (86.8%) were unemployed and 27 (13.2%) were employed. Within the urban respondents, 74 (77.9%) were unemployed and 21 (22.1%) were employed (Table 4.20). The unemployment rate is slightly lower in the urban respondents. Employment has an impact on the disease since it affects accessibility of the health-care facilities.

Table 4.20 Crosstabulation of place of stay versus employment status

			EMPLOYMENT		
			YES	NO	Total
PLACE OF STAY R/U	URBAN	Count	21	74	95
		% within PLACE OF STAY R/U	22.1%	77.9%	100.0%
	RURAL	Count	27	178	205
		% within PLACE OF STAY R/U	13.2%	86.8%	100.0%
Total		Count	48	252	300
		% within PLACE OF STAY R/U	16.0%	84.0%	100.0%

The Chi-square test of place of stay and employment status indicated that the observed differences of cases in cells were statistically significant with sigma being 0.000 (Table 4.21). It can therefore be stated that a greater proportion of the rural respondents were unemployed.

Table 4.21 Chi-square test of place of stay and employment status.

	PLACE OF STAY R/U	EMPLOYMENT
Chi-Square	40.333	138.720
df	1	1
Asymp. Sig.	.000	.000

4.2.3.2 Level of income

Findings of this research showed that 166 (55.3%) respondents had no income, 65 (21.7%) earned between R501 - R1000, 49 (16.3%) earned less than R500 / month, 12 (4.0%) earned between R1001 - R1500, 6 (2.0%) were scholars (and therefore did not have any income) and 2 (0.7%) earned between R1501 - R2000. The percentage of respondents who had no income was slightly higher within the rural respondents (Table 4.22). The other contributing factor to this could be that some of the respondents were pensioners i.e. 92 (30.7%) respondents had age greater than 59 years.

Table 4.22 Crosstabulation of place of stay versus income

			MONTHLY INCOME						
			NO INCOME	< R500	R501 - R1000	R1001 - R1500	R1501 - R2000	SCHOLAR	Total
PLACE OF STAY R/U	URBAN	Count	49	16	17	5	2	6	95
		% within PLACE OF STAY R/U	51.6%	16.8%	17.9%	5.3%	2.1%	6.3%	100%
	RURAL	Count	117	33	48	7			205
		% within PLACE OF STAY R/U	57.1%	16.1%	23.4%	3.4%			100%
Total		Count	166	49	65	12	2	6	300
		% within PLACE OF STAY R/U	55.3%	16.3%	21.7%	4.0%	.7%	2.0%	100%

The Cramer's V correlation between place of stay and level of income indicated a weak association between these variables. The correlation coefficient (0.002) was very close to 0 indicating a very weak relationship (Table 4.23). There was therefore no statistical significant difference between rural and urban respondents with regards to level of income.

Table 4.23 Cramer's V correlation between place of stay and level of income.

		Approx. Sig.
Nominal by Nominal	Phi	.002
	Cramer's V	.002

Income may be a critical factor since finance could have a bearing on accessing health-care facilities. A high percentage of the respondents did not have medical aid - only 4 (1.3%) were on medical aid and this could possibly be linked to lack of employment and lack of income.

4.2.3.3 Availability of health care facilities

Health-care facilities are only accessible if available. The results of this research revealed that a high percentage of the respondents do have the health-care facilities in their local communities. 284 (94.7%) had local clinics, 12 (4.0%) indicated the unavailability of local clinics and 4 (1.3%) were not sure (Fig 4.9).

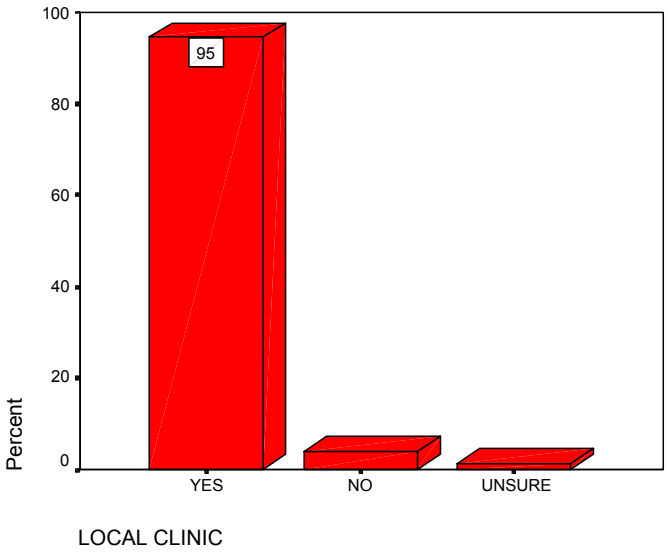

Fig 4.9 Frequency distribution of availability of a local clinic.

With regards to a local hospital, 286 (95.3%) had a local hospital and 13 (4.3%) had no local hospital and only 1 (0.3%) was not sure (Fig 4.10).

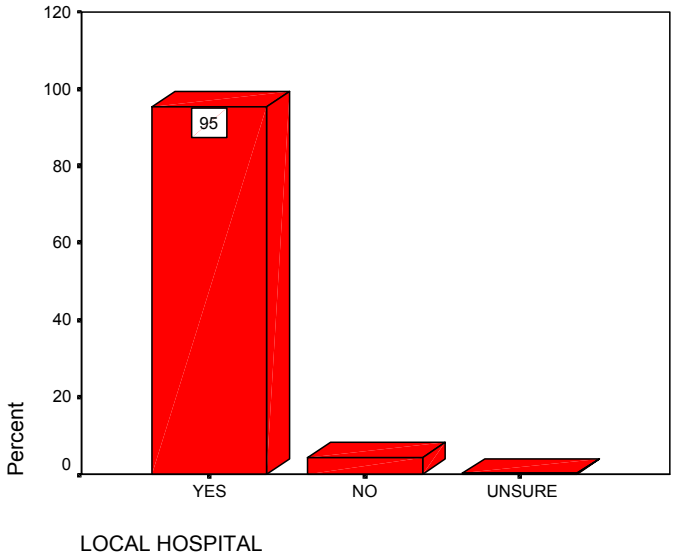

Fig 4.10 Frequency distribution of availability of a local hospital.

The results of this research showed that both urban and rural areas have sufficient health-care facilities. With regards to the availability of a local clinic, in the urban areas 90 (94.7%) respondents reported to have local clinics, 2 (2.1%) did not have any local clinic and 3 (3.2%) were unsure. Within the respondents from rural areas, 194 (94.6%) had local clinics, 10 (4.9%) had no local clinic and 1 (0.5%) was unsure (Table 4.24).

Table 4.24 Crosstabulation of place of stay versus availability of a local clinic

			LOCAL CLINIC			
			YES	NO	UNSURE	Total
PLACE OF STAY R/U	URBAN	Count	90	2	3	95
		% within PLACE OF STAY R/U	94.7%	2.1%	3.2%	100.0%
	RURAL	Count	194	10	1	205
		% within PLACE OF STAY R/U	94.6%	4.9%	.5%	100.0%
Total		Count	284	12	4	300
		% within PLACE OF STAY R/U	94.7%	4.0%	1.3%	100.0%

With regards to the availability of a local hospital, 90 (94.7%) respondents from the urban areas had a local hospital, 4 (4.2%) had no local hospital and 1 (1.1%) was unsure. 196 (95.6%) respondents from the rural areas had a local hospital and 9 (4.4%) had no local hospital (Table 4.25). The respondents were not required to state the functional level of their local hospital since they would have not been able to state this.

Table 4.25 Crosstabulation of place of stay versus availability of a local hospital

			LOCAL HOSPITAL			
			YES	NO	UNSURE	Total
PLACE OF STAY R/U	URBAN	Count	90	4	1	95
		% within PLACE OF STAY R/U	94.7%	4.2%	1.1%	100.0%
	RURAL	Count	196	9		205
		% within PLACE OF STAY R/U	95.6%	4.4%		100.0%
Total		Count	286	13	1	300
		% within PLACE OF STAY R/U	95.3%	4.3%	.3%	100.0%

The data collection tool did not require the respondents to state the actual distance of a local clinic/hospital since most of the respondents would not be able to give that information.

4.2.3.4 Accessibility of health care facilities

Within the respondents who had local clinics, 54.5% do not need transport to access the local clinic and 45.5% need transport to access a local clinic. Within the rural respondents the percentage of those that require transport to access a local clinic was slightly higher (48.7%) compared to the urban respondents (38.5%) (Table 4.26).

Table 4.26 Crosstabulation of place of stay versus distance to a local clinic

			DISTANCE TO THE CLINIC		
			WITHIN A WALKING DISTANCE	NEED TO USE TRANSPORT	Total
PLACE OF STAY R/U	URBAN	Count	56	35	91
		% within PLACE OF STAY R/U	61.5%	38.5%	100.0%
	RURAL	Count	101	96	197
		% within PLACE OF STAY R/U	51.3%	48.7%	100.0%
Total		Count	157	131	288
		% within PLACE OF STAY R/U	54.5%	45.5%	100.0%

The results also revealed that for a high percentage of respondents 93.1%, the local hospital is located remotely and therefore require transport to access it. 6.9% indicated that the local hospital is within a walking distance. The percentage

difference between rural (93.4%) and urban (92.3%) for a need to use transport to access a local hospital, was very small (Table 4.27).

Table 4.27 Crosstabulation of place of stay versus distance to a local hospital

			DISTANCE TO THE HOSPITAL		
			WITHIN A WALKING DISTANCE	NEED TO USE TRANSPORT	Total
PLACE OF STAY R/U	URBAN	Count	7	84	91
		% within PLACE OF STAY R/U	7.7%	92.3%	100.0%
	RURAL	Count	13	184	197
		% within PLACE OF STAY R/U	6.6%	93.4%	100.0%
Total		Count	20	268	288
		% within PLACE OF STAY R/U	6.9%	93.1%	100.0%

The Chi-square test indicated that the significant differences between rural and urban respondents with respect to the distance to the hospital were statistically significant, with sigma being 0.000 (Table 4.28). Therefore, the rural respondents depend more on transport to be able to access a local hospital.

Table 4.28 Chi-square test for place of stay and distance to a local hospital

	PLACE OF STAY R/U	DISTANCE TO THE HOSPITAL
Chi-Square	40.333	213.556
df	1	1
Asymp. Sig.	.000	.000

4.2.3.5 Availability of doctors at a local clinic

A slightly higher percentage of respondents (45.7%) indicated that their local clinics have doctors and 40.3% had no doctors in their local clinic, the others were unsure or not applicable. Results revealed a slightly higher percentage (47.8%) of the availability of doctors in a local clinic compared to urban (41.1%). However, the percentage of urban respondents who were not sure whether their local clinic have doctors was high (18.9%) compared to rural (6.8%) (Table 4.29).

Table 4.29 Crosstabulation of place of stay versus availability of doctors in a local clinic

			DOCTORS IN CLINIC				
			YES	NO	UNSURE	N/A	Total
PLACE OF STAY R/U	URBAN	Count	39	36	18	2	95
		% within PLACE OF STAY R/U	41.1%	37.9%	18.9%	2.1%	100.0%
	RURAL	Count	98	85	14	8	205
		% within PLACE OF STAY R/U	47.8%	41.5%	6.8%	3.9%	100.0%
Total		Count	137	121	32	10	300
		% within PLACE OF STAY R/U	45.7%	40.3%	10.7%	3.3%	100.0%

4.2.3.6 Delay before initial consultation versus stage of disease

The results showed that respondents who delayed in seeking medical help tend to present with a late stage disease. Within the respondents who had 1 - 2 weeks delay, 34 (53.1%) presented with a late stage disease, 27 (42.2%) presented with an early stage disease and 3 (4.7%) were unstaged. Within the respondents who

had a 3 - 4 weeks delay, early stage and late stage count was equal i.e.19 (47.5%) with 2 (5.0%) unstaged. Within the respondents who had a 5 - 6 weeks delay, 18 (52.9%) had a late stage disease, 12 (35.3%) had an early stage disease and 4 (11.8%) were unstaged. Within the respondents who had a delay greater than 6 weeks, 96 (59.3%) presented with a late stage disease, 58 (35.8%) presented with an early stage disease and 8 (4.9%) were unstaged (Table 4.30).

Table 4.30 Crosstabulation of delay before initial consultation versus stage of disease.

			STAGE OF DISEASE			
			EARLY	LATE	NO STAGE	Total
TIME BEFORE VISITING DOCTOR / CLINIC / HOSPITAL	1 - 2 WEEKS	Count	27	34	3	64
		% within TIME BEFORE VISITING DOCTOR / CLINIC / HOSPITAL	42.2%	53.1%	4.7%	100.0%
	3 - 4 WEEKS	Count	19	19	2	40
		% within TIME BEFORE VISITING DOCTOR / CLINIC / HOSPITAL	47.5%	47.5%	5.0%	100.0%
	5 - 6 WEEKS	Count	12	18	4	34
		% within TIME BEFORE VISITING DOCTOR / CLINIC / HOSPITAL	35.3%	52.9%	11.8%	100.0%
	> 6 WEEKS	Count	58	96	8	162
		% within TIME BEFORE VISITING DOCTOR / CLINIC / HOSPITAL	35.8%	59.3%	4.9%	100.0%
Total		Count	116	167	17	300
		% within TIME BEFORE VISITING DOCTOR / CLINIC / HOSPITAL	38.7%	55.7%	5.7%	100.0%

Results also showed that a high percentage of respondents delayed in seeking medical help. 162 (54%) delayed for more than six weeks before initial consultation, 64 (21.3%) delayed for 1 - 2 weeks, 40 (13.3%) delayed for 3 - 4 weeks and 34 (11.3%) delayed for 5 - 6 weeks (Fig 4.11). The mean delay in weeks was 15.75 with a range of 240 weeks. This means that on average the delay was about 16 weeks and some respondents had a delay of up to 240 weeks.

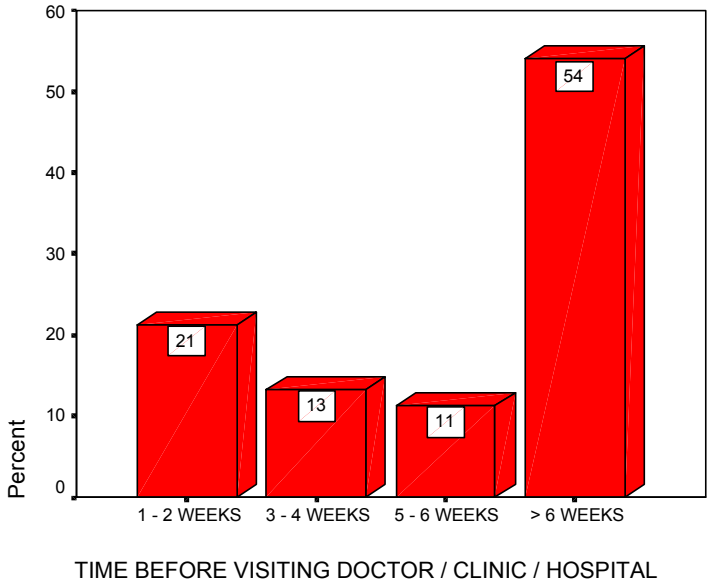

Fig 4.11 Frequency of distribution of delay before initial consultation.

The results also showed that 299 respondents (99.7%) consulted the doctor / clinic only because they felt sick. Delay before referral to the major cancer treatment centre revealed that a high percentage of respondents got referred to the cancer treatment centre within 3 months of initial consultation by the local doctor / clinic / hospital. 235 (78.3%) respondents had a delay of less than 3 months and the balance had a delay ranging from 4 months to about 12 months.

The Chi-square test of stage of disease and the delay before initial consultation indicated that the observed differences of cases in cells were statistically significant with sigma being 0.000 (Table 4.31).

Table 4.31 Chi-square test of stage of disease and delay before initial consultation.

	TIME BEFORE VISITING DOCTOR / CLINIC / HOSPITAL	STAGE OF DISEASE
Chi-Square	141.280	116.340
df	3	2
Asymp. Sig.	.000	.000

4.2.3.7 Place of stay versus difficulties with referral

The percentage difference between the rural and the urban respondents with regards to difficulties with referral was very small. Within the urban respondents, 46 (49.5%) had no difficulties and 47(50.5%) had difficulties with referral. Within the rural respondents, 107 (52.5%) had no difficulties with referral and 97 (47.5%) had difficulties with referral (Table 4.32).

Table 4.32 Crosstabualtion of place of stay versus difficulties with referral

			DIFFICULTIES WITH REFERRAL		
			YES	NO	Total
PLACE OF STAY R/U	URBAN	Count	47	46	93
		% within PLACE OF STAY R/U	50.5%	49.5%	100.0%
	RURAL	Count	97	107	204
		% within PLACE OF STAY R/U	47.5%	52.5%	100.0%
Total		Count	144	153	297
		% within PLACE OF STAY R/U	48.5%	51.5%	100.0%

Multiple response data analysis showed that within the respondents who experienced difficulties with referral, a high percentage had a combination of finance and transport related difficulties. 75 (40.8%) had transport related difficulties, 65 (35.3%) had finance related difficulties and others had family related difficulties (12%), work related difficulties (8.7%) and school related difficulties (2.7%) (Table 4.33).

Table 4.33 Multiple response data - difficulties with referral

Category label	Code	Count	% of Responses	%of Cases
FINANCE	1	65	35.3	43.9
TRANSPORT	2	75	40.8	50.7
FAMILY	3	22	12.0	14.9
WORK	4	16	8.7	10.8
SCHOOL	5	1	.5	.7
OTHER	6	5	2.7	3.4
Total responses		184	100.0	124.3

Crosstabulation of difficulties with referral and place of stay revealed that the rural respondents had the following percentages of responses: transport (45%), finance (34%), family (9%), work (9%), school (1%) and other (2%). The urban respondents had the following percentages of responses: transport (31%), finance (38%), family (19%), work (9%) and other (3%) (Table 4.34). The rural respondents therefore had a slightly higher percentage count on transport related difficulties only. Urban respondents had a higher percentage count with finance and family related difficulties.

