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List of Abbreviations

ACOG	American College of Obstetricians and Gynaecologists	
ACCP Alliance for Cervical Cancer Prevention		
ACS	American Cancer Society	
ASIR	Age standardised incidence rate	
CIConfidence interval		
CIN	Cervical intra-epithelial neoplasm	
DES	Diethylstilboestrol	
FIGO	International Federation of Gynaecology and Obstetrics	
FP	Family planning	
QECH	Queen Elizabeth Central Hospital	
HBM	Health Belief Model	
HIV	Human Immunodeficiency Virus	
HPV	Human Papiloma Virus	
JHPIEGO	John Hopkins Program for International Education in	
	Reproductive Health	
КСН	Kamuzu Central Hospital	
LEEP	Loop Electrosurgical Excision Procedure	



MCH	Mzuzu Central Hospital	
MCH	Maternal child health	
МОН	Ministry of Health	
NCCCNational Cervie	cal Cancer Coalition	
NBCCEDPNational Breast and Cervical Cancer Early Detection Program		
NGO	Non governmental organisation	
OPD	Outpatient department	
OR	Oddsratio	
PATH	Program for Appropriate Technology in Health	
PHC	Primary healthcare	
SPSS	Statistical Programme for Social Science	
UNISA	University of South Africa	
USA	United States of America	
USOSTF	United States Preventive Services Task Force	
VIA	Visual inspection with acetic acid	
WISEMAN	Well-Integrated Screening and Evaluation for Women Across the	
	Nation	
WHS	World Health Survey	
WHO	World Health Organization	

INTRODUCTION AND BACKGROUND INFORMATION

1.1 INTRODUCTION

This study attempted to identify factors influencing Malawian women's intentions to utilise cervical screening services, from the perspectives of women (aged 42 and older in phase 1), and from the nurses/midwives' perspectives (phase 2). Regular cervical cancer screening plays a vital role in reducing mortality from cervical cancer through early detection (Lee-Lin, Pett, Menon, Lee, Nail, Mooney & Itano 2007:1205). Studies have demonstrated that women aged 40 and older have the highest incidence of cervical cancer and yet they poorly utilise cervical cancer screening services (Saksouk 2008; Collymore 2008). Some of the barriers to under-utilisation of health services by older women include: not being in the child bearing age, less access to services and lack of awareness of the need for preventive health services (Dhakal, Chapman, Simkhada, VanTeijlingen, Stephen& Raja 2007:19).

The World Health Organization (WHO2010) states that world-wide, cervical cancer is the second most common cancer among women, but the most common cancer among women in Sub-Sahara Africa (SSA). It is estimated that women in developing countries account for 80.0% of annual cervical cancer deaths occurring worldwide. Most of these deaths occur in the poorest regions which include, South Asia, SSA and parts of Latin America (Collymore 2004; National Cervical Cancer Coalition [NCCC] 2008). An estimated 78 879 women living in Africa will be diagnosed with cervical cancer annually, whilst 61 671 will die from this disease (Denny 2010:70). The countries with higher cervical cancer rates include Zimbabwe, Uganda, Kenya and Malawi (Chirenje, Rusakaniko, Kirumbi, Ngwale, Makuta-Tlebere, Kaggwa, Mpanju-Shumbusho&Makoae 2001:128; Collymore 2004; Sitas, Parkin, Chirenje, Sten, MQoQi, &Wabinga2006; MOH 2004:4). In Malawi, cervical cancer accounted for approximately 28.0% of all female cancers, with 80.0% of the women with cervical

cancer only seeking care during the inoperable late stages (Dzamalala, Mdokwe&Chimwemwe 2004: JHPIEGO 2002).

Malawi is a SSA country where cervical cancer remains one of the leading cancers affecting women. Malawi is a small landlocked country in southern Africa. It has an area of 118 484 square kilometers of which 94 276 square kilometers are land and the rest is covered by the waters of Lake Malawi. The country shares boundaries with Tanzania to the north, Mozambique to the east, southeast and southwest and Zambia to the west (see Annexure A). Malawi has been ranked as one of the world's poorest countries with a Gross National Product (GNP) of \$180. Malawi's Population and House Census for 2008 was 13 066 320 (National Statistics Office 2008:2). Malawi's health challenges include: a high incidence of HIV (12.9% of the women aged 15-49 who were tested, were HIV postiive); high mortality rate of 99/1000 for children younger than five and high maternal mortality rate of 675/100 000 (National Statistics Office 2010:xxii& 97). Among the conditions that affect Malawian women's health, cervical cancer is considered a priority within the non-essential health package (MOH 2004:4).

Effective screening coverage programmes to detect precancerous conditions and to intervene before progression to cancer, are markedly low across age groups and declines rapidly for women over 45 years of age in developing countries. This age group, corresponds with the age at which the incidence of and mortality from cervical cancer rise sharply (Gakidou, Nordhagen&Obermeyer 2008:863).

This study was conducted in two phases at three health centers in Blantyre, Malawi. A quantitative cross-sectional exploratory descriptive research method, using a structured interview schedule, was administered to women aged 42 years and older for phase 1. A qualitative research design (semi- structured interviewsconducted with nurse/midwives) was conducted in phase two. Findings obtained from the nurse/midwives complemented findings obtained from the women. The study was guided by the Health Belief Model (HBM).

1.2 BACKGROUND INFORMATION

Cervical carcinoma is a condition that originates at the squamo-columnar junction of the cervix. According to Saksouk (2008), Sitas et al (2006) and Zanotti (2002), epidemiologic studies demonstrate that the major risk factor for the development of pre-invasive or invasive cervical carcinoma is infection with the Human Papilloma Virus (HPV) which is transmitted sexually.Hernandez, Wilkens, Zhu, McDuffie, Thompson, Shvetsov, Ning and Goodman (2008:888) state that men are assumed to be the main reservoirs of genital HPV infection for women. In Brazil, Mexico, and the United States of America (USA), study results revealed that samples combined from the coronal sulcus, glans penis, shaft, and scrotum of 1160 men from the three countries, overall HPV prevalence was 65.2%, with 12.0% oncogenic types only, 20.7% nononcogenic types only, 17.8% both oncogenic and nononcogenic, and 14.7% unclassified infections. Multiple HPV types were detected in 25.7% of study participants (Giuliano, Lazcano-Ponce, Villa, Flores, Salmeron, Lee, Papenfuss, Abrahamsen, Jolles, Nielson, Baggio, Silva, &Quiterio 2008:2040-2041).

However, in Fernandez, McCurdy, Arvey, Tyson, Morales-Campos, Flores, Useche, Mitchell-Bennett, Sanderson's (2010:615) studyresults on HPV knowledge, attitudes, and cultural beliefs among Hispanic men and women living in the Texas-Mexico border area demonstrated that men did not know that males could transmit the virus, and that it could cause cervical cancer in women. One participant actually asked the moderator to tell him how it could be transmitted.In addition, at a Melbourne University's open day in March 2007, it was revealed that despite the fact that many women participants had already been infected with HPV as evidenced by cervical abnormality rates, and/or had a real risk of future infection, only 28.0% of women felt personally at risk of HPV transmission(McNair, Power & Carr 2009:87).

The types of HPV which are known precursors to cervical cancer include 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59 and 68. The transmission risk for any PHV type is the same (Collymore 2004; Juneja, Sehgal, Sharma &Pandey 2007:38). However, HPV types 16 and 18 are identified most frequently and are most clearly shown to be human carcinogenic. The HPV infection affects the border of the cervix and the

uterus. The squamous epithelium cells found at this junction divide rapidly and have the potential to undergo an abnormal transition to dysplastic cells, if exposed to carcinogens such as HPV 16 and 18 (Holschneider, Goff & Falk 2008; Hiltabiddle 2008; González Intxaurraga, Stankovic, Sorli&Trevisan 2002).Risk factors for HPV include a young age at first sexual intercourse, increased number of sexual partners, smoking, immunosuppression induced by the Human Immunodeficiency Virus (HIV), high parity and low socioeconomic status (Sitas et al 2006; Zanotti 2002).

