

**WOMEN'S AWARENESS KNOWLEDGE REGARDING HEALTH  
PROMOTION ON PREVENTION OF BREAST AND CERVICAL CANCER  
IN OSHAKATI HEALTH DISTRICT**

A THESIS SUBMITTED IN PARTIAL FULFILMENT THE REQUIREMENTS

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BY

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- Finally, I wish to thank the Almighty God for His guidance and potential given to me, which I have dedicated to Him for the benefits of others.

## **DEDICATION**

I would like to dedicate this book to my son, Erick Kehe-Omunhu Herman and two nieces whom I am taking care of: Ouma and Taatipeke, as an encouragement for them to do something useful in life.

**DECLARATION**

I declare that “women’s awareness of knowledge regarding health promotion on prevention of breast and cervical cancer in Oshakati Health District” is my own work and it has not been submitted for any degree or examination at any other institution.

The sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that the contents and/or cover may not be reproduced in any form without the written consent of the author or University of Namibia.

S.Ita

**Signed: S.S. Iita**

**Date: September 2009**

**Place: Windhoek**

## ABSTRACT

This study was exploratory and descriptive in nature. The researcher aimed to explore and describe the awareness knowledge of women regarding health promotion on prevention of breast and cervical cancer. A quantitative approach was utilized for the study in order to provide a comprehensive picture and understanding of the awareness knowledge of women regarding health promotion on prevention of breast and cervical cancer.

The study population consisted of all women of child bearing age between 15-49 years living within Oshakati Health District which is 41,985. The researcher personally distributed four hundred and nineteen (419) questionnaires to every selected respondent on admission at the hospital between March 2008 and October 2008. The respondents who could neither read nor write and/or were unable to fill the questionnaire because of their conditions, were assisted by the researcher and some assistants to complete the questionnaires.

The findings indicated that awareness knowledge of information about breast and cervical cancer exists in Oshakati Health District. However, the overall knowledge on causes of breast and cervical cancer, risk factors for breast cancer and warning signs of cervical cancer was very poor.

The findings also revealed that many respondents were informed about breast self examination (BSE) and they have practiced it. Moreover, most respondents knew

about Pap smear tests but only few had been screened on a recommended routine. However, very few respondents knew about clinical breast examination (CBE), mammography and sonar examination as additional screening methods and even fewer had attended any of these screenings and only about once a year.

It is also revealed that most respondents live near a government health facility. However, the screening rate for the respondents is still low. There are few or no public health materials available at health facilities to inform women on breast and cervical cancer prevention. Most respondents do not have a reading culture, although there were more literate women in the study compared to the illiterates.

The findings also revealed that there are faith-based organizations (FBO) and non-governmental organizations (NGO) within Oshakati Health District who share information about breast and cervical cancers to the public. However, the majority of women do not participate in their activities and do not share or educate other women about breast and cervical cancer prevention.

This study therefore highly recommends that women should share information with their peers and that the radio should be frequently used for disseminating information as it is the most reliable source of information to the rural areas. Relevant public health materials should also be produced by government agencies and NGO/FBO and women should be encouraged to develop a reading culture. Lastly, the government should address barriers (e.g. long distance from health facility, etc.) faced by women in accessing information about breast and cervical cancer.

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## **CHAPTER 1**

### **BACKGROUND TO THE PROBLEM**

#### **1.1 INTRODUCTION**

Cancer is a universal disease that affects people regardless of race, sex, socio-economic status or culture. Cancer evokes deep fears of pain, suffering, dependence, disfigurement and death. Indeed, the fear of this disease is so strong that a person may delay examinations and diagnosis in the hope that the symptoms and signs will disappear. This lapse of time between awareness of a problem and seeking medical attention can affect the impact of treatment and diagnosis (Young, van Niekerk and Mogotlane, 2003, p. 20).

Breast and cervical cancers are both leading causes of death in women 40-44 years of age worldwide. In developing countries, the common forms of the disease in women are cervical, breast and stomach cancer (Ramos, 2005; International Cancer Nursing News (ICNN), 2007, p. 3; Donnelly, 2008; Yaren, Ozkilinc, Guler and Oztop, 2008). However, breast cancer is the most common with almost one third (32%) of all cancers diagnosed in women being breast cancers (Thompson, McFairland, Hirsh and Tucker, 1997; Timothy, Canavan, Nipa and Doshi, 2000; American Cancer Society, 2005).

The prevalence of breast cancer appears to be a worldwide tendency with over 212,000 cases of breast cancer diagnosed in the USA each year, 20,500 in Canada, 13,000 in

Australia, and 41,000 in the UK. In Namibia, 671 patients were diagnosed with breast cancer from 1995-2000 at the Dr. A. B. May Cancer Centre in Windhoek (Obeid, Mendelsohn, Lejars, Foster and Brule, 2001). The Reproductive Health Annual Report of 2006 (Namibia) reveals the occurrence of 61 cases of cancer of the cervix followed by 46 cases of cancer of the breast. The Cancer Association of Namibia has been involved in awareness creation activities of cancer and provision of screening services in Namibia. For the year 2005, breast cancer has the highest incidence with 179 cases and 129 cases of cervical cancer (MOHSS, 2008). These statistics present a dark picture and by implication one can infer that breast cancer contributes to significant death rates amongst women in Namibia. This is corroborated by statistics from the International Breast Cancer Foundation indicating that 43,000 of the 182,000 women who are diagnosed with breast cancer each year die. It was further indicated that one woman in eight has or will develop breast cancer in her lifetime (International Breast Cancer Foundation, 2006).

At the Oshakati Health District for January to December 2004, 37 patients were admitted and discharged with breast cancer diagnosis whilst 3 patients died. For the same period in 2005, the number patients admitted and discharged with breast cancer diagnosis had increased to 49 patients whilst 6 patients died the same year.

Another cancer that is very serious is cervical cancer. In 1998, it was reported that 12,800 women in the United States developed cancer of the cervix and 4,800 women died of the disease. Overall, cervical cancer is relatively uncommon in the developed countries of the World, where intensive screening programmes are in place (Monsonogo, 2008). However, cervical cancer contributes to significant morbidity and mortality rates in many parts of the

developing world (Timothy et al., 2000, p. 2). Most women with cervical cancer experience a long asymptomatic period before the disease recognition of abnormal cytological changes though regular screening may prevent progression from pre-invasive to invasive disease.

In Namibia, 607 cases of cervix cancer were diagnosed between 1995 and 2000. Most of these cases were referred for treatment at Health Centres all over Namibia (Obeid et al., 2001, p. 15). In Oshakati Health District, cervical cancer seems to be a bigger problem than breast cancer. During the 2004 calendar year, the number of patients admitted and discharged with cervical cancer diagnosis was 111, while deaths were 21. During the 2005 calendar year, the number of patients discharged with the diagnosis of cervical cancer has increased to 126 and the total deaths were 18. These figures indicated an increase of cervical cancer incidences.

In most cases, early detection of both breast and cervical cancer enables more effective treatment and a better prognosis for the patient. Unfortunately in many instances women lack important knowledge about breast and cervical cancer. This is a big problem; in contrast vigorous health promotion should be done to rectify the situation (Herron and Freeth, 2005).

According to the World Health Organization (WHO) health promotion includes re-orienting health services to place primary focus on promoting health and preventing disease and building a healthy public policy (Macdonald, Veen and Tones, 1996; Pender, Murdaugh and Parsons, 2003, p. 3). Public health policy can facilitate positive changes in health behaviour norms as well as provide health enhancing environments at a national and community level.

It can, therefore, be assumed that intensive health promotion campaigns on a national and community level concerning cancer can also contribute to empowering people to care for their health.

Thompson et al. (1997) are of the opinion that if people are to be empowered to care for their health, certain variables must be taken into consideration to change people's attitudes. Concerning cancer, the following variables have been identified: life experiences, especially those related to this disease, parental and cultural values and attitudes toward illness, society's emphasis on youth, health and beauty, social pressures for early sexual experiences, smoking and other harmful behaviours and portrayals of people with cancer in the mass media.

However, before attitudes concerning health could be changed people need to get all the necessary information to be able to make a choice. Concerning breast and cervical cancer there is evidence in the literature that women do not always have that knowledge that is necessary to manage their health.

According to Hancock, Thomas and Webster (2005. p. 1), "a national breast cancer centre revealed a sobering picture of Australian women's lack of knowledge about breast cancer". These findings make it clear how crucial it is for women to make sure that they have enough knowledge about breast and cervical cancer to enable them to have regular screens and medical examinations.

Health Education on prevention and early detection of breast and cervical cancer is part and

parcel of primary health care. Although the shift from curative care to primary health care is clear, the knowledge of women in the implementation of promotion on prevention of breast and cervical cancer and management thereof remains a problem in the Oshakati Health District.

Meanwhile, the information needed concerning breast and cervical cancer is provided through the use of various forms of the mass media. However, there are a number of constraints that cause obstacles in obtaining information with specific reference to rural women in Namibia. One of the obstacles involves new electronic technologies, for example digital video conferencing, internet and e-mail which have provided learning opportunities that are more visual and interactive than pamphlets. However, the reality is that there is unequal access to these forms of information technology in rural areas. Moreover, few people read and speak English as the information is written in English. Telephone lines are few and readily affordable to few rural women (Govender, 2005, p. 42).

Media, such as the radio, do not require reading ability and it is accessible to a majority of women, but its usage is restricted due to economic constraints. Moreover, most of these women only listen to selected programmes because radios work on batteries which are not always affordable and accessible to these women.

Health workers are expected to disseminate information to women on how to detect early warning signs of breast and cervical cancer and to attend screening sessions in this regard. Several environmental supportive health facilities have been created that make women's health choices easier and more feasible. For instance, ante-natal care services have been



rolled out to most areas. At Primary Health Care screening area, women are screened including their reproductive health. Pap smears are provided at Oshakati Health District. However, it is not clear how this information is disseminated to women and how they deal with it concerning their own health if such information reaches them.

For people to be empowered concerning their health through mass media they need to be literate. However, in the rural areas literacy is identified as a problem. Health literacy is defined by the Centre for Health Care Strategies Inc 2000 as the ability to read, understand and act on information (Govender, 2005, p. 41). In this sense, being literate means being able to read and understand the language. Thus, language is another barrier to health promotion. Public health campaigns may face resistance if these messages are not language specific. Most of the campaigns are in the English language. By implication it means the non-adaptation of messages to people who mainly communicate in the local language only. Community health workers are the main sources of self care education but many of them can not always read and are not equipped with the knowledge in health promotion on cervical and breast cancers.

Apart from the problem of access to health information, there are also other constraints for example time usage, access to health facilities and transport (Lee, 2000). Time constraint is a problem because women are faced with a lot of family responsibilities, for example cultivating land, cooking, taking care of the home etc. Little time is left for self care, especially when there are no symptoms of ill health. Furthermore, health materials are mostly available in towns and not in rural areas and due to the oral culture of disseminating information, reading would be regarded as a low priority.

Access to facilities is also a problem in Oshakati Health District (Gosschalk & Carrozza, 2009). The MOHSS (1992) also confirmed that “inadequate access to health care has affected women directly; not least in that they tend to predominate in rural areas where service provision is the poorest” (p. 66).

Transportation and lack of knowledge of scheduling time of these services at the health facilities may prevent this group to participate in health promotion activities. Transportation may also prevent this group from having access to involvement in organizations and contact with family members where health promotion activities are discussed (Winkler, Bingham, Coffey and Penn-Hannotwerker, 2008).

The main aim of health promotion is to empower individuals not only in developing personal skills, but also by creating supportive environments, community building and public health policy (Breslin and Lucas, 2003). With some of the constraints mentioned, it could be argued that the issue of health education on breast and cervical cancer creates an important challenge for health workers to address.

## **1.2 OUTLINE OF THE PROBLEM**

Cervical and breast cancer are amongst the most life-threatening diseases affecting women and they are the major problems in women’s health issues globally and in Namibia. Most of the patients diagnosed with cervical and breast cancers in Intermediate Hospital Oshakati

were presented within advanced stages (invasive) of diseases.

Studies have shown that cervical cancer is largely preventable by effective screening programmes and considerable reduction in cervical incidences and deaths has been achieved in developed nations with systematic cytological smear screening programmes. According to Mutyaba, Munro and Weiderpass (2006), it is known that “precancerous lesions are detectable for 10 years or more before cancer develops” (p. 3). Subsequently, if women in Namibia are exposed to frequent examination/scanning for cancer then more women could be supported in early stages of this dreaded disease.

Intermediate Hospital Oshakati is one of the major training institutions for nurses in Namibia and the trendsetter for best practice in the country. The students trained in this institution will practice what is taught and practised in the institution (Mutyaba et al., 2006). The systematic Pap smear screening programme is a free service, available, especially during post-natal services. It is always performed every Monday on women wishing to be screened. Pap smear is exclusively performed in the gynaecological outpatient department and women from other units are referred thereto for screening. In the opportunistic screening system, the onus is on nurses who handle the eligible women to refer them to a unit where screening could be done. Self-referral and referral without any reproductive health problems is very low, reflecting poor literacy of women and poor usage of the policy of health promotion and prevention of disease. Lack of physician referral is also identified as a barrier as studies have shown that women are more likely to be screened if their physician recommends screening (Satcher, 1997, p. 3). Such retroactive approaches could result in fatal outcomes for many women.

Previous studies have shown distance as a barrier to early detection screening programme. Distance within the rural community translates to two primary considerations: time and money. Transportation cost to cover the distance needed to travel to and from Intermediate Hospital Oshakati for a mammogram may be an issue regarding access to health facilities (Lane and Martin 2005; Modeste, Lou Caleb-Drayton and Montgomery, 1999). Coghlin and Uhler (2000) and Gosschalk and Carrozza, (2009) are of the opinion that women without health insurances are less likely to have mammograms or pap-smear tests.

Time constraints facing women can be translated into forgetfulness or being too busy as a barrier. The time barrier involved in waiting for screening procedures, the inconvenience of screening (such as having to take time off from work or to arrange care of home) and the unpleasantness of clinical breast examination may result in women not engaging in early detection tests (Modeste et al., 1999, p. 5). Some studies have shown that the majority of women showed preference for a female professional to take the smear and some of the reasons cited for non-compliance were fear and dislike for the test (Neilson and Jones, 1998, p.3).

With breast cancer, early detection enables more effective treatment and a better prognosis for the patient. Unfortunately in many instances, women lack important knowledge about breast screening. Educating women is the responsibility of nurses who should know those eligible for screening at all stages of life. Various studies have shown a high acceptance of health workers as educators. This is probably due to the better rapport that they have with the community, especially with women (Rao, Nair and Kamath, 2005, p. 4). Clinical breast

examination (CBE) is mostly done by nurses especially during first visit to ante-natal services. A woman is shown how to do breast self examination (BSE), which should be done preferably five to seven days after the menstruation period (when the breasts are not tender or swollen) on a monthly basis. This will bring about an increased awareness among women, empowering them to take care of their own health as well as inducing them to seek medical attention at the earliest. Rao et al. (2005) noted that some women would seek immediate help in case of detection of any breast lump and approach either a doctor or a health worker. However, other women felt it was worthwhile to wait for a while and to look for any further changes prior to seeking help.

Women visiting health facilities for other reasons rather than reproductive problems are rarely given health education concerning the early detection measures of both breast and cervical cancer. In Oshakati Health District where late presentation is predominant and where most breast and cervical cancers were detected accidentally by the women themselves, there is an urgent need for awareness of breast and cervical cancer and their early detection measures. Similarly, baseline reports on the current level of knowledge would be vital to an effective awareness program, hence the need for the study assessing level of knowledge of breast and cervical cancer in the stipulated population (Oluwatosin and Oladepo, 2006, p. 3).

For the purpose of this study, the researcher investigated the awareness knowledge of breast and cervical cancer and their early detection measures among women of child-bearing ages (15-49 years) admitted at Intermediate Hospital Oshakati.

### **1.3 PROBLEM STATEMENT**

The prevalence of breast and cervical cancer are increasing worldwide as well as in Namibia. Furthermore, late presentations of patients to the hospital at advanced stages of cancer when little or no benefit can be derived from any form of therapy, is the hallmark of breast and cervical cancer. This prevailing situation suggests that health behaviour may be influenced by the level of awareness about breast and cervical cancer (Okobia, Bunker, Okonofua and Osama, 2006, p. 1).

The problem is that in spite of efforts made to educate women on prevention and early detection of breast and cervical cancer, the statistics revealed that a gap exists between dissemination of information and knowledge about prevention and early detection of these conditions.

### **1.4 THE PURPOSE OF STUDY**

The purpose of the study was to explore and describe the awareness knowledge amongst women of child-bearing age regarding prevention of breast and cervical cancer in Oshakati Health District.

## **1.5 SPECIFIC OBJECTIVES OF THE STUDY**

The following objectives have been set in order to obtain relevant information to the research problem:

- To describe the knowledge of women regarding causes, risk factors and signs and symptoms of breast and cervical cancer.
- To explore the awareness of women on promotion and prevention of breast and cervical cancer.
- To identify existing opportunities/facilities available for women where they can get prevention information sessions with specific reference to health promotion against breast and cervical cancer in Oshakati Health District.

## **1.6 THE SIGNIFICANCE OF THE STUDY**

The findings of this study may be used to guide women to be knowledgeable about their own health and to manage their own health. The findings will also be useful to the policy makers in developing strategies for alleviating the barriers and challenges faced by women in breast and cervical cancers health promotion. Therefore, the gaps and deficiencies highlighted in the study could contribute to better health service planning. Lastly, the results from the study have added to the body of scientific knowledge on breast and cervical cancers.

## 1.7 ETHICAL CONSIDERATIONS

Permission to conduct the study was sought from the University of Namibia, Senate committee; the Ministry of Health and Social Services (MOHSS); and the Regional Health Director of Oshana Region.

During the study and throughout the research process, several ethical aspects were taken into consideration. Firstly, the respondents were given the choice to withdraw from the study at any given time. This ensured informed consent and voluntary participation. Nobody was forced to provide information against her will.

Confidentiality and anonymity were ensured because no personal details were provided on the questionnaires. Confidentiality was further ensured because the information was maintained in privacy and kept privately until the report was completed.

## 1.8 DEFINITIONS OF KEY CONCEPTS

**Awareness** refers to knowing or realizing that something exists and is important or being interested in something (Evans, 2003, p. 93).

**Knowledge** is information of which a person, organization or other entity is aware. Knowledge is gained either by experience, learning and perception or through association and reasoning. The term *knowledge* is also used to mean the confident understanding of a subject, potentially with the ability to use it for a specific purpose (Groff & Jones, 2003,



p3).

**Women of child bearing age** refer to the years of women's lives during which they can normally bear children (15-49 years) (Blackwell's dictionary of nursing, 1997, p. 137).

**Cervical cancer** is a disease in which the cells of the cervix become abnormal and start to grow uncontrollably, forming tumours (Thompson, McFairland, Hirsh and Tucker, 2002).

**Breast cancer** is a disease caused by the development of malignant cells in the breast. The malignant cells originate in the lining of the milk glands or ducts of the breast (ductal epithelium), defining this malignancy as a cancer. Cancer cells are characterized by uncontrolled division leading to abnormal growth and the ability of these cells to invade normal tissue locally or to spread throughout the body, in a process called metastasis (Lange-Otsuka, 2004, p. 18).

**Health promotion** is a combination of educational and environmental supports for actions and conditions of living conducive to health (Green and Kreuter, 2000, p. 4). Promotive health care seeks to raise the level of health of women through education, empowerment and development of women (Young et al., 2003, p. 25).

**Prevention health care** is the care that seeks to prevent the development of ill-health by modifying the factors that contribute to disease, whether these factors are environmental, social or behavioural (Young et al., 2003, p. 25).

## **1.9 SUMMARY**

Intermediate Hospital Oshakati is a hospital where late presentation of women with breast and cervical cancer are predominant. Therefore, there is an urgent need for awareness of breast and cervical cancer and their early detection measures. The challenges associated with breast and cervical cancers deserve urgent attention. Therefore, the role of a nurse as a teacher, counsellor and educator is crucial in women's health and cannot be underestimated in the health education of clients. The purpose and objectives of the study were indicated.

## **CHAPTER 2**

### **LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK**

#### **2.1 INTRODUCTION**

This literature review examines what is known about women's awareness of knowledge regarding health promotion on prevention of breast and cervical cancer and the problems women are facing. It further examines the opportunities available for women to get information as well as the hindrances that hamper the dissemination of information about health promotion and prevention of breast and cervical cancer.

#### **2.2 CONCEPTUAL FRAMEWORK**

The researcher used the Interaction Model of Client Health Behaviour (IMCHB) as a framework for the study because it focuses on both characteristics of the client and the factors external to the client to provide a comprehensive explanation of actions directed towards risk reduction and health promotion, in this case breast and cervical cancer. Therefore, seeking or not seeking breast and cervical cancer screening is a health behaviour that may be influenced by many factors that are interrelated, such as lack of insurance, socioeconomic status and low educational attainment.

Subsequently, the basic assumptions of the model recognize the role of choice and self-

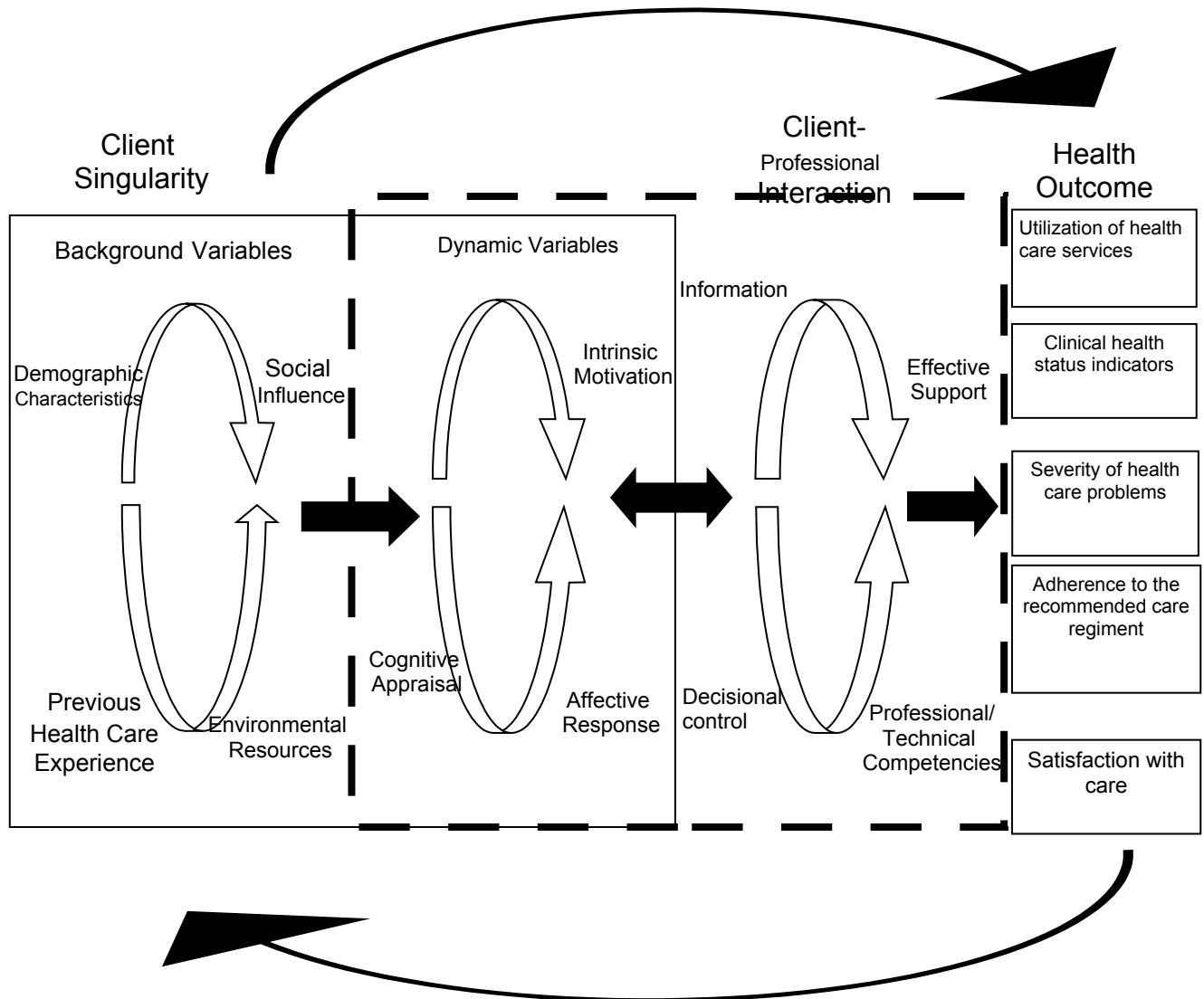
determination of a client on health behaviour, the ability of provider's interaction style and intervention approach to support or discourage the health behaviour and the dynamic impact of each client's singularity profile on health outcomes (Cox, 2003). The model's working hypothesis is that the potential for positive patient health outcomes increases as the provided intervention or interaction is tailored to uniqueness of each patient (background and cognitive, affective and motivational manifestations).

### **Components of the model**

The IMCHB (Figure 2.1) consists of three major components: Client Singularity (the uniqueness and holistic components of a client), Client Professional Interaction and Client Health Outcome (Cox, 1982). The model's objective is to identify and suggest an explanation of the relationships among these three major components. According to Cox (as cited by Ackerson, 2008), the relationship of these elements involves a "continuous reciprocal interaction among aspects of the client's singularity, the interaction and the health care outcome".

### **Client singularity**

The first element of the model, Client Singularity, is defined as the unique characteristics of an individual and includes background variables (age, religion, social support and social networks) and dynamic variables (motivation, knowledge and fear). Together these sets of factors can define the uniqueness of a woman (client singularity) at a given point in time on the basis of intrapersonal and socio-environmental contextual characteristics (Cox, 2003).



**Figure 2.1: Interaction Model of Client Health Behavior (Cox, 1982)**

### **Background variables**

The background variables include the clients' demographics, impact of their social communities, previous experience with health care and environmental resources such as financial resources for health care (Cox, 1982). Understanding the client's socioeconomic status, the influence of social groups and values on the client in regards to a health care issue, and the financial and geographical accessibility of health care, is more likely to predict a certain set of health behaviours than evaluating each variable independently. Matthews, Secrest and Muirhead (2008) noted that background variables interact and over time influence specific health behaviours. Background variables come before other concepts of the model because they are antecedents to subsequent variables (Cox, 1982).