Table 4.34 Crosstabulation of place of stay versus difficulties with referral

Place of stay	Type of difficulty						Total
	Finance	Transport	Family	Work	School	Other	
Urban	22 (38%)	18 (31%)	11 (19%)	5 (9%)	0 (0%)	2 (3%)	58 (100%)
Rural	43 (34%)	57 (45%)	11 (9%)	11 (9%)	1 (1%)	3 (2%)	126 (100%)
Total	65 (35.3%)	75 (40.8%)	22 (12.0%)	16 (8.7%)	1 (0.5%)	5 (2.7%)	184 (100%)

4.3 Professional Nurses Data

The total number of the professional nurses interviewed between the seven hospitals (Addington, King Edward VIII, Madadeni, Edendale, Ngwelezane, Eshowe and Mosvold) was sixty three (63).

4.3.1 Data related to the second objective

The second objective assessed the accessibility of health care service that is provided to the rural Zulu speaking patients. The professional nurses' data will

not be classified to rural/urban since the targeted hospitals provide service to different communities based on the referral pattern of the system. Some of the hospitals were urban based but will receive patients referred from rural areas.

4.3.1.1 Accessibility of health care facilities

Respondents who have been working for more than five years as professional nurses were asked to indicate how they thought accessibility of health care facilities has changed in the past five years. Only 28 (44.4%) respondents had an experience of more than five years. Within this group, 27 (96.4%) felt that the accessibility of the health care facilities have changed in a positive direction i.e. they are more and easily accessible.

4.3.1.2 Multiple response data sets for barriers to diagnosis and referral

The respondents were required to indicate what they consider to be barriers to the referral of patients for cancer. Each respondent could give more than one answer. Results showed a high percentage of responses for the lack of resources (63.5%), lack of trained personnel (60.3%), lack of patient co-operation (47.6%) and patient ignorance (25.4%) as barriers to diagnosis of patients for cancer (Table 4.35).

Table 4.35 Multiple response data - barriers to early diagnosis of patients for cancer

Category label	Code	Count	% of Responses	% of Cases
LACK OF RESOURCES	1	40	29.9	63.5
LACK OF PATIENT CO-OPERATION	2	30	22.4	47.6
LACK OF TRAINED PERSONNEL	3	38	28.4	60.3
PATIENT IGNORANCE	6	16	11.9	25.4
POVERTY	7	1	.7	1.6
DELAY IN SEEKING MEDICAL HELP	8	3	2.2	4.8
STRONG BELIEF IN TRADITIONAL HEALERS	9	4	3.0	6.3
LACK OF EDUCATIONAL PROGRAMMES	10	2	1.5	3.2
Total responses		134	100.0	212.7

With regards to barriers to referral of patients for further management of cancer, results indicated a high percentage of responses for the following: lack of patient co-operation (60.3%), inaccessibility of cancer treatment centers (50.8%) and lack of trained personnel (38.1%) (Table 4.36). The other responses included lack of clear referral protocols (19.0%) and transport related problems (4.8%).

Table 4.36 Multiple response data - barriers to referral of patients for cancer

Category label	Code	Count	% of Responses	% of Cases
LACK OF CLEAR REFERRAL PROTOCOLS	1	12	10.9	19.0
LACK OF TRAINED PERSONNEL	2	24	21.8	38.1
INACCESSIBILITY OF CANCER TREATMENT CENT	3	32	29.1	50.8
LACK OF PATIENT CO-OPERATION	4	38	34.5	60.3
OTHER	5	1	.9	1.6
TRANSPORT PROBLEMS	6	3	2.7	4.8
Total responses		110	100.0	174.6

4.3.2 Data related to the third objective

The third objective assessed the extent of involvement of professional nurses in the assessment and referral of patients for cancer.

4.3.2.1 Referral of patients

Results showed that the responsibility of patient referral still lies mainly with the doctors. 52 (82.5%) indicated that it is still the responsibility of the doctors to refer patients in their institution and only 11 (17.5%) indicated that professional nurses can refer patients in their institutions (Fig 4.12).

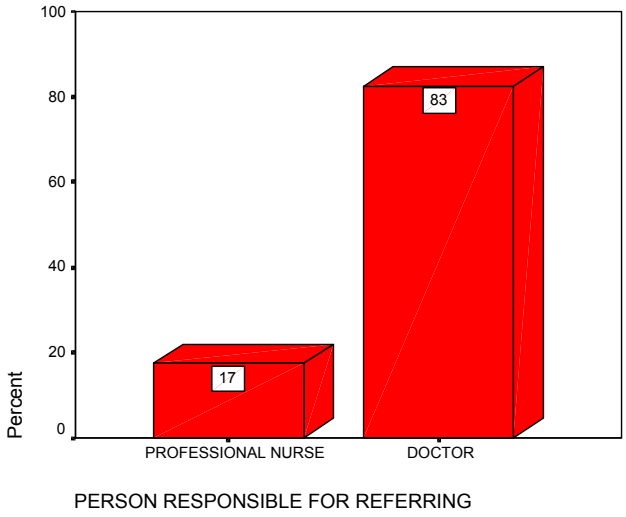

Fig 4.12 Frequency distribution of person responsible for patient referral

A high percentage of respondents also indicated that their institutions have a clear protocol on the referral of patients. 44 (69.8%) respondents had a protocol in comparison to 17 (27%) who were unsure if their institution had a protocol on referral of patients (Fig 4.13).

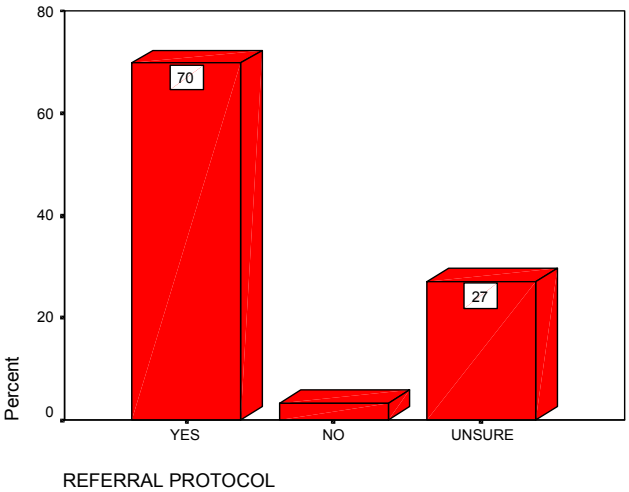

Fig 4.13 Frequency distribution of the availability of referral protocol

The questionnaire did not require the respondents to indicate if the protocol that is available is being followed or not. Patient referral is done since the KZN province only has two major cancer treatment centres and therefore any patient diagnosed with cancer will have to be referred to any of these two centres.

4.3.2.2 Length of time qualified

The respondents interviewed possessed adequate experience in the field of nursing. A high percentage of the respondents had more than 4 years experience as professional nurses. Approximately half of the sample size had experience of more than ten years. 30 (47.6%) had experience greater than 10 years, 15 (23.8%) experience < 3 years, 12 (19.0%) had 4 - 6 years experience and 6 (9.5%) had 7 - 10 years of experience (Table 4.37).

Table 4.37 Frequency distribution of length of time qualified

	Frequency	Percent	Cumulative Percent
< 3 YEARS	15	23.8	23.8
4 - 6 YEARS	12	19.0	42.9
7 - 10 YEARS	6	9.5	52.4
> 10 YEARS	30	47.6	100.0
Total	63	100.0	

4.3.2.3 Oncology Training and Experience

54 (85.7%) had no previous training and only 9 (14.3%) respondents had previous training in the field of oncology (Fig 4.14).

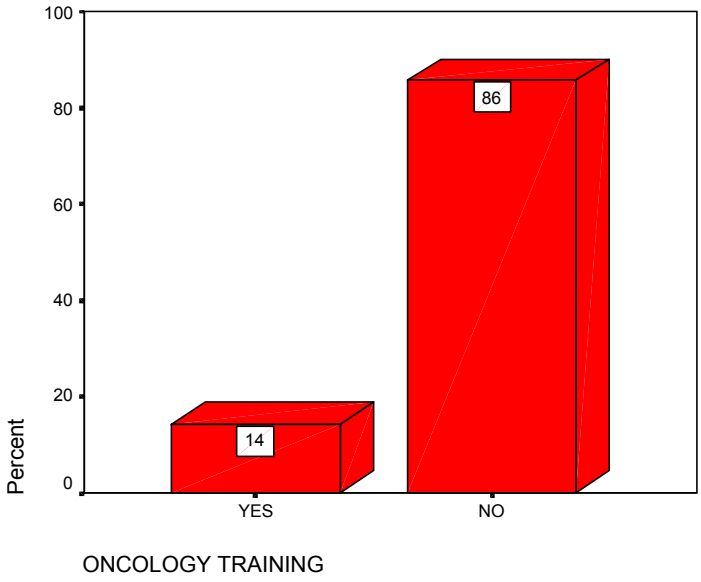

Fig 4.14 Frequency distribution of previous oncology training

Within the latter group, the duration of their training was for a very limited time ranging between less than six months to more than two years. Within this group, 5 (55.6%) had a training of 1 - 6 months, 2 (22.2%) had a training of 6 - 12 months and the other 2 (22.2%) had a training of more than 24 months.

With regards to experience in the management of cancer, a high percentage of respondents (95.1%) had no experience and 34.9% had experience (Fig 4.15).

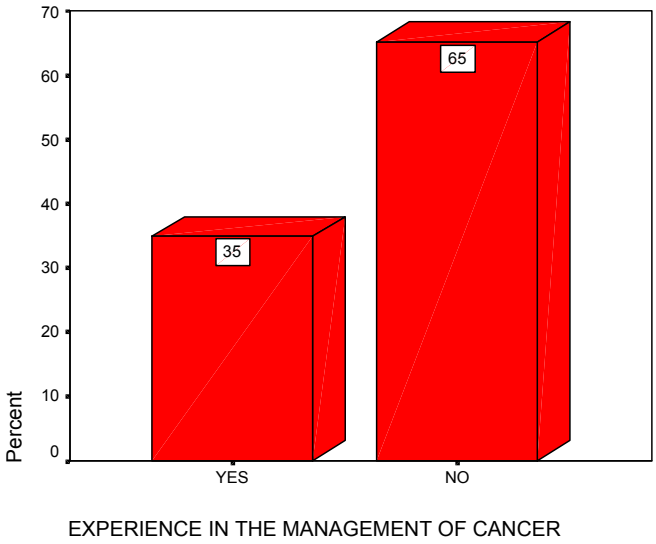

Fig 4.15 Frequency distribution of previous experience in the management of cancer

4.3.2.4 Primary Medical Care Training and Experience

A high percentage of respondents had no previous training nor experience in PMC. 59 (93.7%) had no previous training in PMC and 4 (6.3%) had previous training (Fig 4.16).

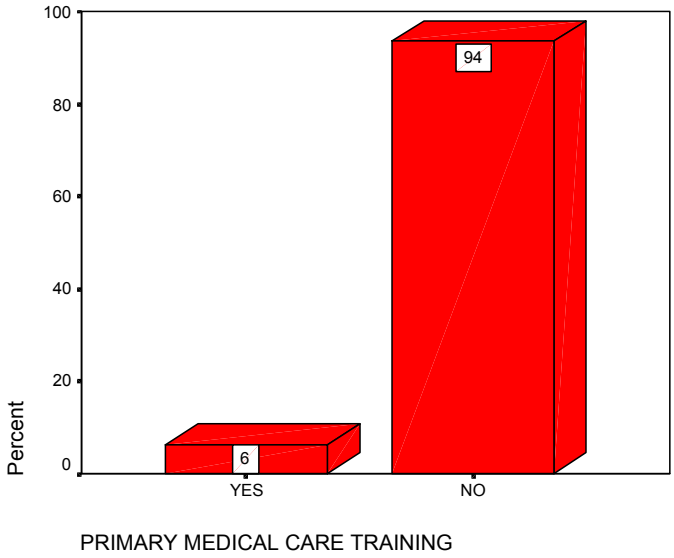

Fig 4.16 Frequency distribution of previous PMC nursing training

With regards to experience in PMC nursing, 36 (57.1%) had no experience in PMC nursing and 27 (42.9%) had experience in PMC nursing (Fig 4.17).

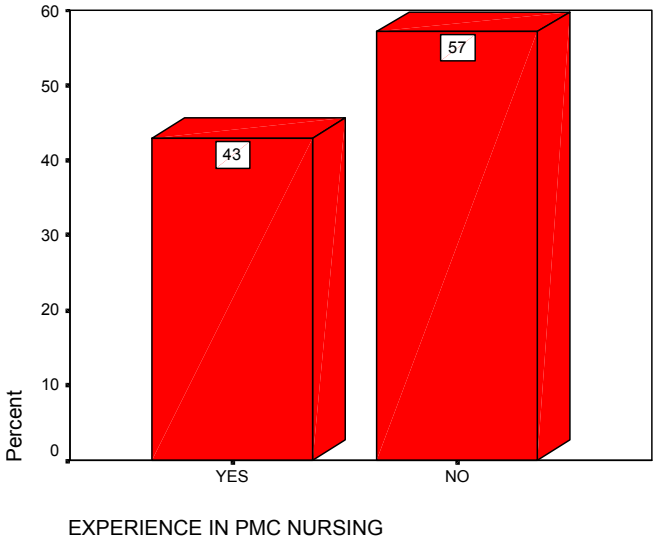

Fig 4.17 Frequency distribution of previous experience in PMC nursing.

4.3.2.5 Understanding of the role of professional nurses

A high percentage of respondents (90.5%) indicated that professional nurses have a role in the investigation, referral and prevention of cancer, a small number (6.3%) disagreed and 2.3% were unsure (Fig 4.18). With regards to the role of professional nurses in the prevention of cancer, only 1 (1.6%) indicated that professional nurses have no role.

Fig 4.18 Frequency distribution of professional nurses role in prevention, referral and investigation of cancer.

4.3.2.6 Cancer awareness and support

With regards to cancer educational programmes, 26 (41.3%) did not have these programmes in place, 22 (34.9%) were unsure if there were any local cancer education programmes and 15 (23.8%) had programmes in place (Fig 4.19).

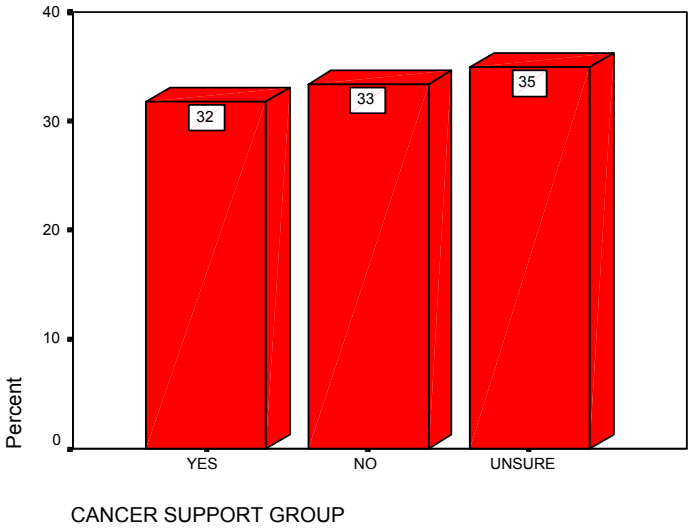

Fig 4.19 Frequency distribution of the availability of cancer support groups

With regards to cancer support groups, 22 (34.9%) were unsure, 20 (31.7%) had groups and 21 (33.3%) did not have these (Fig 4.20).

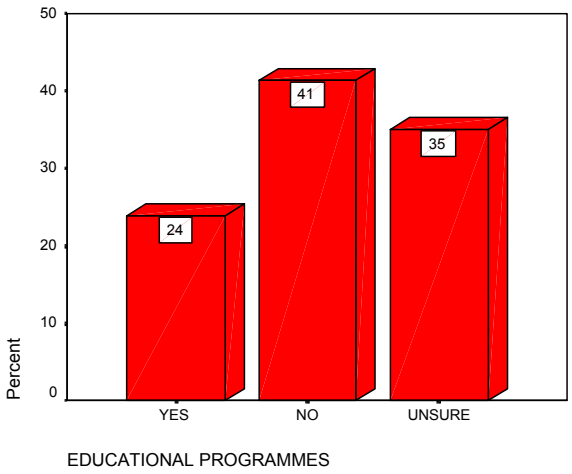

Fig 4.20 Frequency distribution of availability of cancer educational programs

The fact that at least more than a third of the respondents were unsure of the availability of cancer educational programmes and cancer support groups, suggests a lack of such groups / programmes and a lack of involvement of the health care professionals in such programmes.

4.3.3 Data related to the fourth objective

The fourth objective assessed the professional nurses' perception and attitude towards the investigation and treatment of cancer.

4.3.3.4 Knowledge of signs and symptoms of cancer of head and neck and cancer of the cervix

Amongst the listed signs and symptoms for cancer of the cervix, per vaginal bleeding had the highest count (25.1%) followed by per vaginal discharge (20.2%) and lower abdominal pain (11.5%) (Table 4.38).

Table 4.38 Frequency distribution of signs and symptoms listed for cancer of the cervix

Category label	Code	Count	Pct of Responses	Pct of Cases
PV DISCHARGE	1	37	20.2	58.7
PV BLEEDING	2	46	25.1	73.0
LOWER ABDOMINAL PAIN (LAP)	3	21	11.5	33.3
BACK ACHE	4	6	3.3	9.5
POST MENOPAUSAL PV BLEEDING	5	8	4.4	12.7
CHEST PROBLEM	6	1	.5	1.6
LOWER ABDOMINAL MASS	7	1	.5	1.6
WOUND THAT DOES NOT HEAL	8	3	1.6	4.8
PERSISTENT VOICE HOARSENESS	9	1	.5	1.6
DIFFICULTY IN SWALLOWING	10	2	1.1	3.2
PAINFUL INTERCOURSE	11	4	2.2	6.3
CERVICAL GROWTH	12	4	2.2	6.3
NOT SURE	13	3	1.6	4.8
VAGINAL PAIN	14	1	.5	1.6
PAIN	15	5	2.7	7.9
MENNORHAGIA	16	1	.5	1.6
POST COITAL BLEEDING	17	2	1.1	3.2
ANAEMIA / WASTING	18	6	3.3	9.5
OFFENSIVE SMELL	19	7	3.8	11.1
EARLY SEXUAL INTERCOURSE	20	1	.5	1.6
DIFFERENT SEXUAL PARTNERS	21	1	.5	1.6
DYSPAREUNIA	22	1	.5	1.6
WEIGHT LOSS	23	5	2.7	7.9
FEVER	24	1	.5	1.6
PAP SMEAR	25	4	2.2	6.3
CHANGE IN SIZE OF CERVIX	26	5	2.7	7.9
BLEEDING ON TOUCH OF CERVIX	27	3	1.6	4.8
MALAISE	28	1	.5	1.6
PERSISTENT INDIGESTION	29	1	.5	1.6
SORE THROAT	30	1	.5	1.6
Total responses		183	100.0	290.5

With regards to signs and symptoms listed for head and neck cancer, dysphagia had the highest count (19%) followed by voice hoarseness (14.2%) and abnormal growth (9.3%) (Table 4.39).