According to Collymore (2004) and Zanotti (2002), global efforts to detect cervical cancer have focused on screening women for abnormal cervical tissues, treating the condition before it progresses to the advanced stages and providing appropriate follow-up care. Screening efforts have relied largely on Papanicolaou (Pap) smears to detect abnormal cell changes from the cervical transition zone (Juneja et al 2007:38). For developing countries the Pap smear test poses a number of challenges including, lack of trained cytotechnologists, shortage of cytology laboratories, long intervals between the Pap screening and making the results known and lack of health centers that are able to treat pre-invasive lesions. These challenges stimulated research on alternative tests, including Visual Inspection with Acetic Acid (VIA). This test has demonstrated high sensitivity for detecting cervical intra-epithelial neoplasm (CIN) (Jeronimo, Morales, Horna, Pariona, Manrique, Rubinos& Takahashi 2005:1). Cervical cancer develops slowly. The cells of the cervix go through mild to severe changes over a period of years before changing to cancer. This implies that more than 90% of cervical cancer can be detected early through regular screening (Van Til, MacQuarrie& Herbert 2003:1116).

1.2.1 Transmission of the Human Papilloma Virus (HPV)

Hernandez, Wilkens, Zhu, McDuffie, Thompson, Shvetson, Ning and Goodman (2008) state that HPV infection is the principle cause of cervical cancer. The natural history of HPV infection is well characterised in women and is acquired through sexual contact with men. The infection is also common in men and is usually asymptomatic, although prevalence estimates vary from 1.0% to 73.0%. Hermandez et al's (2008) study revealed that uncircumcised men had a higher prevalence of

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HPV infection of the glans/corona (46.0% vs. 29.0%; adjusted OR. 1.96 [95% CI, 1.02-3.75]). It was therefore, concluded that HPV infections occur more frequently among uncircumcised men than among circumcised men.

In addition, Castellsague, Bosch, Munoz, Meijer, Shah, Sanjose', Eluf-Neto, Ngelangel, Chichareon, Smith, Herrero, Moreno and Franceshi (2002:1107), observed an elevated risk of cervical cancer among partners of uncircumcised men, suggesting that lack of circumcision might enhance the transmission of HPV to female partners. The authors conducted five case-control studies in Spain, Colombia, Brazil, Thailand and the Philippines with partners of women who had been newly diagnosed with cervical carcinoma in situ or invasive cervical cancer. The results revealed that HPV was detected in 19.6% of uncircumcised men (166 out of 847) and 5.5% of circumcised men (16 out of 292) (Castellsague et al 2002:1107).

A study on condom use and the risk of genital HPV infection among young women undergraduates of the University of Washington showed that male condoms effectively reduced the risk of male to female genital HPV transmission. This report further states that the incidence of genital HPV infection was 37.8 per 100 patientyears at risk among women whose partners used condoms for all instances of intercourse during the eight months preceding testing, as compared with 89.3 per 100 patient-years at risk among women whose partners used condoms less than 5.0% of the time (adjusted hazard ratio, 0.3; 95 percent confidence interval, 0.1 to 0.6, adjusted for the number of new partners and the number of previous partners of the male partner) (Winer, Hughes, Feng, O'Reilly, Kiviat, Holmes &Koutsky 2006:2648).

According to the Medical Research Council News (2008) and Nordqvist (2006), prostaglandins found in semen aggravate tumour growth in the cervix or uterus. Sexually active women who are at risk of cervical cancer should therefore encourage partners to wear condoms to prevent increased exposure to the prostaglandins that might worsen the condition. In the Albert Schweitzer Hospital, Dordrecht, Netherlands, one randomised clinical study showed that condom use could promote Cervical Intraepithelial Neoplasia(CIN)regression and HPV clearance after following

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up 125 women with CIN. The 2-year cumulative regression rate for CIN was 53.0% among the condom-using group versus 35.0% in the non condom-using group (p=0.03), and 2-year cumulative rates of HPV clearance were 23.0% versus 4.0%, respectively (p=0.02) (Hogewoning, Bleeker, Van de Brule, Voorhorst, Snuders, Berkhof, Westenend&Meuer 2003:813).

1.2.2 Pap smear and visual inspection with acetic acid (VIA) screening

Different cervical cancer screening tests are available worldwide. Protocols vary with respect to guidelines for performing tests such as HPV/DNA, Visual Inspection with Acetic acid (VIA), Pap Smear and cervicography (Dietrich, Tobin, Cassells, Robinson, Greene, Sox, Beach, DuHamel&Younge 2006:563-571; Ministry of Health 2005: 5).

A Pap smear is a test in which cells from the mucous membranes on the squamocolumnar junction of the cervix are scraped with a cotton swab or small 'cyto' brush, stained and examined under a microscope for pathological changes (HealthSquare 2008). It was introduced in the 1930s by Papanicolaou and was endorsed by the American Cancer Society (ACS) in 1945 as an important cancer screening tool. It was validated as a German cervical cancer screening model in 2004 (Siebert, Srocynski, Hillemanns, Engel, Stabenow, Stegmaier, Voigt, Gibis, Holzel& Goldie 2006:7-8). Pap smears became the standard for early detection of cervical cancer lesions during the 1950s.

The VIA is a test that involves gentle application of 5.0% acetic acid (vinegar) on a cervix using a cotton swab followed by inspection with a naked eye under 100-watt illumination (Jeronimo et al 2005:3). Its effectiveness became known in 1982, when Ottavino and La Torre published a study in which 24 000 women were examined visually and colposcopically after a cervical wash with acetic acid. A key result was that 'naked-eye' inspection detected abnormalities in 98.4% of cases. This study concluded that colposcopic magnification is not essential in clinical practice for identification of the cervix 'at risk' (Salvador-Davila 2002:4). Pap smear and VIA

screening are effective in detecting CIN grade 2-3, which are considered to be true precancerous lesions (Jeronimo et al 2005:3).

1.2.3 Classification of cervical cancer

The VIA results are recorded as acetic acid positive or negative for cervical cancer. Immediate treatment is initiated or referral is effected for positive results (Nazeer 2007). Unlike VIA, Pap smear results are graded as mild, moderate or severe or as a low-grade and a high grade lesion (Juneja at el 2007:38). Saksouk (2008), Odicino, Pecorell, Zigliani and Creasman (2008:207-209) and Zanotti (2002) outlined cervical cancer staging clinically by the International Federation of Gynaecology and Obstetrics (FIGO) criteria using physicians' examinations as shown in table 1.1. Following a diagnosis, the physician further classifies the stage of the cancer according to how far the disease has spread into the lining of the cervix, throughout the cervix, or beyond the cervix (see Annexure B). These classifications are used to determine the most appropriate type of treatment (The New York Times 2008; Schoenstadt 2008).

Table 1.1: Stages of cervical cancer: according to the Federation ofInternational Gynaecology and Obstetrics (FIGO)

Stage 0	Pre-invasive disease (carcinoma in situ)		
Stage I	Carcinoma strictly confined to the cervix		
Stage II	Carcinoma that extends into parametrical (but not onto the pelvic side wall) or the upper two thirds of the vagina.		
Stage III	Carcinoma that has extended onto the pelvic side wall or involves the lower third of the vagina. (All cases with hydronephrosis or a non-functioning kidney should be included unless they are known to be due to other causes)		
Stage IV	Carcinoma that has extended beyond the true pelvis to other organs or has clinically involved the mucosa of the bladder, rectum or both.		

Source: Odicino et al (2008:207)

1.2.4 Importance of VIA and Pap smear tests in developing countries

According to Mayo Clinic Staff (2008), Pap smear guidelines from the American Cancer Society (ACS), the American College of Obstetricians and Gynaecologists (ACOG) and the United States Preventive Services Task Force (USPSTF), all women should have their first Pap smears about three years after their first sexual intercourse or at age 21, whichever comes first. This enables early detection of pre-invasive disease and reduces the incidence and the mortality rate of cervical cancer (Saksouk 2008).Data are available internationally on trends and on the incidence of cervix cancer, showing declines in some countries' statistics. Reductions have been noted in Hawaii, Denmark, Finland, Sweden, Japan, New Zealand, Cali, Colombia and Puerto Rica. In Cali, Colombia, screening programmes' case-control study confirmed that screened women had a reduced risk of developing cervical cancer (WHO 2002).