### **Dynamic variables**

The dynamic variables are more active variables than the background variables and cover aspects such as *intrinsic motivation*, *cognitive appraisal* and *affective response*.

#### ***Intrinsic motivation***

Deci and Ryan (as cited in Ackerson, 2008) described motivation as an energized state where one has the ability to direct their behaviour toward a specific goal. Motivation varies based on the degree and type. Each person is influenced to act by different motivational factors, internally (self-determined) or externally (outside force). Intrinsic motivation is

influenced by a person's need to be competent and autonomous. Cox (as cited in Ackerson, 2008) found that factors that affect the degree and expression of motivation can be related to the client's socio-economic status, environmental resources, cognitive appraisal and affective responses.

### *Cognitive appraisal*

A client's cognitive appraisal, such as knowledge, is responsible for their interpretation or perceptions of a health issue and their choice in behaviour. Therefore, cognitive appraisal influences their health state and the quality of the relationship with the provider (Cox, 1982). Abel and Miller, 1997; Cox, 1982 (as cited in Ackerson, 2008) emphasised the suggestion of IMCHB that there is an interrelationship between the background variables and the client's cognitive appraisal. For example, a woman without a family history of breast cancer may not perceive herself as at risk for breast cancer, hence she may not consider a mammography examination. A relationship exists between cognitive appraisal and affective response. An affective (emotional) response, such as fear, can affect the way a client processes information, thereby affecting behaviour.

### *Affective response*

Emotional responses to events influence the interpretation of events and subsequent behaviour. Emotions may hinder or help cognitive ability and thus ultimately affects behaviour (Cox, 1982). Consedine, Magai, Krivoshekova, Ryzewicz and Neugut (2004) found that a fear of "finding something wrong" is a key obstacle to breast cancer screening

among Hispanic and Black groups and a feeling that “it is better not to know” is a reported barrier among several European samples. Consedine et al. (2004) also cited other studies of 434 non-attendees and 515 attendees Swedish women which showed that women who worried most about breast cancer were more likely to screen. A study of African–American women together with samples of English speaking Caribbean, Haitian, Dominican and eastern European women in New York City, showed that worry about cancer was positively associated with mammography and clinical breast examination even when background variables such as education and socio-economic status were controlled. It can be concluded from these findings that some women do not want to know and therefore will not go for screening while women who worry about their status will go for screening.

### **Client–professional interaction**

The second element of the model is client-professional interaction, involving four factors: *health information; affective support; decisional control* and *professional technical competencies*. These factors identify the interaction between the client and the provider as a major influence on health care behaviour (Cox, 1982).

### ***Health Information***

Applied knowledge is powerful; knowledge by itself won't always bring change. Therefore, it is important that clients receive all the information necessary to be able to practice healthy behaviours, for example, many people have information about condom use but they do not practice the right behaviour. Furthermore, clients need assistance with



understanding their health situations, making health care decisions and changing health behaviour (Redman, 1993). The person who presents the information and the way the information is presented is equally important. The knowledge to be used for setting goals and establishing competency in the client may produce successful treatment. Simultaneously, if the amount of information is neither too small nor too large, the information is useful to the client and the client is able to process the information, and the application of the information could follow (Cox, 1982). It could then be argued that if clients understand breast and cervical cancer and the consequences thereof, they will come for regular investigations to determine their health status in this regard.

### *Affective Support*

Affective support, according to Cox (1982), occurs when “the health care provider meets the client at the same level of emotional arousal to a health concern” (p. 6). By implication, it means that ignoring affective support of the client or lending heavy affective support (overwhelming) to the client, yields the client to withdraw. Fear, anxiety and threat are frequent in health education programs and campaigns and may influence the kind of support the client needs. Fear, anxiety and threat may be of limited effectiveness in achieving desired health behaviour outcomes and may do more harm than good in a support program. Addressing the emotional response will serve to further reduce the degree of emotional arousal, increase the woman’s potential for cognitive and decisional control over the health concern and increase the client’s satisfaction (Cox, 1982; Pender, 1966).

### ***Decisional Control***

Decisional control refers to the client's expectation of having power to participate in making health care decisions in order to obtain "desirable consequences" (Cox, 1982). Cox's (1982) model postulates that there are interrelated relationships among decisional control, other interaction factors and aspects of a client's singularity. A sense of self-efficacy is increased by decisional control and influences commitment to health behaviours, i.e. being given the choice to pick between treatment alternatives enhances the client's sense of commitment and behaviour (Cox, 1982).

Decision-making by clients begins with individual perceptions. Personal factors contained within the individual's perception could influence readiness to engage in health promoting behaviours. These factors include the importance of health, desire for competence, self-awareness, self-esteem, perceived health status, definition of health and perceived benefit of health promoting behaviours (Thompson, McFairland, Hirsch and Tucker, 2002). Thus, decision-making would vary given the client's individual perceptions. Therefore, Cox (1982) proposes that decisional control needs more attention and emphasis in the health promotion process based on the factors of client singularity.

### ***Professional-technical competencies***

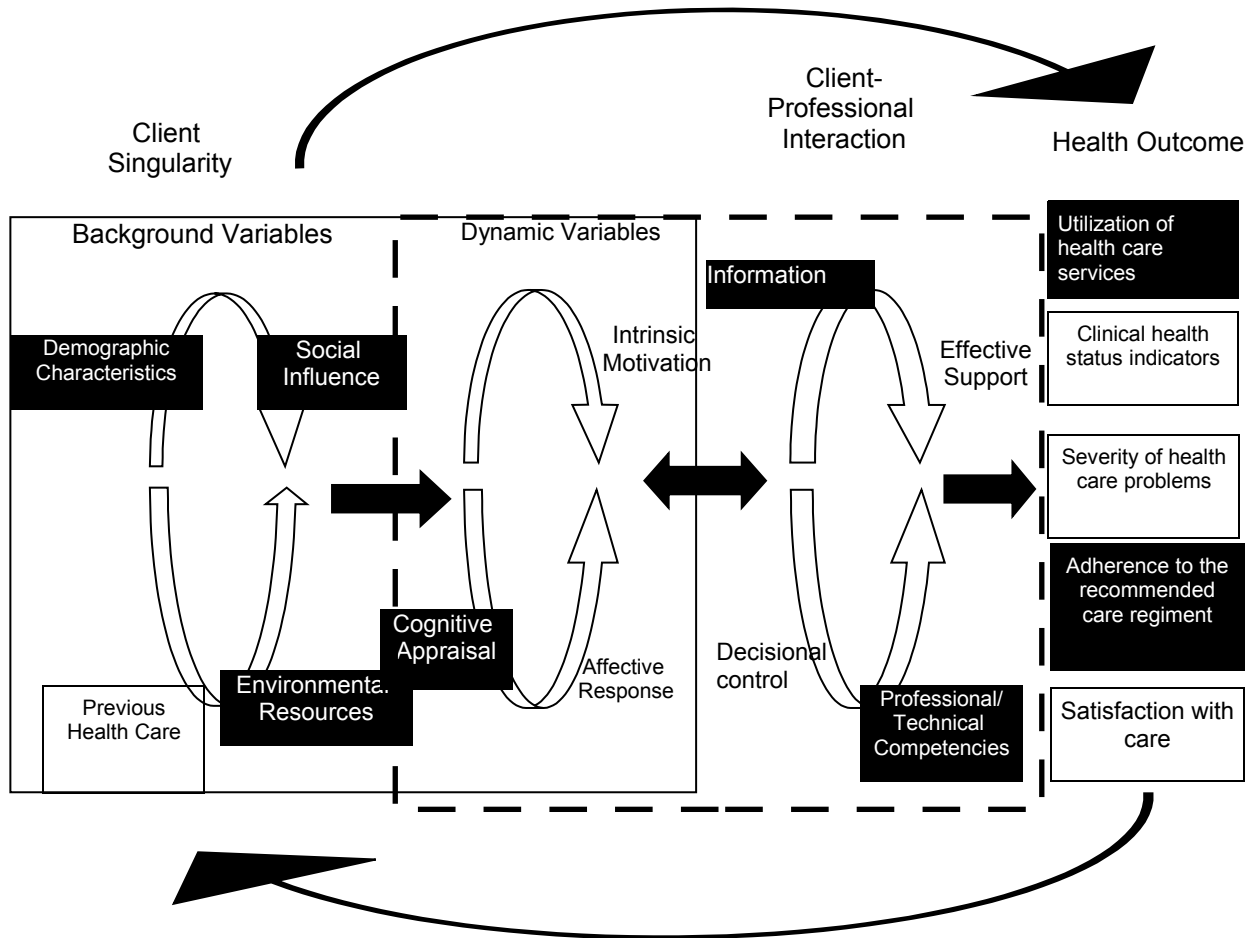
Professional-technical competencies include actions and the dependency of the client on someone else, for example the health care provider, to perform an action. It also includes the readiness of the individual to engage in certain actions. Cues for technical issues or

procedures like the examination of a breast for lumps can be transmitted via mass media, be used as advice from others or be demonstrated by health care providers (Cox, 1982).

### **Health outcome**

The final component of IMCHB is health outcome which has five elements: *(a) utilization of healthcare services, (b) clinical health status indicator, (c) severity of healthcare problem, (d) adherence to the recommended care regimen, and (e) satisfaction with care* (Cox, 1982). The meaning of each of these outcomes can vary depending upon the issue being addressed. For example, the utilization of health care services may be considered positive in health prevention, but negative health behaviour when the goal is to increase one's capabilities to care for self. In most instances, only one of these variables will be of interest depending upon the focus of the client's singularity health care needs and the interaction between the client and the health care provider (Cox, 1982).

**Figure 2.2 The IMCHB Mediating Variables of Interest to the researcher**



### **The IMCHB Mediating Variables of Interest to the researcher**

Out of all the variables of IMCHB, this study will only examine some mediating variables of interest viz: the background variables of demographic characteristics, social influence, previous health care experience and their contributing effects on the dynamic variables of the cognitive appraisal in breast and cervical cancer screening as indicated in Figure 2.2. The study will also examine Client-Professional Interaction Variables of health information and professional/technical competencies and health outcome of utilization of healthcare services and adherence to the recommended care regimen.

The selection of these variables was based on the gap in the utilization of health care services and low adherence to the recommended care regimen of cervical and breast cancer screening in Oshakati Health District, Namibia. According to the model, this can be affected by the personal influencing factors, such as a woman's demographic data, social influence and environmental resources. They affect her cognitive appraisal; affective support and health information received regarding Pap smear testing and cervical cancer, BSE and breast cancer. It also has effects on her affective response and motivation to obtain routine screening.

### **Background variables of client singularity**

Factors such as demographic characteristics (e.g. age, level of education), social influence (e.g. religion, marital status), previous healthcare experiences (e.g. health history including

family history) and environmental resources (e.g. access to health care, barriers to health care, personal resources) are relatively static variables at any single point in time (i.e. the time at which the client-provider encounter occurs). Selected background variables may change over time, but such change tends to be subtle. The impact of the change on these variables on motivated behaviour, in most cases, will not be immediate because health promotion behaviours are largely under the control of the clients (Cox, 2003).

As mentioned by Cox (2003), background variables are posited to have a direct influence on some health outcomes. An example of this could be that income may weakly predict adherence to routine cancer screening or utilization of healthcare facilities, however, they mainly serve as explanatory antecedents to the dynamic variables of client singularity. In addition, a woman who has limited income (demographic characteristics), no health insurance (environmental resources) and family members who fear the worst, the symptom of mass in a breast (social influence) may decide (intrinsic motivation as a dynamic variable) against going for cancer screening (Cox, 2003).

Other factors that are associated with women utilizing cancer screening services can be related to the social influence of a woman's peer influences, religion, social network and social support (Cox, 1982). Support from individuals who are important to the woman and/or trusted by her can influence or facilitate the intrinsic motivation of women in obtaining cancer screening (Pender, Murdaugh and Parsons, 2003). There is a strong association between acceptance and approval of others for motivating one to perform. Ackerson's (2008) study has indicated that the stronger the women's perception of support from important others, such as family, mother, friends, health care providers, the stronger

her social norm was with regard to obtaining recommended cancer screening. This is supported by Minami and Benton (2009) of the International Council of Nurses in their speech on the International Nurses' Day 2009 on the theme 'Delivering quality care, serving communities: Nurses leading care innovations'.

The mass media and publications can provide a good and cost-effective means of informing people in creating an awareness of breast and cervical cancer but interpersonal approaches through professional networks for example: work place or personal social networks (friends, aunts and churches) will be more influential in persuading people to adopt positive behaviour changes (Greenhalgh, Cain and Mittman, as cited in Minami and Benton, 2009).

Rao, Nair and Kamath (2005) found that community has shown a high acceptance of health workers as educators due to the better rapport they have with them. Therefore, advice from health care workers was more important than advice from family and friends as encouragement to undergo cancer screening.

The background variables are therefore, assumed to be interrelated. Demographic characteristics and social influence often are tied to health history, health status and experience. Demographic characteristics and other background variables are connected similarly to the availability and nature of environmental resources.

If the background variables that are most important in identifying women at risk or in explaining women's cognitive appraisal, motivation or affective response are identified, interventions can be tailored to them. For example interventions of cancer screening that

target fear or deficit in cancer screening knowledge of women (15-49) separately may be optimal if fear or knowledge deficit are strongly explanatory of non attendance of cancer screening or is a strong determinant of the dynamic variables of client singularity (Cox, 2003).

### **Dynamic variables of client singularity**

The dynamic variables of client singularity are cognitive appraisal; affective response and motivation (see Figures 2.1 and 2.2). Wilburn, Miller, Chandler and McDevitt (as cited in Cox, 2003) stated that these variables would be affected by an intervention more immediately than would background variables (which tend to be more static). Cognitive appraisal comprises such factors as women's knowledge on cancer screening. For example, women who understand that early detection of cancer can cure or prolong life will adhere to the recommended routine cancer screening.

Affective response factors are based on emotion and ultimately contribute to decision-making. Deci and Ryan (as cited by Cox, 2003) confirmed that fear, anxiety and uncertainty can be very strong predictors of behaviour that are independent of other cognitively based variables (attitudes, knowledge and beliefs).

The dynamic client singularity variables (motivation, cognitive appraisal and affective response) influence each other. For example, consider a woman who discovered a mass in her breast. The discovery generates overwhelming fear of cancer (affective response). This fear in turn generates a fear- controlled goal not to seek medical attention (motivation).



Alternatively, another woman on making the same discovery might act on her knowledge (cognitive appraisal) that not all breast masses are cancerous. This leads to self-determined intrinsic goal (motivation) to seek evaluation to reduce her anxiety (affective response) (Cox, 2003).

Crom et al. (as cited in Cox, 2003) stated that the importance of paying attention to the uniqueness of each patient was supported in a focus group study of young female survivors of childhood cancer. When asked what providers could do to support survivors' health protective behaviours, the response was resoundingly and unanimously to "Listen to my story". They wanted providers to listen to and address their fears, their specific knowledge deficits and internal and external factors that are supported or negated positive health behaviours. These young patients articulated their need for providers to recognize their singularity and to address that singularity in interactions and interventions.

### **Client–Professional interaction**

Two factors (provision of health information and professional or technical competencies) will be dealt with in the element of client–professional interaction, although there are four factors that define the client–professional element: affective support, provision of health information, decisional control and professional or technical competencies (Cox, 2003).

**The provision of health information to women** on cancer screening can be examined from multiple perspectives: the nature (specific versus abstract), and content (the message) of the information provided, the manner in which the information is conveyed (written pamphlets,

leaflets, posters, one-to-one interaction or group interaction, the affective state of women when the information is offered (anxiety, fear) and the quality of information provided.

Health information differs in type and function. Some health information is useful in informing women's cognitive appraisal (e.g. risks factors, signs and symptoms and screening methods of breast and cervical cancer (Cox, 2003). Other health information can be used to promote intrinsic motivation (e.g. positive feedback on cervical cancer survivor who maintains routine screening. Some information can focus on altering the affective response (e.g. specific information on the procedure of Pap-smear test and that it is not very painful as it is said in order to lessen anxiety (Cox, 2003)).

**Professional or technical competencies** refer to the ability of a provider to interact with women in ways that are appropriate to the client singularity and appreciation of the patient's technical versus interpersonal needs in the light of cancer screening. For example, a provider can demonstrate (technically) the procedure of BSE to women and be given a return demonstration by women in order to be able to facilitate women decision making relative to new behaviours to health.

A single provider (health care worker) may not be an expert in skills and abilities in cancer screening and their interventions, but should be able to recognize the need for an intervention and refer women to appropriate cancer screening resources to meet women's needs (Cox, 2003). The studies of Consedine et al. (2004); Taylor, Nguyen, Jackson and McPhee (2008) and Twinn et al. (2007) have shown that physician's intervention is important and that women claim that they are more likely to get a mammogram if a

physician recommends it.

Cox (1982 and 2003) noted that factors within the element of client-professional interaction element influence one another. The relationship component of affective support is the primary foundation on which all other intervention and interaction factors are built. Even the most advanced therapies of Gardasil vaccine and elaborate health education programmes can be unsuccessful without effective communication. This would include the ability to deliver a message of caring and concern and attending to women's level of arousal and building an affiliate bond with women (Cox, 1982 and 2003).

Failure to address their affective response may result in women to be non-compliant with cancer screening routine recommendations. Alternatively, recognition of women's affective state (affective support) and information that helps women cope with their concerns about cancer as a disease (health information) may enhance their adherence to routine cancer screening (Cox, 2003).

Decisional control is related strongly to affective support and provision of health information. In the health care facility that is supportive of autonomy, providers can assist women in doing return demonstration of BSE and giving information on the procedure on Pap-smear test. By supporting women's self-determination, this approach ultimately strengthens women's feelings of self-efficacy and promotes the internalization of responsibility of routine cancer screening attendance (Cox, 2003).

The client-professional interaction or intervention is dictated by women's singularity

profiles. The client and provider encounter can provide many clues that can help to guide the intervention approach. Clearly, what women know and believe (cognitive appraisal) and women's emotional state (affective response) are targets for interventions in terms of affective support and provision of health information (Cox, 2003).

### **Health outcomes**

The elements of health outcomes of interest in this study are healthcare utilization and adherence to recommended care regimens.

**Healthcare utilization** refers to the use of resources as a health promoting behaviour. The concept measure women's independent access of health information sources to inform their decisions or measure self-referred or professional-referred used of healthcare services (e.g. frequency of visits for pap-smear test, mammography, BSE and CBE (Cox, 2003).

**Adherence to the recommended care regimen** is the extent to which women engage in health promotion behaviours of cancer screening that are necessary to ensure optimal health (Cox, 2003). Actual behaviour (for example frequency of attending Pap-smear test per year) and congruency measures (the correspondence between recommended frequency of pap-smear tests per year and the actual behaviour) represent the types of measurable adherence outcomes (Cox, 2003).

## **2.3 BREAST CANCER**

**Breast cancer** is a disease caused by the development of malignant cells in the breast. The malignant cells originate in the lining of the milk glands or ducts of the breast (ductal epithelium), defining this malignancy as a cancer. Cancer cells are characterized by uncontrolled division leading to abnormal growth and the ability of these cells to invade normal tissue locally or to spread throughout the body, in a process called metastasis (Lange-Otsuka, 2004).

Researchers have shown that research does not know exactly what causes breast cancer, but they do know that certain risk factors are linked to the disease. A risk factor is anything that increases a person's chance of getting a disease such a cancer (Thompson, McFairland, Hirsch and Tucker, 2002).

Some risk factors such as alcohol can be controlled. Others, like a person's age or family history, cannot be changed. But having a risk factor, or even several, does not mean that a person will get the disease. Some women who have one or more risk factors never get breast cancer. Most women who get breast cancer do not have any risk factors which means all women are at risk of getting breast cancer (Thompson et al., 2002).

### **2.3.1 Risk factors of breast cancer**

Breast cancer is an issue of concern for every woman in today's society. The National Cancer Institute (as cited in Shepherd and McInerney, 2006) found that being female is the

highest risk factor for breast cancer as one out of eight women in the United States has a lifetime risk of developing breast cancer. Korde, Calzone and Zujewski (2004) stated that: as with other cancers, “increasing age is one of the strongest risk factors” (p.3). The incidence rates begin to increase between ages 35 and 39 years and plateaus at age 80 years. However, Keitel and Kopala (as cited in Shepherd et al., 2006) have stressed that younger women tend to experience a higher mortality from the disease.

Women who have a family history of breast cancer are at a higher risk for breast cancer than those without such a history. Women, who have an especially strong family history, that is, two or more first-degree relatives (a mother, daughter or sister) with breast cancer, particularly before menopause, have a greater than 50 percent chance of developing breast cancer. One of the main factors responsible for this elevated risk is an inherited genetic mutations (permanent changes in genetic material) called BRCA1 and BRCA2 (Fletcher, 2006).

Thompson et al. (2002), stated that if a woman has already had a personal history of cancer in one breast, she has a greater chance of developing a new cancer in the other breast. This is especially true if a woman has inherited BRCA mutations. A previous diagnosis of lobular carcinoma in situ (a localized tumour) is associated with a 10% to 30% greater breast cancer risk and a previous diagnosis of ductal carcinoma in situ is associated with 30% to 50% greater risk.

Fletcher (2006) further indicated that breast cancer risk may be related to the total number of ovulatory menstrual cycles a woman experiences and the longest known exposures to sex

hormones, particularly estrogens, in her lifetime. Risk is inversely related to early age at menarche (first menstrual period) before the age of 11 and increased with a late age at menopause (end of child bearing period) 55 years or older. Korde et al. (2004) are of the opinion that women who have never given birth are more likely to develop breast cancer after menopause than those who have given birth multiple times. The timing of a first pregnancy also appears to play a role with women who have their first full-term pregnancy at the age of 30 years or older having an increased risk of breast cancer as compared to women who give birth before age 30. Although this may not necessarily be a lifestyle choice, having a first child at an earlier age may decrease the risk.

Some studies have shown that breastfeeding slightly lowers breast cancer risk, especially if the breastfeeding lasts 1 to 2 years. This could be because breastfeeding lowers a woman's total number of menstrual periods, same as pregnancy. One study found that having more children and breast-feeding longer could reduce the risk by half. Breast-feeding policy should be emphasized to women without any contra-indication (Fletcher, 2006).

Women who have had a prior breast biopsy that revealed a proliferative abnormality (excessive growth of the glandular breast tissue, also called hyperplasia) have an increased risk for breast cancer, particularly if the cells appear abnormal (atypical hyperplasia). Otherwise, benign breast conditions that are not proliferative (for example fibrocystic change or a noncomplex fibro-adenoma) do not increase the risk of a woman developing breast cancer. Any woman who undergoes a biopsy of a breast abnormality needs to fully understand the results, particularly if they impact the frequency of breast cancer screening (Fletcher, 2006).

There are certain potentially modifiable lifestyle factors that represent an important class of risk factors for breast cancer. Obesity has been found to increase the incidence of breast cancer by up to two and half times in postmenopausal women. The risk seems to be higher if the extra fat is in the waist. Therefore, the use of red meats, especially those high in fat should be limited. Conversely, obesity appears to be protective in pre-menopausal women. This is likely due to an increase in anovulatory cycles, resulting in lower levels of circulating estrogens in young obese women (Shepherd and McInerney, 2006).

On the other hand, physical activity is found to reduce the risk of breast cancer in women who are physically active compared with those who are inactive. Regular physical activity is emphasized as this may reduce the risk. Finally, moderate to heavy alcohol intake has been shown to confer significant increase in risk of breast cancer. Limiting alcohol consumption may reduce the risk. For those who drink, adding the vitamin folic acid to the diet may reduce the increase risk (Korde et al., 2004).

Keitel and Kopala (as cited in Shepherd and McInerney, 2006) indicated that smoking is also identified as a risk factor for developing breast cancer and research findings have established that smokers have a 25% greater risk of dying from breast cancer than non-smokers.

Breast cancer risk factor knowledge among women is important so that they can act as the most pragmatic solution to early detection and as a sign that information was disseminated among them.



### **2.3.2 Signs and symptoms of breast cancer**

Knowing the signs and symptoms of breast cancer may help save women's lives. When breast cancer is discovered early, women have more treatment options and better chances for long-term recovery. The Mayo Foundation for Medical Education and Research (MFMER, 2006) stated that the common sign of breast cancer is a lump which is single and firm or thickening in the breast. Most breast lumps are not cancerous and are often painless.

However, there is also a unique type of inflammatory breast cancer that does not produce a distinct mass or lump that can be felt within the breast. The lack of a lump or mass also makes inflammatory breast cancer difficult to detect by mammograms. Inflammatory breast cancer cells infiltrate the skin and lymph vessels of the breast. When the lymph vessels become blocked by the breast cancer cells the breast becomes red, swollen and warm. The skin changes associated with inflammation can cause the breast skin to look like the skin of an orange. The appearance of the breast is similar to the other inflammatory conditions such as cellulites or mastitis. Other possible associate symptoms include a skin that is hot to the touch, pain and/or itchiness, ridges or thickened areas of breast, rash (entire breast or small patches) and veins on the skin surface becoming more prominent (Patton, 2002).

The other possible associative symptoms include also enlarged lymph nodes under the arm or above the collar bone on the affected side. Inflammatory breast cancer is diagnosed based upon the results of a biopsy. There are also other several signs and symptoms that can indicate breast cancer like nipple pain, nipples that appear inverted or flattened or

spontaneous clear or bloody discharge from the nipple. This study makes it clear how crucial it is for women to make sure that they have regular screens and are investigating any breast changes that are new or unusual (Herron and Freeth, 2005). However, these signs and symptoms are also associated with other non-cancerous breast conditions. If a woman is experiencing these symptoms, it is important not to panic but to seek medical help for an evaluation (Patton, 2002).

### **2.3.3 Early detection measures of breast cancer**

#### **2.3.3.1 Screening practices of women on breast cancer**

Breast cancer screening refers to tests and examinations used to detect cancer, in people who do not have any symptoms. The goal of screening exams is to find cancers before they start to cause symptoms. Screening can lead to earlier diagnosis. The American Cancer Society (ACS, 2007) is of the opinion that detecting breast cancer as early as possible improves the likelihood that treatment will be successful. Early diagnosis may lead to extended lives. Health promotion and maintenance practices apply to all women, regardless of their ages or menstrual status.