Table 4.39 Frequency distribution of signs and symptoms listed for head and neck cancer

Category label	Code	Count	Pct of Responses	Pct of Cases
SWOLLEN TONGUE	1	4	1.9	6.3
SEVERE HEADACHE	2	6	2.8	9.5
DYSPHAGIA	3	41	19.0	65.1
VOICE HOARSENESS	4	32	14.8	50.8
GROWTH	5	20	9.3	31.7
BLEEDING GUMS	6	9	4.2	14.3
PAIN ON SWALLOWING	7	6	2.8	9.5
PERSISTENT COUGH	8	7	3.2	11.1
PAIN	9	13	6.0	20.6
SORE THROAT	11	6	2.8	9.5
HEAVY SMOKING	12	2	.9	3.2
MINE WORKERS	13	3	1.4	4.8
SKIN DISCOLORATION	14	1	.5	1.6
LABORATORY TESTS	15	1	.5	1.6
OFFENSIVE ODOR FROM THE MOUTH	16	7	3.2	11.1
ULCER NOT HEALING	17	15	6.9	23.8
NOT SURE	18	2	.9	3.2
HALITOSIS	19	5	2.3	7.9
OFFENSIVE DISCHARGE	20	1	.5	1.6
ANAEMIA & WASTING	21	2	.9	3.2
DIFFICULTY IN BREATHING	22	3	1.4	4.8
STRIDOR	23	2	.9	3.2
LYMPHADENOPATHY	24	14	6.5	22.2
CHEST PAIN	25	1	.5	1.6
UPPER GIT BLEEDING	26	1	.5	1.6
PAIN ON DEFECATION	27	1	.5	1.6
SWELLING OF THE FACE	28	1	.5	1.6
INDIGESTION	29	1	.5	1.6
LOSS OF WEIGHT	30	3	1.4	4.8
LOSS OF APPETITE	31	1	.5	1.6
PATHOLOGICAL FRACTURE	32	1	.5	1.6
HAEMOPTYSIS	33	2	.9	3.2
EXCESS SALIVATION	34	2	.9	3.2
Total responses		216	100.0	342.9

4.3.3.2 Knowledge regarding cancer management

A high percentage of respondents (49.2%) indicated little knowledge, 25.4% had a fair amount of knowledge, 14.3% had no knowledge, 9.5% were not sure and 1.6% possessed a lot of knowledge regarding cancer management (Fig 4.21).

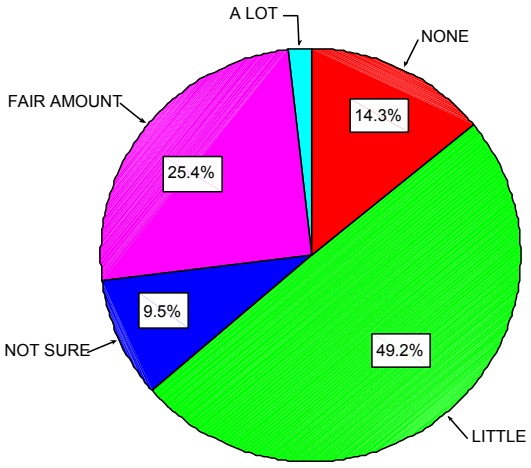

Fig 4.21 Frequency distribution of knowledge regarding cancer

4.3.3.3 Knowledge and attitude

Results showed that overall respondents expressed good knowledge and positive attitude towards cancer. The overall counts for the 23 questions were as displayed in Table 4.40 below.

Table 4.40 Multiple response data - knowledge of PN

Category label	Code	Count	% of Responses	% of Cases
STRONGLY DISAGREE	1	609	42.0	966.7
DISAGREE	2	376	25.9	596.8
UNCERTAIN	3	186	12.8	295.2
AGREE	4	199	13.7	315.9
STRONGLY AGREE	5	79	5.5	125.4
Total responses		1449	100.0	2300.0

4.3.3.4 Specific treatment of knowledge and attitudes

(Refer to Table 4.41)

(i) Concepts of cancer

With regards to the fatality of cancer there was no marked difference, 34 (54%) had good knowledge and 29 (46%) had poor knowledge. With regards to the fear produced by cancer, a higher percentage of respondents (98.4%) indicated that such fear should not interfere with the dissemination of information to the patient.

(ii) Causes of cancer

Results showed that respondents had sound knowledge about the causes of cancer even though the statements that were included were very broad statements and therefore gave the expectation that any person in the medical field should answer / rate them correctly. With regards to contagiousness of cancer, 57 (90.5%) felt that cancer is not contagious (good knowledge) and 6 (9.5%) felt that cancer may be contagious or were uncertain (poor knowledge).

A high percentage of respondents (76.2%) also indicated that they believe that sex at an early age and infections will predispose a person to cancer. A high percentage of respondents (74.6%) had limited knowledge with regards to cancer hereditary and a smaller percentage (25.4%) had positive knowledge.

iii) Cancer prevention and early detection

With regards to cancer prevention, there was no marked difference between those who had poor knowledge (50.8%) and those who had good knowledge (49.2%).

There was also no marked difference between those who felt that cancer is very difficult to prevent since it presents with different signs and symptoms (50.8%) and those who felt that cancer can be easily prevented through early detection of signs and symptoms (49.2%).

iv) Cancer treatment

A slightly higher percentage of respondents felt that cancer is curable (60.4%) and a smaller percentage (39.6%) indicated that cancer is incurable or were uncertain. Thus, about 60% of respondents felt that cancer can be cured.

v) Attitude towards cancer

Respondents generally expressed a positive attitude towards cancer. A few of the respondents had a negative attitude towards cancer. 61 (96.8%) of the respondents had a positive attitude and a smaller percentage (3.2%) had a negative attitude.

Table 4.41 Summary of frequency distribution of knowledge questions for PN

Knowledge question applicable	*Good Knowledge (%)	*Poor Knowledge (%)
A (fatality of cancer)	54.0	46.0
B (cancer produces great)	98.4	1.6
C (cancer in the elderly)	93.7	6.3
D (cancer causes)	71.4	28.6
E (contagious)	90.5	9.5
F (infections predispose)	76.2	23.8
G (cancer is hereditary)	25.4	74.6
H (open wounds predispose)	88.9	11.1
I (difficult to prevent)	50.8	49.2
J (difficult to diagnose)	49.2	50.8
K (no benefit from early consultation)	93.7	6.3
L (cancer curability)	60.3	39.7
M (treatment worsens condition)	52.4	47.6
N (radiotherapy causes cancer)	55.6	44.4
O (chemotherapy does not work)	69.8	30.2
P (radiotherapy causes on to be radioactive)	76.2	23.8
Q (surgery fails to remove cancer)	47.6	52.4
R (surgery causes spread)	42.9	95.1
S (role of traditional healers)	71.4	28.6
T(cost of cancer treatment)	25.4	74.6
U (preferable not to know about diagnosis)	96.8	3.2
V (patients not to be informed)	84.1	15.6
W (family involvement)	88.9	11.1

*Good knowledge (combination of strongly disagree and disagree) and poor knowledge (combination of uncertain, agree and strongly agree).

4.4 Summary

This chapter presented the results of this research project. Tables and graphs were used to simplify the understanding of the results where necessary. The demographic data was presented to highlight the sample characteristics. Cross tabulations for stage of disease, and place of stay were presented for patient data. The chapter also highlighted previous training, experience and knowledge of professional nurses with regards to cancer and its management.

CHAPTER FIVE

5.0 Discussion

5.1 Introduction

This chapter discusses the most salient results presented in the previous chapter. These will be discussed in the light of the research aim and objectives by using the literature review that informed the study. The main trends and patterns in the data will be presented.

5.2 Redefinition of the research aim

The aim of this study was to investigate the factors that contribute to the late presentation of rural Zulu patients with cancer to the two major provincial cancer treatment centres in KwaZulu-Natal.

5.3 Discussion of results

5.3.1 Rural patients present more with the late stage of cancer than urban patients

The treatment of cancer depends on the stage of disease. Results showed that a higher percentage of patients in KwaZulu-Natal still present with a late stage disease for cancers of the cervix and head and neck. Results showed that 59% present with a late stage disease compared to 41% with early stage disease. Cross tabulations of the stage of disease versus place of stay also revealed that late presentation is slightly higher amongst the rural population. The late stage presentation percentages were 61.8% and 53.3% for rural and urban respondents,

respectively. The differences in percentages were also shown to be statistically significant (see Table 4.7). It can therefore be stated that rural patients presented more with a late stage disease than urban patients. It is therefore possible that there are different factors that account for the late presentation between these two groups. This could be accounted for by various factors, some of which will be discussed in this chapter. Such late presentation may influence treatment failure and may therefore result in increased mortality in KwaZulu Natal due to cancer.

MacKillop, Zhou and Quirt (1995 : 532) have shown that a favorable outcome in the treatment of cancer often depends on early intervention. It has been also shown that early detection and early treatment of cancer reduces mortality (NCI, 2004). The stage of disease at presentation is therefore a critical factor in the management of cancer.

The results of this research revealed that 68.3% of the respondents came from rural areas. This confirms what literature has shown that the highest prevalence of the most commonly occurring cancers in the Black population in South Africa occur among the previously disadvantaged living in rural areas (CANSA, 2001b : 1 - 2; Mdletshe and Mavundla, 1998 : 14). Among the most prevalent cancers in this population are the cancers of the cervix and head and neck area. The end result of the late presentation is that patients can only be offered palliative treatment. This is also supported by Martin (1998 : 283) when he describes his 80 : 20 rule which states that in cancers of the cervix, mouth and breast in Western countries

80% of cases present in stages one and two with a survival of about 80% whereas in developing countries 80% of patients present in stages three and four with a survival of 20%.

5.3.2 Rural patients seemed to lack knowledge about cancer.

The results of this research revealed that about 69.7% patients generally lacked knowledge about cancer. Results also showed that there was generally a higher degree of lack of knowledge within the rural patients (refer Table 4.9). The meaning of cancer and illness has been shown to be culture bound (Delbar, 1999 : 45). However, non-participation in cancer detection programs and therefore late stage presentation, should not necessarily be ascribed to cultural factors. Navon (1999 : 42) states that it is essential to distinguish clearly between the impact of cultural background and mere ignorance concerning health behavior. Culture also influences the acceptance of new information and the willingness to act on that information.

Navon (1999:42) also highlights the following:

- Studies conducted in Thailand, Nigeria and South Africa reveal that cancer patients, the general community and even traditional healers are not necessarily aware of the disease's causes, symptoms and available treatments.

- Lack of knowledge about cancer often results in the development of lay theories, which transform misunderstood events into meaningful experiences.

The above highlights support the results of this research. It therefore becomes important that when one looks at late presentation, the influence of lack of knowledge is also considered.

5.3.3 Rural and urban patients lacked methods of acquiring knowledge

Knowledge is acquired through experiences, learning or acquiring information. Depending on the experience or learning of the person, he / she may possess either good (positive) or bad (negative) knowledge. The results of this research revealed that there are very limited available means for the patients to acquire knowledge about cancer. Both patient data and professional nurses data highlighted the lack of cancer educational programs and cancer support groups. Within the rural patients, 97.6% had no cancer support groups and 94.6% had no cancer educational programs. Within the urban patients, 93.7% had no cancer support groups and 94.7% had no cancer educational programmes. The Cramer's V correlation also indicated a weak association between place of stay and the availability of cancer educational programmes and cancer support groups. This indicates the lack of these programmes in both rural and urban communities. This was also supported by the professional nurses' data which revealed that only 23.8% of professional nurses were sure of available cancer educational programs and only 31.7% were aware of cancer support groups. This could also indicate

the lack of involvement of professional nurses in cancer educational programs and cancer support groups.

There are also a number of reasons as to why certain communities may have insufficient knowledge. It is also important to remember that the perception of knowledge is subsequently translated into behaviour (Calman, 1998 : 60). The same author also states that perception may be said to be the interpretation of reality by an individual group or community and it is how we perceive reality that matters. It is therefore expected that, due to the different knowledge base and hence effect on behaviour, the perception of disease, access to health and treatment of cancer will be different between rural and urban communities. This was not the case in this study since both groups (rural and urban) lacked methods of acquiring knowledge. On the other hand, other factors may contribute to cause a person with adequate knowledge not to act on that knowledge.

Educating the communities about cancer can involve different kinds of media. The type of media used should have an impact in the community that is targeted e.g. radio communication can not be effective in communities that generally do not have radios. The challenge within KwaZulu-Natal in rural areas is that, as shown in the results, there is lack of education, unemployment and lack of income and these may act as barriers to the different types of media that can be used effectively within these communities. It is the author's opinion that, for example, posters or printed media could be expected to have a limited impact since people

in these communities are generally illiterate. Also, radio could possibly be effective for the few who can afford to buy the radios, and items like the Internet possible have a limitation due to inaccessibility constraints in these communities. It is therefore possible that the most effective method of educating these communities could be through educational programs and cancer support groups in the form of lectures and talks to families / communities. Health care professionals including the professional nurses could run such programs. The only limitation to this will be the lack of knowledge about cancer management amongst the professional nurses themselves as shown in the results.

5.3.4 Rural patients delayed in seeking medical help

The results of this research clearly showed that there was a high percentage of patients who delayed in seeking medical help and this percentage was slightly higher within the rural patients. Within the rural patients 56.6% had a delay of more than 6 weeks and within the urban patients 48.4% had a delay of more than 6 weeks. The mean delay was 15.75 weeks. The observed differences in proportions of cases in cells with the Chi-square test of place of stay and delay before initial consultation, were shown to be statistically significant with sigma being 0.000 (Table 4.17). It can therefore be stated that a greater proportion of the rural patients delayed in seeking medical help. The Chi-square test of stage of disease and delay before consultation also indicated that the observed differences in proportions of cases in cells between stage of disease and delay before initial consultation, was statistically significant with sigma being 0.000 (Table 4.31). It

can therefore be stated that patients who had a delay of more than six weeks presented more with a late stage disease. This can be linked to several factors. For instance, lack of knowledge (patient ignorance) as identified by the professional nurses' data as one of the barriers to early diagnosis and referral of patients. Lack of knowledge, could also be influenced by culture, which in turn affect one's understanding of health and behaviour (Navon, 1999 : 39).

Knowledge about cancer could enable an individual to seek medical help as early as possible since the individual will know the outcome of untreated disease. This can only happen if there is good knowledge about the prevention, signs and symptoms, treatment and results of treatment (prognosis). On the other hand, in some situations culture may interfere with the understanding of health and its meaning (Navon, 1999 : 39). "Culture is defined as one's values, attitudes and beliefs, thus it would affect one's understanding of health, disease and curing" (Pervan, Cohen and Jaftha, 1995 ; 162).

On the other hand, results showed operating limits e.g. lack of income, lack of employment, lack of transport to access treatment centres. It could therefore be stated that the results demonstrated the association between social and economic factors and patient's health-seeking behaviour in presenting with late stage cancer.

5.3.5 Health care facilities appeared to be easily accessible

The accessibility of the health-care facilities depends on a number of factors and these will be reviewed below. These factors may include availability of health care facilities, resources allocation, referral patterns/protocols, staffing and other. Love (1994 : 1418) has shown that accessibility of health-care facilities is not only a medical problem, social problems of unemployment, poverty, and limited education significantly influence access to services and good health in poorly understood ways.

The results of this research revealed that the delay between initial consultation and referral to the major cancer treatment centre is mainly less than three months. This was supported by the fact that the results of the professional nurses' data uncovered that a higher percentage (69.8%) of hospitals have clear referral protocols. Patients' data also revealed that a high percentage of patients (94.6% rural and 94.7% urban) had local clinics and a high percentage (95.6% rural and 94.7% urban) indicated the availability of a local hospital. This is important since health care facilities are only accessible if available.

The accessibility of health-care facilities has a bigger bearing on the health-care system. Easy access of health-care facilities may promote health since it shortens the delay before consultation of the patient especially in situations where specialist care (e.g. for cancer) is necessary. It has already been shown that any delay in the initiation of treatment may be associated with a clinically important

deterioration in local control of cancer (Mackillop, **et al**., 1996 : 243; Bomford, Kunkler and Sheriff, 1993 : 235). In order to avoid this deterioration in local control which leads to late stage presentation, the health-care facilities must be fully accessible to all communities. Accessible facilities must be those concerned with the investigation, diagnosis, treatment and follow-up of the patient. If any one of these is not achievable, then the mortality rate will increase. Martin (1998 : 283) clearly states that if any established treatment facilities are to have an impact on mortality, they must be linked with the search for the earlier referral and diagnosis of cancer patients. The opposite is also true - early diagnosis must be linked with the availability of treatment facilities.

However, Strachan (1999 : 8) argues that there is still a lack of clear referral systems. She comments that while nurses normally know where to refer a patient to, the problem is that they do not have the proper protocol to know in what cases and conditions to refer. This is also compounded by the fact that the referral of the patient is still the responsibility of doctors in many institutions as shown in the results while it been shown that there is still lack of doctors in rural areas (Strachan, 1999 : 8). This also is also supported by Thomas, **et al**. (2000 : 143) who state that in this province of KwaZulu-Natal, per 100 000 population there were only six specialist, twenty four doctors and one hundred and twenty professional nurses in 1998 / 1999. These are below the national average ratios and could even be lower now with the current brain drain in the nursing profession. It had also been shown previously that there is a low percentage of

doctors working in rural areas - 12% as against 88% working in urban areas (HST, 1995).