A World Health Survey (WHS) was implemented in 2002, on coverage of cervical cancer screening in 57 countries. In many countries the majority of women never had any pelvic examinations done. This was the case in Malawi, Ethiopia and Bangladesh where more than 90.0% of the women reported that they had never undergone pelvic examinations. The average screening rate across these countries was reportedly 68.0%, but only 31.0% of the poorest women had undergone pelvic examinations, compared to 91.0% of women in the richest countries. The inequalities are even more pronounced for effective coverage of cervical cancer screening with the poorest women being nearly seven times less likely to have been screened effectively compared to their rich counterparts, 9.0% and 64.0% respectively (Gakidou et al 2008:863).

In addition, Gakidou et al (2008:863) stated that the crude and effective coverage of cervical cancer screening, across age groups in 57 countries (WHO 2002), was markedly lower in developing countries. Coverage rates declined for women over 45 years of age in developing countries and over 55 years of age in developed countries. The age group for whom effective coverage rates declined, corresponded with the age at which the incidence of and mortality rates from cervical cancer have

risen sharply. In developing countries, an important reason for the higher incidence of cervical cancer was the lack of effective screening programmes to detect precancerous conditions and to intervene before progression to cancer.

1.2.5 Guidelines for the frequency of cervical cancer screening

Mayo Clinic Staff (2008) Zoorob. and Anderson, Cefalu and Sidani(2001:1102) outlined guidelines recommended for cervical cancer screening by the American Cancer Society (ACS), American College of Obstetricians and Gynaecologists (ACOG) and the United States Preventive Services Task Force (USPSTF) as summarised in table 1.2. Malawi follows the single visit approach to cervical cancer prevention with VIA and cryotherapy, if indicated, and targets women aged 30 to 45 years. This approach provides both screening and initial management of a client during the same visit. The women who are VIA-negative, are to be screened at least every 5 years. Women with VIA-positive findings are advised to undergoannual screenings (MoH 2005:4).

AGE	American Cancer Society	American College of	United States
	(ACS)	Obstetricians and	Preventive
		Gynaecologists	Services Task
		(ACOG)	Force (USPSTF)
21 to 29	Every two years with a liquid based test or annually with a conventional test	Annual Pap test	Pap tests at least every three years
Over 30	Every two or three years if one has had three successive negative tests	Every two or three years if one has had three negative tests in a row	Pap tests at least every three years

Source: Mayo Clinic Staff (2008); Zoorob, Anderson, Cefalu and Sidani (2001:1102)



1.2.6 Adherence to screening guidelines for cervical cancer

Women who adhere to recommended guidelines for cervical cancer screening capture most of the benefits, while those who do not receive appropriate follow-up treatment and/or advice after an abnormal or normal Pap smear are at high risk of developing cervical cancer (Ross, Forsyth & Rosenbaum 2006:69). Records and follow-up of 17.0% of patients who were screened in Lesotho and Zimbabwe for cervical cancer, demonstrated an absence of precise management protocols that contributed to poor outcomes. Of the Primary Health Care (PHC) centres surveyed, 31.0% had seen at least two cases of invasive cervical cancer during the preceding year (Chirenje et al 2001:130).

In a randomised controlled trial, to improve cancer screening among low-income women in New York City, women aged 50-69 years received centralised telephone information about the management of cervical cancer screening. Women in the intervention group received a series of telephone calls, facilitating the cervical cancer screening process. Results indicated that there was a 10.0% increased use of Papanicolau tests (P<0.001). This could potentially save lives through early detection even among low-income women (Dietrich et al 2006:569).

In addition, Sankaranarayanaan, Esmy, Rajkumar, Muwonge, Swaminathan, Shanthakumari, Fayette and Cherian (2007:402) conducted a cluster-randomised trial, assessing the effects of visual screening on cervical cancer incidence and mortality in Tamil Nadu, India. Participants in the intervention group were personally invited for VIA screening, given cards indicating the date, time and place of screening and were followed up. Control group participants were advised on how to access prevention services by educating them on cervical cancer screening, signs and symptoms, early diagnosis, treatment and where screening and early diagnosis or treatment services were available. Results after 7 years, demonstrated a 25.0% reduction in cervical cancer incidence (hazard ratio 0.75; 95%; CI 0.55-0.95) and a 35.0% reduction in cervical cancer mortality (hazard ratio 0.65; 95%; CI0.47-0.89) intheintervention group compared with the control group.

A study done with staff members' postgraduate trainees to assess adherence to the USPSTF cervical cancer screening recommendations (at the University Hospital of Albert Einstein College of Medicine) showed that 81.0% of the staff members adhered to USPSTF's screening recommendations. Staff members who required screening during the preceding year were significantly less likely to be adherent when compared to staff members who required screening during the past 3 years (54.0% compared to 87.0%; odds ratio (OR) = 0.17, 95% CI, 0.08 to 0.37 P<.01). The adherence to USPSTF's recommendations was attributed to these staff members' high standard of education, above average incomes, access to healthcare, awareness of the consequences of cervical cancer and the benefits of early detection and treatment of cervical cancer (Ross et al 2006:69).

1.2.7 Treatment options for cervical cancer

According to the MOH (2005:5), VIA is the recommended practice for low-resource settings. The reasons include that:

- It is safe, inexpensive and easy to perform
- The test's results are similar to other tests used for cervical cancer screening
- The required skills can be learned and tests provided by almost all health professionals at all levels of the healthcare system
- It provides immediate results on which decisions about the management (treatment or referral) are based
- Most equipment and supplies for this service are locally available
- Instant treatment through cryotherapy is linked to the screening, and
- It is non-invasive and effectively identifies many precancerous lesions.

The VIA test results are either positive or negative. The following are the guidelines used after the procedure:

• If VIA is negative clients are advised to come for a review in 5 years, and are reminded about risk factors.

- If the test is positive but there is no suspected cancer, the lesion extends less than 2 mm beyond the diameter of the cryotherapy probe, the lesion covers less than 75.0% of the cervix and does not extend to the vaginal walls, explanations are provided to the clients concerned about the meaning of a positive test, the importance of treatment, and recommended follow-up actions.
- If ready for cryotherapy, the clients are counselled about the procedure and it is preferably done on the same day or any other day that the client prefers.
- Clients with precancerous lesions who are unsuitable for cryotherapy and those with invasive cancer are referred for further (usually surgical) treatment (MOH 2005:14; Sankaranarayanan et al 2007:399).

According to HealthSquare (2008) the key reason for cervical screening is early detection. When cervical cancer is diagnosed early and treated effectively, a woman has every reason to expect complete recovery. However, if it is not detected early, Siteman Cancer Center St. Louis (2008) stated that there are different types of treatment for patients with cervical cancer. Some treatments are standard and some are being tested in clinical trials. The standard treatments are the ones currently in use. The authors continued to state that there are three types of standard treatments in use: surgery, radiation therapy and chemotherapy.

Surgery involves removal of the cancerous growth during an operation. Some of the surgical procedures include:

- Conisation this involves removal of a cone-shaped piece of tissue from the cervix and cervical canal.
- Total hysterectomy is a procedure removing the uterus, including cervix through the vagina or abdomen.
- Bilateral salpingo-oophorectomy involves removal of both ovaries and both fallopian tubes.
- Radical hysterectomy is a surgical procedure removing the uterus, cervix and part of the vagina. The ovaries, fallopian tubes or nearby lymph nodes might also be removed.

- Pelvic exenteration is removal of colon, rectum and bladder when the cervix, vagina, ovaries and nearby lymph nodes are also removed.
- Laser surgery involves the use of a Laser beam, which is a narrow beam of intense light, as a knife to make bloodless cuts in tissues or to remove a lesion such as a tumour.
- Loop electrosurgical excision procedure (LEEP) is a treatment that uses electrical current passed through a thin wire loop as a knife to remove abnormal tissues or cancer tumours (Siteman Cancer Center St. Louis 2008:7)

Radiation therapy refers to treatment that uses high-energy x-rays or other types of radiation to destroy the ability of cells to grow and divide (Health Square 2008; Siteman Cancer Center St Louis 2008). The treatment can either be given externally or internally depending on the type and stage of the cancer being treated. External radiation treatment uses a machine outside the body to send radiation towards the cancer. For internal radiation a radioactive substance sealed in needles, seeds, wires or catheters is used. The radioactive substances are then placed directly into the tumour or an area where the cancer cells are most likely to be found (Holschneideret al 2007:2; Siteman Cancer Center St Louis 2008:7).