A variety of factors influence the length of a disease-free period and the overall length of survival after a diagnosis of breast cancer. The essential factors in the early detection of breast cancer are the regular performance of breast self examination (BSE), regular clinical examination and routine mammography. The frequency of these examinations is determined by the woman's age, the presence of significant risk factors and her past medical

history (Lewis, Collier and Heitkemper, 1996).

The International Breast Cancer Association Inc. (2006, p. 15) suggested that an early Breast Cancer Detection Plan should be developed by each woman. This could include:

**a) Breast self examination** is the primary method of surveillance in- between mammograms in women 40 years and older (Lane, Martin, Uhler and Workman, 2003). Monthly breast self-examination (BSE) should begin at an early stage of 20 to 39 years. Breast cancer risk is very low for women below 20s and gradually increases with age (ACS, 2007).

BSE should be done monthly at a regular time when the breasts are not tender. In pre-menopausal women, the best time is 7 days after the start of menstruation. At this time, hormonal stimulation of the breasts is at its lowest point. In these women, nodularity and tenderness will be minimal. For women aged 15-49 years on oral contraceptives, the first day of a new package may be a helpful reminder. Women who have had hysterectomies should set a regular date for monthly BSE. The monthly date of a birthday or the first day of the month is common choice for many women (Lewis et al., 1996). All the methods on when to perform BSE described above are applied in Oshakati Health District.

BSE should be done in good light and should include inspection before a mirror and careful systematic palpation. The entire breast, axilla and clavicle should be examined. The woman should be taught the BSE procedure by a health care provider, using the woman's own hands on her breast. The nurse who is teaching BSE must emphasize that early

detection enhances survival rates. BSE teaching techniques should include allowing time for the woman to ask questions about the procedure and to perform a return demonstration. The woman should be told what to look for, such as a lump, nipple discharge, nipple retraction, redness, pain or tenderness, dimpling of the skin or oedema (Lee, Kim and Ham, 2000). Health care providers in Oshakati Health District are trying their best to demonstrate the procedure to women especially during ante-natal and post-natal services.

Some teaching techniques involve using silicone breast models that simulate normal and abnormal tissue to help women to identify problems. The woman should be shown the normal variations in her own breasts so that she will be able to detect changes. Women should also be taught how to check for the other main symptoms or any changes on the breasts as mentioned earlier.

**(b) Clinical breast examinations (CBE)** should be done every three years from ages 20-39, then every year thereafter. This examination should be done by nurses or family doctors, as they are health professionals with expertise in this field (Albert and Schultz, 2003). These health care providers look for the differences in size or shape of the breasts. The skin is checked for rashes or other abnormal signs. The nipples may be squeezed to check for any other fluid other than milk. They can check the entire breasts, axillaries and collarbones for lumps. The health care providers can check the lymph nodes near the breasts to see if they enlarged (International Breast Cancer Association Inc, 2006). In the Oshakati Health District, CBE is only done during ante-natal and post-natal services and when some abnormalities have been detected. The international Breast Cancer Association's guideline as mentioned above is not adhered to.

c) **Baseline mammogram** should be done by the age of 40 and it should continue every one to two years for women 40-49, depending on previous findings. Mammogram is a picture of the breasts with X-rays. Mammograms show breast lumps before it can be felt through palpation. They can also show micro calcifications. Lumps or micro calcifications can be from cancer or pre-cancerous cells or other conditions. However, a mammogram may miss some cancers and the result is called a “false-negative” and sometimes a mammogram may show things that turn out not to be cancer and result is called a false-positive. Therefore, mammogram is recommended to be done every year for women aged 50 and older (International Breast Cancer Association Inc., 2006). However, the recommended routine of mammogram above is not applied in Oshakati Health District because of scarce resources. The only machine available is used for curative services when abnormalities like tumours have been detected on women. Few women with medical insurance cover do attend mammogram because of recommendation of the private physicians and sometimes few may request it.

d) **Chemoprevention** refers to the use of medications to reduce cancer risk. Currently, tamoxifen citrate (Nolvadex), a selective estrogen receptor modulator (SERM), is the only agent approved by the US Food and Drug Administration (FDA) for breast cancer risk reduction. In 1998, results of a large randomized trial showed tamoxifen reduced the incidence of breast cancer by 49% in women at high risk of the disease. The most marked risk reduction was seen in women with a history of atypical hyperplasia, who had an 86% decrease in risk (Korde et al., 2004).

e) **Prophylactic surgery** can significantly reduce the risk of cancer in women with known or suspected hereditary breast cancer. In patients with known genetic mutations, prophylactic mastectomy has been shown to reduce the risk of breast cancer by at least 90% (Korde et al., 2004).

## **2.4 CERVICAL CANCER**

Cervical cancer is a disease in which the cells of the cervix become abnormal and start to grow uncontrollably, forming tumours (Thompson et al., 2002).

### **2.4.1 Risk factors of cervical cancer**

The exact cause of cervical cancer is not known, but certain things appear to increase the risk. The risk factors for cervical cancer according to BUPA's Health Information Team (2003) are discussed below.

There are specific types of the human papilloma virus (HPV) that cause the infection of cervical cancer. They are called papilloma viruses because some of them cause a type of growth called papilloma. Papillomas are not cancers, and are commonly called genital warts. Certain types of HPV are called "high risk" types because they are often the cause of cancer of the cervix. These types include HPV 16, HPV 18, HPV 31, HPV 33, and HPV 45 as well as some others. About two thirds of all cancers are caused by HPV 16 and 18, as they lead to abnormal changes in the cells of the cervix (Klug, Hetzer and Blettner, 2005;

National Cancer Institute, 2006).

Many women become infected with HPV, but very few will ever develop cervical cancer. In most cases, the body's immune system fights off the viruses, and infection goes away without any treatment. The infection persists in some women and can cause cervical cancer. Although there is currently no cure for HPV infection, there are ways to treat the warts and abnormal cell growth that HPV causes (Giles and Garland, 2006; ACS, 2008, p. 2).

HPV is passed on through sex and usually causes no symptoms at all for many years, so sexual partners may not know that they are infected. Even when someone doesn't have visible warts, he/she can still be infected with HPV and pass the virus to somebody else. Uncircumcised men are thought to be more likely to have the virus and be able to pass it on to someone else (ACS, 2008, p. 2).

ACS (2008) further explained that condoms do provide some protection against HPV, but they cannot completely protect against infection. This is because HPV can still be passed from one person to another by skin-to-skin contact with an HPV-infected area of the body that is not covered by a condom - like the skin in genital or anal area. Still, it is important to use condoms to protect against HIV and other sexually transmitted illnesses that are passed on through some body fluids.

Cherath and Alic (n.d.) and Pitts and Clarke (2002) are of the opinion that since HPV is a sexually transmitted infection, sexual behaviours can put women at risk for HPV infection

and cervical cancer. These behaviours include:

- Sexual intercourse at age 16 or younger. This is particularly true for young women because the cells lining the cervix do not fully mature until age 18. These immature cells are more susceptible to cancer causing agents and viruses.
- Multiple male sexual partners.
- Sexual partners who have had multiple partners.
- A partner who has had previous sexual partners with cervical cancer.

Dabash et al. (2005), stated that infection with the human immunodeficiency virus (HIV) that causes acquired immunodeficiency syndrome (AIDS) is a risk for cervical cancer. HIV/AIDS damage the immune system and seem to make women more at risk for HPV infections. Scientists believe that the immune system is important in destroying cancer cells and slowing their growth and spread. Women who test positive for HIV may have impaired immune systems and a cervical pre-cancer might develop into an invasive cancer faster than it normally would. Furthermore, sexual behaviours that put women at risk for HIV infection, also puts them at risk for HPV infection (Dabash et al., 2005).

Another factor on the list includes smoking that may double the risk of cervical cancer. Chemicals produced by tobacco smoke can damage the DNA of cervical cells. The risk increases with the number of years a woman smokes and the amount she smokes. Some studies have shown that some states in the USA have passed legislative mandate to use cigarette tax revenue to pay for the treatment of cancer (Lawson, Henson, Bobo and Kaeser, (2000) and Mutyaba et al., (2005)).



Diets that are low in fruits and vegetables and low economic status increase the risk of cervical cancer. Overweight women are more likely to develop this cancer too (Lawson et al., 2000). Poverty is also a risk factor for cervical cancer. Many women with low incomes do not have ready access to adequate health care services, including the cervical smear tests. This means they may not get screened or treated for pre-cancerous cervical disease (ACS, 2008, p. 4).

ACS (2008) noted that Chlamydia, a common kind of bacteria, could infect the reproductive system. It is spread by sexual contact. Some studies have seen a higher risk of cervical cancer in women whose blood test results show past or current Chlamydia infection compared to women with the normal test results. Infection with Chlamydia often causes no symptoms in women. A woman may not know that she is infected at all unless she is tested for Chlamydia. Long-term Chlamydia infection can cause pelvic inflammation, leading to infertility.

There is evidence that taking oral contraceptives for a long time increases the risk of cancer of the cervix. Research suggests that the risk of cervical cancer goes up the longer a woman takes oral contraceptives, but the risk goes back down again after the oral contraceptives are stopped. In a recent study, the risk of cervical cancer was doubled in women who took birth control pills longer than 5 years, but the risk returned to normal 10 years after they were stopped. Therefore, it is important for a nurse as health educator to give information to women regarding the advantages and disadvantages of birth control pills (Anti- Cancer

Council of Victoria, 1997; ACS, 2008, p. 3).

Multiple pregnancies have been identified as a risk factor for cervical cancer. Women who have had many full-term pregnancies have an increased risk of developing cervical cancer. One theory is this may be because some of the women may have been exposed more to HPV through unprotected sexual contact. Also, studies have pointed to hormonal changes during pregnancy as possibly making women more susceptible to HPV infection or cancer growth. Another thought is that the immune system of pregnant women might be weaker, allowing for HPV infection and cancer growth (ACS, 2008, p. 4). Therefore condom use should be emphasized as effective method of family planning and prevention of different infections.

Family history of cervical cancer may run in some families. If your mother or sister had cervical cancer, your chances of developing the disease are increased by 2 to 3 times. Some researchers suspect that some instances of this familial tendency are caused by an inherited condition that makes some women less able to fight off HPV infection than others (ACS, 2008, p. 5).

In thinking about risk factors, it helps to focus on those that you can change or avoid (like smoking or human papilloma virus infection), rather than those that you cannot (such as your age and family history). However, it is still important to know about risk factors that cannot be changed, because it's even more important for women who have these factors to get regular Pap-tests to detect cervical cancer early (ACS, 2008).



## **2.4.2 Early detection of cervical cancer**

### **2.4.2.1 Screening practices of women on cervical cancer**

The primary goal of cervical cancer screening is to detect and treat pre-cancerous cervical lesions in order to prevent the occurrence of invasive cervical cancer. For women in whom pre-cancerous cervical lesions have been detected, the likelihood survival is nearly 100% with appropriate evaluation, treatment and follow-up (Lawson et al., 2000, p. 4).

#### **a) Conventional Pap-smear**

There are various methods which can be used to detect cervical cancer. Most often, cervical cancer is first detected with a Pap-smear test. A Pap-smear test is a screening tool that is performed as part of pelvic examination, especially during post natal services. The vagina is spread with a metal instrument called a speculum. A swab is used to remove mucus and cells from the cervix (Cherath and Alic, n.d.).

Lawson et al. (2000) stated that the American College of Obstetricians and Gynaecologists recommends that women should have a routine Pap-smear test and pelvic examination when they become sexually active or at age 18 years, whichever occurs first. Pap-smear tests are recommended every year until three consecutive Pap-smear tests are interpreted as normal and repeated screening every 3 years thereafter. A reduced interval between screenings can be recommended by the physician on the basis of a woman's risk factor for cervical cancer.

This is because of the strong evidence that supports the theory that routine screening with Pap-smear tests will lower the rate of cervical cancer. The U.S. Preventive Service Task Force (USPSTF) recommended routine screening for women who are and have been sexually active and who have a uterine cervix. The USPSTF also recommended that women who have had a total hysterectomy (surgery) to remove the uterus and cervix do not need to have cervical cancer screening. However, if the surgery was treatment for pre-cancerous cells or cancer, the woman should continue with screening (Lawson et al., 2000).

Centres for Disease Control and Prevention, Workowski and Berman (2006, p. 1) found that the recommendations for cervical cancer screening intervals vary in the United States, but the American Cancer Society and American College of Obstetricians and Gynaecologists guidelines recommend annual screening for women aged 21-30 years and then every 2-3 years for women aged over 30 years if three consecutive annual Pap-smear tests are negative. Women with a history of sexually transmitted infections (STIs) might be at risk of cervical cancer and therefore they should follow the recommendations on these guidelines.

HIV infected women should be provided with a comprehensive gynaecological examination, including a pelvic examination and Pap-smear test as a part of their initial evaluation. A Pap-smear test should be done twice in the first year after diagnosis of HIV infection and if the results are normal, annually thereafter, because HIV positive women are known to have higher rates of persistence, progression and recurrence of disease after treatment. If the results of the Pap-smear tests are abnormal, regardless of CD4+ count or antiretroviral treatment status, the women should undergo colposcopy and direct biopsy.

Colposcopy and biopsy are not indicated in HIV–positive women with negative Pap-smear test reports (Centres for Disease Control and Prevention et al., 2006; Anderson, 2000).

Based on a study done in India on early detection of cervical cancer, the World Health Organization recommends that resource-poor nations screen all women at least once in a life time with a priority given to women at the age of 35 years. However, there is a debate about whether the age limit is too high, especially in countries with high HIV incidence. In India in 2003, 46.6% of HIV cases in women occur in the 15-29 years age group (Dabash et al., 2005, p. 3).

Another study done on the cervical cancer programs in developing countries like South Africa found that screening is theoretically available at gynaecology, family planning and ante- and post-natal clinics, but little routine screening occurs in the public sector. In general, women have to initiate screening by specifically requesting a Pap-smear test. The current practice of opportunistic screening and treatment of precancerous and cancerous lesions are a rational use of resources. Researchers suggested a policy aimed at screening all women over age 20 every five years would be at least as cost effective as the current policy of treatment without an organized screening program (ARCHIVES, 2005, p. 3).

Oshakati Health District is following the American Cancer Society and American College of Obstetricians and Gynaecologists guidelines on screening intervals. To HIV infected women, Pap- smear tests are not recommended according to Centres for Disease Control and Prevention guideline. Few women with a history of sexually transmitted infections (STIs) are referred for Pap-smear tests depending on the eligibility of the physicians. In

Oshakati Health District, Pap-smear test is the most popular test used for screening cervical cancer especially in the public health sector.

**b) Liquid-based cytology (LBC)**

The Liquid-based cytology method is mainly used in developed countries because it is more expensive and the laboratory staffs need to be specially trained. It is a refinement of conventional cytology and instead of smearing cervical cells on the slide; the provider transfers the specimen from a brush to a preservative solution. The specimen is sent to a laboratory where the slide is prepared. Each specimen requires a shorter interpretation time, leading to increased efficiency and cost-effectiveness and material collected can be tested for HPV DNA (WHO, 2006, p. 93).

**c) Visual methods**

The other method used is known as direct visual inspection with acetic acid (VIA) or cervicospoty and it can be used as an alternative to cytological testing or can be used along with Pap-screening. VIA involves applying 3% to 5% acetic acid (vinegar) to the cervix using a spray or a cotton swab and observing the cervix with the naked eye after one minute. If characteristic, well-defined aceto-white areas are seen adjacent to the transformation zone, the test is considered positive for pre-cancerous cell changes or early invasive cancer. The results are immediately available, allowing treatment during a single visit and thus reducing loss to patient follow-up. Another advantage of VIA, not offered by Pap or HPV DNA tests, is that it allows providers to identify the small proportion lesions that are unsuitable for treatment with cryotherapy. VIA is also a method of treatments

suitable to limited resource settings (Internet About cervical cancer, 2008, p. 5).

Visual inspection with Lugol's iodine (VILI) is another method similar to VIA but involves applying Lugol's iodine to the cervix and examining for mustard-yellow areas. The results of the VILI are immediately available, which offers the advantage of follow up without delay (Internet About cervical cancer, 2008, p. 5).

**d) HPV DNA-based screening methods**

HPV DNA testing are new tests that can detect DNA from high-risk HPV types in vaginal or cervical smears. A sample of cells is collected from the cervix or vagina using a small brush or swab; then, the specimen is sent to a laboratory for processing. Detection of high risk HPV does not necessarily mean that pre-cancer or cancer is present, it indicates simply that there is an HPV infection. The significant advantage of it is that it can identify women who already have cervical disease in addition to those who are at risk for developing it (Internet About cervical cancer, 2008, p. 5).

U.S. Food and Drug Administration (2006) has announced the approval of Gardasil, the first vaccine developed to prevent cervical cancer, pre-cancerous genital lesions and genital warts due to Human Papilloma Virus (HPV) types 6, 11, 16 and 18. The vaccine is approved for use in females 9-26 years of age. The vaccine is effective against HPV types 16 and 18 which cause approximately 70% of cervical cancers and HPV types 6 and 11, which cause approximately 90% of genital warts. Therefore, this vaccine is a significant advance in the protection of women's health in that it strikes at the infections that are the root cause of many cervical cancers. It is given as three intramuscular injections over a six



month period, with the second dose given two months after the first and the third about six months after the first. However, females are not protected if they have been infected with that HPV type(s) prior to vaccination, indicating the importance of immunization before potential exposure to the virus. Gardasil also does not protect against less common HPV types not included in the vaccine, thus routine and regular pap-screening remain critically important to detect precancerous changes in the cervix to allow treatment before cervical cancer develops.

The second vaccine, GlaxoSmithKline's Cervarix, also protects against infection with two of the most common cancer-causing types of HPV, types 16 and 18 and is given in a series of 0.5ml injections. In this case, the second dose is given a month after the first and the third given six months after the first. Licensing for this vaccine was expected to be granted during the course of 2007 (U.S. Food and Drug Administration, 2006, p.3). In both the public and private sectors of Oshakati Health District the two vaccines mentioned are not yet available, but they are available at some private sectors in Windhoek.

**e) Follow-up and management of women with an abnormal (positive) test**

Screening by itself will not prevent every single case of cervical cancer. An effective system for follow-up and treatment of women who test positive is the most important component of a successful cervical cancer prevention programme (Ell, Vourlekis, Muderspach, Nissly, Padgett, Pineda, Sarabia and Lee, 2002).

One of the methods which can be used to diagnose cervical cancer following an abnormal

Pap-smear test is a colposcopy. The doctor uses a magnifying and illuminating scope to view the epithelial layer and surrounding blood vessels on the surface of the cervix, vagina and vulva. If any abnormal areas are observed, a colposcopic biopsy may be performed. A biopsy is the removal of a small piece of tissue for microscopic examination by a pathologist for precise histopathological diagnosis of the abnormalities (whether they are pre-cancerous or cancerous) and their severity and extent, so that treatment can be tailored to each case (Cherath et al., n.d.).

WHO (2006) further explained that other types of cervical biopsy may be performed. Endocervical curettage is a biopsy in which a narrow instrument called a curette is used to scrape tissues from inside the opening of the cervix for microscopic diagnosis. This is done if a woman has a positive Pap-smear test, but no abnormal areas are observed with colposcopy and there may be a lesion in the cervical canal. In this case, the endocervix can be examined with a special speculum and a sample of cells can be taken for biopsy.

A cone biopsy, or cold knife conization, is used to remove a cone-shaped piece of tissue from the cervix, including portions of the outer (ectocervix) and inner cervix (endocervix). Conization is recommended for the treatment of dysplasia when outpatient treatment is not feasible or not accessible, and to rule out invasive cervical cancer. It is a rather extensive operation, involving removal of a large area of the cervix with a surgical laser and is usually done under general, spinal or epidural anaesthesia. Because of possible side-effects, cold knife conization should be reserved for cases that cannot be resolved with cryotherapy or loop electrosurgical excision procedure (LEEP) (WHO, 2006, p. 138).

In Oshakati Health District, both private and public sectors do follow up and manage women with positive (abnormal) tests with biopsy, colposcopy and conization. These procedures are conducted either at Intermediate Hospital Oshakati or the Ongwediva Medi-Park Private Hospital.

Cryotherapy is another method which can be used to eliminate pre-cancerous areas on the cervix by freezing them. It involves applying a highly cooled metal disc (cryoprobe) to the cervix, and freezing its surface using carbon dioxide (CO<sub>2</sub>) or nitrous oxide (N<sub>2</sub>O) gas. The cryoprobe is applied to the cervix twice, for three minutes each time, with a 5-minute thaw between. Cryotherapy is highly effective for the treatment of small lesions, but for larger lesions the cure rate is below 80% (WHO, 2006, p. 136).

A loop electrosurgical excision procedure (LEEP) is a cone biopsy using a wire that is heated by an electrical current to remove abnormal areas from the cervix. LEEP aims to remove both the lesion and the entire transformation zone. The tissue removed is sent for examination to the histopathology laboratory, allowing the extent of the lesion to be assessed. LEEP treats the lesion and, at the same time, produces a specimen for pathological examination. It is successful in eradicating pre-cancers in more than 90% of cases. Cone biopsies can be used to determine whether abnormal cells have invaded below the surface of the cervix. They also can be used to treat many pre-cancers and very early cancers (WHO, 2006, p. 137).

## **2.5 OPPORTUNITIES/FACILITIES FOR WOMEN TO OBTAIN INFORMATION ON HEALTH PROMOTION AGAINST BREAST AND CERVICAL CANCER**

The Government of Namibia recognizes health as a fundamental human right and is committed to the achievement of “the goal of health for all Namibians by the year 2000 and beyond”. The first National Safe Motherhood Conference held by the Ministry of Health and Social Services in November 1991 already underlined the government’s commitment to women and women’s health (MOHSS, 1992, p. 65).

Since independence, most health centres have been upgraded to be able to provide the necessary antenatal, post-natal and other maternal services close to the people. For clinics and hospitals to support Primary Health Care (PHC), they offer daily comprehensive and integrated services which include: antenatal and post natal care, nutrition education, general health education, essential laboratory backup, maternity services, family planning and regular community health worker training and outreach.

Namibia has an existing and strong health sector which has a commitment to integrated reproductive health service. It also opted for integrating breast and cervical cancer prevention into other primary health services (MOHSS, 2008, p. 21). This approach is supported by Bradley, Barone, Mahe, Lewis and Luciani (2005) who advocated that the goals of any cervical cancer prevention program should be to achieve high coverage of the population at risk and to ensure that women with positive results are properly managed. This can be achieved by screening services to be incorporated into primary health care and

viewed as an essential component of well-woman services.

Two to three nurses and a gynaecologist had been designated to manage the services (managing the screening itself, notifying women of tests results and ensuring follow-up care) at the Intermediate Oshakati Hospital. This has an advantage that the skill levels are maintained and high-quality screening are ensured with the fewer but dedicated staff rather than a greater number of multipurpose staff; although this also has implications for service coverage during leave absences or when there is a high rate of staff turnover.

Most of the government's health facilities in Namibia use static health services in breast and cervical screening depending on the infrastructure and other resources available. The Cancer Association of Namibia is the only non-governmental organization offering Pap-smears and breast examinations mobile services through the country so far. For the year 2005, there were 179 cases of breast cancer compared to 129 cases of cervical cancer reported. In 2007, the Cancer Association of Namibia carried out 7087 Pap-smear examinations countrywide of which 6890 were negative (MOHSS, 2008, p. 21). Recently, in 2009, the organization trained six nurses at Oshakati Health District on how to conduct Pap-smear tests.

### **2.5.1 Levels of the health care system where prevention information on breast and cervical cancer can be obtained**

**Community level:** At the community level, there are various community-based, faith-based and other non-governmental organizations (NGOs) where prevention information on breast

and cervical cancer can be obtained.

In the Oshakati Health District, there are many NGOs, like Project Hope, supporting caregivers of orphans and vulnerable children by giving them loans and training field promoters to register new cases and tracing defaulters on treatment of Tuberculosis. However, they do not give information concerning breast and cervical cancer screening. Tonata is another supportive NGO for people living with HIV. They do give information on screening of breast and cervical cancers specifically to their members on workshops and radio programmes every Sunday at 14H00. Yelula/U-khai is also another NGO supporting people living with and affected by HIV/AIDS but they do not give information concerning breast and cervical cancer screening. Catholic AIDS and ELCIN AIDS Actions are two faith-based organizations in the district offering counselling and training infected and affected people on prevention, sexual behavioural changes and positive living with HIV/AIDS. They also do not conduct health education on breast and cervical screening

According to studies done in rural India, and at Dallas and Texas in USA, most women sourced their knowledge from local NGOs (Cornforth, 2002; Rao et al., 2005; Oluwatosin and Oladepo, 2006). These NGOs trained women on BSE techniques, for example the mirror method for visual inspection of the breast and the lying down position for breast palpation and while bathing. At the end of the session, an illustrated booklet on the topic was distributed among the women to reinforce what was taught. NGOs can also make significant contribution to breast and cervical cancer awareness through sponsoring health talks, symposia, seminars and workshops. Some women surveyed in the studies above sourced their knowledge on breast health and breast cancer information either from the

television or the print media, radio, newspapers and magazines.

Some working women sourced their knowledge from their workplace as part of their occupational health safety work programme. Forty percent of young women surveyed said they turn to family members, elders, neighbours and friends for breast health and breast cancer information, while some got their knowledge from secondary, high and tertiary schools (Cornforth, 2002; Rao et al., 2005; Oluwatosin and Oladepo, 2006).

A small group may hold focus group discussions (small meetings) with friends, mothers and aunts which will empower women with prevention information. These women knew each other and that is the power in this approach. That shows a real sense of support among women (Tatum, Wilson, Dignan, Paskett and Velez, 1997; Ross, 2000).

Paskett et al. (1999), in a study done among African-Americans residing in low-income housing communities, used lay health educators to deliver education messages and develop a sense of self-efficacy in the women. The community-based interventions included the following:

- (i) “Women’s Fest” a free party held in the community that included food, educational classes on cancer, cholesterol, blood pressure and diabetes screening.
- (ii) A church program that included a minister’s luncheon and a lay health educator program, “Taking Care of Our Sisters” for female church members. Dunn, Oliver and Lyons’ (2005) study added that faith communities facilitated access to the lay community as

they exist practically in every community and have the ability to influence the hardest-to-reach populations. Church members of the faith communities have the potential to not only receive life saving messages, but to disseminate health information to others in the community who do not attend a particular faith community (Matthews, Nerida, Julie and Calhoun, 2006). Disseminating health information is vital in decreasing the morbidity and mortality of this rural community.