The situation posses a question - why is it that the delay between initial consultation and referral is short, but patients still present with a late stage disease? Strachan (1999 : 8) states that the problem may be that the lack of medical doctors which means that referring a patient to a hospital does not necessarily ensure that the patient will get proper medical care. She also states that this may be because there is still a shortage of nurses who are competent in consulting, diagnosing and treating a patient (Strachan, 1999 : 8).

A delay of less than 3 months could possibly be acceptable provided that there will be no more delay when the patient is being consulted for treatment initiation. Fortin, **et al**. (2002 : 929) have recommended in a study done in Quebec (Canada), that radiotherapy should be commenced as soon as possible after consultation with the oncologist- preferably within 20 - 30 days. This study was conducted on early stage head and neck cancer. Mackillop, **et al**. (1994 : 221) in another study recommended that the interval between referral and consultation by the oncologist should not exceed two weeks, and neither should the interval between consultation and initiation of treatment exceed two weeks. The biggest challenge in KwaZulu-Natal is that, as shown by the results, the delay before referral to oncology has been reduced but there is still a big delay between initial

consultation by the oncologist and the initiation of treatment in the public sector (refer to Appendix A).

The waiting periods for radiotherapy generally range between one month and ten months. Such long waiting periods combined with the fact that these patients present with a late stage disease lead to increase mortality in the province. Such long waiting periods develop whenever the demand for a medical service exceeds its supply. This may be happening because of two main reasons, firstly with the local hospitals and clinics now more accessible, more of the disease is detected and referred; secondly lack of staffing in radiotherapy which could result in less number of patients that can be accommodated at a time for treatment.

5.3.6 Health care facilities appeared to be more available.

As stated above, health-care facilities are only accessible when available (see 5.3.5). The results of this research showed that the previously disadvantaged communities who lacked health-care facilities now have facilities. Amongst the rural respondents, 94.6% confirmed the availability of a local hospital. Buch (2000 : 56) states that service inherited in 1994 was a reflection of a system which focused primarily on supporting the apartheid State rather than on improving health or providing an efficient and effective health service. This resulted in the health-care facilities being distributed along racial lines and the Blacks having to carry the worst burden of disease. At the same time there were laws which prevented Blacks to become free citizens in the urban areas with a result that they

mainly occupied the rural areas. Since 1994 there has been a commitment from the government to ensure that all South Africans get infinitely better value for the money spent on health as outlined on the Reconstruction and Development Programme (RDP) of the African National Congress (ANC) (The African National Congress, 1994 : 43).

Strasser (1999 : 7) stressed what had been pointed out in the ANC health plan when she says "Although South Africa has large numbers of highly skilled health workers, much of their training has been inappropriate and they are poorly distributed in relation to health and health care needs. The transformation of the health system to one based on the Primary Health Care approach will require reorientation of existing personnel……There will also need to be changes to basic training."

This is also supported by the progress and achievements made between 1994 - 1999 as presented by Buch (2000 : 57). These achievements include the establishment of a unitary health system with a single national department and nine (9) provincial health departments. This means that facilities that could have been previously designated to Whites only are now available to the broader community. The other achievement is the upgrading of many clinics and health centers and the building of approximately 500 new ones, in poor, hitherto under-served communities (Buch, 2000 : 57). Previously, first level curative care was only available at a distant hospital outpatient department. The availability of

health-care facilities is therefore not a contributing factor to the late presentation of patients with the late stage disease. However, it has been shown above that the lack of doctors in rural areas does not guarantee that a patient will get proper medical care in a medical facility. It should also be highlighted that the results of this research revealed that even though the hospitals are available, 93.4% of the rural respondents required transport to access the local hospital. The Chi-square test also indicated that a greater proportion of the rural patients depend on transport to access a local hospital. This combined with lack of employment, poor income and poor socio-economic conditions have a bearing on accessibility of the local hospital (see 5.3.7). As stated above, these factors impact on the accessibility of health-care facilities in poorly understood ways.

It has been stated that approximately two thirds of Africans live in rural areas and it is this part of the population which must travel furthest to reach a health facility and wait the longest to see a health provider for a medical consultation that is most likely to last less than five minutes (HST, 2000). The same author also states that Africans are at greatest risk of ill health due to poverty combined with poor public health conditions, overcrowded housing, lack of accessible drinking water and sanitation, yet they have the greatest difficulty accessing health services and are treated the most shabbily when they do. With regards to the local clinic, only 48.7% of rural patients indicated that they require transport to access a local clinic. This could mean that the local clinics are better accessible as there is less dependence on transport. It should also be remembered that the

availability of these facilities might not be a guarantee of better care unless adequate resources are provided.

5.3.7 Several factors impacted on the accessibility of the health care facilities

Results showed that there is a high unemployment rate (86.8%) within the rural patients. This was shown to be statistically significant by a Chi-square test with sigma being 0.000. It can therefore be stated that a greater proportion of the rural patients are faced more with a problem of unemployment which impact on accessibility of health care facilities. Results also showed that 57.1% of the rural patients have no income and this have a negative effect since, as highlighted above, a higher percentage of patients require transport to access a local hospital (see 5.3.6). However, the Cramer's V correlation indicated a lack of association between place of stay and level of income. There was therefore no statistical difference with regards to level of income between rural and urban patient. This could lead to that rural communities visit the hospital only if it is highly indicated.

Results also showed that among the leading difficulties experienced within the rural respondents with referral are transport (45%) and finance (34%) related difficulties. Urban respondents experienced similar difficulties (refer to Table 4.34). This is supported by literature as it has been shown that the cost of health, distance and the availability and cost of transport are major barriers to care for the rural communities (HST, 2000). Also, poor education came out very strongly

considering that 99% of the rural respondents had education that is below matric / senior certificate (42.4% of the rural respondents had no education at all).

As already stated above social problems of unemployment, poverty and limited education significantly influence access to services and good health in poorly understood ways. Calman (1998 : 40) describes 'poverty' as the state of an individual or a group, where there is a lack of resources which significantly affects health and well-being and the lack of resources which may include money, material possessions, emotional and psychological support, environmental protection, education, opportunities, shelter, housing, information, and so on.

It has also been shown that district expenditure per capita is significantly higher in urban than rural districts and that there are expenditure variations in primary health and hospital expenditure (Daviaud, **et al**. 2000 : 154). The expectation would be that the rural districts would have a higher spending per capita to compensate for the lack of employment, as these communities can not afford hospital visits. With regards to utilization rate of available facilities, urban districts experience a utilization rate of about three times higher than their rural counterparts (Daviaud, 2000 : 156). Daviaud (2000 : 156) then comments that the low utilization rates in rural areas suggests poor access, lack of trust in services, and raises questions about the quality of care. Quality of care is affected by staffing. Strasser (1999 : 8) points out that Primary Health Care (PHC) trained

nurses are often concentrated in well-resourced urban areas leaving the poorly resourced rural areas only wanting.

It is therefore evident that there are currently more health facilities available, but their accessibility is still faced with a lot of challenges as discussed above.

5.3.8 Role of professional nurses in cancer management

The results revealed lack of training of professional nurses in the management of cancer. Only 14.3% had previous training in the management of cancer and only 34.9% indicated previous experience in cancer management. There was also lack of training in PMC nursing with only 6.3% with previous training and only 42.9% with experience in PMC nursing. This limited training and experience in both cancer management and PMC nursing could lead to inadequate or incorrect education, diagnosis and referral of patients for cancer. This is also supported by the fact that a higher percentage of professional nurses interviewed also indicated that they have little (49.2%) or no knowledge (14.3%) with regards to cancer management. This was also highlighted by a variety of items that were listed as signs and symptoms of cancer of the cervix and head and neck cancer. A lot of items listed do not have anything to do with cancer in these sites.

Professional nurses have a role to play in the current health system used in South Africa. Since 1994, it has been the strategy of the Department of Health to increase access to health care and to accelerate quality health service especially

to those who did not have access previously (Buch, 2000 : 54). Such strategy focused on the provision of sufficient health care using the primary health care system where nurses are generally the core functional unit. The role of nurses can therefore not be overlooked in prevention, detection, treatment and follow up of patients for cancer.

This is echoed by Strasser (1999 : 8), "Without well trained, supported and evenly distributed nurses, the national health system as envisaged by the government will not materialize. Nurses have the ability to not only serve as the backbone of the health system but to serve as the backbone of a well-run and highly effective health system." It has also been shown that the nursing profession has a role to play throughout the continuum of cancer control (Pervan, Cohen and Jaftha, 1995 : 724).

Strachan (1999 : 8) states that the problem is that generally nurses do not have proper protocol to know in what cases and conditions to refer a patient. There is therefore a greater need of training to be provided to professional nurses especially those who function in the PMC services and rural institutions where the availability of doctors may be limited.

The other challenge is that in most institutions (hospitals) it is still the responsibility of the doctors to refer patients. The result is that, in certain circumstances even if the professional nurse knows where and when to refer a

patient, he / she may not be allowed to do so by the protocol. This was also affirmed by the high percentage of professional nurses (90.5%) that indicated that professional nurses have a role in the investigation, referral and prevention of cancer. However, there are limitations to fulfilling this role and these limitations may include the following:

- Lack of training and experience in cancer management and hence lack of knowledge with regards to cancer management as highlighted above.
- Lack of training and experience in PMC nursing as highlighted above.
- Lack of flexibility of referral protocol, which still place the responsibility of referral of patients in doctors when it has been shown that there is still a lack of doctors (Strachan, 1999 : 8).
- Other factors that were highlighted in the result section as barriers to referral and diagnosis of patients which included lack of resources, lack of trained personnel, lack of patient co-operation, patient ignorance, inaccessibility of the cancer treatment centers and lack of clear referral protocols.

The results showed that only 23.8% of professional nurses were aware of existing cancer educational programs in their institutions and only 31.1% had cancer support groups in place. This is an indication of lack of cancer educational programs and support groups in most institutions.

5.3.9 Professional nurses perception and attitude

The discussion on the previous section (5.3.8) highlighted that there is a lack of training and experience of professional nurses with regards to cancer management and PMC nursing. This lack of training may bring an expectation that professional nurses will have a negative attitude towards cancer management. However, it was shown in the results that a high percentage of professional nurses interviewed indicated that they have a role to play in the investigation, referral and prevention of cancer.

With regards to the signs and symptoms of the disease, there was an element of negative perception since there was a variety of items that were listed that were incorrect. But the positive aspect of this is that there was a high count for the correct signs and symptoms.

The specific treatment of knowledge and attitudes section, revealed that overall professional nurses have good perception and therefore a positive attitude towards cancer and its management. It was however, alarming that 32% of responses from the professional nurses' data, indicated lack of knowledge and negative attitude towards cancer (refer to Table 4.39). PN results also revealed that 49.2% of PN felt they have very little knowledge regarding cancer, and 14.3% had no knowledge about cancer.

5.4 Summary

This chapter has discussed the findings of this research project using available literature as a source of discussion. It highlighted the factors that are possible contributing factors to the late presentation with cancer of the rural Zulu-speaking patients. Factors that have been previously shown in literature as resulting into delay of these patients in seeking medical help were also reviewed.

The chapter highlighted the following factors:

- Rural patients present more with the late stage disease and therefore have poor prognosis.
- There is a high degree of lack of knowledge about cancer amongst the rural Zulu speaking patients which is affected by culture, unemployment, limited education, poor socio-economic conditions and lack of methods of acquiring knowledge.
- Rural Zulu speaking patients had a long delay in seeking medical help.
- Health care facilities are now more available and therefore easily accessible but their accessibility is impacted upon by several factors.
- Professional nurses have a role in cancer management but this role is limited by lack of training and experience in cancer management and PMC. Their role is also limited by the current protocols which still places the responsibility of referral on the doctors.

CHAPTER SIX

6.0 CONCLUSION

6.1 Introduction

This chapter is designed to present the conclusions based on the results discussed in chapter 4 and the discussion presented in chapter 5. It will also highlight the pitfalls of this research as well as recommendations for both future research and what can be used in improving the status quo of late presentation of patients with cancer.

6.2 Study design limitations

This study could have been designed to be purely qualitative by using semi-structured interviews or tape-recorded interviews in order to allow a deeper exploration of the data and the respondents to freely express their opinion or facts, especially with the professional nurses. This was not possible due to the large sample size and the time constraints associated with the availability of the respondents. To overcome this problem and also ensure that the data is reliable, the researcher personally interviewed all patients and professional nurses questionnaire was designed to have more of open ended questions. The questionnaires were also designed to cover different aspects as outlined in chapter 3.

6.3 Conclusions

6.3.1 Lack of knowledge (first objective)

There is a high level of ignorance amongst the rural Zulu speaking patients which is affected by:

- Culture (even though this study did not focus on culture) - as shown in literature that culture includes one's values, attitudes and beliefs and it thus affects one's understanding of health, disease and curing (Pervan, Cohen and Jaftha, 1995 ; 162). .
- Limited education.
- Lack of cancer educational programs and cancer support groups.

Consultation by traditional healers was not shown to be a contributing factor to late presentation as previously shown in literature.

6.3.2 Accessibility of health care service (second objective)

The accessibility of health care service is affected by the following:

- Long waiting lists in the cancer treatment centres.
- Delay by patients in seeking medical help.
- Location of the cancer treatment centres which forces the use of a centralized radiotherapy system that has been shown to be limiting.
- Distance, and the availability and cost of transport in accessing local hospitals that will refer patients to these major cancer treatment centres.
- Lack of doctors in rural hospitals when the responsibility of patient referral still lies with them.

- Lack of resources allocation and spending in rural communities.
- Patient factors which include lack of income, unemployment, culture, lack of education, and lack of trust in services.

6.3.3 Role of professional nurses (third objective)

Professional nurses have a role to play in the assessment and referral of patients for cancer but their role seems to be limited by the lack of training in cancer management and PMC nursing. This contributes to lack of knowledge with regards to cancer management. There is also a lack of involvement of professional nurses in the cancer educational programs and cancer support groups.

6.3.4 PN perception and attitude towards cancer (fourth objective)

PN were shown to generally have positive perceptions and therefore positive attitudes towards cancer.

6.4 Recommendations

The recommendations presented here will be based on the findings of this research. The recommendations are as follows:

- In order to address the lack of knowledge amongst the rural Zulu speaking patients, delivery of public health measures must be ensured while incorporating development of multidisciplinary / multisectoral teams with a community orientated approach (HST, 2001). This may be

coupled with implementation of effective educational programs for the rural communities by using relevant media in order to enhance patient co-operation and decrease patient ignorance. Methods that will reach out to these communities where they are will have to be sought - instead of waiting for them to get to the hospital and then only get the information at that stage.

- The problem of delay by the rural Zulu speaking patients in seeking medical help could be addressed by ensuring that there is a mix of primary health care, public health, clinical and community development approaches that are appropriate to each community and this is supported by current literature (HST, 2001).

- The lack of doctors in rural areas could be addressed by ensuring appropriate training of adequate numbers of rural doctors and other health professionals and promote the reorientation of Universities / Technikons to provide such training (HST, 2001). This could also be enhanced by continued educational support of health professionals in rural areas.

- The lack of resources and spending in rural communities could be addressed by the provision of adequate resources and facilities for rural health care (HST, 2001). This may require a thorough review of the

district health expenditure and ensure that spending to promote rural health is increased accordingly.

- Understanding that the perceptions of health are important in changing health and therefore consider how people learn about health with specific review of cultural influences, lack of income, limited education and unemployment since these affect the behaviour of the individuals towards health (Calman, 1998 : 64).

- Providing training for professional nurses in cancer management which will enhance their level of knowledge thereby increasing their efficiency in cancer investigations and referral, and also increasing their capacity in taking a lead in running cancer educational programs and cancer support groups.

- Providing training in PMC nursing and ensuring that those who have been trained are not lost into the private sector or middle management positions (Strasser, 1999 : 8).

- Revise the referral protocols and making provision for professional nurses to be able to refer patients when necessary in preference to the current protocol that places the responsibility of referral in doctors only.

- Reviewing the accessibility of the major cancer treatment centres and make improvements as necessary to increase the accessibility of these e.g. decentralization of the cancer treatment centres (as opposed to the current centralized radiotherapy system), while at the same time an effort is made to attract and retain staff in oncology. This could also be done in liaison with the training institutions (Universities - for doctors / oncologist and professional nurses; colleges - for professional nurses and Technikons - for radiographers).

It should however be mentioned that the above recommendations could only be possible if cancer is seen as a national problem and therefore every effort made, be supported from the national government.

6.5 Summary

This chapter presented the study design limitations. It also presented the research conclusions based on the major highlights of the results. The conclusions were presented in line with the objectives of this research. This chapter also presented the recommendations drawn up from the conclusions of this research project.

LIST OF REFERENCES

Barron, P and Asia, B., 2002. South African Health Review 2001 - The District Health System. The Press Gang, Durban.

Benk, V., Ho, V., Fortin, P.R., Zhang, G., Levinton, C. and Freeman, C.R. 1998. Predictors of Delay in Starting Radiation Treatment for Patients with Early Stage Breast Cancer. International Journal of Radiation Oncology : Biology, Physics. 41 (1) : 109 - 115.

Berg, B.L. 1995. Qualitative Research Methods for the Social Sciences. 2nd edition. Allyn and Bacon. United States of America.

Bomford, C.K., Kunkler, I.H. and Sheriff, S.B. 1993. Walter and Miller's Textbook of Radiotherapy : Radiation Physics, Therapy and Oncology. 6th edition. Longman Publishers Pty Ltd. Singapore.

Buch, E. 2000. The Health Sector Strategic Framework : a Review. In Health System Trust. South African Health Review 2000 [online]. Available from: http://www.hst.org.za/sahr2000. [Accessed 16 May 2001].

Calman, K.C. 1998. The Potential for Health - How to Improve the Nation's Health. Oxford University Press. New York.

CANSA. 2001a. Cervical Cancer [on line]. Available from: http://www.cansa.co.za/registry_cervix.asp. [Accessed 16 May 2001].

CANSA. 2001b. National Cancer registry: Histologically diagnosed cancer, *199 – 1995; Summary statistics – Black Male* [on line]. Available from: http://www.cansa.co.za/registry_black_male_table.asp. [Accessed 16 May 2001].