Chemotherapy involves the use of drugs to stop the growth of cancer cells (Holschneider et al 2007). The drugs either kill the cells or stop them from dividing. Chemotherapy can reach cancer cells systemically after being taken by mouth or injection into a vein or muscle. It can also be placed directly into the spinal column, an organ or a body cavity and would affect cancer cells in those areas or regions. The type and stage of the cancer being treated determines the way the chemotherapy is given (Siteman Cancer Center St. Louis 2008).

1.2.8 Treatment options by stage of cervical cancer

The stages of cervical cancer (Odicino et al 2008:207) are displayed in table 1.1.

1.2.8.1 Stage 0 (pre-invasive or cancer in situ)

According to Siteman Cancer Center St. Louis (2008) and The New York Times (2008), for this stage, carcinoma is in situ. Therefore these patients could benefit from the following treatment options: loop electrosurgical excision procedure, Laser surgery, conisation, cryotherapy, total hysterectomy and internal radiation therapy for patients who cannot have surgery because of co-existing medical conditions.

1.2.8.2 Stage I (carcinoma strictly confined to the cervix)

Patients in this category are divided into two groups, stage 1A and Stage 1B. Patients in stage 1A are recommended for either of the following treatments options: total hysterectomy with or without bilateral salpingo-oophorectomy, conisation, radical hysterectomy and removal of lymph nodes or internal radiation therapy. Stage 1B patients can benefit from either a combination of internal and external radiation therapy, radical hysterectomy and removal of lymph nodes or radical hysterectomy and removal of lymph nodes followed by radiation therapy plus chemotherapy (Siteman Cancer Center St Louis 2008; The New York Times 2008).

1.2.8.3 Stage II (carcinoma extends into upper two-thirds of the vagina)

This stage is further categorised into two as IIA and IIB. According to the Siteman Cancer Center St Louis (2008:7), similar to patients in stage IB, patients in stage IIA can also benefit from either of the following treatment options: a combination of internal and external radiation therapy, radical hysterectomy and removal of lymph nodes or radical hysterectomy and removal of lymph nodes followed by radiation therapy plus chemotherapy. The recommended treatment for patients in stage IIB is internal and external radiation therapy combined with chemotherapy (Siteman Cancer Center St Louis 2008; The New York Times 2008).

1.2.8.4 Stages III (carcinoma has extended into the pelvic side wall or the lower third of the vagina)

Patients categorised in this stage can benefit from internal and external radiation therapy with concurrent chemotherapy (Siteman Cancer Center St Louis 2008; The New York Times 2008).

1.2.8.5 Stage IV (darcinoma that has extended beyond the true pelvis to other organs)

Patients diagnosed with stage IV cervical cancer can be broadly divided into two groups IVA and IVB. Recommended treatment for both stages may include internal and external radiation therapy combined with chemotherapy. This treatment is given as palliative therapy to relieve symptoms caused by the cancer and to improve the quality of life (Siteman Cancer Center St. Louis 2008; The New York Times 2008).

1.2.9 What Malawi has done to detect and manage cervicalcancer

To initiate cervical cancer services, Project Hope piloted the Cervical Cancer Prevention Programme from 1999 to 2002. This programme concentrated on selected health facilities in the Blantyre and Mulanje districts of Malawi and was relatively successfully accepted by women, healthcare providers, as well as policy makers. A total of 5 446 women were screened, 9.4% of whom were assessed as VIA-positive. In February 2002, the MOH (2005:1) incorporated cervical cancer in its National Reproductive Health policy and later, in 2005, it initiated a phased-in national cervical cancer prevention programme. The MOH also endorsed VIA and cryotherapy as an appropriate approach to detect and treat cervical pre cancerous changes (MOH 2005:1).

Since 2005, services for screening and treatment of pre-cancerous lesions have been introduced in all districts throughout the country. The programme aimed at screening at least 80.0% of all Malawian women aged 30 to 45 over a five year period (approximately 668 668 women by 2010)(MOH 2005). The MOH's National

Service Delivery Guidelines for Cervical Cancer Prevention and the MOH's National Cervical Cancer Programme Strategy, developed during April 2005 and August 2004 respectively, outline Malawi's approach and framework for cervical cancer service delivery throughout the country. The National Reproductive Health Service guidelines also guide service providers to deliver cervical cancer screening and treatment services(MOH 2005:1; JHPIEGO 2002; Muula&Geubbels 2006:186).

Nurse/midwives are among the service providers performing cervical cancer screening. Nurse/midwives play an important role in the education of Malawi's women because of their close relationship with women and the women's comfort in asking nurse/midwives about the symptoms of and screening procedures for gynaecological cancers. Thus, nurse/midwives are in a unique position to give health education to women in Malawi (Yaren, Ozkilinc, Guler&Oztop 2008:279). Therefore, nurse/midwives will be included in this study (in phase 2) in order to get insight into their perceptions about factors associated with the intention to be screened for cervical cancer among Malawian women, aged 42 and older.

1.2.10 Significance of the study

This study will provide insight intofactors associated with the intention to be screened for cervical cancer among women aged 42 and older in Malawi. Both women aged 42 and older (phase 1) as well as the nurse/midwives (phase 2) will provide information about these factors. The study's findings might assist healthcare providers to review the cervical cancer, screening and treatment policies.

1.3 STATEMENT OF THE PROBLEM

Malawi's cancer statistics (MoH2000-2006) indicates that of the 3 221 women found to be positive for cervical cancer, 1 991 were aged 42 and older (Dzamalala et al 2008). Blantyre district has an estimated 49 942 and 18 924 women living in the Ndirande and Chilomoni health centers' catchment areas respectively (Blantyre District Health Office Statistics 2008). At these health centers, 107 and 111 women
respectively had cervical cancer screening tests done between March and June 2008. Of those screened only 11 from Chilomoni and 8 from Ndirande health center were at least 42 years old (MOH 2008), yet this is the high risk group.

Furthermore, an audit of gynaecological cancer patients admitted during the first quarter of 2008 at the Queen Elizabeth Central hospital (QECH) in Blantyre revealed that 29.6% of gynaecological cancers were among women aged 40-49 years. Cervical cancer was common amongst those above 40 years of age (21 out of 59 women). Data also indicated that all women diagnosed with cervical cancer had not been screened although all had visited a health facility at least once during the preceding 5-10 years (Taulo, Malunga&Ngwira 2008:141). Hence the need todetermine factors that are associated withwomen's intention to use cervical cancer screening services among women aged 42 and older.

Nurse/midwives need to perform important education, encouraging and informing roles to influence women to be screened for cervical cancer. Nurse/midwives combine their knowledge of healthcare and available screening services to educate women about cervical cancer. Although the MOHprovides free screening services in some health centres, the low rates of screening among women age 42 and older, coupled with the high incidence of cervical cancers in this age group, indicated the importance of performing this study.

1.3.1 Purpose of the study

The purpose of the study was to identifyfactors, with emphasis on knowledge, that were associated with the intention to be screened for cervical cancer screening among Malawian women, aged 42 and older. The study also attempted to identify factors identified from nurse/midwives' perspectives as influencing the intention to utilise cervical cancer screening by women of the same age group.

1.3.2 Specific objectives

The objectives were guided by the HBM because the study was measuring women's perceived susceptibility, severity, benefits, barriers and sources of information on cervical cancer and screening. The objectives wereto:

- Identify demographic variables for women aged 42 and older and their association with these women's intentions to be screened for cervical cancer.
- Describe the association between perceived susceptibility to cervical cancer in women aged 42 and older and their intentions to be screened.
- Determine the association between perceived seriousness of cervical cancer in women aged 42 and older and their intentions to be screened.
- Determine the association between perceived benefits of cervical cancer screening in women aged 42 and older, and their intentions to be screened.
- Identify the association between perceived barriers to being screened for cervical cancer among women aged 42 and older, and their intentions to be screened.
- Establish whether any association exists between cues to action (sources of information) for cervical cancer screening among women aged 42 and older and their intentions to be screened.
- Identify, from midwives' perspectives, which factors are associated with the intention to be screened for cervical cancer among women aged 42 and older in Malawi.