(iii) Educational brochures and leaflets especially designed to address identified barriers such as “Where to get a Mammogram and Pap-smear test”, although they produce only limited and short-lived changes in knowledge in literate populations and are often not read by the targeted audience (Okobia et al., 2006, p. 8).

(iv) Mass-media techniques such as public rallies, newspaper and radio advertisements appear to be more effective media to reach a wider audience but the benefit of these media may be limited in rural communities with limited access to these media. For instance, more articles in the newspapers about breast and cervical cancer could enhance knowledge (Modeste et al., 1999; Okobia et al., 2006).

(v) The explosion of telecommunications in literate and urban populations enhanced the ability to communicate the results of studies and recommendations directly with the public which increased the public health community.

(vi) Monthly classes in each community conducted by a lay health educator in a group setting.



- (vii) Targeted mailings and door knob hangers with invitations to events.
- (viii) Community health workers have to do one-to-one educational sessions in women's homes.

Some studies have shown that communication and advocacy with influential, medical and political leaders can positively affect the community's trust and willingness to participate in breast and cervical cancer prevention programs. The use of a constituency counsellor office as an information centre to distribute screening materials and community-wide cancer awareness event, as it is done annually by the Namibian Cancer Association, will be very useful in this regard. The Government may join with traditional partners, including tribal leaders and councils to offer education and outreach in community settings.

**Health Centre-Primary Care Level:** These are primary care facilities with trained staff and regular working hours. Antenatal and post natal services may be available. Screening services of breast and cervical cancers may be provided depending on the resources and health providers available. Health providers at this level include nurses, community health workers and sometimes doctors (MOHSS, 2001).

There are five health centres in Oshana Region, namely Okatana, Ou Nick, Oshakati, Ondangwa and Ongwediva Health centres. All of them provide pap-smear tests as a routine screening and as part of post natal services as they do have resources and specialized health providers. However, there are eleven (11) clinics in Oshana region but only eight (8)

provide pap-smear services as the rest do not have enough spaces and speculums. Women with abnormal (positive) results are referred to the district hospital, Oshakati for follow-up and treatment. Six nurses in Oshakati Health District were trained on how to do pap-smear examinations by the Cancer Association of Namibia in 2009. During nurses' outreach programs to the community, information is given on breast and cervical cancers.

Breast self-examination (BSE) is demonstrated to women by nurses and community health workers especially in health centres and few clinics where there are sufficient staff to provide the service. Clinical Breast examination (CBE) is only a routine during ante-natal and post natal services. The only posters available in most centres and clinics are for BSE procedures. There are no leaflets concerning the promotion of prevention of breast and cervical cancers in both health centres and clinics.

Different studies done in rural India, and Dallas and Texas in USA reported that the majority of women endorsed that they would seek immediate help in case of detection of any lump and approach either a doctor or a health worker and this shows a high acceptance of health workers as educators. This is probably due to the better rapport that they have with the community especially women. It also brings about an increased awareness among women, empowering them to take care of their own health as well as inducing them to seek medical attention at the earliest optimums (Cornforth, 2002, p. 2; Rao et al., 2005, p. 2).

**District Hospital-Secondary Care Level:** Intermediate Hospital Oshakati is the only district hospital in the region that provides general, medical, paediatric and maternity services, surgical care, inpatient and outpatient care, and sometimes specialized care.

Patients are referred from health centres and practitioners from other district hospitals. Laboratory services, including cytology and histopathology, are available. To expand the number of clients seeking services, nurses often undertake outreach activities – promoting their services to community members who may not have been aware of the provider or of the services offered. Community outreach strategies may include educational sessions, literature distribution, community events, and media and church programmes. However, many integrated programmes miss individuals who need preventive health services by failing to systematically screen their existing clients.

Operations research projects in Latin America have demonstrated that integration can be made more effective through what is called “in-reach”. Providing more services to individuals who already make use of public health facilities in other ways, using in-reach strategies for example chart reminders, in-service meetings, patient-directed literature and simple screening instruments to produce changes in the knowledge and behaviour of clients and providers (Vernon and Foreit, 1999, p. 2).

Integrated health programmes in hospitals and health centres need to make the in-reach a higher priority. Unlike providing information about clinics and services during ordinary outreach activities, a simple brochure and posters in the waiting rooms give clients information when they are most able to act on it. A simple screening instrument fixed to the health provider’s consulting room wall can also act as a constant reminder of the need for client screening (Vernon and Foreit, 1999, p. 2).

Brull, Ghali and Quan (1999), in a study done in a teaching hospital in Calgary, stated that

patients admitted in the hospital had numerous opportunities for prevention, many of which had not been addressed during hospitalization. Although nurses addressed some of these opportunities, doctors missed many opportunities for prevention and thus did not capitalize on patients' likely heightened receptiveness to prevention. It was suggested that doctors may need to increase their attention to preventive care in order to improve health promotion. Perhaps the development of a preventive pre-discharge checklist could serve as a reminder for doctors to consider prevention once acute medical issues have been resolved.

Paskett et al. (1999) stated that clinic-focused interventions designed to address provider, system, and patient barriers to conducting breast and cervical cancer screening and included one-on-one counselling sessions and personalized letters for follow-up testing for women who had abnormal test results. Vernon and Foreit (1999) mentioned that almost all public and not-for-profit health care providers in Latin America offered reproductive and maternal and child health care in their hospitals, clinics, and health posts. Such services include prenatal and postnatal care, family planning, preventive services for breast and cervical cancer, and the diagnosis and treatment of sexually transmitted diseases. In addition, women can bring their children to health care facilities for paediatric services and well-baby care, which creates additional opportunities for providing reproductive health care. Although these services are usually available at the same time and in the same locations, they are often underutilized and their existence may not be well-known to the client population.

In Latin America, it is not so much an absence of services but a lack of promotion of existing services that is a principal barrier to increasing the utilization of reproductive health

care (Vernon and Foreit, 1999, p. 1). A study in Guatemala found that approximately 29% of women attending health centres did not know that family planning services were available in their health centres. Another 11% were not aware that well-baby services were offered at these clinics. A Peruvian non profit organization offered many new reproductive health services in 1995, most of which were underutilized. In 1996, the organization surveyed clients to determine which additional services they might wish to receive from the organization's health clinics. More than 34% of clients surveyed said they wanted treatment for one of the following health problems: sexually transmitted diseases, cancer screening and other reproductive health services that were already being offered by the clinic (Vernon and Foreit, 1999, p. 2).

One reason for this lack of awareness is that clients tend to seek one health service at a time. Health providers, in turn, tend to concentrate on treating the specific problem they are presented with and do not always inform clients about preventive services. They also do not screen for needed preventive services even when they are readily available.

There are several benefits associated with better screening and the provision of more health services at each clinic visit. The extent of clients' unmet needs for preventive health care could be reduced, and clients would have to spend less time and money travelling and waiting for services. From the program's standpoint, it should be more efficient and less costly to provide multiple services in a single visit than to provide the same services at separate visits.

## **2.6 SUMMARY**

This chapter describes how the conceptual framework was utilized. A literature review on breast and cervical cancers prevention had been done which lay as a foundation of this study.

## **CHAPTER 3**

### **RESEARCH METHOD**

#### **3.1 INTRODUCTION**

This chapter describes how the study was conducted at the Oshakati Health District in Oshana Region in Namibia. It describes the research design used in the study, including the pilot study, data collection (the population, sampling etc), ethical considerations and measures to ensure validity and reliability.

#### **3.2 RESEARCH DESIGN AND METHOD**

##### **3.2.1 Research design**

A quantitative, non-experimental design was used for this study. This approach was selected in order to provide a complete picture and understanding of the awareness knowledge of women regarding health promotion on prevention of breast and cervical cancers (De Vos, 1998, p. 8).

The study is explorative in nature because the literature was explored in order to gain more insight and understanding of the concept “health promotion”, factors that impede health promotion as well as perceptions and knowledge of women in Oshakati Health District with regard to the usage of “health promotion” on prevention of breast and cervical cancers in

different health facilities.

It is also descriptive in nature because it described the phenomenon as accurately as possible by using statistical, quantitative results from a sample representing population (Polit, Beck and Hungler, 2001, p. 19). A contextual study involves conducting a study within a setting that includes the social factors like level of education, social networks and economic environment. This study is contextual because it investigated the information provided to women regarding health promotion on prevention of breast and cervical cancer in Oshana Region.

### **3.2.2 Research method**

A research method can be defined as a systematic set of techniques and procedures that a researcher followed in order to collect and analyze data (Polit and Hungler, 1999, p. 186). In this study, a survey was used to search for accurate information on the extent of knowledge of women regarding health promotion on prevention of breast and cervical cancers in Oshakati Health District.

### **3.3 POPULATION**

A target population is defined as the entire group of people that is of interest to the researcher or in other words the entire group that meets the criteria the researcher is interested in studying (Burns and Grove, 2005, p. 342). The accessible population in this study included all women of child bearing age (i.e. 15-49 years because cervical and breast



cancers have their highest incidence in this group of women) living in Oshakati Health District which is 41,985 according to MOHSS' Health Information System for Oshana Region.

### **3.4 SAMPLING**

Sampling refers to the process of selecting the subjects from the total population in order to obtain information regarding a phenomenon in a way that represents the population of interest (Brink, 1999, p. 133). The research sample comprised of 419 women altogether which ensured a 95% sampling confidence level. The respondents were selected randomly.

The type of random sampling utilised was “systematic sampling” as described by Polit et al. (2001, p. 243). Based on their description, every  $k^{\text{th}}$  case from some list or group is used. In this study every second woman of child bearing age admitted in Intermediate Hospital Oshakati, depending on her condition, was approached to be part of this study. Admission registers of maternity, surgical and gynaecological wards, depending on respondents' conditions, were mostly used as lists where women had been drawn from. Thus, random selection of every second woman admitted in the Intermediate Hospital Oshakati in the age of women child bearing (15-49) and who was willing to participate has been interviewed (Burns and Grove, 2005).

### 3.5 RESEARCH INSTRUMENT

A structured questionnaire was used as the research instrument. The questionnaire consisted of open-ended and closed questions. The questionnaire was designed to describe the profile of women of child bearing age (15-49) who were admitted at Intermediate Hospital Oshakati at a time (see annexure A, Section A); to determine their level of awareness knowledge regarding health promotion on prevention of breast and cervical cancer (see annexure A, Section B) and to identify existing opportunities/facilities available to these women where they can get health promotion and prevention information sessions with specific reference to breast and cervical cancer in Oshakati Health District (see annexure A, Section C). The researcher compiled the questions from the available literature (books, journals and internet) with the help of colleagues, who have experience in research design.

**Sections A:** This consisted of 8 questions that dealt with the profile of women of child bearing age [15-49] who were admitted at Intermediate Hospital Oshakati at a time.

**Section B:** This section consisted of 8 questions that dealt with the awareness knowledge on causes, risk factors, signs and symptoms and screening methods used for early detection of breast and cervical cancer in Oshakati Health District. Question 11 dealt with the causes of breast and cervical cancer whilst question 12 dealt with risk factors of both. Questions 13 -14 dealt with the warning signs and symptoms of both and questions 15-16 dealt with screening methods available for early diagnosis and treatment of breast and cervical cancer.

**Section C:** This section dealt with the availability of any existing opportunities/facilities for

women and where they could get health promotion and prevention information sessions with reference to breast and cervical cancer.

In total, the questionnaire consisted of 52 closed questions and 10 open-ended questions. Guidelines and instructions were given on how to complete the questionnaire.

### **3.6 MEASURES TO ENSURE VALIDITY AND RELIABILITY**

#### **3.6.1 Reliability**

Reliability refers to the consistency with which an instrument measures the attribute (Polit and Hungler, 2001). As part of checking the reliability and validity of the research instrument, the researcher conducted a pilot study in the Tsandi Health District so as to test the feasibility of the questionnaire. The information obtained was used to improve the research instrument (Polit and Hungler, 1999, p. 44). Ten women were used in the pilot study and they were excluded from the sample of the population in the main study.

Reliability assisted the researcher to identify difficulties in the method and materials which were used and investigated the accuracy and appropriateness of the questionnaire (Burns and Grove, 2005, p. 374; Bless and Higson-Smith, 2000, p. 129). Consequent to the pilot study, some questions relating to gravida and parity of women and how often have had cervical smears taken which were omitted were later added. The questions were also cross-checked for any ambiguities or repetitions. All the minor problems that were identified were corrected and the questions were refined.

### **3.6.2 Validity**

Validity refers to the degree to which the instrument measures what it is supposed to be measuring (Polit and Hungler, 2001, p. 308). The structured questionnaire contained questions relating to the important aspects covered in the literature review. In order to ensure content validity, expert health professionals were asked to review the questionnaire and their opinions and suggestions were incorporated in the final version of the questionnaire (Brink, 1999, p. 167).

## **3.7 DATA COLLECTION**

The researcher personally distributed four hundred and nineteen (419) questionnaires to every selected respondent on admission at the hospital between March 2008 and October 2008. The respondents who could neither read nor write and/or were unable to fill the questionnaire because of their conditions, were assisted by the researcher and some assistants to complete the questionnaires. As a full time government employee, data was collected only after working hours from 17h00 up 19h00 and sometimes during weekends. This resulted in the whole process taking up to eight months that was March 2008 till October 2008.

The research assistants comprised of some students, pupil enrolled nurses and professional nurses. These assistants were orientated on the objectives of the study and questionnaires items before they were allowed to collect data. In addition, these assistants only helped the

respondents in filling the questionnaires under the supervision of the researcher who was always with them at the same time in the same ward. In this way, it was easy to answer and clarify questions raised by the assistant. After all the 419 questionnaires were completed, they were collated and sent for data analysis.

### **3.8 ETHICAL CONSIDERATIONS**

During the study and throughout the research process, the several ethical aspects were taken into consideration. Permission to conduct the study was sought from the necessary institutions and authorities: the University of Namibia; the Permanent Secretary of the Ministry of Health and Social Services (MOHSS) and the Director of the Ministry of Health and Social Services, Oshana Region.

Moreover, the respondents were given the choice to withdraw from the study at any given time. This ensured informed consent and voluntary participation. In other words, none of the respondents was forced to provide information against her will.

Confidentiality and anonymity were ensured because no names or other personal details were provided on the questionnaires. Confidentiality was further enhanced by ensuring that the information was kept private since only the researcher and the supervisor had access to the information. No information was disclosed or discussed with any irrelevant authority or third party.

### **3.9 SUMMARY**

This chapter describes how the research was conducted. It covered the research design, population, sampling, research instrument, measures taken to ensure reliability and validity, data collection and ethical considerations. The structure of the questionnaire and the technique of collecting data were also explained.

## CHAPTER 4

### DATA ANALYSIS RESULTS

#### 4.1 INTRODUCTION

The previous chapter dealt with design and method on how the information was gathered. In this chapter the results of the study will be discussed.

##### **Purpose and Objectives**

The study was designed to assess knowledge and practices of women and options available where they can get prevention information sessions regarding health promotion on prevention of breast and cervical cancer.

Questionnaires were used to collect the data. Face-to-face interviews, "where the researcher or an assistant interviewer presented the items orally", were conducted with most respondents who could not fill out a questionnaire due to their inability to read or write or because they did not understand English. However, some few questionnaires were self-administered by respondents who can read, write, and understand English, but with the interviewers being close to them in case of a need for clarity on some of the questions. The assistant researchers were trained by the researcher on how to administer the questionnaire, record the responses and the proper meaning of concepts in the local language.

The interviews were conducted on a one to one basis between the interviewer and the respondent though it was within the reach of other patients. By administering the questionnaire this way, the need for confidentiality and the cultural norms of the respondents were satisfied. Very few women declined to participate in the study but data collection continued until 419 questionnaires were administered.

The questionnaire consisted of three sections (see Annexure A):

- A. Socio-demographic information.
- B. Assessing the awareness knowledge of women on causes, risk factors, signs and symptoms and screening methods used for early detection of breast and cervical cancer.
- C. Assessing the availability of any existing opportunities/facilities for women where they can get health promotion and prevention information sessions with reference to breast and cervical cancer.

Closed and open ended questions were used. Closed questions were analyzed using the Statistical Package for the Social Science (SPSS). Basic descriptive statistics, frequencies and percentages were performed on all variables. Inferential statistics were used to do correlations with age and education. Pearson chi-square test was used to assess relationship percentage scores and socio demographic variables. Missing values were excluded from calculations of p-values and p-values below 0.05 were considered statistically significant. The researcher examined the practice of prevention of breast and cervical cancer to determine factors that might influence the behaviour. Variables considered for this analysis



included education and age. Open ended questions were scrutinized and important words were highlighted

## 4.2 DATA ANALYSIS OF QUESTIONNAIRES

### Section A: Socio-demographic information

The socio-demographic characteristics of study respondents are shown in Tables 4.1-4.2 and figures 4.1-4.5.

#### 4.2.1 Section A: Item 2: Wards to which respondents were admitted

**Table 4.1: Frequency distribution of wards to which respondents were admitted**

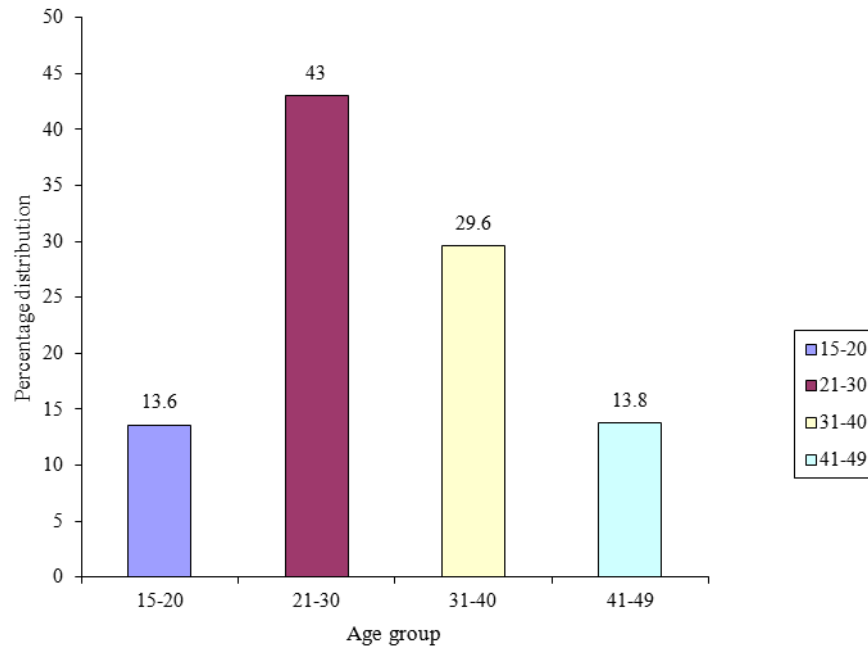
(N=419)

Ward	Frequency	Percentage (%)
Eye	1	0.2
Gynaecology	164	39.1
Surgical	55	13.1
Medical	3	0.7
Maternity	193	46.1
Total	416	99.3
Missing	3	0.7
Total	419	100.0

Table 4.1 showed that most of the respondents were in ward 14 the maternity ward, followed by ward 4, the gynaecological ward and ward 6, the surgical ward. It was easy to access these patients because of their satisfactory conditions compared to patients in ward 8 which is a medical ward and who were in most cases very sick.

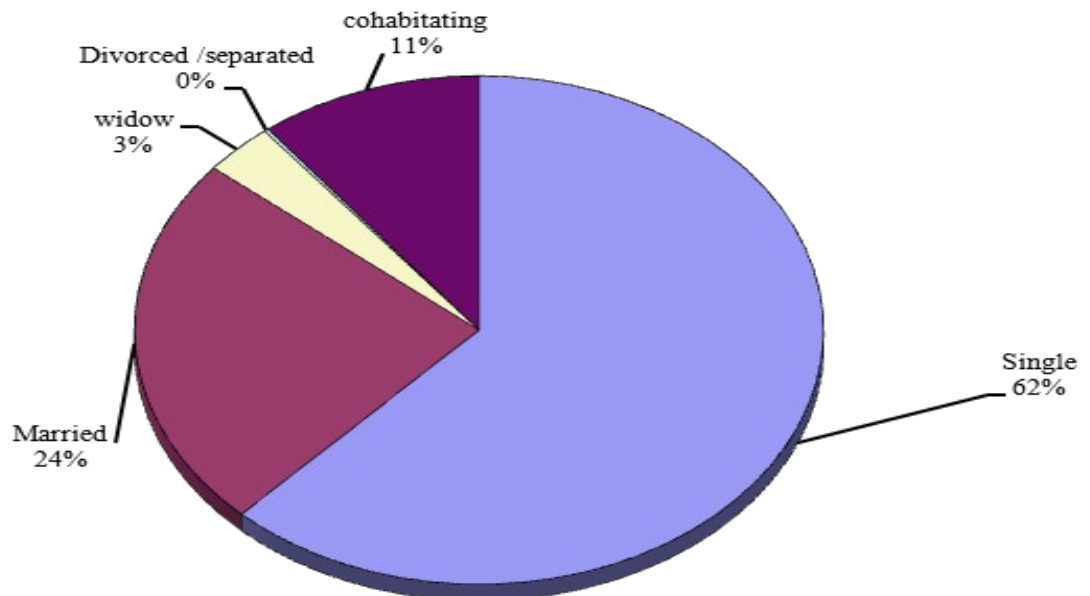
#### **4.2.2 Section A: Item 3: Age of respondents**

From figure 4.1 it can be seen that the majority of respondents are in the age group of 21-30 years. This can be because this age group is the highest peak of child bearing age women, describing them as being sexually active, more likely to have exposure to HPV and to develop pre-cancerous lesions. Traditionally the assumption has been that this age group accesses the healthcare system more often in order to receive contraception and pregnancy care. Most study respondents were from maternity and gynaecological wards which are all obstetrical cases (Twinn, Holroyd, Fabrizio, Moore and Dickinson, 2007, p. 19; Lockwood-Rayermann, 2004, p. 360).

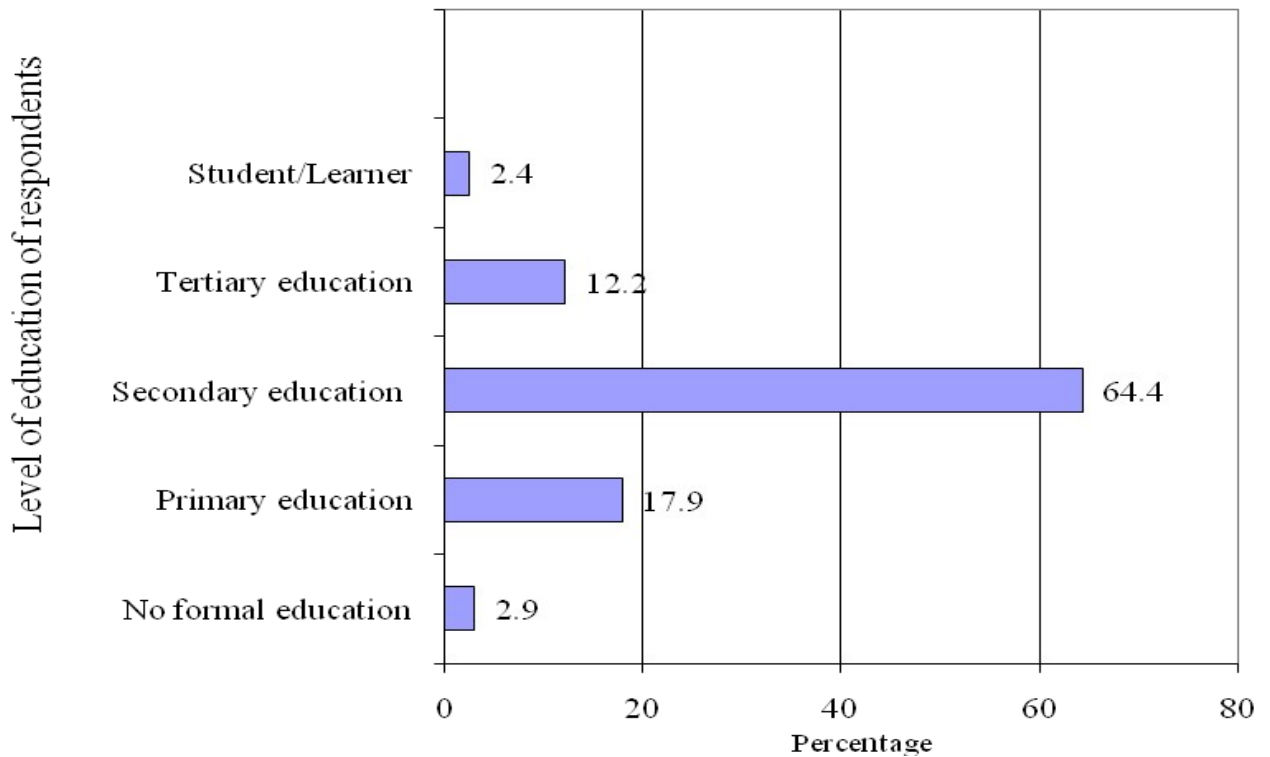
**Figure 4.1: Respondents' age group distribution (N =419)**

#### 4.2.3 Section A: Item 4: Marital status of the respondents

From figure 4.2 it was found that more than half of the study respondents (62.1 %, n = 260) were single. The possible implication of this is that these women may have partners who have more than one sexual partner and they may be at risk of developing cervical dysplasia (“Populations at risk for cervical cancer”, 2000). Twinn et al. (2004) stated that having a family, and being married (social influence) is a strong support system which can encourage women to attend cancer screening.

**Figure 4.2. Marital status of respondents (N =419)****4.2.4 Section A: Item 5: Level of education**

Nearly two-thirds (64.4%, n = 270) of the study respondents had secondary education (Figure 4.3) which means that most respondents were literate and were able to read, understand and to act on information of health promotion and prevention of breast and cervical cancer appearing on the mass media.