CANSA. 2001c. National Cancer Registry [on line]. Available from: http://www.cansa.co.za/registry.asp. [Accessed 16 May 2001].

Daviaud, E.; Engelbrecht, B.; Molefakgotla, P.; Crisp, G.; Collins, D; and Barron, P. 2000. District Health Expenditure Reviews. In Health System Trust. South African Health Review 2000 [online]. Available from: http://www.hst.org.za/sahr2000. [Accessed 16 May 2001].

de Vries, E and Reid, S. 2003. Do South African Rural Origin Medical Students Return to Rural Practice? [online]. Available from: http://www.hst.org.za [Accessed 11 July 2003].

Delbar, V. 1999. From the Desert : Transcultural Aspects of Cancer Nursing Care in Israel. Cancer Nursing. 22 (1) : 45 - 51.

Dr Hacking, D., Consultant Oncologist - Netcare Oncology, 2000. Personal communication to S. Mdletshe, September 2000.

Fortin, A.; Bairati, I.; Albert, M.; Moore, L.; Allard, J.; and Couture, C. 2002. Effect of Treatment Delay on Outcome of Patients With Early-Stage Head And Neck Carcinoma Receiving Radical Radiotherapy. International Journal of Radiation Oncology : Biology and Physics. 52 (4) : 929 - 936.

Granda-Cameron, R.N. 1999. The Experience of Having Cancer in Latin America. Cancer Nursing. 22(1) : 51 - 57.

Griffiths, S and Short, C. 1994. Radiotherapy Principles to Practice - a Manual for Quality in Treatment Delivery. Longman Singapore Publishers. Singapore.

Hawkins, J.M. 1988. The Oxford Paperback Dictionary. 3rd edition. Oxford University Press. Great Britain.

HST, 1995. A National Household Survey of Health Inequalities in South Africa [online]. Available from: http://www.hst.org.za/case/overview.html [Accessed on 11 July 2003].

HST, 2000. Rural / Urban Inequity [online]. Available from: http://www.hst.org.za/hlink/equity/rura%2Durban.html [Accessed on 11 July 2003].

HST, 2001. Health For All Rural People - The Durban Declaration [online]. Available from: http://www.hst.org.za/wrhc/proceed/ddecl.html [Accessed on 11 July 2003].

La Marca, K., Wiese, K.R., Pete, J.E. and Carbone, P.P. 1996. A Progress Report of Cancer Centres and Tribal Communities : Building A Partnership Based on Trust. Cancer (Supplement). 78 (7) : 1633 - 1637.

Love, R.R. 1994. Cancer Prevention Through Health Promotion : Defining the Role of Physicians in Public Health. Cancer. 74 (4) : 1418 - 1421.

Mackillop, W.J., Fu, H., Quirt, C.F., Dixon, P., Brundage, M. And Zhou, Y. 1994. Waiting for Radiotherapy in Ontario. International Journal of Radiation Oncology : Biology and Physics. 30 (1) : 221 - 228.

Mackillop, W.J., Zhou, Y. and Quirt, C.F. 1995. A Comparison of Delays in the Treatment of Cancer with Radiation in Canada and the Unites States. International Journal of Radiation Oncology : Biology and Physics. 32 (2) : 531 - 539.

Mackillop, W.J., Bates, J.H.T., O'Sullivan, B. And Withers, H.R. 1996. The Effect of Delay in Treatment on Local Control by Radiotherapy. International Journal of Radiation Oncology : Biology and Physics. 34 (1) : 243 - 250.

Mackillop, W.J., Groome, P.A., Zhang-Solomons, J., Zhou, Y., Feldman-Stewart, D., Paszat, L., Dixon, P., Holoway, E.J. and Cummings, B.J. 1997. Does A Centralised Radiotherapy System Provide Adequate Access to Care ? Journal of Clinical Oncology. 15 (3) : 109 - 115.

Martin, W.M.C. 1998. Cancer in Developing Countries Part-ii - Cancer Control Strategies and Priorities. Clinical Oncology : An International Cancer Journal. 10 (5) : 283 - 287.

Mathurine, G., Assistant Director: KZN Oncology, 2003. Personal communication to Mdletshe, S, August 2003.

Mdletshe, S. and Mavundla, T.R. 1998. The Experience of Women Undergoing Radiotherapy Treatment : Guidelines of Support. The South African Radiographer. XXXVI (2) : 14 - 20.

Mouton, J. 2001. How to Succeed in Your Master's and Doctoral Studies : A South African Guide and Resource Book. Van Schaik Publishers. Pretoria.

Navon, I. 1999. Voices From the World : Cultural Views of Cancer Around the World. Cancer Nursing. 22 (1) : 39 - 45.

NCI, 2004. Cancer Screening Overview [online]. Available from: http://www.nci.nih.gov/cancerinfo/pdq/screening/overview [Accessed on 24 March 2004].

Neal, A.J. and Hoskin, P.J., 1997. Clinical Oncology - Basic Principles and Practice. 2nd edition. Oxford University Press. New York.

Pervan, V., Cohen, L.H. and Jaftha, T. 1995. Oncology for Health-care Professionals. Juta and Co Ltd. Cape Town.

Provost, E.M. 1996. Cancer Screening on the Yukon-Kushkokwim Delta, South Alaska : A Population Based Study . Cancer (Supplement). 78 (7) : 1598 - 1602.

Strachan, K. September 1999. What are Some of the Problems in Nursing Today? HST Update. Issue no. 46 : 8 – 9.

Strasser, S. September 1999. Transforming Nursing Education Towards Primary Health Care. HST Update. Issue no. 46 : 6 – 8.

The African National Congress. 1994. The Reconstruction and Development Programme. Umanyano Publications. Johannesburg.

Thomas, S.; Muirhead, D.; Doherty, J.; and Muheki, C., 2000. Public Sector Financing. In Health System Trust. South African Health Review 2000 [online]. Available from: http://www.hst.org.za/sahr2000. [Accessed 16 May 2001].

Welman, J.C. and Kruger, S.J. 1994. Research Methodology. 2nd edition. Oxford University Press : Cape Town.

APPENDICES

Appendix A

Table A : Waiting periods for radiotherapy at King Edward Hospital as at March 2000

SITE	AIM	TIME
BREAST	Radical	+ 10 months
HEAD & NECK	Radical	+ 08 months
	Palliative (5GyX5#)	+ 08 months
	Palliative (10Gy stat)	+ 02 months
GYNAECOLOGY	Radical	+ 03 months
	Palliative	+ 02 months
GENERAL	Radical	+ 02 months
	Palliative	+ 02 months
PAEDIATRIC	All	+ 04 weeks

NB: These are waiting periods to be seen in the planning clinic. The waiting periods from planning to treatment machine averages about 1 - 2 weeks.

Appendix B

Table B: The effects of waiting lists for radiotherapy (Mackillop, **et al**. 1996 : 244)

Direct effects of delay on the outcome of treatment

1.0 Decreased effectiveness of curative radiotherapy (stochastic effects)
- 1.1 Decreased probability of local control
- 1.2 Increased probability of spread beyond the irradiated field
- 1.3 Decreased chance of cure because of 1.1 and 1.2
- 1.4 Increased chance of treatment complications

2.0 Decreased quality of life while waiting for treatment (non-stochastic effects)
- 2.1 Persistence or worsening of symptoms
- 2.2 Psychological distress

Indirect effects of waiting lists

3.0 Altered patterns of referral
- 3.1 Adoption of inferior alternatives because radiotherapy is not readily available
- 3.2 Referral to distant locations

4.0 Altered patterns of practice of radiation oncology
- 4.1 Decreased technical quality of radiotherapy
- 4.2 Narrowing scope of radiotherapy to technical practice
- 4.3 Decline in academic activity

Economic effects of waiting lists

5.0 Decreased efficiency of radiotherapy programs
- 5.1 Decreased net benefits of radiotherapy (see 1.0 and 2.0 above
- 5.2 Increased administrative cost of managing waiting lists without any decrease in the cost of radiotherapy

6.0 Decreased radiotherapy usage
- 6.1 Reduction in unnecessary radiotherapy may yield savings
- 6.2 Reduction in the use of necessary radiotherapy may increase the use of more expensive alternatives

Appendix C

Table C: Probability of local control as a function of treatment delay and T_d for a tumour with an initial probability of local control of 50% (Mackillop, **et al**. 1996 : 247)

	Treatment delay (weeks)															
T_d (days)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
5	50%	16%	1%													
10	50%	32%	16%	5%	1%											
20	50%	41%	32%	24%	16%	10%	5%	2%	1%							
30	50%	44%	38%	32%	27%	21%	16%	12%	8%	5%	3%	2%	1%			
60	50%	47%	44%	41%	38%	35%	32%	29%	27%	24%	21%	19%	16%	14%	11%	10%
90	50%	48%	46%	44%	42%	40%	38%	36%	34%	32%	30%	29%	27%	25%	23%	21%
120	50%	49%	47%	46%	44%	42%	41%	40%	38%	37%	35%	34%	32%	31%	29%	28%
150	50%	49%	48%	47%	45%	44%	43%	42%	41%	40%	38%	37%	36%	35%	34%	32%
180	50%	49%	48%	47%	46%	45%	44%	43%	42%	41%	40%	39%	38%	37%	36%	35%

Where T_d = tumour doubling time

Appendix D

TABLE D. Misconceptions that may interfere with the application of cancer nursing to other cultures (Navon, 1999 : 41).

Domain	**Misconceptions**
Professional views	*Perception of biomedicine as superior to all other therapeutic systems *Culture-bound interpretations of traditional and lay health beliefs
Patients' reactions	*Expectations that patients' health- seeking behaviour in other cultures will accord with Western norms *Expectations that patients in other cultures will manifest Western-style cognitive and emotional responses
Nurses' practice	*Presupposition that Western patterns of treatment, prevention, and diagnosis disclosure are universally applicable *Assumption that Western-style relationships with patients are suitable for other cultures, too

Appendix E

Table E. Strategies for enhancing the cultural relevance of cancer nursing (Navon, 1999 : 42).

Strategy	**Sphere of notions**	**Sphere of actions**
Changing clients' health beliefs and practices	*Adapting messages on screening, diagnosis, and treatment to local community's way of thinking *Developing culturally sensitive tools for the assessment of nursing interventions	*Allowing local community's representatives to participate in nursing interventions *Using existing resources and support systems in local communities for imparting accurate information
Changing nurses' beliefs and treatment patterns	*Educating nurses that their own professional values are socially and culturally constructed *Teaching nurses to tolerate health beliefs and practices of other cultures	*Adapting the patterns and setting of nursing care to local community's cultural norms *Adapting nurses' behaviour toward clients to local community's cultural norms

Appendix F

Table F. Possible misinterpretations of cultural and cross-cultural research findings (Navon, 1999 : 43).

Misinterpretation	**Alternative Explanations**		
Attributing each and every difference to cultural factors	Apparent cross-cultural differences may in fact result from socio-economic gaps	Apparent cross-cultural differences may in fact result from gaps in the level of knowledge	Apparent difference between Western and traditional medicine may be explained by the use of lay theories
Identifying cultural views with other variables	Apparent lack of difference between individual and general cultural views may in fact result from failure to distinguish between them	Apparent lack of difference between cultural views and behavioural norms may in fact result from failure to distinguish between them	Apparent lack of difference between past and present cultural views may in fact result from neglecting their change over time
exaggerating the extent of cultural differences	Apparent differences between ethnic minorities and dominant groups may in fact result from their separate investigation	Apparent differences between specific cultures may in fact result from their separate investigation	Apparent differences between Western and non-western cultures may in fact result from unwarranted generalisations

Appendix G(i)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
26 October 2000

Professor J.P. Jordaan
The Head of Department
Radiotherapy and Oncology Dept.
Box 977
Addington Hospital
DURBAN

Dear Prof

RE: REQUEST TO INTERVIEW PATIENTS

I am currently doing a Master's Degree with Technikon Natal for which I will be undertaking a research project on the factors that contribute to late presentation of black patients with cancer to KwaZulu-Natal hospitals.

The results of this project will be used to make recommendations that will aid in early diagnosis of cancer amongst the black patients, which will benefit the health-care professionals, patients and the government.

The project will be conducted by interviewing patients already diagnosed with cancer and the health-care professionals (nurses) who function in the investigation and treatment of these patients before they are referred to the major treatment centre for cancer.

Following the discussion you had with Miss Hesketh (Head of Department: Radiography Department), the assistance I require is three fold:

1. To be granted permission to interview patients who are treated for cancer of the cervix and head and neck cancer in the oncology department (Addington and King Edward Hospital).
2. To be granted permission to verify the stage of the disease for those

patients who have been interviewed by accessing their oncology folders.

3. To have your support in any other way in pursuit of this study.

At the completion of the study the results will be made available to your department with necessary recommendations.

If you require more information, please contact me at:

Tel: 031 – 2042507 (w) or 031 – 4650218 (h)
Fax: 031 – 2042574
E-mail: sibusiso@umfolozi.ntech.ac.za

Thank you for your assistance in this matter

Yours sincerely

Mr S. Mdletshe

Appendix G(ii)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
09 January 2001

The Secretary General: Prof R.W. Green-Thompson
Department of Health - KZN
Natalia
P/Bag X 9051
PIETERMARITZBURG

Dear Sir

RE: REQUEST TO CONDUCT RESEARCH

I am currently doing a Master's Degree with Technikon Natal for which I will be undertaking a research project on the factors that contribute to late presentation of black patients with cancer in KwaZulu-Natal hospitals.

The results of this project will be used to make recommendations that will aid in early diagnosis of cancer amongst the black patients, which will benefit the health-care professionals, patients and the government.

The project will be conducted by interviewing patients already diagnosed with cancer and the health-care professionals (nurses) who function in the investigation and treatment of these patients before they are referred to the major treatment centre for cancer.

The assistance I require is two folds:

1. To be granted permission for undertaking this project, as I will have to visit different hospitals and clinics.
2. To have the policy document on the procedure followed in the referral of patients from a local clinic / hospital / doctor to a district / tertiary hospital.

Enclosed is a copy of the research proposal as submitted to the research committee of the Technikon Natal and the questionnaires that will be used. At the completion of the study the results will be made available to your department with necessary recommendations.

If you require more information, please contact me at:
Tel: 031 – 2042507 (w) or 031 – 4650218 (h)
Fax: 031 – 2042574
E-mail: sibusiso@umfolozi.ntech.ac.za

Thank you for your assistance in this matter

Yours sincerely

Mr S. Mdletshe

Appendix G(ii)

Reference: 9/2/3/R

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
26 June 2001

Mr J.G. Shawe
C/o Secretary: Department of Health
KwaZulu-Natal
Natalia
330 Longmarket Street
PIETERMARITZBURG

Dear Mr Shawe

RE: REQUEST TO CONDUCT RESEARCH

Your letter dated 23 February 2001 refers.

As requested, I have attached the letter confirming that the ethics committee has reviewed the research proposal. I have also attached the updated research proposal document.

Thank you for your assistance in this matter.

Yours sincerely

Mr S Mdletshe
Contact details:
Tel no.: 031 – 204 2450(w)
O31 – 465 0218(h)
Cell no.: O83 733 5376
Fax no.: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

Appendix G(iii)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
09 January 2001

The Chief Medical Superintendent: Dr Hurst
Addington Hospital
Box 977
DURBAN

Dear Madam

RE : REQUEST TO CONDUCT INTERVIEWS

I am currently doing a Master's Degree with Technikon Natal for which I will be undertaking a research project on the factors that contribute to late presentation of black patients with cancer.

The results of this project will be used to make recommendations that will aid in early diagnosis of cancer amongst the black patients, which will benefit the health-care professionals, patients and the government.

The project will be conducted by interviewing patients already diagnosed with cancer and the health-care professionals (professional nurses) who function in the investigation and treatment of these patients before they are referred to the major treatment centre for cancer. Addington hospital has been chosen for inclusion in the study to conduct these interviews.

I hereby therefore request to be granted permission to interview professional nurses and patients undergoing radiotherapy treatment. Professional nurses interviewed will be those who function in the medical out-patient or casualty departments. Patients will be interviewed in the radiotherapy department.

Enclosed is a copy of the research proposal as submitted to the Technikon Natal research committee.

If you require more information, please contact me at:
Tel: 031 – 2042507 (w) or 031 – 4650218 (h)
Fax: 031 – 2042574
e-mail: sibusiso@ntech.ac.za
Thank you for your assistance in this matter

Yours sincerely

Mr S. Mdletshe

G(iii)

Your reference: AD/66/1

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
12 March, 2001

Dr J. Hurst
The Chief Medical Superintendent
Addington Hospital
Box 977
Durban
4000

Dear Dr Hurst

With reference to your letter dated 25 January 2001, I would like to submit the attached documents as requested. The other information that you requested is as follows.

Topic of research project: "An investigation of the factors that contribute to the late presentation of black patients with cancer in seven KwaZulu-Natal hospitals."

For research protocol please refer to the research methodology section on the previously submitted proposal document (pages 14 – 18).

The time frame is as follows:

- March to August 2001 – data collection (interviews)
- September 2001 – data analysis
- October 2001 – complete the draft of the research report.
- November 2001 – do corrections and necessary editing if required. Complete typing and binding the research project and submit.
- 2002 – communication of results.

I would also like to bring to your attention that I have submitted a request for permission to conduct this research project to Secretary: Department of Health, Pietermaritzburg. On completion of this study the results will be made available to the department of health with necessary recommendations.

Thank you for your assistance in this matter.

Mr S Mdletshe

Appendix G(iii)

Your reference: AD/66/1

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
26 June 2001

Dr J. Hurst
The Chief Medical Superintendent
Addington Hospital
Box 977
Durban
4001

Dear Dr Hurst

RE: REQUEST TO CONDUCT INTERVIEWS

The telephonic conversation with the secretary of your department on 20 March 2001, requesting submission of a letter confirming that a recognised ethics committee has reviewed the research proposal, refers.

Attached is a copy of the letter that confirms the above request. I have also attached a copy of the updated research proposal.

Thank you for your assistance in this matter.