1.3.3 Research questions

The study aimed at answering the following questions:

- What are the women's demographic and socio-psychological variables and their association with the intention to be screened for cervical cancer?
- What is the association between perceived susceptibility and the intention to be screened for cervical cancer among women aged 42 and older?
- What is the association between perceived seriousness of cervical cancer and the intention to be screened for cervical cancer among women 42 years and older?

- What is the association between perceived benefits of being screened for cervical cancer and the intention to be screened for cervical cancer among women aged 42 and older?
- What is the association between perceived barriers to being screened for cervical cancer and the intention to be screened among women aged 42 and older?
- What is the association between sources of information (cues to action) and the intention to be screened for cervical cancer among women aged 42 and older?
- What are the factors identified by nurse/midwives that are associated with the intention to be screened for cervical cancer among women aged 42 and older?

1.4 THEORETICAL FRAMEWORK: THE HEALTH BELIEF MODEL (HBM)

The Health Belief Model (HBM) was used to contextualise this study. The model attempted to explain and predict that the intent and decision to take preventive action against a particular disease might be associated with the individual's perceived: susceptibility to the disease, severity of the disease, benefits of the preventive action, and barriers to taking preventive action. The model further asserts that modifying factors also influence preventive actions (University of Twente Health Communication 2004). According to Nejard, Wertheim and Greenwood (2005:64), Hellister and Anema (2004) the HBM was developed as a framework to explain peoples' participation in health screening and to change peoples' health behaviours positively.

The model was chosen because of its prediction for taking preventive action against a particular disease, is in line with this study. Although health education messages are provided to women on cervical cancer screening, few Malawian women aged 42 and older are being screened. Therefore, the researcher was interested in measuring the woman's perceived: susceptibility to the disease, severity of the disease, benefits of the preventive action, and barriers to planning to take up the preventive action. That is, the model provided a suitable framework for determining factors influencing intention to take up the cervical cancer screening tests among women aged 42 and older.



1.4.1 The importance of the theoretical or conceptual framework (HBM)

According to Kitson, Rycroft-Malone, Harvey, Mc Cormack, Seers and Titchen (2008:8), a conceptual framework is a set of variables and relationships that should be examined in order to understand the phenomenon, while a theory provides a denser and logically more coherent set of relationships and offers views on the relationships and seeks to explain the phenomena. A conceptual model is important for building a body of knowledge related to the phenomenon it explains (Burns & Grove 2001:140).

According to Russel (2006:117) a model provides an understanding and a reasonably accurate prediction of a wide range of health protective behaviours of a general target group or population of people and might correctly predict those most likely to engage in positive behaviours. However, though the model may predict the likelihood of engagement in positive behaviours, it may be less useful when making predictions about behaviour at the individual level, because of the potential impact of modifying factors.

1.4.2 Origin and contribution of the Health Belief Model (HBM)

The HBM is one of the oldest social cognition models developed by Hochbaum, Rosenstock and Kegels in the 1950s while working in the USA public health services. It was developed as an attempt to understand the failure of free tuberculosis (TB) health screening programmes. Since then the HBM has been modified and adapted to explore a variety of long and short term health behaviours, including sexual risk behaviours and the transmission of HIV/AIDS (Nejard et al 2005: 64; University of Twente, health communication 2004).

The HBM has also been used with great success for almost half a century to promote condom use (Emergency Response Team Associates [ERT] 2007), prediction of dieting and fasting behaviour (Nejad et al 2005:63-74), Human Papilloma Virus (HPV) early detection and treatment (Albarracia, Gillette, Earl, Glasman&Durantini 2005:856), and oral health promotion (Hollister &Anema 2004). On the other hand, Nejad et al (2005:64) pointed out that the HBM has no strict guidelines as to how the different

variables predict behaviours. Instead, the HBM proposes that individual independent variables are likely to contribute to the prediction of health behaviours. Nejad et al (2005:64) added that although this lack of structure for the HBM is often a source of criticism among researchers, the flexibility of the model might make it more adaptable to predicting a variety of behaviours.

According to Nejard et al (2005:64) and the University of TwenteHealth Communication (2004), the HBM is based on the assumptions that a person would plan to take a health-related action if that person:

- feels that a negative health condition (cervix cancer) could be avoided
- has a positive expectation that by taking a recommended action (cervical screening) she would avoid a negative health condition (advanced cervical cancer)
- believes that she could successfully plan and take a recommended health action (undergo cervical screening and adhere to recommended actions).

In this study the HBM was adapted in order to evaluate the model variables which include: demographic, socio-pyschological, perceived susceptibility, perceived seriousness, perceived benefits, perceived barriers, cues to action and their relationship to intention to be screened for cervical cancer.

1.4.3 Components of the Health Belief Model (HBM)

There are three foundational components; individual perceptions, modifying factors and factors influencing the likelihood of individuals undertaking the recommended preventive health action (University of Twente, Health Communication 2004). The HBM has four constructs: perceived susceptibility, perceived severity, perceived benefits and perceived barriers (refer to figure 1.1). These constructs represent people's readiness to act. Cues to action indicate readiness to and stimulation of behaviour. Additionally, self efficacy is the ability to successfully perform an action. Modifying variables that might be associated with an individual'suptakeof health actions include age, prior knowledge and beliefs (Russel 2006:115).



Figure 1.1: Conceptual framework of the Health Belief Model (HBM)

Source: Glanz, Rimer and Lewis 2002:52

1.4.3.1 The six constructs of the Health Belief Model

Sections 1.4.3.1.1 to 1.4.3.1.7 present the six constructs of the HBM as shown in figure 1.1.

1.4.3.1.1 Perceived susceptibility

Perceived susceptibility is the person's belief about the chances of contracting a health condition or one's opinion or one's chances of getting a condition. This also includes acceptance of diagnosis in cases of existing health problems (Groenewald et al 2006:3-4; University of Twente, Health Communication 2004). However, individual differences play an important role in the process of symptom detection, and before a decision is made, to seek professional advice for suspected illness. People focus mostly on symptoms that involve pain, discomfort or one's inability to function normally. This poses a problem in cases where the condition does not show signs in the early stages, like cervical cancer. Nevertheless, individuals who believe

that they are at increased risk or are vulnerable to certain forms of illness are likely to be particularly vigilant or on the lookout for associated signs and symptoms (Russell 2006:111).

1.4.3.1.2 Perceived severity

Perceived severity is the person's beliefs about the seriousness of contracting a health condition or one's opinion of how serious a condition is and what its consequences are (University of Twente, Health Communication 2004). Together perceived susceptibility and perceived severity comprise what is known as the perceived threat of illness, sometimes known as vulnerability. Perceptions of severity might be subjective. It might be associated withfactors such as socialisation, beliefs and educational background. Perceived severity can also be affected by emotional states, which may result in a decrease or increase in the likelihood of help seeking behaviour. If an individual is anxious, it might lead to denial or sensitivity, thereby misinterpreting normal physiological responses as signs of illness or dysfunction. In extreme cases an individual might constantly focus on internal, somatic stimuli and be consumed by concerns about some underlying pathology because of fear of the condition. Some individuals perceive severity when they consider the associated consequences of pain, death and financial expenses (Russell 2006:111).

1.4.3.1.3 Perceived benefits

Perceived benefits refer to the person's beliefs about the effectiveness of a strategy to reduce the threat of illness or one's belief in the efficacy of the advised action to reduce the risk of seriousness of impact (University of Twente, Health Communication 2004). The likelihood of an individual engaging in health seeking behaviour is associated with the perceived barriers minus benefits. In this case an individual would be weighing the costs versus the gains. If seeking health actions would address the perceived susceptibility and severity of going through pain or death, the cost is outweighed (Russel 2006:111).