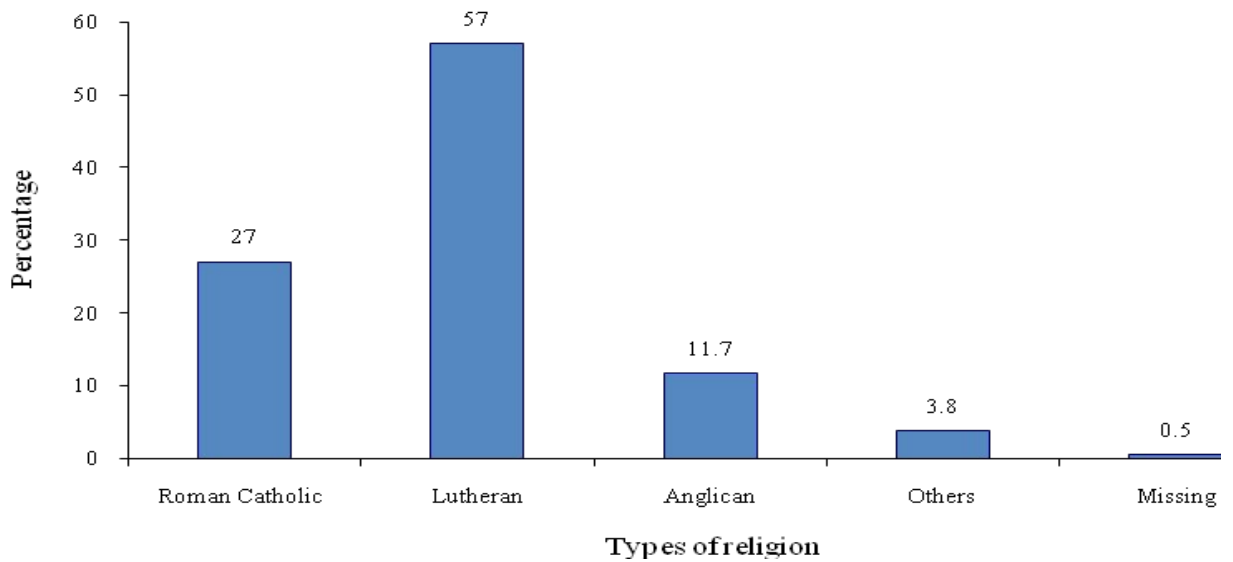
**Figure 4.3 Level of education (N =419)**

Studies by Lockwood-Rayermann (2004, p. 355) and Lee (2000) have reported that the level of education is a contributing factor to a woman's ability to understand the importance of healthcare, the diagnosis of breast and cervical cancer and the benefits of screening. Generally, the better educated a woman is, the healthier she is likely to be. The better the education, the more likely the women is to adopt healthy behaviours and healthy lifestyles. However, Breitkopf, Pearson and Breitkopf (2005) advised health care providers to exercise caution when using reported education level as a guideline for educating and communicating with clients about cancer screening, as many clients have low reading levels. Health care providers should use effective educational techniques which tailor information to populations with low literacy like the use of pictures and videos as well as clarifying with clients what particular words mean to them.

#### 4.2.5 Section A: Item 6.1: Religious affiliation of respondents

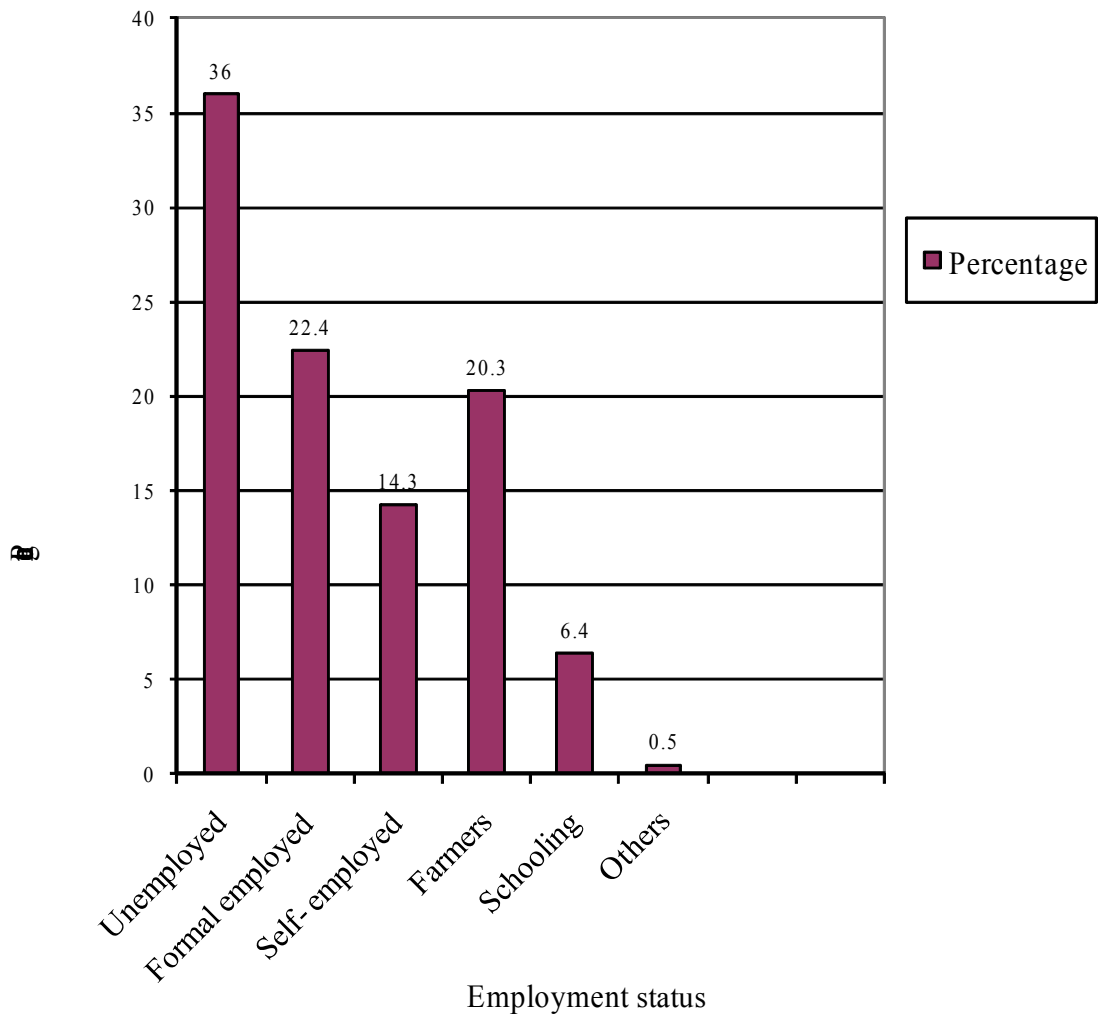
Nearly all the respondents (99.5%, n = 417) were affiliated to some religious organisation (Figure 4.4). The majority of respondents were Lutherans (57.0%, n = 239), 27.0% (n = 113) were Roman Catholics, 11.7% (n = 49) were Anglicans and the rest were from different Pentecostal denominations. Dunn et al. (2005)'s study found that churches have a strong social influence in their communities as they can facilitate access to information of cancer screening to the lay communities as they exist in practically every community and have the ability to influence the hardest to reach populations.

**Figure 4.4. Religious affiliation of respondents (N =419)**



Church members have the potential to receive life saving messages and to disseminate health information to others in the community who do not attend a particular faith community. The oral culture of disseminating health information is vital in decreasing the morbidity and mortality of this rural community.

**Figure 4. 5 Employment status of respondents (N = 419)**



#### **4.2.6 Section A: Item 7: Employment Status**

The majority of the women (36.0%, n = 151) were unemployed, 22.4% (n = 94) had formal employment, 20.3% (n = 85) were subsistence farmers, and 14.3% (n = 60) were self-employed, 6.4% (n = 27) were still students and the rest were under other categories.

Lockwood-Rayermann (2004, p. 355)'s study have found that economic circumstances (environmental resources) are vitally important factors in the health promotion of any community. Employment is expected to provide a source of income to the individual as well as an opportunity for access to the employer provided insurance coverage at either minimal or no expense to the employee (Gosschalk and Carrozza, 2009). Without employment most individuals have limited access to affordable insurance unless the person is a dependent child or married to an individual who has health insurance benefits.

Another aspect of income includes an individual's willingness to pay (for example transport) and the influence it has on her degree of risk behaviour. It also explores the impact when a spending decision must be made in the midst of uncertainty. Given an option between meeting the basic needs of food and shelter versus preventive measures, it has often been presumed that the latter will be neglected without consideration to the long-term impact on earnings and productivity.

Generally, the more affluent the community, the better the level of health promotion of a community against breast and cervical cancer will be. Economic factors are important in health, for example there are poor communities which do not have spare money to pay for visits to doctors and to hospitals (Young et al., 2003, p. 25). Figure 4.5 indicates the employment status of respondents.

#### **4.2.7 Section A: Item 8: Membership of Medical health insurance/medical aid scheme**

Table 4.2 showed that the majority of the study respondents (88.5%, n = 371) were not



members of a medical health insurance/medical aid scheme while only 10.7% (n = 45) were covered by a medical health insurance/medical aid scheme.

**Table 4.2 Membership of medical aid fund/insurance (N=419)**

Medical health insurance/ Medical aid scheme	Frequency	Percentage (%)
Yes	45	10.7
No	371	88.5
Sub total	416	99.2
Missing	3	0.7
Total	419	100.0

Analysis of a follow up question (Item 8.1) indicated that all (n = 45) of those covered by a medical health insurance/medical aid scheme were aware that these schemes financed the screening of both breast and cervical cancer. Lockwood-Rayermann (2004); Abraido-Lanza, Chao and Gammon (2004); Rodriques, Ward, Perez-Stable (2005); and Gosschalk and Carozza (2009) are all of the opinion that having an insurance provider will generally provide a female with a payment source for screening either as a result of mandate or because of such screening being a covered service on the plan, resulting in increased levels of screening. Without insurance coverage an individual's ability to afford care is greatly dependent on her income and access to community or public health services.

### **4.3 SECTION B: AWARENESS KNOWLEDGE ON METHODS OF EARLY DETECTION AND DIAGNOSIS OF CERVICAL AND BREAST CANCER**

Forty questions were designed to elicit respondents' knowledge about risk factors, causes, common signs and symptoms and methods of early detection and diagnosis of cervical and breast cancer.

#### **4.3.1 Section B: Item 9: Awareness knowledge of breast and cervical cancer**

A large proportion of the study respondents (89.3%, n = 374) had heard of and were aware about both breast and cervical cancers while (7.2%, n =.30) never heard about both breast and cervical cancers.

A Chi-square test showed a statistically significant relationship between knowledge of awareness of both cancers and age group. While women between 21-40 years tended to indicate "yes"; women younger than 20 years tended to say "no" to a lesser extent (Chi-square with two degrees of freedom = 35.532,  $p=0.000 < 0.001$ ). By implication, older women seem to be more aware of both cancers than younger women.

**Table 4.3 Outline of awareness levels on different types of cancer (N=419)**

Awareness knowledge of cancers	Frequency	Percentage (%)
Breast and cervical cancer	374	89.3
No to both cancers	30	7.2
Only breast cancer	9	2.1
Only cervical cancer	6	1.4
Total	419	100.0

There was also a statistically significant relationship between age group and level of education of respondents. Women with secondary education and younger women (21-30 years) were more knowledgeable than other categories of age groups ( $p=0.000 <0.05$ ). There was no statistically significant relationship ( $p=0.13 >0.05$ ) between knowledge of awareness of cancers and level of education.

#### 4.3.2 Section B: Items 9.1 and 9.2: Awareness knowledge content of breast and cervical cancer

Items 9.1 and 9.2 were opened-ended questions asking what the study respondents had heard about breast cancer on one hand and about cervical cancer on the other hand.

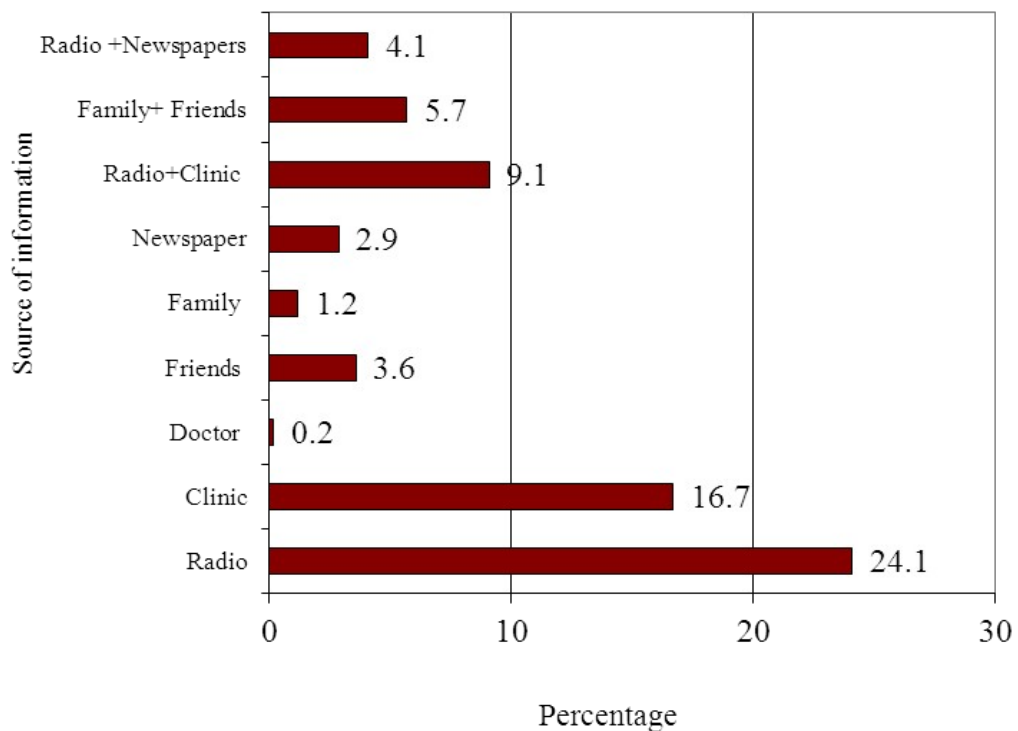
**Section B, Item 9.1, Breast Cancer:** The majority of study respondents (41.2%,  $n = 173$ ) had heard that breast cancer is caused by a lump in the breasts, 25.2% ( $n = 106$ ) had heard about breast cancer but they were not furnished with detailed information while 14.5% ( $n = 61$ ) were aware that breast self examination (BSE) is the necessary examination needed for early detection of breast cancer.

**Section B, Item 9.2, Cervical Cancer:** Forty percent (n = 168) of the study respondents had heard and believed that cervical cancer exists, but they did not have any further information. Seventy four (17.6%) have heard and were aware of cervical cancer, but they did not have much information while (14.5%, n = 61) were aware of the early screening method of pap-smear annually and at post-natal services which is needed for prevention of cervical cancer. Lastly, twenty respondents (4.7%) have heard that cervical cancer is a dangerous disease that can cause death, cannot be cured and as a woman you cannot bear children.

#### 4.3.3 Section B: Item 10: Source of information

##### a) Breast cancer

**Figure 4.6 Source of information on breast cancer (N =419)**

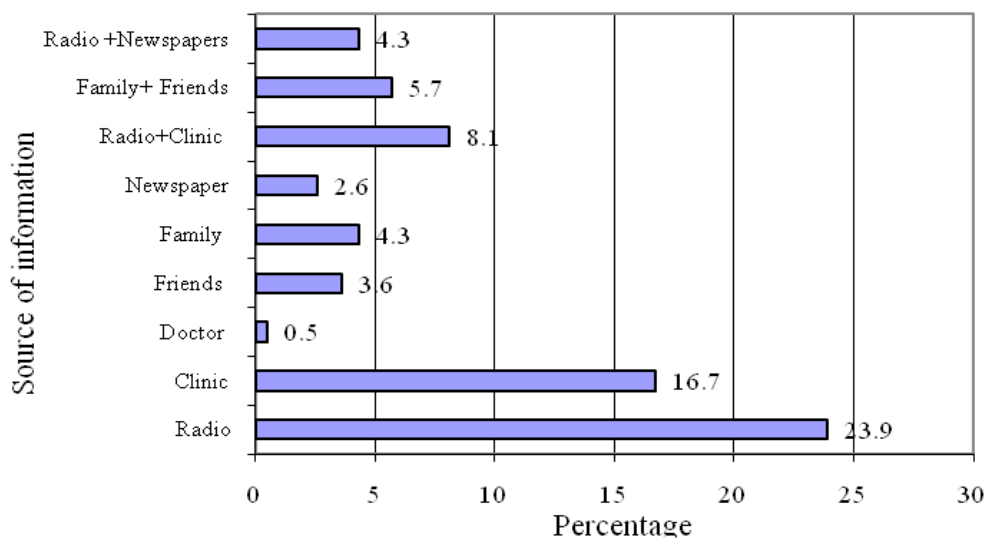


The respondents' leading source of information on breast cancer was the radio with 24.1% (n =101) followed by health workers (clinic, 16.7% n = 70), radio and clinic (9.1%, n =38), family and friends (5.7%, n = 24) and radio and newspapers (4.1%, n =17). Radio was by far the most source of information on breast cancer for the respondents with 24.1% (n = 101) claiming as their sole source and a total of 37.3% (n = 156) mentioning it as their source. Figure 4.6 indicates source of information on breast cancer.

#### b) Cervical cancer

One hundred (23.9%) respondents acknowledged the radio as their source of information on cervical cancer, followed by health workers (clinic), 16.7% (n = 70), radio and clinic 8.1% (n = 34), family and friends 5.7% (n = 24) and radio and newspapers 4.3% (n = 18). Radio was also by far the most source of information on cervical cancer for the respondents with 23.9% (n = 100) claiming as their sole source and a total of 36.3% (n = 142) mentioning as their source.

**Figure 4.7 Source of information on cervical cancer (N= 419)**



#### 4.3.4 Section B: Item 11: Knowledge on causes of breast and cervical cancer

Respondents were asked whether they have ever heard of the causes of breast and cervical cancer. The responses of respondents about the causes of breast and cervical cancer are summarised in table 4.4. The majority of the respondents have not heard about the causes of both.

**Table 4.4 Knowledge on causes of breast and cervical cancer (N=419)**

Awareness of causes of cancers	Frequency	Percentage (%)
Breast and cervical cancer	86	21
No to both cancers	315	75.2
Only breast cancer	16	3.8
Only cervical cancer	1	0.2
Missing	1	0.2
Total	419	100.0

There was no statistically significant relationship between the age groups and knowledge about the causes of breast and cervical cancer ( $p=0.07 >0.05$ ) or between the level of education and knowledge of causes of breast and cervical cancer ( $p=0.633 >0.05$ ).

#### 4.3.4 Section B: Items 11.1-11.2: Knowledge on causes of breast and cervical cancers

Items 11.1-11.2 were open ended questions on the causes of breast and cervical cancers.

**Section B: Item 11.1: Breast Cancer**

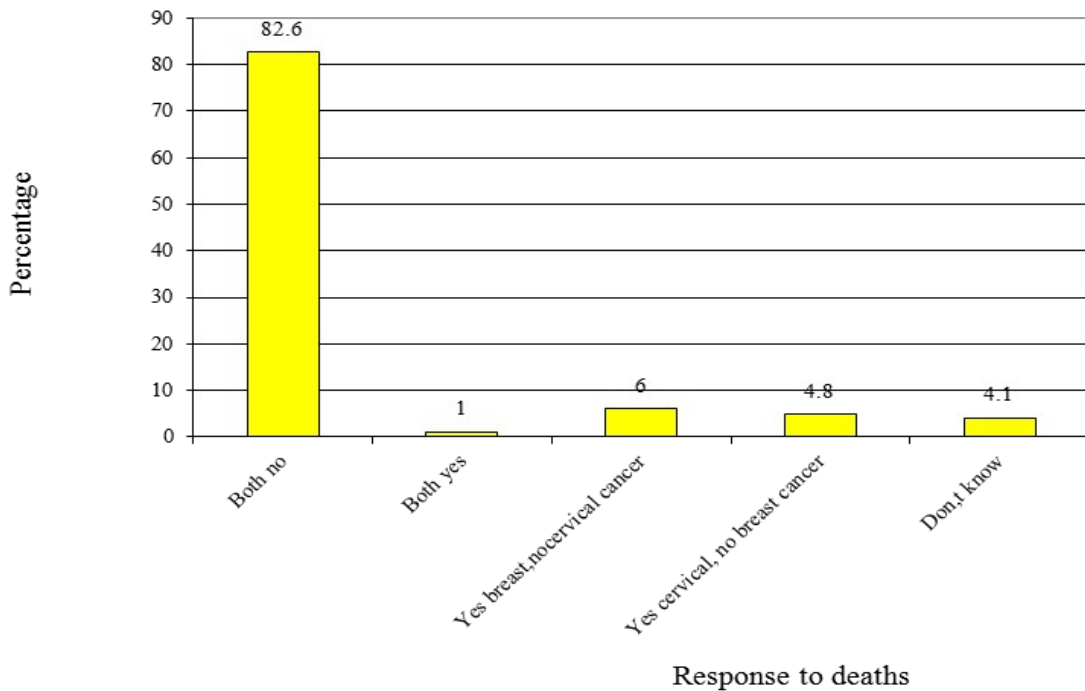
Only three respondents (2.9%, N=102).among who responded yes to the cause of breast cancer could identified that the cause was unknown. The. most frequently endorsed causes of breast cancer were lumps in the breasts (58.8%, n = 60, and wounds or sores on the breasts (12.7%, n = 13.

**Section B: Item 11.2: Cervical Cancer**

The most identified cause of cervical cancer was mass in the uterus (39%; n =34; N= 87); followed by organism without specifying the name of the organism like Human Papilloma Virus (HPV) (30%, n=26); increased number of sexual partners (20%, n=17) and early age of sexual intercourse (18%, n=16).

**4.3.5 Section B: Item 12: Death related to either breast or cervical cancer in the family**

The majority of the respondents (82.6%, n =346) said “no” the question: “Did anyone in your family die of either breast or cervical cancer?” while only 1.0% (n =4), said “yes” to both; 6% (n =25) said “yes” to breast cancer and “no” to cervical cancer and 4.8% (n = 20) said “yes” to cervical cancer and “no” to breast cancer.. The others (4.1%, n =17) did not know.

**Figure 4. 8 Deaths of respondents' family members (N =419)**

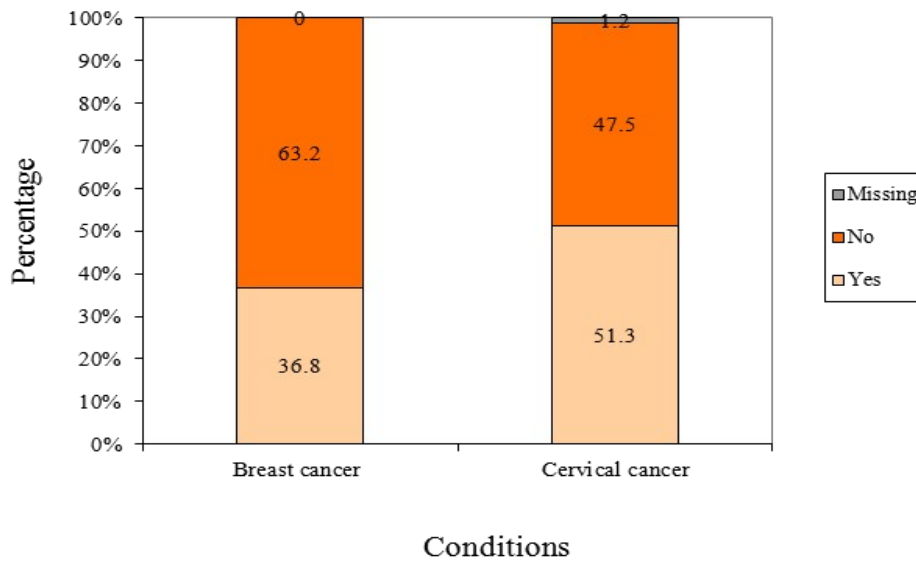
#### 4.3.5 Section B: Item 12.1: Which family member died of breast or cervical cancer?

Nine respondents (2.1%) claimed their aunts died of breast cancer, seven (1.7%) mentioned mothers, seven (1.7%) grandmothers, six (1.4%) extended family members and four (1.0%) sisters and cousins respectively. Concerning cervical cancer, six (1.4%) claimed grandmothers, four (1.0%) aunts, three (0.7%) mothers and two (0.5%) on both sisters and extended families.



#### 4.3.5 Section B: Item 12.2 & 12.4: Awareness knowledge on risk factors for breast and cervical cancers

**Figure 4.9 Breast and cervical cancer risk factors (N=419)**



From Figure 4.9, it can be seen that the knowledge of study respondents about risk factors for breast cancer was low as 63.2% (n =265) said they were not aware of the risk factors and only 36.8% (n = 154) claimed that they were aware of the risk factors. However, the knowledge of study respondents about the risk factors of cervical cancer were relatively better as 51.3% (n = 215) were aware of the factors that they thought might increase the risk of developing cervical cancer while 47.5% (n = 199) were not aware of the risk factors.

A statistically significant relationship was found between age group and knowledge of risk factors, where younger women tended to indicate a “no” whereas older women indicated a “yes” to a lesser extent (p=0.001 <0.05). Moreover, there was no statistically significant relationship found between level of education and knowledge of risk factors of breast cancer

( $p = 0.971 > 0.05$ ).

#### **4.3.5 Section B: Item 12.3: Risk factors of breast cancer explained to respondents**

Two (0.5 %) respondents were aware that first menstrual period before the age of 12 as a risk factor, three (0.7 %) were aware of never being pregnant, five (1.2 %) were aware getting the first baby after 30 years and four (1.0 %) were aware that risk factors are associated with previous history of cancer and smoking. Almost one third 32.2% ( $n = 135$ ) were aware that breast cancer could be inherited in some families and total of (34.6 %,  $n = 145$ ) mentioning it as a risk factor. Majority of respondents (62.3 %,  $n = 261$ ) acknowledged that none of risk factors was explained to them.

#### **4.3.5 Section B: Item 12.5: Risk factors of cervical cancer explained to respondents**

Of the respondents who responded yes to the risk factors of cervical cancer (10.2%,  $n = 22$ ,  $N = 216$ ) thought that failure to use condoms might increase the risk of cervical cancer; (10.6%,  $n = 23$ ) were aware of early sexual intercourse as a risk factor; (11.5%,  $n = 25$ ) chose early sexual intercourse together with increased number of sexual partners; while (18.5%,  $n = 40$ ) respondents claimed increased number of sexual partners alone. Increased number of partners and early sexual intercourse were identified as risk factors on top the list and thus why it is important for women to be aware of these risk factors and able to change sexual behaviours and to get regular Pap-smear tests to detect cervical cancer early.