Yours sincerely

Mr S Mdletshe
Contact details:
Tel no.: 031 – 204 2450(w)
O31 – 465 0218(h)
Cell no.: O83 733 5376
Fax no.: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

Appendix G(iv)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
10 January 2001

The Chief Medical Superintendent
Mosvold Hospital
P/Bag X2211
INGWAVUMA

Dear Sir or Madam

RE : REQUEST TO CONDUCT INTERVIEWS

I am currently doing a Master's Degree with Technikon Natal for which I will be undertaking a research project on the factors that contribute to late presentation of black patients with cancer.

The results of this project will be used to make recommendations that will aid in early diagnosis of cancer amongst the black patients, which will benefit the health-care professionals, patients and the government.

The project will be conducted by interviewing patients already diagnosed with cancer and the health-care professionals (professional nurses) who function in the investigation and treatment of these patients before they are referred to the major treatment centre for cancer. Your institution has been chosen for inclusion in the study to conduct these interviews.

I hereby therefore request to be granted permission to interview professional nurses. Professional nurses interviewed will be those who function in the medical out-patient or casualty departments.

Enclosed is a copy of the research proposal as submitted to the Technikon Natal research committee.

If you require more information, please contact me at:
Tel: 031 – 2042507 (w) or 031 – 4650218 (h)
Fax: 031 – 2042574
e-mail: sibusiso@ntech.ac.za

Thank you for your assistance in this matter

Yours sincerely

Mr S. Mdletshe

Appendix G(v)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
01 February 2001

The Assistant Director: Nursing Services – Mrs E.T.B. Mkize
Eshowe Hospital
P/Bag X504
ESHOWE

Dear Madam

RE : REQUEST TO CONDUCT INTERVIEWS

I am currently doing a Master's Degree with Technikon Natal for which I will be undertaking a research project on the factors that contribute to late presentation of black patients with cancer.

The results of this project will be used to make recommendations that will aid in early diagnosis of cancer amongst the black patients, which will benefit the health-care professionals, patients and the government.

The project will be conducted by interviewing patients already diagnosed with cancer and the health-care professionals (professional nurses) who function in the investigation and treatment of these patients before they are referred to the major treatment centre for cancer. Your institution has been chosen for inclusion in the study to conduct these interviews.

I hereby therefore request to be granted permission to interview professional nurses. Professional nurses interviewed will be those who function in the medical out-patient or casualty departments. I discussed this matter with Dr McDonald telephonically on 2001-02-01 and he advised me to forward my request to your office.

Enclosed is a copy of the research proposal as submitted to the Technikon Natal research committee and a copy of the questionnaire that will be used.

If you require more information, please contact me at:
Tel: 031 – 2042507 (w) or 031 – 4650218 (h)
Fax: 031 – 2042574
e-mail: sibusiso@ntech.ac.za
Thank you for your assistance in this matter

Yours sincerely

Mr S. Mdletshe

G(v)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
26 June 2001

Mrs E Mkhize
Assistant Director: Nursing Services
P/Bag 504
ESHOWE
3815

Dear Mrs Mkhize

RE: REQUEST TO INTERVIEW PROFESSIONAL NURSES

I am writing to make a follow-up on the letter I had posted to your office dated 01 February 2001. Up to date I have not received any correspondence from your office.

Attached is a copy of the letter that I had sent to your office, a copy of the research proposal document and a copy of the letter confirming that the ethics committee reviewed the research proposal.

Thank you for your assistance in this matter.

Yours sincerely

Mr S Mdletshe
Contact details:
Tel no.: 031 – 204 2450(w)
O31 – 465 0218(h)
Cell no.: O83 733 5376
Fax no.: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

Appendix G(vi)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
10 January 2001

The Chief Medical Superintendent
Ngwelezane Hospital
P/Bag X20021
EMPANGENI
3880

Dear Sir or Madam

RE : REQUEST TO CONDUCT INTERVIEWS

I am currently doing a Master's Degree with Technikon Natal for which I will be undertaking a research project on the factors that contribute to late presentation of black patients with cancer.

The results of this project will be used to make recommendations that will aid in early diagnosis of cancer amongst the black patients, which will benefit the health-care professionals, patients and the government.

The project will be conducted by interviewing patients already diagnosed with cancer and the health-care professionals (professional nurses) who function in the investigation and treatment of these patients before they are referred to the major treatment centre for cancer. Your institution has been chosen for inclusion in the study to conduct these interviews.

I hereby therefore request to be granted permission to interview professional nurses. Professional nurses interviewed will be those who function in the medical out-patient or casualty departments.

Enclosed is a copy of the research proposal as submitted to the Technikon Natal research committee.

If you require more information, please contact me at:
Tel: 031 – 2042507 (w) or 031 – 4650218 (h)
Fax: 031 – 2042574
e-mail: sibusiso@ntech.ac.za

Thank you for your assistance in this matter

Yours sincerely

Mr S. Mdletshe

Appendix G(vi)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
26 June 2001

The Chief Medical Superintendent
Ngwelezane Hospital
P/Bag X20021
EMPANGENI
3880

Dear Sir/Madam

RE: REQUEST TO INTERVIEW PROFESSIONAL NURSES

Attached is a completed form for application to carry out research in your institution.

I have also attached an updated research proposal document and a copy of the letter confirming that the research proposal was reviewed by the ethics committee.

Thank you for your assistance in this matter.

Yours sincerely

Mr S Mdletshe
Contact details:
Tel no.: 031 – 204 2450(w)
O31 – 465 0218(h)
Cell no.: O83 733 5376
Fax no.: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

Appendix G(vii)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
10 January 2001

The Chief Medical Superintendent
Edendale Hospital
P/Bag X509
PLESSISLAER

Dear Sir or Madam

RE : REQUEST TO CONDUCT INTERVIEWS

I am currently doing a Master's Degree with Technikon Natal for which I will be undertaking a research project on the factors that contribute to late presentation of black patients with cancer.

The results of this project will be used to make recommendations that will aid in early diagnosis of cancer amongst the black patients, which will benefit the health-care professionals, patients and the government.

The project will be conducted by interviewing patients already diagnosed with cancer and the health-care professionals (professional nurses) who function in the investigation and treatment of these patients before they are referred to the major treatment centre for cancer. Your institution has been chosen for inclusion in the study to conduct these interviews.

I hereby therefore request to be granted permission to interview professional nurses. Professional nurses interviewed will be those who function in the medical out-patient or casualty departments.

Enclosed is a copy of the research proposal as submitted to the Technikon Natal research committee.

If you require more information, please contact me at:
Tel: 031 – 2042507 (w) or 031 – 4650218 (h)
Fax: 031 – 2042574
e-mail: sibusiso@ntech.ac.za

Thank you for your assistance in this matter

Yours sincerely

Mr S. Mdletshe

Appendix G(vii)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
26 June 2001

The Chief Medical Superintendent
Edendale Hospital
P/Bag X509
PLESSISLAER

Dear Sir / Madam

RE: REQUEST TO INTERVIEW PROFESSIONAL NURSES

I am writing to make a follow-up on the letter I had posted to your office dated 10 January 2001. Up to date I have not received any correspondence from your office.

Attached is a copy of the letter that I had sent to your office, a copy of the research proposal document and a copy of the letter confirming that the ethics committee reviewed the research proposal.

Thank you for your assistance in this matter.

Yours sincerely

Mr S Mdletshe
Contact details:
Tel no.: 031 – 204 2450(w)
O31 – 465 0218(h)
Cell no.: O83 733 5376
Fax no.: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

Appendix G(viii)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
30 January 2001

Mrs Govind
The Deputy Director: Nursing Services
King Edward VIII Hospital
Dalbridge
DURBAN

Dear Madam

RE : REQUEST TO CONDUCT INTERVIEWS

I am currently doing a Master's Degree with Technikon Natal for which I will be undertaking a research project on the factors that contribute to late presentation of black patients with cancer.

The results of this project will be used to make recommendations that will aid in early diagnosis of cancer amongst the black patients, which will benefit the health-care professionals, patients and the government.

The project will be conducted by interviewing patients already diagnosed with cancer and the health-care professionals (professional nurses) who function in the investigation and treatment of these patients before they are referred to the major treatment centre for cancer. Your institution has been chosen for inclusion in the study to conduct these interviews.

I hereby therefore request to be granted permission to interview professional nurses. Professional nurses interviewed will be those who function in the medical out-patient or casualty departments.

Enclosed is a copy of the research proposal as submitted to the Technikon Natal research committee.

If you require more information, please contact me at:
Tel: 031 – 2042507 (w) or 031 – 4650218 (h)
Fax: 031 – 2042574
e-mail: sibusiso@ntech.ac.za

Thank you for your assistance in this matter

Yours sincerely

Mr S. Mdletshe

Appendix G(viii)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
26 June 2001

Mrs Govind
The Deputy Director: Nursing Services
King Edward VIII Hospital
Dalbridge
DURBAN

Dear Madam

RE: REQUEST TO CONDUCT INTERVIEWS

I am writing to make a follow-up on the letter I had personally delivered to your section following our telephonic conversation on 01 February 2001, which was dated 30 January 2001. Up to date I have not received any correspondence from your office.

Attached is a copy of the letter that I had sent to your office, a copy of the research proposal document and a copy of the letter confirming that the ethics committee reviewed the research proposal.

Thank you for your assistance in this matter.

Yours sincerely

Mr S Mdletshe
Contact details:
Tel no.: 031 – 204 2450(w)
O31 – 465 0218(h)
Cell no.: O83 733 5376
Fax no.: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

Appendix G(viii)

MEMORANDUM

To: **Dr S.A. Mhlambi**

Chief Medical Superintendent – K.E.H.

From: **Mr S Mdletshe**

Master's student: Department of Radiography – Technikon Natal

Date: 2001-08-07

re: **REQUEST TO INTERVIEW PATIENTS AND PROFESSIONAL NURSES**
Reference: KE 2/7/1 (40/2001)

Dear Sir

Your letter dated 27 July 2001 refers.

Please find the enclosed copy of the ethical approval of this research project as requested. I have also enclosed a copy of the approval granted by the Secretary: Department of Health, KwaZulu-Natal.

This research project does not carry any financial or human resource implications to King Edward VIII Hospital and it is not a clinical trial.

Thank you for your assistance in this matter.

Mr S Mdletshe

Contact details:

Tel no.: **031 – 204 2450 (w)**

031 – 465 0218 (h)

Fax no.: **031 – 204 2574**

E-mail address: sibusiso@ntech.ac.za

Appendix G(ix)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
10 January 2001

The Chief Medical Superintendent
Madadeni Hospital
P/Bag X6642
NEWCASTLE

Dear Sir or Madam

RE : REQUEST TO CONDUCT INTERVIEWS

I am currently doing a Master's Degree with Technikon Natal for which I will be undertaking a research project on the factors that contribute to late presentation of black patients with cancer.

The results of this project will be used to make recommendations that will aid in early diagnosis of cancer amongst the black patients, which will benefit the health-care professionals, patients and the government.

The project will be conducted by interviewing patients already diagnosed with cancer and the health-care professionals (professional nurses) who function in the investigation and treatment of these patients before they are referred to the major treatment centre for cancer. Your institution has been chosen for inclusion in the study to conduct these interviews.

I hereby therefore request to be granted permission to interview professional nurses. Professional nurses interviewed will be those who function in the medical out-patient or casualty departments.

Enclosed is a copy of the research proposal as submitted to the Technikon Natal research committee.

If you require more information, please contact me at:
Tel: 031 – 2042507 (w) or 031 – 4650218 (h)
Fax: 031 – 2042574
e-mail: sibusiso@ntech.ac.za

Thank you for your assistance in this matter

Yours sincerely

Mr S. Mdletshe

Appendix G(ix)

Technikon Natal
Department of Radiography
P.O. Box 953
Durban
4000
26 June 2001

The Chief Medical Superintendent
Madadeni Hospital
P/Bag X6642
NEWCASTLE

Dear Sir / Madam

RE: REQUEST TO INTERVIEW PROFESSIONAL NURSES

I am writing to make a follow-up on the letter I had posted to your office dated 10 January 2001. Up to date I have not received any correspondence from your office.

Attached is a copy of the letter that I had sent to your office, a copy of the research proposal document and a copy of the letter confirming that the ethics committee reviewed the research proposal.

Thank you for your assistance in this matter.

Yours sincerely

Mr S Mdletshe
Contact details:
Tel no.: 031 – 204 2450(w)
O31 – 465 0218(h)
Cell no.: O83 733 5376
Fax no.: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

Appendix G(x)

MEMORANDUM

To: **The Director: Cancer Association**
KwaZulu-Natal - Umbilo

From: **Mr S Mdletshe**
Master's student: Department of Radiography – Technikon Natal

Date: 2001-07-04

re: **Interview of patients**

Dear Sir

I would like to request permission to interview patients in your institution as a pilot for my research project. This project is registered with Technikon Natal for the Master's Degree in Technology: Radiography. The title of the research project is "An investigation into the factors that contribute to the late presentation of rural Zulu patients with cancer to the two major provincial cancer treatment centres in KwaZulu-Natal." I have attached proof of review of the project by the ethics committee.

I have chosen to use the patients in your institution since I need patients who already have cancer but are not going to be part of the study. I require patients who are Zulu speaking.

Thank you for your assistance in this matter.

Mr S Mdletshe
Contact details:
Tel no.: **031 – 204 2450 (w)**
031 – 465 0218 (h)
Fax no.: **031 – 204 2574**
E-mail address: sibusiso@ntech.ac.za

APPENDIX H

TECHNIKON NATAL

DEPARTMENT OF RADIOGRAPHY

TOPIC OF RESEARCH: AN INVESTIGATION INTO THE FACTORS THAT CONTRIBUTE TO THE LATE PRESENTATION OF RURAL ZULU PATIENTS WITH CANCER.

Dear participant

I am currently undertaking a research project which aims to investigate the factors that contribute to the late presentation of rural Zulu patients with cancer to the two major provincial cancer treatment centres in KwaZulu-Natal - Addington and King Edward VIII Hospitals.

The study will involve interviewing of patients, who have either cancer of the cervix or head and neck cancer. The interview will be conducted by the researcher using a structured questionnaire. I therefore request your participation in this study. Your participation will only entail being available for an interview. The researcher will ensure that you do not miss your turn to see the doctor or to have your treatment. The researcher will also refer you to the oncology social worker if found necessary.

Participation in the study will not alter or affect your treatment for cancer. It does not carry any risks. Participation in the study is voluntary and you are free to withdraw from the study at any time you want. The information you give will be treated with confidentiality and will only be used for research purposes. The data gathered will only be handled by the researcher and no names will be used for data analysis and data presentation. Confidentiality will be maintained at all times.

The study could benefit the government's health delivery policies, as better service could be delivered with the intention to cure the patients. The community / society would benefit as well, as service delivery could be improved enabling patients to receive treatment for cancer at an early stage of the disease. Patients who will be interviewed could also benefit, as they could be diagnosed early and offered treatment earlier than is currently happening in cases of recurrence of the disease.

Your co-operation will be appreciated.

Yours faithfully

Mr S Mdletshe
Contact details:
Tel no.: 031 – 204 2507(w)
O31 – 465 0218(h)
Cell no.: O83 733 5376
Fax no.: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

TECHNIKON NATAL

DEPARTMENT OF RADIOGRAPHY

TOPIC OF RESEARCH: AN INVESTIGATION INTO THE FACTORS THAT CONTRIBUTE TO THE LATE PRESENTATION OF THE RURAL ZULU PATIENTS WITH CANCER

Dear participant
I also request your permission to review your oncology file in order to determine the stage of your disease.

Permission granted

Yes	No

(Tick appropriate box)

_____ _____
Signature of participant Date

_____ _____
Researcher's signature Date

INFORMED CONSENT FORM

(To be completed by patient / subject)

Date :

Title of research project : *An investigation into the factors that contribute to the late presentation of the rural Zulu patients with cancer to the two major provincial cancer treatment centres in KwaZulu-Natal (Addington hospital and King Edward hospital)*

Name of supervisor : *Dr T S Magojo (Ph D – Natal)*

Please circle the appropriate answer		**YES**	**NO**
1.	Have you read the research information sheet?	Yes	No
2.	Have you had an opportunity to ask questions regarding this study?	Yes	No
3.	Have you received satisfactory answers to your questions?	Yes	No
4.	Have you had an opportunity to discuss this study?	Yes	No
5.	Have you received enough information about this study?	Yes	No
6.	Do you understand that you are free to withdraw from this study?	Yes	No
	a) at any time		
	b) without having to give any reason for withdrawing, and		
	c) without affecting your future health care.		
7.	Do you agree to voluntarily participate in this study?	Yes	No

If you have answered no to any of the above, please obtain the necessary information before signing.

Please print in block letters:

Patient / Subject name: _____ Signature: _____

Parent / Guardian: _____ Signature: _____

Witness Name: _____ Signature: _____

Research Student Name: _____ Signature: _____

INSTRUCTION:

Answer questions by making a cross on the most appropriate box or writing the appropriate number in the appropriate box, and where applicable write down the answer in your own words unless other instructions are given.

NB: Do not skip any question, answer all questions.

QUESTIONS:

1. Indicate the age group that you belong to:

18 – 28 years	29 – 38 years	39 – 48 years	49 – 58 years	Over 59 years

2. Sex :

Male	Female

3. State the place in which you were born:

   Town: ……

   Village: ……

4. State the place where you are currently living in:

   Town: ……

   Village: ……

5. For how long have you been living in the current place?

3 years and under	4 – 6 years	7 - 9 years	More than 9 years

6. Marital status:

Married	Divorced	Widowed	Single	Common law

7. Do you have children?

Yes	No

8. If your answer is yes to no. 7, indicate the number of children that you have:

1 – 2	3 - 4	5 - 6	More than 6	Unsure

9. Who do you stay with?

Alone	Parents	Family – (husband / wife and children)	Relatives, specify: ……	Other, specify: ……

10. Indicate the highest educational qualification that you have obtained.

No education	Std 1 – std 5	Std 6 – std 9	Senior Certificate	Certificate	Diploma	Degree	Other, specify: ……

11. Are you currently employed?

Yes	No

12. State your current occupation or occupation before retirement / retrenchment / sickness: .....

13. Has a traditional healer treated you before?

Yes	No

14. Indicate your monthly income group

No income	< R500	R501 – R1000	R1001 – R1500	R1501 – R2000	> R2000

15. Do you belong to any medical aid scheme?

Yes	No

16. Does the place where you stay have cancer support groups?

Yes	No	Unsure

17. Does the place where you stay have cancer educational programs for the community?

Yes	No	Unsure

18. Does the place where you stay have a clinic?

Yes	No	Unsure

19. If your answer is yes to no. 18, does it have doctors?

Yes	No	Unsure

20. If your answer is yes to no. 19, how often do they visit the clinic?

Daily	1 – 3 times a week	2 – 4 times a month	Once a month	Unsure

21. Indicate the distance that you travel to get to the clinic.

Within a walking distance	Has to use transport

22. Does your current place of stay have a hospital?

Yes	No	Unsure

23. If your answer is yes to no. 22, Indicate the distance that you travel to get to the hospital.

Within a walking distance	Has to use transport

24. Do you know what is currently wrong with you?

Yes	No	Unsure

25. If your answer is yes to no. 24, indicate what is wrong with you:

NB: You can choose more than one answer for this question.