1.4.3.1.4 Perceived barriers

Perceived barriers are a person's beliefs about the potential negative (tangible and psychological) consequences of adopting the health strategy or one's opinion of the tangible and psychological costs of the advised actions (University of Twente, Health Communication 2004). These are aspects that affect one's willingness to perform a positive health action. They would contradict an individual's intended action despite being given the correct information. Perceived barriers could be symptoms causing embarrassment, conditions carrying a social stigma, cultural influence of witchcraft, association of conditions with old age, procedures perceived as painful, fear of test results or time consuming issues (Leyva, Byrd &Tarwater 2006: 17; Russel 2006:111).

1.4.3.1.5 Cues to action

Cues to action refer to events or experiences that could be personal (such as physical symptoms of a health condition), interpersonal, environmental, mediarelated publicity that could motivate a person to take action or adopt a strategy to activate readiness (University of Twente, Health Communication 2004). Perceived vulnerability and severity of a condition could lead to the likelihood of taking action. For some individuals the experience of a condition with someone close to them, could influence their behaviour change. In addition, some cues for individuals to engage in health actions include health promotion campaigns, lay-referral systems, relatives' and/or friends' illnesses, articles in newspapers or magazines, pressure to take action coming from third parties such as spouses, friends or employers (Russel 2006:116).

1.4.3.1.6 Likelihood of taking recommended preventive health actions

The likelihood of taking recommended preventive health action is one's self confidence in executingpromotive/preventive health activities(University of Twente, Health Communication 2004).

ADAPTATION OF THE HEALTH BELIEF MODEL TO GUIDE THE STUDY





Figure 1.2: Adapted conceptual framework of the Health Belief Model (HBM)

Source: Adapted from Glanz, Rimer and Lewis 2002:52

1.4.3.1.7 Modifying factors

Modifying factors are defined as demographic, socio-psychological and structural which serve to condition an individual's perceptions (University of Twente, Health communication 2004). Figure 1.2 represents the adapted model showing the variables to be used in this study.

1.4.4.1 The adapted HBM and operational definitions of the concepts for this study

This research has been guided by a modification of the HBM (refer to figure 1.2). Five HBM constructs were adapted to guide this study. These constructs include: perceived susceptibility, perceived severity or seriousness, perceived benefits, perceived barriers, cues to action and intention to be screened for cervical cancer. The adapted HBM aims at evaluating the direct association of each concept with women's intention to be screened for cervical cancer. Therefore perceived benefit minus perceived barriers was not considered one component but rather each construct's association with the intention to use cervical screening services. Perceived threat and self efficacy were not evaluated in this study. According to Russel (2006:111) perceived susceptibility and perceived severity combined comprise the perceived threat of illness, sometimes known as vulnerability. Therefore, for this study perceived threat has been reconceptualised as part of perceived susceptibility and perceived severity. Self efficacy is one's ability to take action (National Cancer Institute 2005:5). This study was conducted to explore the association between the HBM concepts andwomen's intentions to be screened for cervical cancer. Therefore, in this study, self efficacywas redefined as the intention to be screened for cervical cancer.

The five constructs of the adapted HBM as shown in figure 1.2 are discussed in sections 1.4.4.1.1 to 1.4.4.1.7

1.4.4.1.1 Perceived susceptibility

In this study,perceived susceptibility has been defined as knowledge of the aetiology of cervical cancer, vulnerable age group, effect of HPV, self awareness of being at riskand incidence of the disease.

1.4.4.1.2 Perceived severity or seriousness

For this study perceived seriousness has been defined as knowledge about cervical cancer as a condition, its signs and symptoms, fears associated with the condition and the progression of the condition.

1.4.4.1.3 Perceived benefits

For the purpose of this study perceived benefits have been defined as knowledge about cervical cancer screening tests and benefits of early detection of the condition. It also encompasses the purpose of screening, when to initiate screening, frequency of screening, the meaning of an abnormal test result and knowledge about available treatment.

1.4.4.1.4 Perceived barriers

In this study perceived barriers have been defined as attitudes (stigma, fear, discrimination) of significant others (family members, peers and traditional medical practitioners) and family norms regarding cervical cancer, screening and treatment, socio-economic, social support system and service delivery issues.

1.4.4.1.5 Cues to action

For the purpose of this study cues to action have been defined as the available support system including family members, peers and healthcare providers. In addition, available sources of information (health education talks, televisions, radios, brochures, leaflets, pamphlets, flyers, posters, banners) regarding cervical cancer screening tests.

1.4.4.1.6 Intention to be screened for cervical cancer

In this study likelihood of taking recommended preventive health action has been defined as the intention of client to be screened for cervical cancer.

1.4.4.1.7 Modifying factors

For this study modifying factors refer to demographic variables such as age, education level, ethnicity, marital status, occupation; socio-psychological variables including the respondent's income, employment status, religion, occupation of spouse, number of children and structural variables as previous experience with cervical cancer screening.

The objectives and the questions of the study are in consistent with the modified HBM which guided the study.

1.5 RESEARCH METHODOLOGY

This section summarises the research methodology which will be discussed in detail in Chapter 3. The study will be conducted in two phases.

1.5.1 Phase 1: Quantitative design

A descriptive, quantitative cross-sectional exploratory researchmethod was used to collect and interpret data. Structured interviews were conducted with women, aged 42and older, to determine factors that are associated with the intention to be screened for cervical cancer in public hospitals in Malawi. Activities in this phase included: recruiting of research assistants, selection of settings and respondents for the study, conducting structured interviews with women aged 42 and older who had previously used cervical cancer screening services and with those who had not done

so. This was followed by the analysis of data. Three research qualified nurse/midwives assisted with the data collection, subsequent to being trained by the researcher. Three study settings wereconveniently selected for data collection.

The study population for phase 1 comprised women aged 42 and older, attending one of the three participating health centers, irrespective of whether or not they had had previous cervical cancer screening tests done. A total of 381 women from Bangwe, Ndirande and Chilomoni health centers were interviewed during phase 1. The sample comprised 126, 190 and 65 selected women from the three participating sites respectively, using a convenient and non probability sampling method. Data were collected by conducting face to face structured interviews. A pre-test of the instrument was conducted at Queen Elizabeth Central Hospital (QECH) in Blantyre district, which did not participate in the actual study. Five womenwere interviewed during the pre-testing of the instrument.

Data collected phase during 1 were analysed, using descriptive statistics and the Statistical Package for Social Sciences (SPSS) version 16.0. Following frequency distribution calculations, findings have beensummarised and analysed using contingency tables or cross tabulations. Pearson's Chi-square (X²) test was used to compute the relationship between HBM concepts and women's intention to be screened for cervical cancer.

1.5.2 Phase 2: Qualitative research design

A qualitative research design, using semi-structured interviews was used for this phase. Semi-structured questions were formulated for this phase. Questions aimed at capturingthe nurse/midwives' perspectives about factors associated with Malawian women's intention to be screened for cervical cancer. Participants for phase 2 of this study comprised 14 nurse/midwives working at the three participating healthcarecentres. A purposive convenience sampling method was used to select 14 (5, 5 and 4) nurse/midwives from Bangwe, Ndirande and Chilomoni health

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centresrespectively. The health facility involved in the pre-test was not part of the main study.

1.5.3. Ethical considerations for participants in the study

To ensure the protection of human subjects, approval to conduct the study wasrequested from and granted by the Research and Ethics Committee, Department of Health Studies, University of South Africa (Unisa), Malawi College of Medicine Research Ethics Committee, the medical superintendent QECH, Blantyre District Health Officer and the officers in-charge of the three healthcare facilities selected as study sites. Each respondent in phase 1 and each participant in phase 2 signed an informed consent form prior to being interviewed. An explicit explanation was given about each individual's freedom to refuse to participate in the study or to withdraw at any point, without suffering any ill effects whatsoever. Interviews were conducted in a private place away from other people. No identity was reflected on any documents. The completed structured interview schedules were kept under lock and key.

1.6 LAYOUT OF THE THESIS

The following is the layout of the research report:

Chapter 1: Introduction to the study. This chapter has discussed the background of the problem, provided a problem statement and explained the significance of the study. This has been followed by presentation of purpose of the study, objectives guiding the study, and research questions, theoretical framework, conceptual and operational definitions used in the thesis, an overview of the research methodology and ethical considerations.