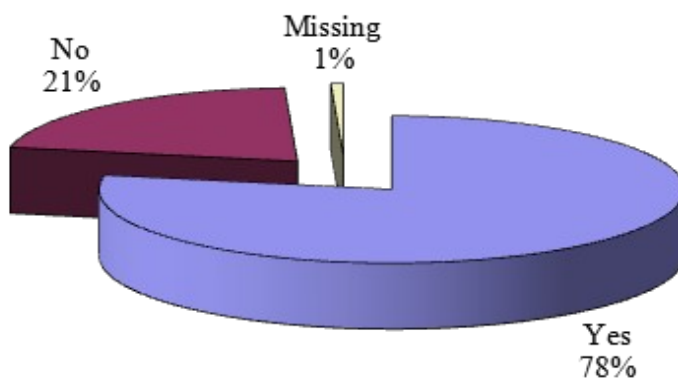
No statistically significant relationship was found between age group and knowledge of risk factors ( $p = 0.144$ ), though younger women tended to indicate a “no” whereas older women indicate a “yes” to a lesser extent. By implication it means that older women know a little bit more of the risk factors than younger women. Moreover, there was no statistical

relationship found between level of education and knowledge of risk factors of cervical cancer ( $p=0.115 >0.05$ ).

#### 4.3.5 Section B: Item 12.6: Use of family planning methods

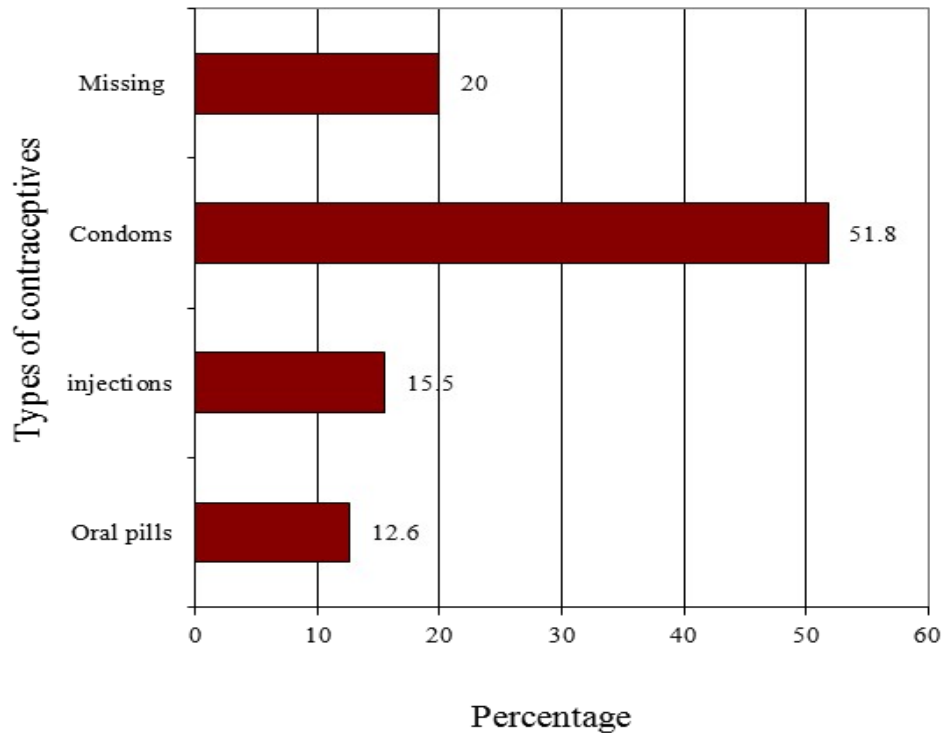
As shown in figure 4.10, the majority of the respondents (78.0%,  $n = 327$ ) reported that they were using contraceptives while (21.2%,  $n = 89$ ) were not using contraceptives.

**Figure 4.10 Use of family planning methods (N=419)**



#### 4.3.5 Section B: Item 12.7: Types of family planning methods

**Figure 4.11 Types of contraceptives used by respondents (N=419)**

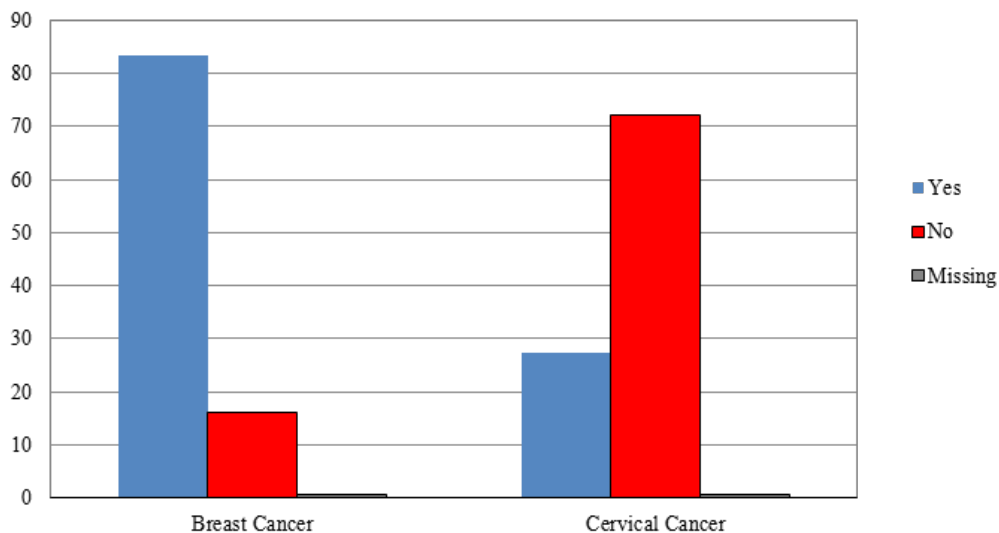


The most (51.8%, n =217) frequently used contraceptives were condoms (Figure 4.11) followed by injections (15.5%, n =65) and lastly oral pills (12.6%, n =53). A statistically significant relationship was found between age group and knowledge of use of contraceptives with younger women (21-30 years) tending more to indicating a “yes” while older women indicated a “no” to a lesser extent ( $p=0.002 <0.05$ ). The same age group (21-30 years) of women indicated a significant preference for condoms compared to other types of contraceptives ( $p=0.000 <0.05$ ). Moreover, there was also a statistically significant relationship found between level of education and knowledge of use of contraceptives with significantly more women with secondary education reporting using contraceptives

( $p=0.000 < 0.05$ ).

#### 4.3.6 Section B Item 13 and 14: Knowledge on early warning signs of breast and cervical cancer

**Figure 4.12: Knowledge on early warning signs of breast and cervical cancer (N=419)**



The respondents' knowledge of early warning signs of breast cancer was good with (83.3%, n =349) claiming that they knew the early warning signs of breast cancer (Figure 4.12). However, the respondents' knowledge about the early warning signs of cervical cancer was rather poor. Only (27.2%, n =114) respondents reported that they were aware of the early warning signs of cervical cancer, while the majority (72.2%, n =302) were not aware of cervical cancer signs and symptoms.

#### **4.3.6 Section B: Item 13.1: Early warning signs and symptoms of breast cancer known by respondents**

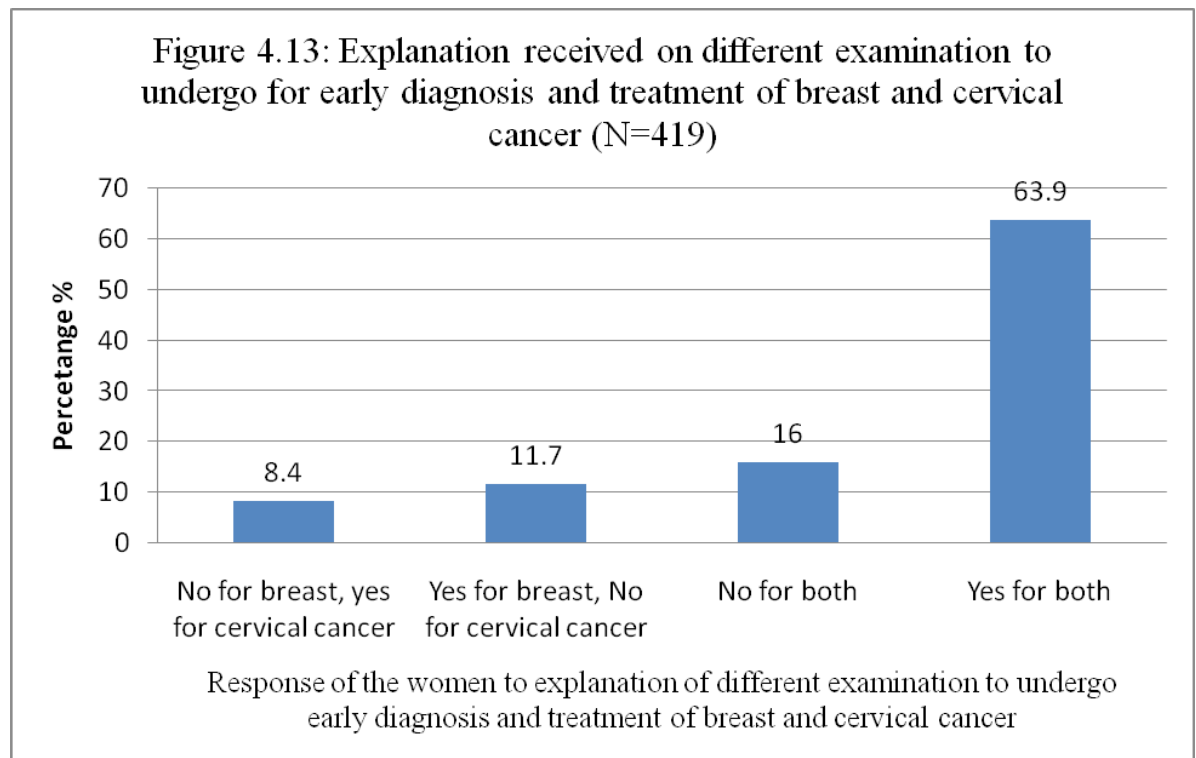
Nearly sixty percent (56.8%, n = 238) of the respondents knew that breast cancer presents as a breast lump. Fewer respondents were able to respond correctly to non-lump symptoms of breast cancer such as change in the breast size, abnormal nipple discharges and change in the colour of the skin of the breasts.

#### **4.3.6 Section B: Item 14.1: Early warning signs and symptoms of cervical cancer known by respondents**

From the respondents who indicated knowledge of the warning signs and symptoms of cervical cancer, only (23.6%, n = 27, N = 114) could identify that its early warning signs were asymptomatic. Fewer respondents chose vaginal bleeding, pelvic inflammation diseases (PID) and sexually transmitted infection (STI) as early warning signs of cervical cancer.

#### **4.3.7 Section B Item 15: Knowledge of women on early detection measures of breast and cervical cancer**

The majority of the respondents (63.2%, n = 265) indicated that someone has indeed explained to them the different examinations to undergo for early diagnosis and treatment of both breast and cervical cancer, while (15.3%, n = 64) indicated the opposite (Figure 4.13).



#### **4.3.7 Section B: Item 15.1: Source of information of women on early detection measures of breast and cervical cancer**

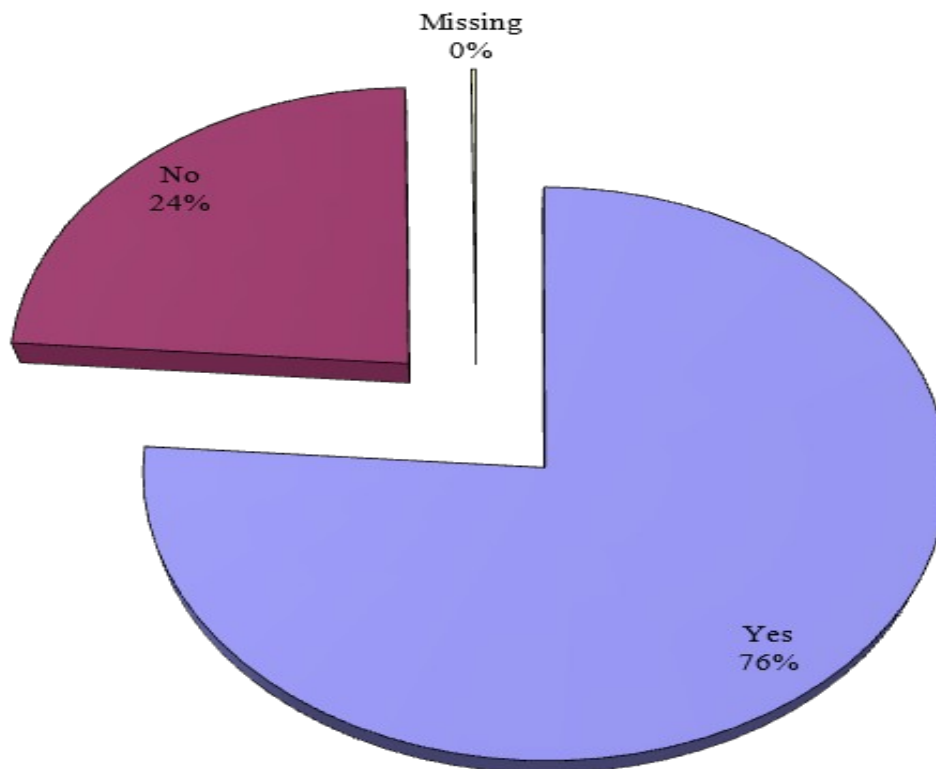
A large proportion of (41.1%, n = 172) sourced their information from the clinic sisters for both breast and cervical cancer, while 6.9% (n = 29) sourced their information from the clinic sisters and doctor.

#### **4.3.7 Section B: Item 15.2: Awareness knowledge of women on breast self-examination**

The respondents' knowledge of breast self examination (BSE) was very good as (76.1%, n = 319) had heard of BSE prior to the survey and only 23.6% (n = 99) have not (Fig. 4.14).

Further analysis shows that there was a statistically significant relationship between age group and knowledge of awareness of BSE. Younger women (21-40 years) generally said “yes” while older women generally indicated a “no” indicating that younger women were more knowledgeable than other age groups ( $p=0.000 < 0.05$ ). There was a statistically significant relationship between level of education and knowledge of awareness of BSE. Women with at least secondary education were more aware of BSE than women with less education ( $p=0.037 < 0.05$ ).

**Fig. 4.14 Knowledge on breast self-examination (N=419)**



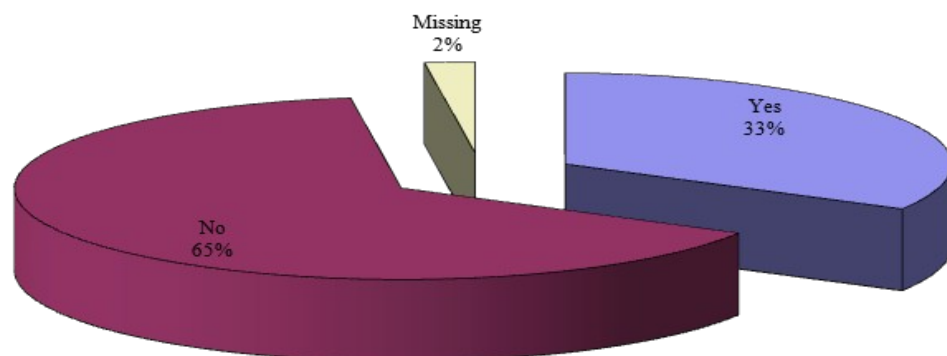


#### 4.3.7 Section B: Item 15.3: Source of information of women on breast self-examination

Nearly sixty percent (59.7%, n = 250) of the respondents got their information on BSE from clinic sisters, while a few respondents got their information from doctors, family members and friends with percentages ranging from 0.7% - 2.9%.

#### 4.3.7 Section B: Item 15.4: Demonstrations on breast self-examinations given to respondents

**Figure 4.15 Demonstration on breast self examinations given to respondents (N=419)**



The majority of the respondents (64.7%, n = 271) reported that the procedure for BSE was demonstrated to them while (33.2%, n = 139) had never seen the demonstration (Fig. 4.15).

#### 4.3.7 Section B: Item 15.5: Source of practical skills on breast self-examination given to respondents

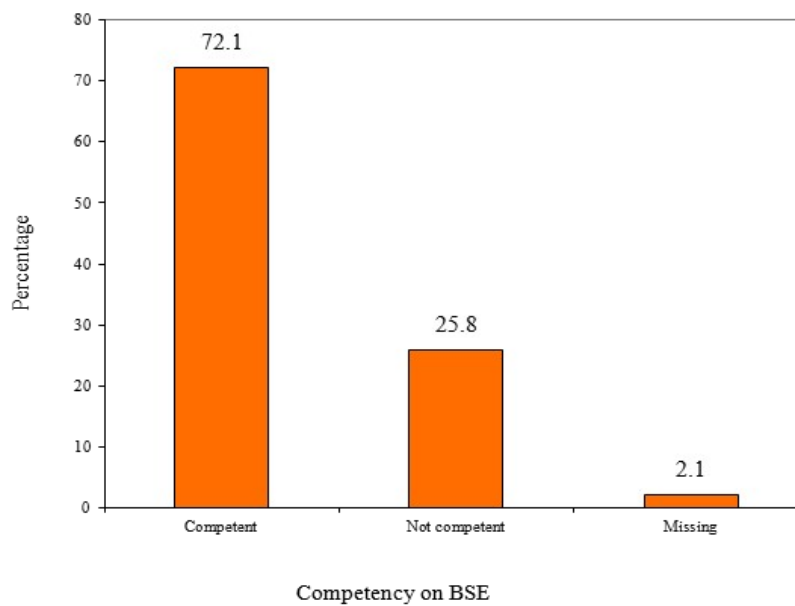
The most common source of demonstration of BSE to the respondents are clinic sisters (30.5%, n =128) followed by family members (14.3%, n = 18) and friends (1.0%, n =4).

Ross' (2000) study has emphasized that small meetings with friends and family members (mothers and aunts) on routine preventive care and screening contribute to the success of these interventions.

#### 4.3.8 Section B: Item 15.6: Competence on breast self-examination by respondents

Many respondents (72.1%, n =302) acknowledged that they practiced BSE and they were competent in practising it (Figure 4.16) while the remainder (25.8%, n =108) reported that they were not competent about it.

**Figure 4.16 Self rating with regard to breast self examination (N=419)**

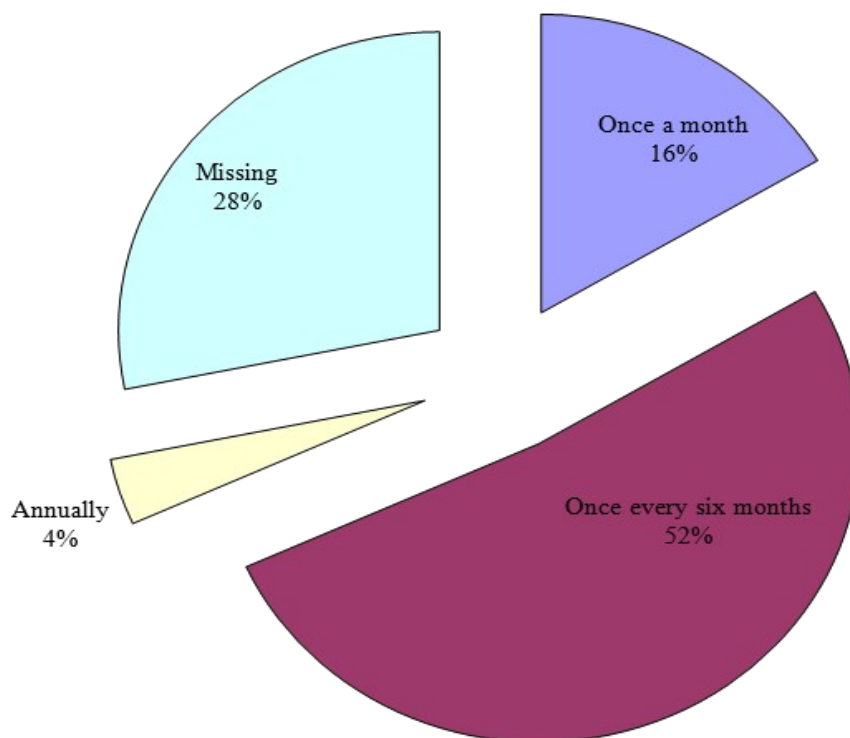


#### 4.3.7 Section B: Item 15.7: Abnormalities needed to be identified during breast self-examination

Slightly more than half of the study respondents (50.6%, n = 212) claimed to have examined their breasts looking for breast lumps. Fewer respondents claimed to have been looking for changes in the skin texture, abnormal discharge from nipples, change in the breast size and inverted nipples.

#### 4.3.7 Section B: Item 15.8: Frequency of breast self-examinations by respondents as a screening method

**Figure 4.17 Time intervals of attendance of breast self examination by respondents (N=419)**



As indicated in Figure 4.17, the majority of the respondents claimed to examine their

breasts once a month (51.8%, n =217), (16.5%, n =69) claimed to examine them once every six months while (3.6%, n =15) claimed to examine them on an annual basis.

There was a statistically significant relationship between age group and performing BSE. Younger women (21-30 years) indicated a “yes” whereas older women indicated a “no” ( $p = 0.001 < 0.05$ ) meaning that young women performed BSE more often within the guidelines of once a month. There was no statistically significant relationship found between level of education and knowledge of performing BSE ( $p=0.822 > 0.05$ ).

#### **4.3.7 Section B: Item 15.9: Additional screening methods used for detection of breast cancer**

The awareness of other screening methods was very low among the respondents. Only (7.4%, n =31) were aware of mammograms; (2.1%, n =9) were aware of sonar while (1.9%, n =8) were aware of CBE. A large proportion of (69.5%, n =291) acknowledged that they were not aware of other screening methods.

#### **4.3.7 Section B: Item 15.10: Attendance of mammogram and CBE as screening methods used for detection of breast cancer**

The use of a mammogram and CBE was very low among respondents as only. (2.1%, n =9) and (1.9%, n =8) of the respondents underwent routine screening of mammogram and the CBE screening method respectively.

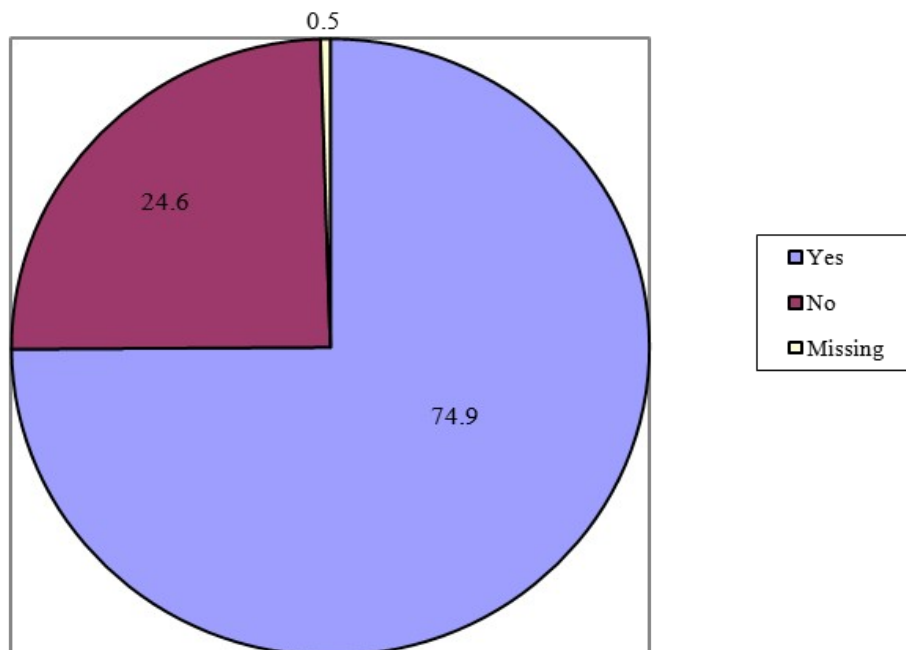
#### 4.3.7 Section B: Item 15.11: Frequency of mammograms and CBE screening methods

Of those who underwent routine mammogram screening only three (33.3%, N = 9) did it on an annual basis and the other three (33.3%, N =9) did it every two years. Of those who underwent the CBE screening, five (62.5%, N = 8) did it on an annual basis and the other three (37.5%, N = 8) did it every second year.

#### 4.3.8 Section B: Item 16: Awareness knowledge of respondents on cervical smear test

The respondents' awareness and knowledge of cervical smear test was very good as (74.9%, n =314) had heard of the cervical smear test, while only (24.6%, n = 103) had not heard of it (Figure 4.18).

**Figure 4.18 Awareness knowledge of respondents on cervical smear test (N=419)**



#### **4.3.8 Section B: Item 16.1: Source of information on cervical smear test**

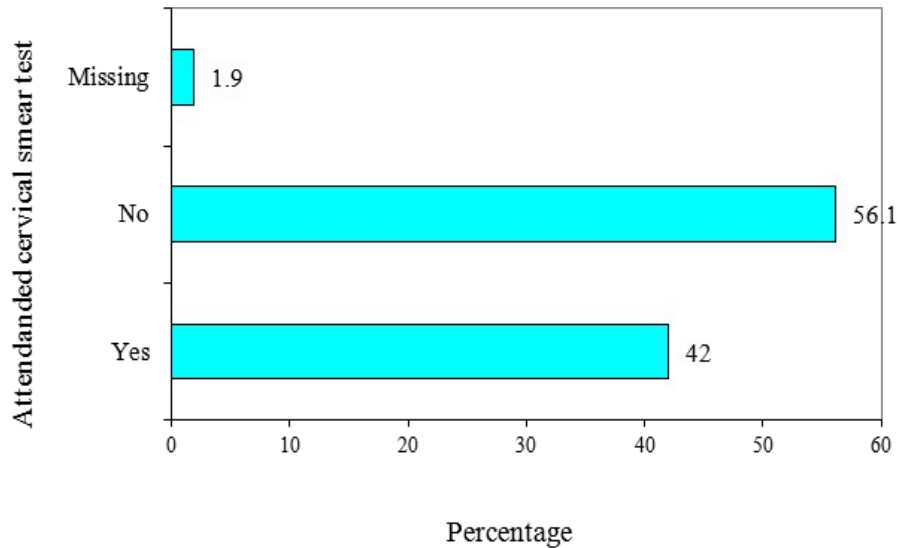
The most common source of information on cervical smear test is from the clinic sisters (62.5%, n =262). Fewer respondents mentioned doctor, family members and friends as their sources of information.