TB	Cancer	Hypertension	Diabetes	Flu / cold	Other, specify; ……..

26. How long did it take you to visit the local clinic / hospital / doctor after you had noticed that you were sick / had a problem?

1 – 2 weeks	3 – 4 weeks	5 – 6 weeks	More than 6 weeks

27. What caused you to visit the local clinic / hospital / doctor?

Routine check-up	Felt sick	Advised by a traditional healer	Traditional healer could not help	Other (specify): ……

28. After you visited the local clinic / hospital / doctor, how long did it take to be referred to Addington or King Edward VIII hospital for further treatment?

3 months and less	4 – 6 months	7 – 9 months	10 – 12 months	More than 12 months

29. Did you experience any difficulties in the process of referral from your local clinic / hospital / doctor to Addington / King Edward VIII hospital?

Yes	No

30. If your answer is yes to no. 29, specify the nature of the problem:

Finance	Transport	Family	Work	School	Other, specify: ……..

31. Who referred you to Addington / King Edward VIII hospital?

Local clinic	Local hospital	Private doctor	Other, specify: …….

32. Who referred you from your local clinic/ hospital to Addington / King Edward VIII hospital?

Doctor	Nurse	Not sure

33. When you were referred from your local clinic / hospital to Addington / King Edward VIII hospital, were you told what was wrong with you/

Yes	No

34. If your answer is yes to no. 33, who informed you:

Doctor	Nurse	Unsure

35. What did he / she say was wrong with you?

TB	Cancer	Hypertension	Diabetes	Flu / cold	Not sure	Other, specify; ……..

36. Indicate the degree to which you agree or disagree with the following statements. Simply put the number that represents your feelings in the column provided.

Key: Strongly agree = 5

Agree = 4

Uncertain = 3

Disagree = 2

Strongly disagree = 1

a) Cancer is not a fatal disease.	
b) Cancer produces great fear and therefore patients should not be told about it.	
c) Elderly people usually do not get cancer.	
d) A bump or hard knock may cause cancer.	
e) Cancer may be contagious.	
f) Sex at an early age and infections do not predispose a person to certain type/s of cancer/s.	
g) Cancer is a punishment from God	
h) Cancer is hereditary.	
i) Opening surgical wounds predispose a person to cancer.	
j) Cancer is very difficult to prevent since many things cause it.	
k) Going to see a doctor early does not help in the management of cancer and it does not alter the prognosis.	

l) The treatment for cancer is worse than the disease because of the side-effects of treatment.	
m) Radiotherapy causes cancer.	
n) Chemotherapy does not work in treating cancer.	
o) Cancer stays even after surgery is performed to remove it.	
p) Surgery can not cause cancer to spread.	
q) Traditional healers can treat cancer successfully..	
r) If one gets cancer it is preferable not to know about it.	
s) Patients, especially elders, should not be informed about his/her cancer diagnosis in the local clinic/hospital but this should be done where cancer treatment is offered.	
t) The family must not get involved with the cancer diagnosis and management of the patient.	
u) Cancer is incurable.	

Thank you for your assistance.

This questionnaire was developed in English and translated into Zulu by the researcher and then checked for correctness by Mr S Mhlongo who is a teacher at Sithengile High School.

TECHNIKON NATAL

DEPARTMENT OF RADIOGRAPHY

ISIHLOKO SOCWANINGO: UCWANINGO EKUTHOLENI IZINTO EZIHOLELA EKUTHENI ABANTU ABASUKA EMAPHANDLENI ABANGAMAZULU BAFIKE ESIBHEDLELA NOMDLAVUZA USUDLONDLOBELE UMA BEZOKWELASHWA.

Ngiyabingelela kuwena obambe iqhaza
Ngenza ucwaningo oluqonde ukuthola izinto eziholela ekutheni abantu abasuka emaphandleni abangamaZulu bafike nomdlavuza usudlondlobele uma bezokwelashwa ezikhungweni ezimbili ezinkulu zokulapha umdlavuza KwaZulu-Natal – ezibhedlela iAddington ne King Edward VIII.

Lolucwaningo luzokwenziwa ngokuthi kubekhona ukubuzwa kwemibuzo ehleliwe esephepheni, ibuzwa umcwaningi kulezoziguli ezinomdlavuza womlomo wesibeletho, ekhanda noma entanyeni. Ngenxa yalokhu ngithanda ukukunxusa ukuthi ubambe iqhaza kulolucwaningo ngokuphendula imibuzo esephepheni ozoyibuzwa umcwaningi. Umcwaningi uyoqinisekisa ukuthi ungadlulwa ithuba lakho lokubonana nodokotela noma ithuba lakho lokwelashwa. Umcwaningi uyokuhlelela ukuthi ubonwe usonhlalakahle uma kunesidingo.

Ukubamba iqhaza kulolucwaningo ngeke kushintshe noma kuphazamise ukwelashwa kwakho ulashelwa umdlavuza, futhi akunabungozi. Ukubamba iqhaza kulolucwaningo akuphoqelekile futhi ungayeka noma nini uma ufisa ukuyeka. Noma iluphi ulwazi olunikezayo luyogcinwa luyimfihlo futhi luyosetshenziselwa ucwaningo kuphela. Lonke ulwazi olutholakele luyogcinwa umcwaningi kuphela. Amagama abantu ngeke asetshenziswe ekuhlaziyweni nasekubhalweni kwemiphumela yocwaningo. Imininingwane yocwaningo iyogcinwa iyimfihlo ngasosonke isikhathi.

Ucwaningo lungasiza uhulumeni mayelana nenqubomgomo yokunikeza ukunakekela okungcono kwezempilo. Ukwelashwa kwalabo abaphethwe umdlavuza kungenziwa ngenhloso yokuthi ulashwe uphele umdlavuza. Umphakathi nawo ungahle usizakale, ngenxa yokuthi ukusatshalaliswa kwezempilo kungenziwa ngcono bese kuthi labo abaguliswa umdlavuza bakwazi ukuthi basheshe bathole ukwelashwa umdlavuza ungakadlondlobali. Lezo ziguli ezizophendula imibuzo yalolucwaningo nazo zingasizakala, ngoba uma ziba nesimila esisha somdlavuza noma zibuye ziphathwe umdlavuza wangaphambilini, ziyokwazi ukuthi zisheshe zithole ukwelashwa.

Ukubambisana nawe kulolucwaningo kuyoba usizo olukhulu.

Mr S Mdletshe
Iminingwane yokuxhumana nami
Inombolo yocingo: 031 – 204 2507(emsebenzini)
031 – 465 0218(ekhaya)
Inombolo yecellular: 083 733 5376
Inombolo yefax: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

IMVUME YOKUBAMBA IQHAZA OCWANINGWENI

(Yenzelwe ukugcwaliswa umuntu obamba iqhaza ocwaningweni)

Usuku :

ISIHLOKO SOCWANINGO: *Ucwaningo ekutholeni izinto eziholela ekutheni abantu abasuka emaphandleni abangamaZulu bafike esibhedlela nomdlavuza usudlondlobele uma bezokwelashwa KwaZulu-Natal – ezibhedlela eAddington nase King Edward VIII.*

Igama lombheki wocwaningo : *Dr T S Magojo (Ph D – Natal)*

Yenza indingiliza empendulweni efanaleyo

1. Ulifundile yini ipheshana elinikeza imininingwane ngalolucwaningo na? Yebo Cha
2. Ingabe ulitholile yini thuba lokubuza imibuzo mayelana nalolucwaningo na? Yebo Cha
3. Wenelisekile yini ngezimpendulo zitholile emibuzweni obunayo ngalolucwaningo na? Yebo Cha
4. Ulitholile yini ithuba lokukhuluma nomcwaningi maqondana nalolucwaningo na? Yebo Cha
5. Ingabe imininingwane oyitholile mayelana nalolucwaningo ikwanelisile na? Yebo Cha
6. Uyaqonda ukuthi ukhululekile ukuthi uyeke ukubamba iqhaza kulolucwaningo na?
   a) noma ngasiphi isikhathi Yebo Cha
   b) ngaphandle kokuthi unikeze izizathu zokuthi ushiye Yebo Cha
   c) ngaphandle kokuphazamisa ikusasa lokunakekelwa kwempilo yakho Yebo Cha
7. Uyavuma ukuthi ubambe iqhaza kulololucwaningo na? Yebo Cha

Uma uphendule wathi cha kunoma yimuphi walemibuzo engenhla, qiniseka ukuthi uthola imnininingwane efaneleyo ngaphambi kokuba usayine.

Bhala ngokucacile ngamagama amakhulu

Igama lobambe iqhaza ocwaningweni:_____ Signature: _____

Umzali / Umkhulisi: _____ Signature: _____

Ufakazi: _____ Signature: _____

Igama lomcwaningi: _____ Signature: _____

TECHNIKON NATAL

DEPARTMENT OF RADIOGRAPHY

ISIHLOKO SOCWANINGO: UCWANINGO EKUTHOLENI IZINTO EZIHOLELA EKUTHENI ABANTU ABASUKA EMAPHANDLENI ABANGAMAZULU BAFIKE ESIBHEDLELA NOMDLAVUZA USUDLONDLOBELE UMA BEZOKWELASHWA.

Ngiyabingelela kuwena obambe iqhaza

Ngiyakunxusa futhi ukuthi unginikeze igunya lokubheka izincwadi zakho ezimayelana nokwelashwa kwakho (oncology file) ukuze ngikwazi ukuthola imininingwane yomdlavuza okuphethe.

Ingabe uyangigunyaza

Yebo	Qha

(Kholekitha ibhokisi elifaneleyo)

_____ _____

Isignature yobambe iqhaza Usuku

_____ _____

Isignature yomcwaningi Usuku

IMIGOMO YOKUPHENDULA IMIBUZO:
Phendula imibuzo ngokwenza isiphambano ebhokisini elifanele, noma ngokubhala inombolo efanele ebhokisini elifanele, lapho kunesidingo khona bhala impendulo ngamagama akho ngaphandle uma kubekwe eminye imogomo.

Imibuzo:

1. Bonisa ubungako beminyaka yakho:

18 – 28 iminyaka	29 – 38 iminyaka	39 – 48 iminyaka	49 – 58 iminyaka	Ngaphezu kweyi - 59

2. Nikeza ubulili bakho

Isifazane	Isilisa

3. Nikeza igama lendawo owazalelwa kuyo:

   Idolobha:……..

   Isigodi:……..

4. Nikeza igama lendawo ohlala kuyo njengamanje:

   Idolobha:……..

   Isigodi:……..

5. Isikhathi (iminyaka) osusihlalile kulendawo ohlala kuyo njengamanje:

Ngaphansi kweminyaka emi - 3	Phakathi 3 – 6 weminyaka	Phakathi 7 – 9 weminyaka	Ngaphezulu kweminyaka eyi – 9

6. Imininingwane eqondene nomshado

Ushadile	Wehlukanisile	Washonelwa	Awushadile	Uhlezi ngokomthetho

7. Unabo yini abantwana na?

Yebo	Cha

8. Uma impendulo kunguyebo kumbuzo 7, bangaki abantwana bakho:

1 - 2	3 - 4	5 - 6	Ngaphezu kwabayi- 6	Awunasiqiniseko

9. Uhlala nobani njengamanje?

Wedwa	Nabazali	Nomndeni – (umyeni / unkosikazi nabantwana)	Izihlobo, cacisa: ……. ……	Okunye (cacisa): ……..……

10. Nikeza izinga ofunde wafinyelela kulo:

Awuzange ulithole ithuba lokufunda	Umatikule - tsheni	Std 1 – std 5	Std 6 – std 9	Isitifiketi somse-benzi	IDiploma	IDegree	Okunye (cacisa):……

11. Uyasebenza yini njengamanje?

Yebo	Cha

12. Cacisa uhlobo lomsebenzi owenzayo noma owawuwenza ngaphambi kokugula / kokuthatha umhlalaphansi.

……

13. Bonisa inani lemali oliholayo / olitholayo ngenyanga.

Awuholi	< R500	R501 – R1000	R1001 – R1500	R1501 – R2000	> R2000

14. Wake walashwa umuntu olapha ngendlela yesintu (inyanga noma isangoma) ngaphambilini?

Yebo	Cha

15. Ingabe ungaphansi kohlelo lwe-medical aid na?

Yebo	Cha

16. Indawo ohlala kuyo njengamanje ngabe inazo izinhlelo zokunakekelwa kwalabo abaguliswa umdlavuza?

Yebo	Cha	Awunasiqiniseko

17. Indawo ohlala kuyo njengamanje ngabe inazo izinhlelo zokufundisa ngesifo somdlavuza?

Yebo	Cha	Awunasiqiniseko

18. Indawo ohlala kuyo njengamanje ngabe inawo umtholampilo na?

Yebo	Cha	Awunasiqiniseko

19. Uma impendulo kunguyebo kumbuzo 18, ngabe unabo odokotela na?

Yebo	Cha	Awunasiqiniseko

20. Uma impendulo yakho kunguyebo kumbuzo 19, bafika kangaki emtholampilo?

Nsuku-zonke	1 – 3 izikhathi ngeviki	2 – 4 izikhathi ngenyanga	Kanye ngenyanga	Okunye, cacisa: …… ……	Awunasiqiniseko

21. Ibanga olihambayo ukuze ufinyelele emtholampilo ngabe lingakanani?

Liyahambeka ngezinyawo	Alihambeki ngezinyawo

22. Indawo ohlala kuyo njengamanje ngabe inaso isibhedlela na?

Yebo	Cha	Awunasiqiniseko

23. Ibanga olihambayo ukuze ufinyelele esibhedlela ngabe lingakanani?

Liyahambeka ngezinyawo	Alihambeki ngezinyawo

24. Ngabe uyazi ukuthi uphethwe yini njengamanje na?

Yebo	Cha	Awunasiqiniseko

25. Uma impendulo kunguyebo, bonisa ukuthi yini ekuphethe:

NB: Unganikeza impendulo engaphezu kweyodwa kulombuzo.

Isifuba	Umdlavuza	IBP / ihayihayi	Ushukela	Umkhuhlane	Awusazi	Okunye, cacisa: …….

26. Kwakuthatha isikhathi esingakanani ukuthi uyobonana nodokotela emva kokuba usubonile ukuthi uyagula?

1 – 2 wamaviki	3 – 4 wamaviki	5 – 6 wamaviki	Ngaphezu kwamaviki ayisi - 6

27. Nikeza isizathu esabangela ukuthi uyobonana nodokotela.

Wawuyohlola ngokujwayelekile	Wawugula	Waboniswa owayekulapha ngokwesintu	Usizo lokwelapha ngokwesintu lwaselwehlulekile	Okunye (cacisa): ……

28. Kwathatha isikhathi esingakanani ngaphambi kokuba udokotela, umtholampilo noma isibhedlela sikudlulisele phambili eAddington / King Edward ukuba uzothola ukulashwa?

Ngaphansi kwezinyanga (months) ezi-3	Phakathi 4 – 6 wezinyanga (months)	Phakathi 7 – 9 wezinyanga (months)	Phakathi 10 – 12 wezinyanga (months)	Okunye, cacisa: …… …… ……

29. Zikhona izinkinga noma ubunzima owabhekana nabo ngesikhathi sewudluliselwa eAddington / King Edward na?

Yebo	Cha

30. Uma impendulo yakho kunguyebo, bonisa uhlobo lwenkinga:

Kwaba yimali	Umndeni	Umsebenzi	Indlela yokuhamba	Isikole	Okunye, cacisa: ……

31. Ubani owakudlulisela eAddington / King Edward na?

Umtholampilo wendawo	Isibhedlela sendawo	Udokotela ozimele	Okunye, cacisa: ……

32. Ubani owakwenzela izincwadi eziqondene nokudluliselwa kwakho eAddington / King Edward na?

Udokotela	Umhlengikazi	Awusakhumbuli / awunasiqiniseko

33. Ngenkathi udluliselwa ukuthi uzolashwa kelesisibhedlela, Addington / King Edward, ngabe waziswa yini ukuthi uphethwe yini?

Yebo	Cha	Awunasiqiniseko

34. Uma impendulo kungu yebo, ubani owakwazisa?

Udokotela	Umhlengikazi	Okunye, cacisa:……

35. Owakwazisa wakutshela ukuthi uphethwe yini?

Isifuba	Umdlavuza	IBP / ihayihayi	Ushukela	Umkhuhlane	Awusazi	Okunye, cacisa: …….

36. Bonisa ukuthi uvumelana noma uphikisana kangakanani nalezizitatimende ezibhalwe lapha ngokubhala inombolo efanele ebhokisini.