Chapter 2: Literature review. This chapter presents information about factors associated with the intention to be screened for cervical cancer among women aged 42 and older. Information was sourced through the review of Internet articles, journals, books and research reports. The studied literature will be

summarisedaccording to the HBM's major tenets. Areas of literature reviewed include: information on cervical cancer such as its impact, aetiology, available screening tests, screening and utilisation of screening and impact of screening; women's perceived susceptibility to cervical cancer, women's perceived severity of cervical cancer, women's perceived benefits of being screened for cervical cancer, perceived barriers to intentions to be screened and cues to using cervical cancer screening services.

Chapter 3: Research Methodology. The research designs used in both phases are discussed in this chapter. Also included is information about the study settings, populations, samples, instruments, ethical considerations, data collection methods and data analysis.

Chapter 4: Data analysis for phase 1 of the study. This phase discusses the quantitative data (phase 1). Structured interviews using face to face approach were used with women aged 42 and older who hadused cervical cancer screening services and those who had never been screened.

Chapter 5: Data analysis for phase 2. During this qualitative phased, semi-structured interviews were conducted with nurses/midwives working at the health facilities participating in phase 1 of this study.

Chapter 6: Study results from phase 2 semi-structured interviews conducted with nurses/midwives (presented in chapter 5) complemented findings obtained from phase 1, structured interviews conducted with women (presented in chapter 4). This has been followed by conclusions, recommendations and suggestions for further studies. Limitations of the study are also addressed.

1.7 SUMMARY

This chapterprovided information regarding factors associated withwomen's intentions to utilise of cervical cancer screening services, focusing on women aged 42 and older at Bangwe, Ndirande and Chilomoni health centers in Blantyre, Malawi.

The HBM guidedthe identification of women's knowledge levels and other factors that might be associated with the utilisation of cervical cancer screening services. Factors addressed included: demographic, socio-psychological and structural factors influencing cervical cancer screening intentions; perceived susceptibility to cervical cancer; perceived severity/seriousness of cervical cancer; perceived benefits of cervical cancer screening and early detection; perceived barriers to cervical cancer screening. Knowledge interacts with the cognitive appraisal associated with cervical cancer screening (Ackerson, Pohl & Low 2008:58). Therefore, the modified HBM components guided this study, investigating the relationship between women's knowledge about cervical cancer, its aetiology, screening, early detection, treatment and intention to participate in cervical cancer screening.

This study was conducted in two phases.Phase one utilised the quantitative crosssectional exploratory research method (conducting structured interviews with women aged 42 and older) while phase 2 was qualitative (conducting semi-structured interviews with nurse/midwives providing screening services in the three participating healthcarecenters). Findings obtained from Phase 2 complemented findings obtained from Phase 1. Women aged 42 and older are the most at risk group for cervical cancer because of under-utilisation of preventive health services (Dhakal et al 2007).The nurse/midwives play an important role in the education of women while providing cervical cancer screening services. Therefore, this study aims to identify factors influencing women's intentions to utilise cervical cancer screening, specifically among women aged 42 and also to identify nurse/midwives'perceptions about these factors.

This chapter has therefore, discussed factors associated with intention to be screened for cervical cancer among women aged 42 and older in Malawi and globally. Also presented in this chapter are the problem statement, purpose of the study, study objectives and questions, significance of the study, the HBM and definitions of terms. Lastly a summary of the research methods for phases 1 and 2 has been presented.

A literature review, on factors influencing cervical cancer screening intentions among women aged 42 and older, will bepresented in chapter 2. Reports about women's knowledge about cervical cancer, screening, early detection and treatment were reviewed according to the major tenets of the HBM. This comprised studies on what is already known about cervical cancer and screening internationally as well as in Malawi.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapterpresents literature reviewed on studies that have been conducted on factors associated with women's intentions to use cervical cancer screening services. This discussion will be presented under the following subtopics:cervical cancer, impact of cervical cancer, aetiology of cervical cancer, screening and utilisation of screening, impact of cervical cancer screening, knowledge and utilisation of health screening services, the HBM, factors associated with cervical cancer screening in relation to the HBM's concepts. These includedemographic, socio-psychological and structural factors influencingcervical cancer screening; perceived susceptibility to cervical cancer; perceived severity/seriousness of cervical cancer; perceived benefits of cervical cancer screening and early detection; perceived barriers to be screened for cervical cancer; and cues to planning to use cervical cancer screeningservices.

2.1.1 Purpose of literature review

Reviewing existing literature related to a study is a critical step in conducting a study. A literature review addresses written sources relevant to the selected topic (Burns & Grove 2001:107). The main purpose of a literature review is to build upon the work of others and there has to be some indication of a relationship with what others have said and done before. In addition, it assists the researcher in formulating the research problem into a feasible context. The researcher also learns what directions are indicated by the work of other researchers, what evidence is lacking, inconclusive and/orcontradictory and what research designs or methods seem suitable to the current study (Burns & Grove 2001:111).

For the purpose of this study literature available internationally and nationally about women's knowledge concerning cervical cancer, screening, early detection treatment and HBM concepts was reviewed. A literature review was conducted to enhance the researcher's knowledge about the research topic and to enhance the research design. Sources of information included research articles on the Internet, in journals, and books, Ministry of Health (MoH) reports for Malawi, reports from non-governmental organisations (NGOs) and information from Malawi's cancer registry 2000-2006. These weresourced from the libraries of the University of South Africa (Unisa) and University of Malawi, Kamuzu College of Nursing (KCN) as well as from Malawi'sMoH and JHPIEGO offices. The following are the search engines utilised during this research study.

Internet search engines used for literature review

http://www.google http://www.googlescholar.com http://www.bmj.com http://www.pubmedcentral.nih.gov/

The major concepts of the study were used as key words for the literature search. These included cervical cancer, cervical cancer screening, visual inspection with acetic acid, Pap smear, Health Belief Model, knowledge about cervical cancer, cervical cancer screening, early detection and treatment, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self efficacy, service delivery and screening practices.

2.2 CERVICAL CANCER

2.2.1 The impact of cervical cancer

World-wide, cervical cancer comprises approximately 12.0% of all cancers in women. It is the second most common cancer in women worldwide, but the most common cancer among women in developing countries. Annual global estimates state that 470600 new cases were diagnosed and 233400 deaths occurred from

cervical cancer during the year 2000 (WHO 2002). At least 85.0% of cervical cancer deaths occur in developing countries with most occurring in the poorest regionswhich include, South Asia, Sub Saharan Africa (SSA) and parts of Latin America (Collymore 2004; WHO 2002). In SSA, cancer of the cervix is the leading cancer with an estimated 70700 new cases in 2002 (total in the whole continent was 78900 cases). Estimated rates for eastern and southern Africa are 30 to 60 per 100000 higher than those reported for the rest of SSA, which ranged from20 to 35 per 100000. The countries with highest rates include Zimbabwe, Uganda and Kenya. The disparity is attributed to the lack of effective screening programmes in developing countries that have a high incidence of cervical cancer (Chirenje et al2001:128; Collymore 2004; Sita et al 2006).

Thus, cervical cancer has a devastating impact on women's health around the world, particularly among women in the developing world. The regions hardest hit are among the world's poorest. Incidence rates are reported to be 69 per every 100 000 in Tanzania, 55 per every 100 000 in Bolivia and 40 per every 100 000 in Papua New Guinea. The highest number of cases has been reported in India with an estimated 132 000 new cases which is more than one-fourth of the annual worldwide total (Collymore 2008). According to Ladiness-Llave (2006) cervical cancer is not a disease of old age. The majority of its victims are women who are at the peak of their biological and economically productive stages of life. This means, when a woman dies of cervical cancer, a life is not simply lost. Rather, a husband loses a wife, the children lose a mother, and the family is destabilised psychologically, financially and socially. At the same time, economically there is loss of a productive pair of hands and also a loss to the country which pays a large part of the cost of treating cervical cancer.

According to Dzamalala et al(2004), in Malawi cervical cancer accounted for approximately 28.0% of all female cancers. Of the women with cervical cancer who sought care, 80.0% were inoperable, being in the terminal stages of the disease when they reached the health facility. In addition, data from more than 7 000 women in Malawi indicate that approximately 11.0% tested positive for pre-cancerous lesions. Many women in Malawi remain unaware of cervical cancer and have no

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access to cervical cancer screening services (Dzamalala et al 2004; JHPIEGO 2002).