#### **4.3.8 Section B: Items 16.2; 16.2.1 and 16.2.2: Obstetric history of respondents**

The majority (84.5%, n =354) of the respondents had children and (75.9%, n =318) had delivered their babies in the hospital; (6.7%, n =28) had delivered at home, while some of those who are multi-gravida had delivered some of their babies in the hospital and others at home.

#### **4.3.8 Section B: Item 16.3: Attendance of cervical smear test**

Many of the respondents (56.1%, n =235) acknowledged that they have never been screened for cervical cancer and only (42.0%, n =176) reported that they have been screened as depicted in Figure 4.19.

**Figure 4.19 Attendance of cervical smear test (N=419)**

#### 4.3.8 Section B: Item 16.4: Frequency of attendance of cervical smear tests

Some of the respondents (22.9%, n =96) had been screened as part of postnatal services and returned for the results; (9.1%, n = 38) had been screened as a routine on annual basis and (6.2%, n =26) had been screened as part of the post natal services and never returned for the results.

The reasons cited for not returning for Pap smear tests results are the unawareness of the importance of the test; no commitment to the test results and not seeing the importance of collecting the results. Some respondents who did not return for Pap-smear examination after delivery claimed that the speculum used for the procedure was very painful and to some, the procedure was not available at close-by clinics. Fewer respondents claimed to have no money for transport and no follow-up advice was given by health workers.

The reasons mentioned above are similar to those mentioned for not attending routine screening tests as prescribed by the MOHSS (2001). Young women were aware of screening test but did not have it because they are too young to have as many pap-smears tests as older women. Some of the reasons were that they did not have time to attend the procedure due to domestic duties and other work related issues as some bosses could not permit employees to go for treatment especially casual workers.

There was a statistically significant relationship between age group and awareness of Pap-smear examination. Young women (21-30 years) were more aware of Pap-smear examinations than older women ( $p=0.000<0.05$ ). Younger women were less likely than older women to have had a Pap-smear within the guidelines ( $p=0.000 <0.05$ ). There was no statistically significant relationship between level of education and awareness of Pap-smear examination though women with secondary education were more aware of the examination than the other age groups ( $p=0.071>0.05$ ).

Some of women (23.3%,  $n=98$ ) were aware of the recommended frequency for Pap-smear tests in Namibia which is every third year if the results were negative for the previous three consecutive years. Some other respondents (15.75%,  $n=66$ ) have time intervals between four to nine years, while 6.9% ( $n=29$ ) of the respondents have time interval of more than ten years. Lockwood-Rayermann (2004)'s study has found that the principle risk factor for invasive cancer is failure to receive routine screening.

No statistically significant relationship was found between age group and frequency of



attendance of Pap smear examination ( $p=0.695>0.05$ ). There was also no statistically significant relationship found between level of education and attendance of Pap-smear examination ( $p=0.17>0.05$ ).

#### **4.3.8 Section B: Item 16.5: Awareness knowledge of respondents on other possible screening methods**

Most of the respondents (97.1%) do not have knowledge on other additional possible screening methods.

#### **4.4 SECTION C: AVAILABILITY OF EXISTING OPPORTUNITIES/FACILITIES FOR WOMEN TO GET HEALTH PROMOTION AND PREVENTION INFORMATION ON BREAST AND CERVICAL CANCERS**

##### **4.4.1. Section C: Item 17: Name of the nearest health facility**

From the study it emerged that every respondent lived near a health facility with (27.7%,  $n=116$ ) living near Oshakati Hospital; (8.1%,  $n=34$ ) near Ongwediva Health Centre, (4.8%,  $n=20$ ) near Okahao and also (4.8%,  $n=20$ ) near Engela Hospitals. Most respondents were from different hospitals, health centres and clinics around the four northern regions district hospitals as Oshakati Hospital was a referral hospital for all four northern regions.

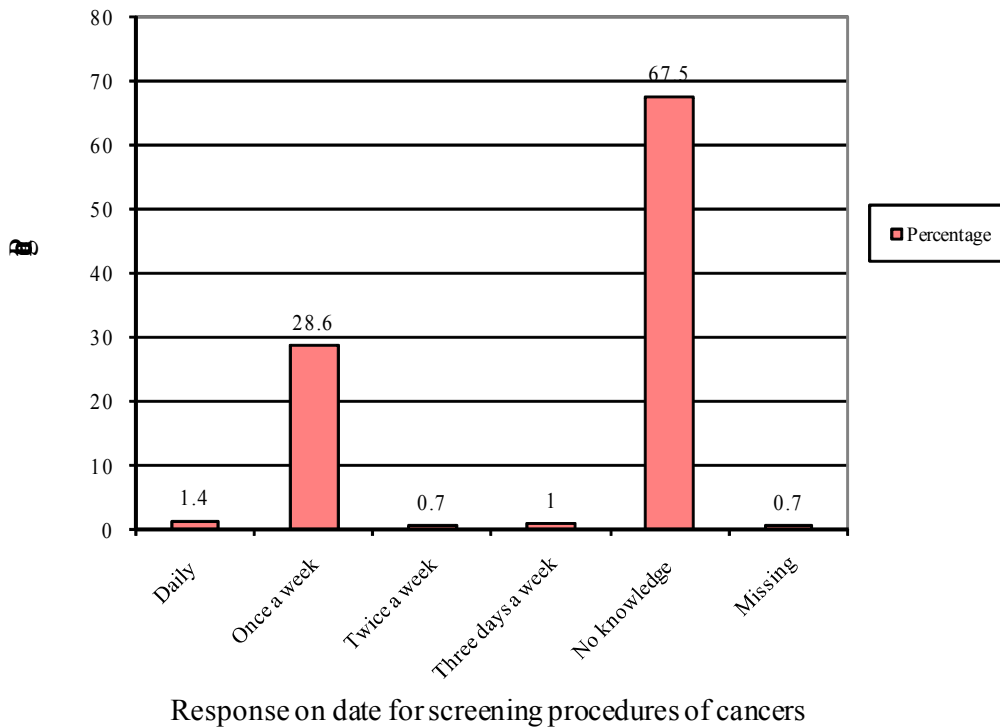
The studies of Kim et al. (1999); DiNapoli (2003); Lockwood-Rayermann (2004, p. 355); Twinn et al. (2007) and Taylor et al. (2008) have found that higher levels of cervical cancer

screening participation among women are strongly associated with having a usual place (environmental resource) for screening and physician recommendations.

**4.4.2. Section C: Item 18: Knowledge of frequency of screening procedures per week**

The majority of the respondents (67.5%, n =283) were not aware of the date for screening procedures of both breast and cervical cancer at their nearest facility (Figure 4.20). Only (28.6%, n =120) of the respondents knew that many government health facilities were screening once a week.

**Figure 4.20 Date for screening procedures of cancers (N=419)**



#### **4.4.3 Section C: Item 19: Encouragement information received for screening**

Nearly half of the respondents (48.7%, n =204) reported that health workers did encourage them to be screened for both breast and cervical cancer. However, it is evident that health workers need to put more effort on encouraging women to be screened as more respondents (49.6%, n =208) claimed not to have been encouraged to be screened for both breast and cervical cancer.

#### **4.4.3 Section C: Item 19.1: Methods used to deliver encouragement information**

Of those who reported that health workers did encourage them to be screened for both breast and cervical cancer, 46.7% (n =196) acknowledged that the information was delivered through group health talks during their visits to ante natal clinic.

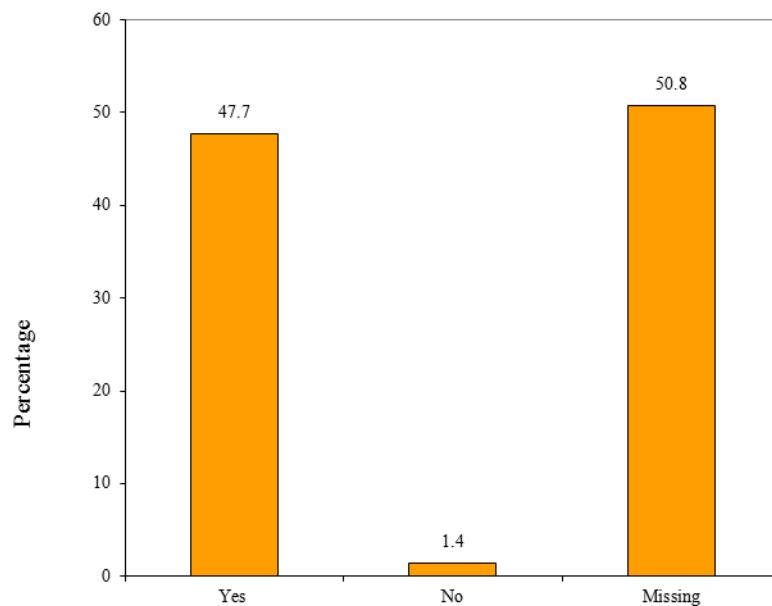
#### **4.4.3 Section C: Item 19.2: The main message of the encouragement information delivered**

The main message in most cases of the information given by 47.2% (n =198) respondents was that early screening is needed for early detection and both cancers could cause death if not treated immediately.

#### 4.4.3 Section C: Item 19.3: The acceptability and clearness of main message to respondents as women

A large proportion of the respondents (50.8%, n=213) reported as missing (Figure 4.21) can be counted as those who did not receive information for screening during their visits to health facilities while (47.7%, n = 200) of the respondents who received the information agreed that the main message was clear and acceptable to them, and only (1.4%, n = 6) found the message unclear and unacceptable.

**Figure 4.21 Main message acceptable and clear (N=206)**



Response of women to acceptability and clearness of the main message

#### 4.4.4 Section C: Item 20: Availability of public health materials at health facility

Table 4.5 summarizes the responses to the question asking whether there were any public educational materials available at the health facilities to inform women about breast and cervical cancer prevention. More than half of the women (54.9%, n= 209) claimed that there were “no” public educational materials available at the health facilities. Only a third of the respondents (33.7%, n= 141) replied yes while (11%, n= 46) do not know. It is imperative on the MOHSS and concerned individuals to produce more leaflets and health materials so as to reach more women visiting the health facilities.

**Table 4.5: Availability of public educational materials at health facilities (N=419)**

<b>Availability of public health materials at health facilities</b>	<b>Frequency</b>	<b>Response (%)</b>
Yes	141	33.7
No	230	54.9
Do not know	46	11.0
Sub- total	417	99.5
Missing	2	0.5
Total	419	100.0

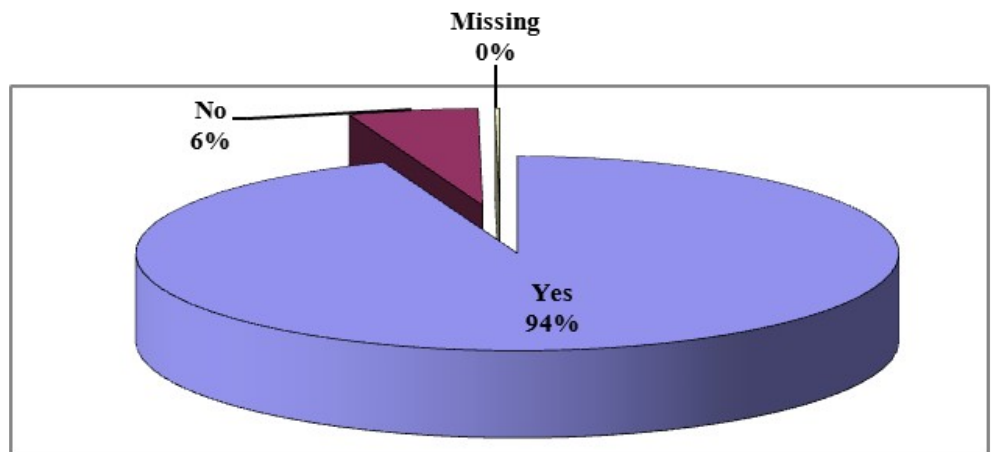
#### 4.4.5 Section C: Item 21: Reading culture among women

Table 4.6 summarizes the responses to the question whether women read books, health materials and newspapers regarding health promotion and prevention of breast and cervical cancer. The majority of the respondents (64.9%, n =272) did not read any books, health materials and news-papers, although most of the women were literate. Women should be encouraged to increase their reading culture especially on health related matters.

**Table 4.6: Reading culture among women (N =419)**

<b>Reading books on health</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	138	33.1
No	272	64.9
Cannot read	7	17.0
Sub- total	417	99.5
Missing	2	0.5
Total	419	100.0

#### 4.4.6 Section C: Item 22: Ownership of radio

**Figure 4.22. Ownership of radio among respondents ( N =419)**

It is evident that the radio is the most reliable source of information to the respondents as Figure 4.22 shows that nearly all of them (94.3%, n = 395) acknowledged that they own radio sets.

#### 4.4.6 Section C: Item 22:1 Frequency of listening to the radio sets

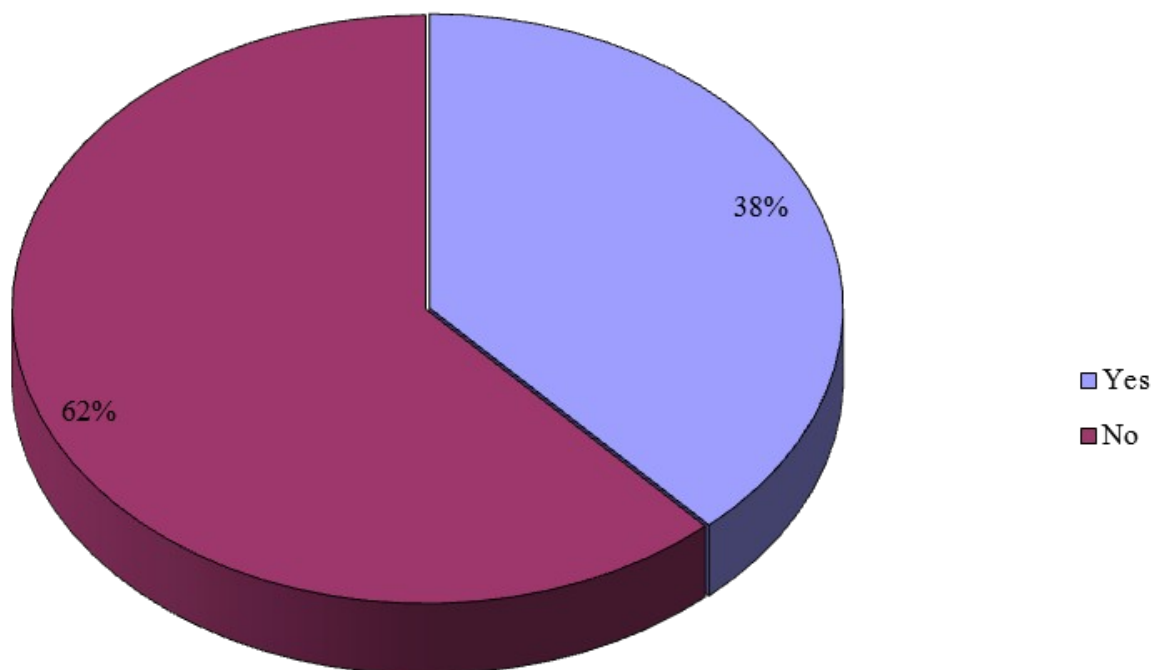
Most of the respondents (64.0%, n = 253, N = 395) agreed that they listen to the radio 3-4 times a day and heard information regarding health promotion and prevention of both breast

and cervical cancers. Herdman and Sherris (2004) and Oelke (2002) suggested that radio announcements, especially made by senior public health officials, may be the most effective tool in increasing awareness of breast and cervical cancers.

#### 4.4.7 Section C: Item 23: Ownership of television sets

When asked whether they owned television sets, the majority of the respondents (61.8%, n = 259) said “no” to the question (Figure 4.23) and only (38.2%, n =160) said “yes”.

**Figure 4.23. Ownership of television sets ( N = 419)**



**4.4.7 Section C: Item 23.1: Frequency of watching television among respondents (N=160)**

Only (34%, n = 55) of those who own television reported that they had listened and viewed information regarding health promotion and prevention on both breast and cervical cancer while 31% (n = 50) respondents had listened and viewed information during evening hours only on breast cancer.

**4.4.8 Section C: Item 24: Availability of faith-based and/or feminist organizations in the community**

Study respondents were asked whether there were any churches/religious and/or feminist organizations available in the community disseminating information to women to improve their participation in screening programs. More than a third (37.0%, n =155) of the respondents said “no” to the question and only (18.4%, n = 77) said “yes”; while (15.8%, n =66) said they are not aware that there are religious organizations and (27.9%, n =117) said they are aware that there are religious organizations in their communities but did not participate as members.

**4.4.8 Section C: Item 24.1 and 24.2: The names and activities of faith-based and/or feminist organizations available in the community**

Most of those respondents who responded “yes” (60 out of the 77) got their information mainly from activities organised by church organizations, including Catholic Aids Action.



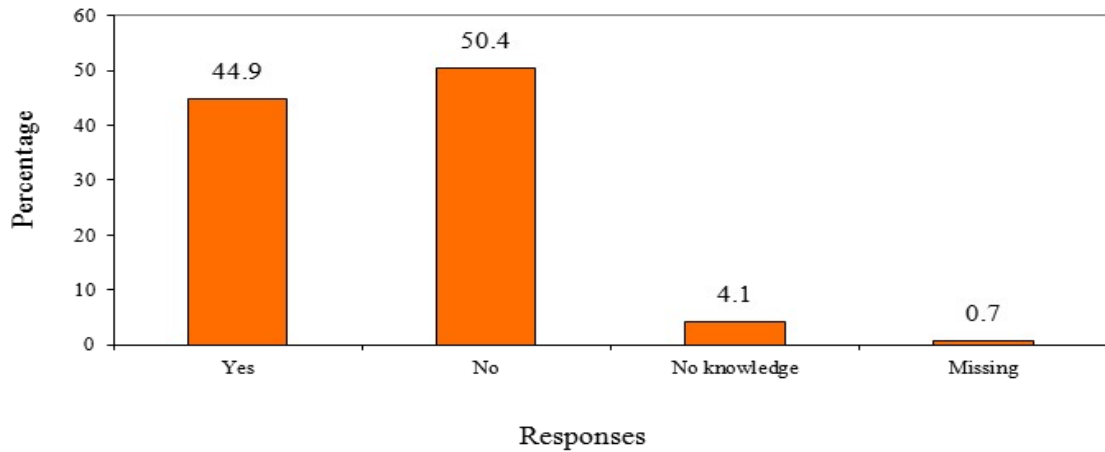
These activities include annual church seminars and conferences where health information and speeches on health education were given to respondents. Health information was also given during church choirs' preparations, after church services on some Sundays and at Deaconess's meetings. The activities are undertaken throughout the year. Herdman and Sherris (2000, p. 34) found that inviting nurses (social influence) to speak about cancer screening education at women's group meetings may be useful in disseminating health information to clients.

Fewer respondents identified non-governmental organizations (NGO) and support groups on HIV/AIDS like Total Control of Epidemic (TCE), Red Cross Organization, Lironga Eparu and Tuberculosis (TB) support groups. Younger respondents identified the Girl Child of Namibia and other youth organizations

Some of the study respondents from the Ministry of Defence acknowledged that they did have a routine screening programme for all women as part of their occupational health programme. Most of these activities are undertaken throughout the year.

#### 4.4.9 Section C: Item 25: Sharing of information among peers

**Figure 4.24 Sharing of information among peers (N=419)**



The question was about respondents' involvement in communicating messages to their peers about breast and cervical cancer prevention. Half of the respondents (50.4%, n = 211) did not share their knowledge about breast and cervical cancer prevention with other women while only 44.9% (n = 188) admitted that they did so.

#### 4.5 COMPARISON OF THE COMPONENTS OF THE MODEL WITH RESULTS OF THE STUDY

Client Singularity	Background variables	Differences were found concerning age, marital status, and level of education, religion, employment status and membership of medical health insurance.
	Dynamic variables	This section covered awareness, causes, risk factors and signs and symptoms. Different levels of dynamic variables were indicated by respondents.
Client–Professional interaction	Health information	<p>Questions concerning health information indicated that most respondents received information on awareness about these conditions, risk factors of cervical cancer as well as early warning signs of breast cancer.</p> <p>In general, most respondents did not receive information on causes of both conditions, risk factors for breast cancer and early warning signs of cervical cancer.</p>
	Decisional Control	Most respondents indicated their participation in health related behaviours for example use of condoms and BSE practice on a monthly basis while few attended pap-smear tests.
	Professional technical competencies	Most respondents indicated that the health care providers are competent in teaching BSE and explaining the pap-smear test examinations as most respondents indicated that they were taught the procedure of BSE. However, they need to do more health talks on other screening methods of both breast and cervical cancer.
Health Outcome	Utilization of health care services	Most respondents indicated a high level of using contraceptives especially condoms and few had undergone pap-smear test examinations. Most respondents indicated that they have no knowledge of other screening methods of both breast and cervical cancer.
	Adherence to the recommended care regimen	Majority of respondents adhered to the recommended routine of monthly practicing of BSE. Few respondents adhered to recommended routine of CBE and mammogram. Few respondents adhered to the recommended routine of attending pap- smear tests as part of their post–natal services and returned for results.

#### **4.6 SUMMARY**

The results of this study added to the body of knowledge on Oshakati Health District women's personal motivating factors that contribute to breast and cervical cancers' screening. Background variables of demographic characteristics, social influences, previous health care experiences, environmental resources, information and cognitive appraisal as to beliefs and vulnerability were studied in details as to their contributing influences to the utilization of health care services and adherence to the recommended routine of breast and cervical cancers screening. Women are at higher risks for breast and cervical cancers because of poor screening due to unknown influences. This study offered support as well as theory adaptation in terms of the data findings from the interviews regarding the interaction of a woman's social influence and information on her cognitive appraisal (beliefs and vulnerability) associated with breast and cervical cancers screening.

## CHAPTER 5

### CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

#### 5.1 INTRODUCTION

In this chapter the conclusions, recommendations and limitations will be discussed. The conclusions will be formulated according to the objectives of the study. The purpose of the study was to explore and describe the awareness knowledge amongst women of child-bearing age regarding prevention of breast and cervical cancer in the Oshakati Health District.

#### 5.2 CONCLUSIONS AND OBJECTIVES

The objectives of this study are as laid out in chapter in 1.

##### 5.2.1 Knowledge regarding causes, risk factors and signs and symptoms of breast and cervical cancers

The first objective is to describe the knowledge of women regarding causes, risk factors and signs and symptoms of breast and cervical cancers. This study concluded that the awareness knowledge of information about breast and cervical cancer does exist in the community. This may be explained by the findings that the leading sources of information available in the district about breast and cervical cancer were the radio and clinic. The

majority of the respondents were exposed to these sources. In contrast, the causes of breast and cervical cancer were very poorly understood with (75.2%, n =315) of the respondents reporting that they had never heard about the causes. This is confirmed by the findings that (50.4%, n = 211) do not share information with peers about cancer prevention.

The majority of the respondents are single (62.1%; n = 260). Roughly a third (37%, n =155) do not have faith-based organizations in their communities that are giving information on promotion and prevention of breast and cervical cancers, (27.9%, n =117) are aware of the existence and roles of these organizations but had never participated as members in order to be able to get information; while (15.8%, n = 66) are not aware of the existence of faith-based organizations in their communities. Minami and Benton (2009) emphasized that interpersonal approaches through personal social networks, family and faith based organizations will be more influential in persuading women to adopt positive behaviour changes such as promotion of prevention of breast and cervical cancers. The knowledge of risk factors for breast cancer in this study was very poor and the study showed that only (32.2%, n =135) knew about heredity as a risk factor for breast cancer.

The knowledge of risk factors for cervical cancer was relatively better because (51.3%, n = 215) of the respondents were aware of factors that might increase the risk of developing cancer. However, the knowledge that HPV infection and smoking as risk factors for cervical cancer did not surface in the study sample.

The radio was the leading source of information with (24.1%, n = 101) while the clinic was the second with (16.7%, n =70). Moreover, (54.9%, n =230) of the women indicated that

there were no public educational materials available at health facilities. This is despite the background information indicating that (64.4%, n =270) of the women have secondary education. These women have the ability to understand the importance of health care and breast and cervical screening (Lockwood–Rayermann, 2004).

The overall knowledge of early warning signs of breast cancer was very good as (83.3%, n =349) of the respondents revealed that a painless lump is significant, though pain is considered a general indicator for impending danger. Few respondents were able to respond to non-lumps symptoms.

The overall knowledge of early warning signs of cervical cancer was very poor as only (6.4%, n =27) could identify correctly that the early warning signs of cervical cancer were asymptomatic. One can therefore imply that a lack of knowledge of accurate information about cervical cancer existed in the community. Some respondents considered vaginal bleeding, PID and STI as early warning signs of cervical cancer. Forty three percent (43%, n =180) of the respondents were in the age group of 21-30 years which is the highest peak age of child-bearing age women. They could be described as sexually active, more likely to have exposure to human papilloma virus (HPV) and to develop precancerous lesions (Lockwood–Rayermann, 2004; Twinn et al., 2007).

### **Recommendations on objective one**

Women leading community based organizations should invite their peers to scheduled meetings and workshops and encourage other women to participate in activities of NGOs

and faith-based organizations available in their communities and be able to share information. Several studies have shown that women's use of cancer screening services can be related to the social influences, religion, social network of NGOs and social support. Support from peers who are important to women and trusted by them can influence or facilitate the motivation of women in obtaining cancer screening (Cox, 1982; Pender et al., 2003). Faith communities exist in every community and have the ability to influence the hardest to reach populations and can disseminate health information to others in the community who are not attending a particular faith community (Dunn et al., 2005). Faith-based organizations should disseminate health information to others according to their schedules of meetings per calendar year, especially on Sundays after church where most members do attend church services.

Breast and cervical cancers is a taboo subject in some communities. As a result, women frequently are unprepared to discuss breast and cervical prevention with their health care providers, partners or close family members. Counselling by peers and health care providers can inform women and help them develop the skills necessary to discuss cervical and breast cancer with those closest to them. Counselling that addresses women's concerns and questions is a critical component of breast and cervical cancer prevention services (Cornforth, 2002; Rao et al., 2005).