Okhetha kukho: Ngivumelana kakhulu = 5
Ngiyavumelana = 4
Anginasiqiniseko = 3
Ngiyaphikisana = 2
Ngiphikisana kakhulu = 1

a)	Umdlavuza isifo esingabulali.	
b)	Umdlavuza isifo esiletha ukusaba okukhulu.	
c)	Abantu abadala abajwayele ukuphathwa umdlavuza.	
d)	Ukushayiseka / ukunqubuzeka entweni ethize kungaholela ekuphathweni umdlavuza.	
e)	Umdlavuza isifo esithelelanayo.	
f)	Ukuba nobudlelwano ngokocansi usemncane nokuba namagciwane athile angeke kuholele ekutheni uphathwe umdlavuza.	
g)	Umdlavuza uyisijeziso esivela kuNkulunkulu (kumdlali).	
h)	Umdlavuza uyathathelana ngokozalo.	
i)	Ukungazimbozi ngokufanele izilonda emva kokuhlinzwa kungaholela ekuphathweni umdlavuza.	

j)	Umdlavuza kulukhuni ukuwuvikela ngoba ubangwa izinto eziningi.	
k)	Ukusheshe uye ukuyobonana nodokotela akukusizi ukubhekana nesifo somdlavuza.	
l)	Ukulashelwa umdlavuza kwedlula ukuguliswa umdlavuza uqobo lwawo.	
m)	Ukulashwa ngokushiswa (radiotherapy) kubanga umdlavuza.	
n)	Ukulashwa ngemijovo (chemotherapy) akusebenzi.	
o)	Umdlavuza awupheli noma umuntu esehlinziwe wakhishwa.	
p)	Ukuhlinzwa kungabangela ukuthi umdlavuza uqhubekele phambili uye nakwezinye izinxenye zomzimba.	
q)	Ukulashwa ngendlela yesintu ikhona okusebenza kangcono uma uphethwe umdlavuza.	
r)	Uma kwenzeka ngiba nomdlavuza, kungcono ukuba ngingaziswa / ngingatshelwa.	
s)	Iziguli, ikakhulukazi abantu abadala, akufanele baziswe uma kutholakala ukuthi banomdlavuza.	
t)	Umndeni akufanele ubambe iqhaza ekulashweni kwalolwo ophethwe umdlavuza.	
u)	Umdlavuza awulapheki.	

Ngibonga kakhulu ngosizo lwakho!

Leliphepha lemibuzo lenziwe ngesilungu labuye lahunyushelwa esiZulwini ngumcwaningi uMnuz S Mdletshe lase lihlolisiswa ukuthi lihunyushwe ngokufaneleyo uMnuz S Mhlongo onguthishela eSithengile High School.

APPENDIX I

TECHNIKON NATAL

DEPARTMENT OF RADIOGRAPHY

TOPIC OF RESEARCH: AN INVESTIGATION INTO THE FACTORS THAT CONTRIBUTE TO THE LATE PRESENTATION OF RURAL ZULU PATIENTS WITH CANCER.

Dear participant

I am currently undertaking a research project which aims to investigate the factors that contribute to the late presentation of rural Zulu patients with cancer to the two major provincial cancer treatment centres in KwaZulu-Natal - Addington and King Edward hospitals.

The study will involve completion of the questionnaire by professional nurses from the hospitals that refer patients to these two major centres. I therefore request your participation in this study. Your participation will only entail completion of the questionnaire, which should take about 20 to 25 minutes of your time.

Participation in the study does not carry any risks and it is voluntary. You are free to withdraw from the study at any time you want. The information you give will be treated with confidentiality and will only be used for research purposes. The data gathered will only be handled by the researcher and no names will be used for data analysis and data presentation. Confidentiality will be maintained at all times.

The study could benefit the government's health delivery policies, as better service could be delivered with the intention to cure the patients. The community / society would benefit as well, as service delivery could be improved enabling patients to receive treatment for cancer at an early stage of the disease. Patients who will be interviewed could also benefit, as they could be diagnosed early and offered treatment earlier than is currently happening in cases of recurrence of the disease.

Your co-operation will be appreciated.

Yours faithfully

Mr S Mdletshe
Contact details:
Tel no.: 031 – 204 2507(w)
O31 – 465 0218(h)
Cell no.: O83 733 5376
Fax no.: 031 – 204 2574
E-mail address: sibusiso@ntech.ac.za

INFORMED CONSENT FORM

(To be completed by the subject)

Date :

Title of research project : *An investigation into the factors that contribute to the late presentation of rural Zulu patients with cancer to the two major provincial cancer treatment centres in KwaZulu-Natal (Addington hospital and King Edward hospital)*

Name of supervisor : *Dr T S Magojo (Ph D – Natal)*

Please circle the appropriate answer	YES	NO
1. Have you read the research information sheet?	Yes	No
2. Have you had an opportunity to ask questions regarding this study?	Yes	No
3. Have you received satisfactory answers to your questions?	Yes	No
4. Have you had an opportunity to discuss this study?	Yes	No
5. Have you received enough information about this study?	Yes	No
6. Do you understand that you are free to withdraw from this study?	Yes	No
d) at any time		
e) without having to give any reason for withdrawing, and		
f) without affecting your future health care.		
7. Do you agree to voluntarily participate in this study?	Yes	No

If you have answered no to any of the above, please obtain the necessary information before signing.

Please print in block letters:

Subject name:_____ Signature: _____

Witness Name:_____ Signature: _____

Research Student Name:_____ Signature: _____

INSTRUCTIONS:

Answer questions by ticking the appropriate box or circling the most appropriate number, and where applicable write down the answer in your own words unless other instructions are given.

NB: Do not skip any questions, answer all questions.

QUESTIONS:

1. How long ago did you qualify as a professional nurse?

3 years and under	4 – 6 years	7 – 10 years	More than 10 years,

2. Indicate your qualification/s.

NB: You can tick more than one box for this question.

General nursing	Midwifery	Community nursing	Psychiatric nursing	Occupational health nursing	Other, specify: ……..

3. Do you have any training in the field of treatment and management of cancer?

Yes	No

If your answer is NO to no. 3 do not answer questions 4 – 7.

4. How long ago did you have that training?

1 – 3 years ago	4 – 6 years ago	7 – 9 years ago	More than 9 years ago

5. What was the duration of that training?

1 – 6 months	7 – 12 months	13 – 18 months	19 – 24 months	More than 24 months

6. In which institution did you attend the course?

College of nursing	Technikon	University	Private institution	Attended workshops

7. State the basic modules covered relating to this subject

……

……

8. Do you have any practical experience in the treatment and management of cancer patients?

Yes	No

9. Have you attended any course/received training related to primary medical-care nursing?

Yes	No

If your answer is NO to no. 9, do not answer questions 10 – 13.

10. How long ago did you have that training?

1 – 3 years ago	4 – 6 years ago	7 – 9 years ago	More than 9 years ago

11. What was the duration of that training?

1 – 6 months	7 – 12 months	13 – 18 months	19 – 24 months	More than 24 months

12. In which institution did you attend the course?

College of nursing	Technikon	University	Private institution	Attended workshops

13. State the basic modules covered relating to this subject:

……

……

14. Do you have any practical experience in primary medical-care nursing?

Yes	No

15. How much knowledge do you possess regarding cancer management?

None	Little	Not sure	Fair amount	A lot

16. In your institution, who is responsible for the referral of patients for further treatment for any type of disease?

Professional nurse	Doctor	Other, specify; ……..

17. Does your institution have a clear protocol to be used for referral of patients for further treatment for any type of disease?

Yes	No	Unsure

18. If your answer is yes to no. 17, is the existing protocol familiar to all the professional nurses and doctors?

Yes	No	Unsure

19. Does your institution offer treatment for cancer?

Yes	No	Unsure

20. If your answer is yes to no. 27, indicate the form of treatment that is offered.

NB: You can choose more than one answer for this question.

Radiotherapy	Chemotherapy	Surgery	Hormonal therapy	Other, specify: ……. ……..

21. Do you think professional nurses have a role in the investigation and referral of patients with cancer for treatment?

Yes	No	Unsure

22. Do you think professional nurses have a role in cancer prevention?

Yes	No	Unsure

23. Does your local area have a cancer support group?

Yes	No	Unsure

24. Does your local area have cancer educational programmes for the community?

Yes	No	Unsure

25. What do you see as barriers to early diagnosis of cancer?

NB: You can choose more than one answer for this question.

Lack of resources	Lack of patient co-operation	Lack of trained personnel	Other, specify:…… ……..

26. What do you see as barriers to referral of patients for further treatment of cancer?

NB: You can choose more than one answer for this question.

Lack of clear referral protocols	Lack of trained personnel	Inaccessibility of cancer treatment centers	Lack of patient co-operation	Other, specify: …….

27. If you have been working for the past five years, do you feel that the accessibility of the health care service and the referral of the patients has changed over the past five years?

Yes	No	Not applicable

28. If your answer is yes, indicate which way you feel it has changed:

Positively – more accessible and affordable	Negatively – inaccessible and expensive	Other, specify: ……

29. State what you consider to be the diagnostic signs and symptoms of cancer of the cervix.

……

……

……

……

30. State what you consider to be the diagnostic signs and symptoms of head and neck cancers (head and neck cancers include: larynx, mouth, nasopharynx, oropharynx, tongue, salivary glands and gum):

……..

……

……

……..

31. Explain the procedure that is followed in your hospital in investigating / diagnosing / managing a patient who is suspected of having cancer.

……

……

……

……

32. Indicate the degree to which you agree or disagree with the following statements. Simply put the number that represents your feelings in the column provided.

Key: Strongly agree = 5

Agree = 4

Uncertain = 3

Disagree = 2

Strongly disagree = 1

a) Cancer is not a fatal disease.	
b) Cancer produces great fear and therefore patients should not be told about it.	
c) Elderly people usually do not get cancer.	
d) A bump or hard knock may cause cancer.	
e) Cancer may be contagious.	
f) Sex at an early age and infections do not predispose a person to certain type/s of cancer/s.	
g) Cancer is hereditary.	
h) Opening surgical wounds predispose a person to cancer.	
i) Cancer is very difficult to prevent since many things cause it.	
j) Cancer is very difficult to diagnose since it presents with different signs and symptoms.	
k) Going to see a doctor early does not help in the management of cancer and it does not alter the prognosis.	

l) Cancer is incurable.	
m) The treatment for cancer is worse than the disease because of the side-effects of treatment.	
n) Radiotherapy causes cancer.	
o) Chemotherapy does not work in treating cancer.	
p) Radiotherapy may make the family radioactive from being around the patient.	
q) Cancer stays even after surgery is performed to remove it.	
r) Surgery can not cause cancer to spread.	
s) Traditional healers can treat cancer successfully..	
t) Cancer treatments are too costly.	
u) If one gets cancer it is preferable not to know about it.	
v) Patients, especially elders, should not be informed about his/her cancer diagnosis in the local clinic/hospital but this should be done where cancer treatment is offered.	
w) The family must not get involved with the cancer diagnosis and management of the patient.	

Thank you for your assistance.

This questionnaire was developed by the researcher – Mr S Mdletshe

Appendix J

Table J: Number of new cases registered at King Edward Hospital and Addington Hospital per annum - 1999

DIAGNOSIS		NUMBER OF PATIENTS
Cancer of the cervix	Addington Hospital	+70
	King Edward Hospital	+500
Head and neck cancers	Addington Hospital	+140
	King Edward Hospital	+300
Total		+1010

Appendix K

TABLE K1: FIGO staging of carcinoma of the cervix (Bomford, Kunkler & Sherriff, 1993: 405).

Stage	Clinical findings
0	Carcinoma in situ.
I Ia Ib	Growth confined to cervix. Micro-invasive carcinoma. Clinically invasive carcinoma.
IIa IIb	Spread beyond the cervix to the upper two thirds of the vagina. Spread to parametrium but not as far as the lateral pelvic wall.
IIIa IIIb	Spread to the lower third of the vagina. Spread to the pelvic side wall and / or hydronephrosis or non-functioning kidney due to ureteric compression by tumour.
IVa IVb	Spread to the bladder or rectum and / or extending beyond the true pelvis. Spread to distant sites outside the true pelvis.

TABLE K2: **TNM** staging of the mouth cancer (Bomford, Kunkler & Sherriff, 1993: 313).

T stage	Clinical findings
T1	Tumour less than 2cm
T2	Tumour 2 – 4cm
T3	Tumour greater than 4cm
T4	Invasion of neighboring structures

NB: This table is for staging of the mouth cancer. The staging for head and neck cancers is site dependent but this may be used to appreciate the size of the tumour.

AN INVESTIGATION INTO THE FACTORS THAT CONTRIBUTE TO THE LATE PRESENTATION OF RURAL ZULU PATIENTS WITH CANCER TO THE TWO MAJOR PROVINCIAL CANCER TREATMENT CENTRES IN KWAZULU-NATAL (prior to December 2002)

Sibusiso Mdletshe
October 2003

AN INVESTIGATION INTO THE FACTORS THAT CONTRIBUTE TO THE LATE PRESENTATION OF RURAL ZULU PATIENTS WITH CANCER TO THE TWO MAJOR PROVINCIAL CANCER TREATMENT CENTRES IN KWAZULU-NATAL (prior to December 2002)

BY:

SIBUSISO MDLETSHE

Dissertation submitted in full compliance with the requirements for the M.Tech. in the Department of Radiography and the Durban Institute of Technology.

Except for quotations specifically indicated in the text and such help as I have acknowledged, this dissertation is wholly my own work, and has not been submitted for any qualification at any other institution.

_____ _____

S. Mdletshe **Date**

I, the undersigned approve the final submission of this dissertation:

_____ _____

Dr T.S. Magojo **Date**
PhD (Natal) Registered Industrial Psychologist

Submitted on: October 2003 at Durban Institute of Technology

in Durban

DEDICATION

This dissertation is dedicated to my late four family members, who suddenly passed away during my study - my dear cherished father Siphoso (Mkhulu); my elder brother Bongani (Dibaba or Big 6); my precious sister Nelly (Ncana) and my beloved sister in-law Gugu (Kudlakwezingane) - their sudden passing encouraged me to finish this dissertation.

This dissertation is also dedicated to the following persons:
My dear wife Sibongile for her understanding and encouragement,

My lovely mom Hlalaphi for holding the family together through this testing time and for always believing in me,

My nephew Lungelo (Gundane) for being the family's little angel,

Ms AL Hesketh for believing in me,

All the patients with cervix and head and neck cancers, and the professional nurses who willingly participated in this study.

ACKNOWLEDGEMENTS

I thank my Heavenly Father who sustained me during this study - I was faced with many challenges but He kept me going - I love Thee Daddy.

My supervisor, Dr TS Magojo who supported me unreservedly all the way - your work was not in vain.

My wife for her support, understanding and encouragement.

My mother, my brother, my sisters, my nephews and my nieces for believing in me and tolerating me.

Ms AL Hesketh, for being the source of direction and encouragement - you made it possible for me to complete this study.

The staff from the Department of Radiography of Durban Institute of Technology, for all the support, encouragement and believing in me - Nalene, Tuto, Rosh, Lynda, Thembi, Loganee, Sushi, Desiree and not forgetting Cynthia. Special thanks go to Rosh and Nalene for perusal and review of this research work.

Ms G Mathurine and the staff of the KwaZulu-Natal Oncology Department for their support and help when I needed to interview their patients.

Dr D Hacking -Netcare Oncology (Durban Oncology Centre) for providing some information and for advice,

The Nursing Services' Managers of the following hospitals: Addington, King Edward VIII, Madadeni, Eshowe, Mosvold, Ngwelezane and Edendale for assisting me in collecting data from the professional nurses.

The Secretary General of KwaZulu-Natal Department of Health for granting me the permission to conduct this study.

Mrs L Munro, for her help in proof reading my document and for the constructive comments in the early stages of this project.

Mr K Thomas for assisting with the statistics.

And all who contributed directly and indirectly to the completion and success of this study.

ABSTRACT

PURPOSE

This research focuses on investigating the factors that contribute into the late presentation with cancer of the rural Zulu patients into the major cancer treatment cantres in KwaZulu-Natal (KZN). It explores the patients' knowledge and perception about cancer. It also examines the accessibility of the cancer treatment centres. It further explores the role of professional nurses in the assessment and referral of patients for cancer and their perception and attitudes towards cancer management.

METHODS AND MATERIALS

300 Zulu speaking patients with a confirmed diagnosis of either cervix or head and neck cancer were randomly selected for inclusion in the study. 210 (70%) patients had cervix cancer and 90 (30%) had head and neck cancer. The researcher interviewed these patients at Addington and King Edward VIII Hospitals using a structured questionnaire.

Convenience sampling was used to select a group of 63 professional nurses (PN) from seven different hospitals in KZN (Addington, King Edward VIII, Eshowe, Edendale, Madadeni, Mosvold and Ngwelezane). The PN selected had to be working in the medical out-patient department (MOPD) and were interviewed using a semi-structured questionnaire that they had to complete on their own. Data

analysis was done using the SPSS package to obtain frequency distributions and cross-tabulations. Cramer's V test and Chi-square was used to indicate the strength and direction of the relationship between variables and the level of significance.

RESULTS

Results uncovered that rural patients present more with a late stage disease and this was shown to be statistically significant. Cross-tabulations for place of stay (rural / urban) revealed the following within the rural patients: high unemployment rate (86.8%), lack of cancer support groups (97.6%), lack of cancer educational programmes (94.6%), availability of local clinics (94.6%) and local hospitals (95.6%). Results also showed that 56.6% of rural patients delayed for more than 6 weeks in seeking medical help with a high percentage reporting transport and finance related difficulties with referral, these were also shown to be statistically significant. Multiple response data sets revealed a high level of lack of knowledge (69.7% of responses) which seemed to be higher within the rural patients, and this was supported by the level of limited education with only 3.3% having post matric education.

PN data revealed that a high percentage of PN had no previous training in cancer management (85.7%) and Primary Medical Care (PMC) nursing (65.1%). A high percentage also lacked previous experience in cancer management (65.1%) and

PMC nursing (57.1%). PN also indicated that they have limited knowledge with regards to cancer management.

Results also revealed that the responsibility of patient referral still lies mainly with the doctors and a high percentage of PN (69.8%) reported that their institutions have clear referral protocols. Multiple response data sets highlighted the following among the barriers to patient diagnosis for cancer: lack of resources, lack of trained personnel, lack of patient co-operation, patient ignorance, strong belief in traditional healers, delay in seeking medical help, lack of educational programmes and poverty. The following were reported among the barriers to referral of patients: lack of patient co-operation, inaccessibility of the cancer treatment centres, lack of trained personnel, lack of clear referral protocols and transport problems.

CONCLUSIONS

The findings suggest that the contributing factors to the late presentation could be attributable to patient factors, role of PN and the current system used to offer radiotherapy. These could be addressed by promoting patient education and training of professional nurses in cancer management and PMC nursing and a re-look at resources allocation and spending in rural communities.

TABLE OF CONTENTS

APPENDICES