Wellness programmes and occupational health services should be established by law in any eligible organization including secondary, high and tertiary schools to be able to render health care services to its members and employees including BSE, CBE and pap-smear test information (Shepherd and McInerney, 2006).



Community health workers' training should be expanded to include causes, risk factors, signs and symptoms, benefits of screening, recommendations on screening and descriptions of procedures. They can encourage women on their monthly home visits to hold meetings and share information in their communities with friends, mothers and aunts. The women knew each other and that is the power in this approach. These will foster a real sense of support among women (Ross, 2000; Hurd, Muti, Erwin and Womack, 2003; Williams, Mullan and Todem, 2009).

There are few opportunities for continuing professional development in reproductive female oncology. There is a pressing need for MOHSS in collaboration with the Nursing Council and University of Namibia to attend to the establishment of oncology courses as soon as possible.

### **5.2.2 Explore the awareness of women on promotion and prevention of breast and cervical cancer**

The second objective is to explore the awareness of women on promotion and prevention of breast and cervical cancer. It was concluded that more respondents were better informed and had seen demonstrations about BSE as an early detection measure than breast cancer as a disease and they have practiced it. However, there is still a major concern for few respondents who did not practice it as this seems to be the only easily accessible early detection measure for breast cancer. Findings also showed that the recommended CBE of once a year is not popular. In environment where there is no active national screening

programme, this is of great concern.

The findings that few respondents acknowledged mammography and sonar is expected since mammography and sonar are not readily available to this population. The same applies to colposcopy, biopsy of the cervix and Gardasil vaccine against cervical cancer. Gardasil vaccines against cervical cancer are not yet used by private doctors and at private hospitals in Oshakati Health District.

Most respondents (74.9%, n= 314) agreed that they knew about Pap-smear tests and that cervical cancer is curable if detected early. Despite that, only (22.9%, n =96) of the respondents had been screened as part of post-natal services and returned for the results while (9.1%, n =38) had been screened as a routine on annual basis. The rest of the respondents had never been screened, mostly because they did not feel vulnerable to the disease and this may be concluded that acquiring knowledge does not readily translate into behaviour change. Every respondent lived near a Government health facility and yet (67.5% n =283) do not have knowledge about dates for screening at their nearest health facility.

### **Recommendations on objective two**

Integrating various reproductive health services is generally the best way to meet the challenges of prevention health services. Integration could be more effective through “in-reach” methods– providing more services to individuals who already make use of health facilities in other ways by using simple screening instruments to produce changes in the knowledge and behaviour of clients and providers. The Ministry of Health and Social

Services through its Family Health Division should develop this simple instrument and train staff in its use. Health care providers seeing clients should make use of the instrument and refer or recommend clients for screening. This will promote of existing and underutilized services to the clients.

The role of a nurse as a teacher, counsellor and educator is crucial in women's health and cannot be underestimated. Supervisors of departments and units and managers of health facilities should support and encourage nurses to use every opportunity to teach and reinforce the practice of BSE and pap-smear tests when seeing women in health settings. Health education sessions taught should be recorded and reported on a monthly basis to managers for action.

State and private doctors should recommend eligible women to be screened for both cancers as studies have shown that women are more likely to be screened if the doctors recommend screening. Private Doctors can send reminder letters to their patients.

MOHSS, through the Family Health Division, should facilitate the development of pre-discharge checklists as a reminder for Doctors to consider prevention once acute medical care has been resolved. This checklist should be distributed in each ward so that it can be used during Doctors' rounds.

Managers at all health centres and clinics where services are rendered could improve access by at least being clear about the times and days on which screening could be conducted. Such information should be communicated to all staff and local populations and having a

policy that, in principle that no woman requesting screening would be refused. Managers can do it through frequent announcement in the radio and posters that are displayed on the doors of the consulting and waiting rooms. Since women are most likely to seek services from providers who are sensitive and responsive to their specific needs (primary affective support) (Cox, 1982; Herdman and Sherris, 2000), health Managers should delegate female health care providers for reproductive health where possible.

The ability to implement a national program to address early detection of breast and cervical cancers depends largely on the involvement of various partners in the state: doctors, community leaders, headmen, churches, non-governmental organizations and private sector organizations and (women) consumers working together as partners (Boeckner, Gross, Chaulk, Ramsey, Ruff and Tando, 2000). The MOHSS through the Family Health Division should increase the number of Pap-smear tests centres throughout the country through other partners like the Cancer Association of Namibia. This might mean taking mobile services to the hard to reach women in their communities.

Health care providers treating and caring for clients should give cervical cancer education and screening should be recommended to women at risk, especially to women with compromised immune systems (AIDS or other Cancer), women with genital warts caused by human papilloma virus (HPV) and women who have never had a Pap-smear test or who have had Pap-smear tests infrequently. The MOHSS, through the Family Health Division, when reviewing program planning should investigate the possibility of providing counselling and screening for cervical cancer in the voluntary counselling and testing centres (VCT) for HIV.

Women tested positive for HIV may have impaired immune systems. The MOHSS should include the policy of recommendation of eligible positive HIV status women to undergo Pap-smear test as part of the baseline clinical assessment and monitoring with annual follow-up visits.

### **5.2.3 Existing opportunities/facilities available for women on health promotion against breast and cervical cancers in Oshakati Health District**

The third objective is to identify existing opportunities/facilities available for women where they can get prevention information sessions with specific reference to health promotion against breast and cervical cancer in Oshakati Health District. It was concluded that most respondents live near a government health facility for obtaining preventive health care on breast and cervical cancer screening. However, the screening rate (frequency) for these respondents are not following the recommended cancer screening rate as there is sometimes a time interval of more than three to ten years without attendance or no attendance at all.

The study concluded that there are few public educational materials available at health facilities to inform women on breast and cervical cancer prevention. It was also concluded that most respondents do not have a reading culture, although more than half of respondents were literate.

The study concluded that the radio is the most reliable source of information to the rural areas; although it seems not to be used optimally, as many have access to it but still have

inaccurate information. The television showed little information on breast cancer.

It was concluded that churches/religious or feminist organisations available in the community should disseminate information to women to improve their participation in cancer screening. However, majority women do not participate in activities. It was concluded that the majority of women do not share and educate other women about breast and cervical cancer prevention.

### **Recommendations on objective three**

Health care providers seeing clients should give cancer screening education at health facilities. They should emphasize the reason for screening particularly as these women can be seen by a health practitioner. Researchers have reported that one of the strongest predictors of screening compliances is the knowledge of the reason for screening and a closest health facility. Health care providers should have social influence on women and should be able to recommend screening to eligible women (Thompson, et al., 2003).

The IEC division should develop health materials that are at the different reading levels of women, culturally acceptable in the community and can be translated into local languages. These should be distributed to their partners in health and other ministries so that people can get the same information. Health care providers should display posters and showing videos in their waiting rooms especially in rural areas where the literacy level are low (Cox, 1982).

The radio is the most reliable source of information to the rural areas. Health care providers

in each region need to give more health talks through the radio in order to reach more women, especially when MOHSS has been given a free airtime of one hour every Friday by the Namibian Broadcasting Co-operation (NBC) to deliver health information to the Namibian population. The other radio stations should emulate this example and do the same.

The Namibian Broadcasting Co-operation (NBC) and other television stations should include more health information on breast and cervical cancer prevention on their television broadcasting schedules on a weekly basis.

### **5.3 RECOMMENDATIONS FOR FURTHER STUDY**

It was concluded that most respondents do not have a reading culture, although more women were literate in the study. There is a need to investigate further why women are not reading. The other barrier that still needs to be addressed is the question about access to appropriate health education and materials.

### **5.4 LIMITATIONS OF THE STUDY**

The possibility that respondents may misinterpret a question can be minimized by careful pre-testing of the questionnaire but it cannot fully be eliminated. The researcher assessed knowledge using simple phrases and questions interpreted into vernacular language. Few women who have completed the questionnaires themselves might be misinterpreted some questions and this could lead to bias.

## 5.5 CONCLUSION

Awareness knowledge of information about breast and cervical cancer exists in Oshakati Health District. However more women lack accurate information on breast and cervical cancer prevention. Radio and clinics were identified as reliable sources of information through the study.

There is a pressing need to deliver quality information through these tools as the results of this study showed a gap between dissemination of information and knowledge about prevention and early detection of these conditions.

This study set out to explore the health promotion concepts and factors that impede health promotion as well as perceptions of women in Oshakati Health District. It can therefore be concluded that the aim of the study was achieved and the goals outlined in Chapter 1 were met.

The results obtained in the study validated and confirmed the literature, and therefore, one can conclude that by exploring the health promotion concept in Namibia, we can enhance our understanding of the gap between knowledge and behaviour change. In light of the results of this study, new initiatives and interventions that take health promotion into account can be developed so that we can approach the situation more effectively and with greater understanding.



## **5.6 SUMMARY**

Since the introduction of the Primary Health Care (PHC) approach in 1992, many challenges like access to facilities in rural areas have been addressed to meet the needs of the society. One of the aspects that remained important is to raise awareness of women regarding health promotion on prevention of breast and cervical cancers. During the study, the question relating to awareness raising knowledge of women of child-bearing age [15-49] in Oshakati Health District was addressed. Strengths and shortcomings were identified and recommendations were made accordingly.

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**ANNEXURES**

Research questionnaire

Permission letters

RESEARCH QUESTIONNAIRE

February 2008

**To: All admitted child-bearing women [15-49 years old]  
Intermediate Hospital Oshakati**

**SUBJECT: Women's awareness of knowledge regarding Health promotion on prevention of breast and cervical cancer in Oshakati Health District.**

I am Saara Suoma Iita, a registered nurse working at Nursing Care Quality Improvement Section in Intermediate Hospital Oshakati.

I am also a Master's degree student (student number 2005072060) at the University of Namibia and I am currently conducting research on **women's awareness of knowledge regarding Health Promotion on prevention of breast and cervical cancer in Oshakati Health District** as part of the Master of Public Health degree requirements. The purpose of the study is to determine the level of knowledge of women regarding health promotion on prevention of breast and cervical cancer in Oshakati Health District and secondly to identify existing opportunities/ facilities available for women where they can get health promotion and prevention information sessions with specific reference to breast and cervical cancer in Oshakati Health District.

This research project will be conducted under the supervision of Prof. A. van Dyk and Mrs. W. Wilkinson. Permission to conduct the research was granted by the following officers: Dr. K. Shangula, Permanent Secretary of the Ministry Health and Social Services and the Health Director of Oshana Region, Dr N. T. Hamata.

The questionnaire will be handed personally to respondents and will be in the presence of the researcher. The questionnaire is in English (the official language), but to accommodate better understanding, the questions will be translated into Oshiwambo language.

Respondents will have to complete the questionnaire according to their availability. Your opinion will represent the opinions of other child- bearing women [15-49] like yourselves. The questionnaire will take 30-50 minutes to complete.

Could you please grant me a few minutes of your time to complete the questionnaire?

Thank you in advance.

Saara Suoma Iita  
P. O. Box 1833  
OSHAKATI  
Namibia

Contacts numbers:

(065)- 2233126 (work)  
(065)- 230667 (home)  
(264)- 812793435 (cell phone)

**Section A****Demographic Information**

1. Registration number: \_\_\_\_\_

2. Ward: \_\_\_\_\_

**(Please tick the appropriate box)**

**3. Age**

(a) 15-20

(b) 21-30

(c) 31-40

(d) 41-49

**4. Marital status**

(a) Single

(b) Married

(c) Widow

(d) Divorced/ Separated

(e) Cohabiting

**5. Level of education (Tick the highest level of education)**

(a) No formal education

(b) Primary education

(c) Secondary education

(d) Tertiary education

(e) Student/ Learner

**6. Do you belong to any religion?**

(a) Yes

(b) No

**6.1. If yes, which religion does you belong to?**

- (a) Roman Catholic
- (b) Lutheran
- (c) Anglican
- (d) Other (Specify)
- 

**7. Employment Status**

- (a) Still schooling
- (b) Unemployed
- (c) Formal employed e.g. teaching, nursing etc.
- (d) Self-employed e. g. hairdressing, trading etc.
- (e) Subsistence farmer
- (f) Other (Specify)
- 
- 
- 

**8. Do you own/ covered by a medical health insurance/ medical aid scheme?**

- (a) Yes
- (b) No

**8.1. If the answer yes, does it cover the financing of both screening methods of both breast and cervical cancer?**

- (a) Yes
- (b) No
- (c) Do not know

**Section B.**

**These questions relate to the objective of assessing the awareness knowledge of women on causes, risk factors, signs and symptoms and screening methods used for early detection of breast and cervical cancer in Oshakati Health District.**

**(Please tick the appropriate answer)**

**9. Have you ever heard of?**

(a) Breast Cancer

(b) Cervical Cancer

yes	no
yes	no

**9.1. If the answer is yes, what did you hear about breast cancer?**

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**9.2. If the answer is yes, what did you hear about cervical cancer?**

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**10. How did you hear about? (Tick the correct answer (s)).**

	Breast Cancer	Cervical Cancer
(a) Radio		
(b) Newspaper		
(c) Clinic		
(d) Doctor		
(e) Friends		
(f) Family		
(g) Other		

**11. Have you ever heard of the causes of?**

**(Tick the correct answer)**

(a) Breast Cancer

(b) Cervical Cancer

yes	no
yes	no

**11. 1. If the answer is yes, what did you hear about the causes of breast cancer?**

---



---



---

**11. 2. If the answer is yes, what did you hear about the causes of cervical cancer?**

---



---



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**12. Did any one in your family died of**

- (a) Breast Cancer
- (b) Cervical Cancer
- (c) Do not know

yes	no
yes	no

**12. 1. If yes, indicate which family member?**

	Breast Cancer	Cervical Cancer
(a) Mother		
(b) Grandmother		
(c) Sister		
(d) Aunt		
(e) Cousins		
(f) Extended family members		

**12. 2. Were the risk factors (elements that increase the possibility or of harm or of a harmful occurrence) of breast cancer ever likelihood explained to you?**

- (a) Yes
- (b) No

**12. 3. If yes, which of the following were explained to you? (Tick the appropriate answer (s)).**

- (a) Women having her first menstrual period early, before age 12.
- (b) Women never being pregnant.
- (c) Women having a first baby after 30 years of age.
- (d) Breast cancer inheritable in families.
- (e) Breast cancer is associates with previous personal history of breast, ovarian cancer and smoking.

**12. 4. Were the risk factors (elements that increase the possibility or of harm or of a harmful occurrence) of cervical cancer ever likelihood explained to you?**

- (a) Yes
- (b) No



**12. 5. If yes, which of the following was explained to you?****(Tick the appropriate answer(s))**(a) Human papilloma virus (HPV). (b) Failure to use condoms. (c) Smoking. (d) Early age of first sexual intercourse. (e) Increased number of sexual partners. **12.6. Do you use any contraceptives (Family planning methods)?**(a) Yes (b) No **12.7. If yes, indicate which one (s) of the following are you using?**(a) Oral pills (b) Injections (c) Condoms **13. Were the early warning signs and symptoms of breast cancer ever explained to you?**(a) Yes (b) No **13. 1. If yes, which of the following concerning breast cancer ever explained to you? (Tick the appropriate answer(s)).**(a) Lumps in the breasts. (b) Change in the breast size. (c) Change in the color of the skin of the breasts. (d) Change in the nipples of the breasts. (e) Abnormal discharges from the nipples. (f) Pain in the breasts

**14. Were the early warning signs and symptoms of cervical cancer ever explained to you?**

- (a) Yes
- (b) No

**14.1. If yes, which of the following concerning cervical cancer ever explained to you? (Tick the appropriate answer(s)).**

- (a) Asymptomatic (Showing no symptoms).
- (b) Vaginal bleeding.
- (c) Pelvic inflammatory diseases (PID), the inflammation of inner female organs caused by germs (bacteria) marked by abdominal pain, fever and tenderness in the uterine cervix.
- (d) Sexually transmitted diseases (STD), venereal diseases caused by sexual contact.

**15. Did any one ever explain to you different examinations to undergo for early diagnosis and treatment of the following cancer?**

- (a) Breast Cancer
  - (b) Cervical Cancer
- |     |    |
|-----|----|
| yes | no |
| yes | no |

**15. 1. If yes, by whom?**

	Breast Cancer	Cervical cancer
(a) Clinic sister		
(b) Family member		
(c) Doctor		
(d) Friend		

**15. 2. Have you ever heard about breast self – examination?**

- (a) Yes
- (b) No

**15. 3. If yes, by whom?**

- (a) Clinic sister
- (b) Family member
- (c) Doctor
- (d) Friend

**15. 4. Was the procedure ever demonstrated to you?**

(a) Yes

(b) No

**15. 5. If yes, by whom?**

(a) Clinic sister

(b) Family member

(c) Doctor

(d) Friend

**15. 6. Have you ever done the procedure of breast self-examination yourself?**

a) Yes

(b) No

**15. 7. If yes, what kind of things are you looking for during self-examination yourself?  
(Tick the appropriate answer(s)).**

(a) Lumps in the breasts.

(b) Inverted nipples.

(c) Nipples abnormal discharges.

(d) Change in the breasts skin textures such as pain, redness and tenderness.

(e) Change in the size and shape of the breasts.

**15. 8. If yes, how often do you do the procedure of breasts self examination?**

(a) Once every six months.

(b) Once a month.

(c) Annually.

**15. 9. Do you know the other possible screening methods used for detection of breast cancer?**

- (a) Sonar, a picture of breasts taken by a machine through sound waves.
- (b) Mammogram, a picture of breasts taken through X-rays.
- (c) Clinical breast Examination (CBE), examination of breasts by health workers.
- (d) No knowledge

**15. 10. Do you go for a clinical breast examination (CBE) and mammogram?**

- (a) Mammogram
  - (b) Clinical breasts examination (CBE)
- |     |    |
|-----|----|
| yes | no |
| yes | no |

**15. 11. If yes, how often do you go for mammogram and clinical breasts examination (CBE)?**

	Mammogram	Clinical breasts examination (CBE)
Annually		
Every 2 years		
Every 5 years		

**16. Have you ever heard about cervical smear test, a screening tool used to remove mucus and cells from the cervix as part of pelvic examination?**

- (a) Yes
- (b) No

**16. 1. If yes, by whom?**

- (b) Clinic sister
- (b) Family member
- (c) Doctor
- (d) Friend

**16. 2. Do you have children?**

- (a) Yes
- (b) No

**16. 2. 1. If yes, how many children do you have?**

**Gravida ----- Para-----**

**16. 2. 2. Where have they been delivered?**

at home

at the hospital

**16. 3. Have you ever had a cervical smear test?**

(a) Yes

(b) No

**16. 4. If yes, how often do you attend cervical smear test?**

(a) As part of the post – natal services. Mention the date (year) of the last cervical smear test. Returned for the results.

Gravida ----- Para----- at the time of smear test

(b) As part of the post – natal services. Mention the date (year) of the last cervical smear test but **never** return for the results.

Gravida ----- Para----- at the time of smear test

(c) Reasons for not returning for Pap smear results

-----  
 -----  
 -----

(d) Once a year

(e) Every second year

(f) Every third years

(g) Every five years

**16. 5. Do you know the other possible screening methods used for early detection of cervical cancer?**

(a) Colposcopy, examination of the vagina and cervix by means of colposcope.

(b) Biopsy of the cervix, a piece of tissue is taken from the external opening of the uterus for pathological examination.

(c) Gardasil vaccine, used to prevent precancerous genital lesions, genital warts and cervical cancer due to types 6, 11, 16, 18 human papilloma virus (HPV).

(d) No knowledge

**Section C**

**These questions relate to the objective of assessing availability of any existing opportunities/ facilities for women where they can get health promotion and prevention information sessions with reference to breast and cervical cancer.**

**Please tick the appropriate answer.**

**17. What is the name of your nearest government health facility?**

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**18. When is the date for screening procedures of both breast and cervical cancer at your nearest health facility?**

(a) Everyday

(b) One day per week. Specify

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(c) Two days per week. Specify

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(d) Three days per week. Specify

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(e) No knowledge

**19. Did health workers ever give information to you to encourage you to be screened for both breast and cervical cancer at your nearest health facility?**

(a) Yes

(b) No

**19.1. If yes, how was the information delivered?**

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**19.2. What was the main message?**

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**19.3. Was the message clear and accepted by you as a woman?**

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**20. Are there any public educational materials available at health facility to inform women of breast and cervical cancer prevention?**

- (a) Yes
- (b) No
- (c) Do not know

**21. Do you read books, health materials and newspapers regarding health promotion and prevention of breast and cervical cancer?**

- (a) Yes
- (b) No
- (c) Cannot read

**22. Do you own a radio?**

- (a) Yes
- (b) No

**22. 1. If yes, how often do you listen to radio?**

- (a) Three to four times a day listen to specific programmes.
- (b) Three to four times a day listen to specific programmes but never heard information regarding health promotion and prevention of **breasts cancer** delivered on radio.
- (c) Three to four times a day listen to specific programmes but never heard information regarding health promotion and prevention of **cervical cancer** delivered on radio.
- (d) Three to four times a day listen to specific programmes and heard information regarding health promotion and prevention of **breasts cancer** delivered on radio.
- (e) Three to four times a day listen to specific programmes and heard information regarding health promotion and prevention of **cervical cancer** delivered on radio.

**23. Do you own a Television?**(a) Yes (b) No **23. 1. If yes, how often do you watch television?**(a) Evening hours in a day watch specific programmes. (b) Three to four times a day listen to specific programmes but never viewed information regarding health promotion and prevention of **breasts cancer** delivered on television. (c) Three to four times a day listen to specific programmes but never viewed information regarding health promotion and prevention of **cervical cancer** delivered on television. (d) Three to four times a day listen to specific programmes and viewed information regarding health promotion and prevention of **breasts cancer** delivered on television. (e) Three to four times a day listen to specific programmes and viewed information regarding health promotion and prevention of **cervical cancer** delivered on television. **24. Are there any other churches /religious or feminist organizations available in the community disseminating information to women and improve their participation in screening programs?**(a) Yes (b) No (c) Do not know. (d) Not participating herself as a member. **24.1. If the answer is yes, what are they and what kinds of activities are undertaken by the respective institutions?**


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**24.2. Are these activities undertaken throughout the year or only during special campaigns?**


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**25. Are women themselves involved in communicating messages to their peers and educating other women about breast and cervical cancer?**(a) Yes



(b) No

(c) No knowledge

# UNIVERSITY OF NAMIBIA

Private Bag 13301, 340 Mandume Ndemufayo Avenue, Pionierspark, Windhoek, Namibia



## FACULTY OF MEDICAL AND HEALTH SCIENCES

**Letter of Permission:  
Post-Graduate Students**

**Date:** 24 April 2007

**Dear Students:** Ms. S. Iita

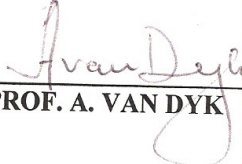
The Post-Graduate Studies Committee has approved your research proposal.

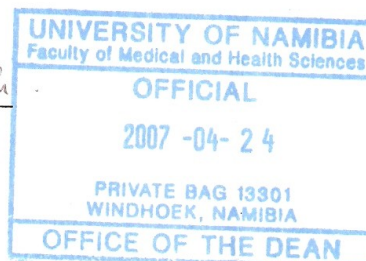
**Title:** Awareness and knowledge of women regarding health promotion and prevention of breast and cervical cancer in Oshakati Health District

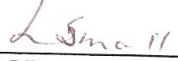
You may now proceed with your study and data collection.

It may be required that you need to apply for additional permission to utilize your target population. If so, please submit this letter to the relevant organizations involved. It is stressed that you should not proceed with data collection and fieldwork before you have received this letter and got permission from the other institutions to conduct the study. It may also be expected that these organizations may require additional information from you.

Please contact your supervisors on a regular basis.

  
PROF. A. VAN DYK



  
PROF. L. SMALL



**REPUBLIC OF NAMIBIA**

*Ministry of Health and Social Services*

Private Bag 13198	Ministerial Building	Tel: (061) 2032507
Windhoek	Harvey Street	Fax: (061) 227607
Namibia	Windhoek	E-mail: <a href="mailto:akulobone@mhss.gov.na">akulobone@mhss.gov.na</a>
Enquiries: Mr A. Kulobone	Ref.: 17/3/3/AP	Date: 28 May 2007

**OFFICE OF THE PERMANENT SECRETARY**

Ms Saara Suoma Iita  
P/Box 1833  
Oshakati

Dear Madam,

**RE: AWARENESS AND KNOWLEDGE OF WOMEN REGARDING HEALTH PROMOTION AND PREVENTION OF BREAST AND CERVICAL CANCER IN OSHAKATI HEALTH DISTRICT.**

1. Reference is made to your application to conduct the above-mentioned study.
2. The proposal has been evaluated and found to have merit.
3. Kindly be informed that approval has been granted under the following conditions:
  - 3.1.1. The data collected is only to be used for operational purpose;
  - 3.1.2. A quarterly progress report is to be submitted to the Ministry's Research Unit;
  - 3.1.3. Preliminary findings are to be submitted to the Ministry before the final report;
  - 3.1.4. Final report to be submitted upon completion of the study;
  - 3.1.5. Separate permission to be sought from the Ministry for the publication of the findings.

Wishing you success with your project.

Yours sincerely,

**DR. K. SHANGULA**  
PERMANENT SECRETARY



Directorate: Policy, Planning and HRD  
Subdivision: Management Information and Research



**REPUBLIC OF NAMIBIA**

*Ministry of Health and Social Services*

**DIRECTORATE: OSHANA REGION**

Private Bag 5538  
Oshakati

Tel: No. (09-264-65-223-3119)  
Fax: No. (09-264-65-220303)

**Office of the Director**

Enquiries: Dr N.T. Hamata 19 June 2007

Mrs Iita  
P.O.BOX 1833  
Oshakati

Dear Mrs Iita

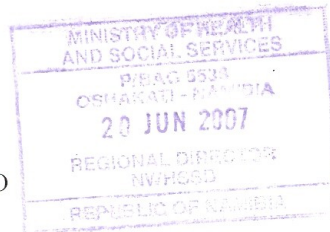
**APPLICATION FOR PERMISSION TO CONDUCT A RESEACH IN OSHAKATI STATE HOSPITAL**

Permission is hereby granted. You are reminded to adhere to the conditions of approval of the Permanent Secretary.

Wishing you success in your research studies.

Yours sincerely

**Dr N.T. Hamata**  
**Regional Director**



cc: Dr I.W. Dennar, CMO