According to Kahn, Goodman, Slap, Hvang and Emans (2001:334) the incidence and mortality of cervical cancer has decreased during the past 30 years especially in developed countries. This is as a result of comprehensive efforts to screen women for HPV, and cervical dysplasia. Additionally, there has been improved treatment of carcinoma in situ and early stage cervical cancer. Although the progression to cervical cancer can be stopped through early detection and treatment of precancerous changes, it still remains a major burden on public health resources in SSA (Ozgeduz & Riviello 2008:0851). Service challenges for cervical cancer screening and treatment are similar to those for other health interventions. They include: competing health needs, lack of political will, limited access to services, under developed healthcare structures, lack of knowledge about screening and treatment, limited financial, equipment, and human resources, costs, long ques and waiting times, missed referrals and follow-up visits (Program for Appropriate Technology in Health [PATH] 2001:5).

2.2.2 Aetiology of cervical cancer

Cervical carcinoma is a condition that develops at the border of the cervix and the uterus. The major risk factor for the development of pre-invasive or invasive cervical carcinoma is infection with the Human Papilloma Virus (HPV) which is transmitted sexually (Saksouk 2008; Sitas et al 2006; Zanotti 2002). The HPV can be detected in 99.7% of cervical cancers and is extremely common.Over 50.0% of sexually active women acquire the virus by 50 years of age (Holschneider et al 2008). Different types of HPV are identifiedas precursors to cervical cancer (Collymore 2004; Juneja et al 2007:38). However, the two most common subtypes, HPV 16 and 18 are found in over 70.0% of all cervical cancers. The squamous epithelium cells found at this junction of the cervix and uterus divide rapidly and have the potential to undergo an abnormal transition to dysplastic cells, if exposed to carcinogens such as HPV 16 and 18 (Holschneider et al 2008; Hiltabiddle 2008; González Intxaurraga 2002).

Cervical changes progress from mild to severe over a period of years before changing to cancer. This indicates that more than 90.0% of cervical changes can be detected early through regular screening and can be treated before progressing to malignancy (Denny, Goff & Falk 2010; Van Til et al 2003:1116). Most HPV infections are transient. Only 3-10% of women whose infections are not cured become persistent HPV carriers, constituting a high risk group for progression to cancer of the cervix (Collymore 2004; Saksouk 2008). Collymore (2004) adds that women may contract HPV when they are young but only progress to cervical cancer once they become 35 years of age or older. Pre cancerousstages of cervical dysplasia are frequently asymptomatic, emphasising the importance of screening for early detection.

Risk factors for HPV include early age at first sexual intercourse, increased number of sexual partners, smoking, immune-suppression including the Human Immunodeficiency Virus (HIV), high parity, and low socioeconomic status (Sitas et al 2006; Zanotti 2002). Cervical Intraepithelial Neoplasia (CIN) is common in HIV infected women because: both HIV and HPV are sexually transmitted andHIV infected women are more likely to have persistent HPV infections(Robinson, Goff & Falk 2009).

According to Collymore (2004) and Zanotti (2002), global efforts to detect cervical cancer have focused on screening women for abnormal cervical tissues, treating the condition before it advances and providing appropriate follow-up care. In developed countries, there has been a 75.0% decrease in the incidence and mortality of cervical cancer over the past 50 years while in developing countries it remains the second most common cause of cancer-related morbidity and mortality. The discrepancy is largely due to the widespread institution of cervical cancer prevention and screening programmes in developed countries. These programmes are essentially non-existent in most developing countries. A recent meta-analysis of process of care failures in prevention of cervical cancer in developing countries revealed that poor screening history was the primary factor: 54.0% of invasive cervical cancer patients had inadequate screening histories and 42.0% had never been screened (Holschneider et al 2008).

2.2.3 Available screening tests

There are various types of cervical cancer screening tests available worldwide, included HPV/DNA, visual inspection with acetic acid (VIA), Pap smear and cervicography (Dietrich et al 2006:557-558; MOH 2005:5). Historically, visual inspection of the cervix with Lugol's iodine, without magnification, was the initial method of screening of the cervix in the 1930s. This was rapidly replaced by cervical cytology because of its low sensitivity and specificity of 79.0% and 85.0% of VIA. As such, screening efforts have relied largely on Papanicolaou (Pap) smears to detect abnormal cell changes at the cervical transition zone (Denny et al 2010; Juneja et al 2007:38). A Pap smear test became the standard for early detection of cervical cancer lesions from the 1950s (HealthSquare 2008). Its sensitivity and specificity for CIN 2-3 is 70% to 80%, and 95% respectively (CytoCore Incorporated. 2008-2009)

For developing countries widespread utilisation of the Pap smear test presents a number of challenges. These challenges have lead to the re-introduction of VIA, which utilises the naked eye as a screening tool, for low resource settings. Despite its limited specificity, it is economical, requires little equipment, and provides immediate results (Denny et al 2010; Jeronimo et al 2005). Both the Pap smear and VIA screening are effective in detecting CIN grade 2-3, which are considered to be true precancerous lesions (Jeronimo et al 2005).

The use of the HPV test, on its own or in combination with VIA, has the potential to improve cervical cancer screening in low resource settings. Unfortunately it is expensive, requires infrastructure for processing, and has a long period of waiting for results. It has a higher sensitivity than VIA (90.2% vs. 41.4%), but a lower specificity (84.2% vs. 94.5%) (Sankaranarayanan et al 2009:1394). However, HPV testing is superior to VIA or cervical cytology because it detects a large number of high-risk sub-types of HPV.On the other hand cervical cytology tests are excellent screening tools for pre-invasive cancer. This indicates that rapid results for HPV testing may be suitable for performing screening and treatment in low resource setting. Furthermore, the authors state that it is preferable to use a combination of two screening tests

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rather than either test alone to avoid missed diagnosis. In the Western world a diagnosis of cervical cancer is often established by biopsyand pathology reports (Denny et al 2010).

Symptomatic women without a visible lesion and those who have only abnormal cervical cytology undergo colposcopy with directed biopsy. If necessary, this is followed by diagnostic conisation. A screening test, followed during the same visit by treatment of women with positive results eliminates communication difficulties regarding results and issues of non compliance with follow up clinic visits. Cryotherapy is the most cost effective and preferred treatment for a screen-positive VIA testing in developing countries.

2.2.4 Screening and utilisation of screening services

Women in developed countries are often screened for cervical cancer, every one to three years. However, this screening frequency is not possible in most developing countries. In such cases decisions regarding the frequency of screening are based on available resources and on the age range that will result in the largest reduction in cervical cancer incidence and mortality (Denny et al 2010). The authors state that the greatest impact on cervical cancer reduction appears to result from screening women aged 30 to 35 years. This is supported by a subgroup analysis from a randomised trial conducted in India. Over 80 000 women aged 30-59 were assigned either VIA screening or cervical cancer health education. At seven years follow up, women who had been screened showed a 25.0% decrease in age standardised rate of cervical cancer incidence(Sankaranarayanaan et al 2007:402).

Recent studies have also calculated the optimal screening frequency and age. One such study utilised clinical data from India, Thailand, Kenya, South Africa and Peru to evaluate cervical cancer screening in women once in a lifetime at the age of 35 years. It was discovered that screening with VIA or HPV within these parameters would reduce the life time risk of cervical cancer by 25.0%-36.0% (Denny et al 2010). Unfortunately, the success of the approach used in developed countries has not been replicated in developing countries, mostly attributable to a shortage of

human and material resources. A recent study estimated that 63.0% of women in developed countries receive cervical cancer screening with the highest ranging from 80.0% to 90.0%. In developing countries screening is estimated at 19.0%, ranging from 1.0% in Bangladesh, Ethiopia and Myanmar to 73.0% in Brazil (Denny et al 2010). Many women in Malawi remain unaware of cervical cancer and have no access to cervical cancer screening services (Dzamalala et al 2004; JHPIEGO 2002). Although there is a 75.0% decrease in the incidence and mortality of cervical cancer in developed countries, it remains the second most common cause of cancer-related morbidity and mortality in developing countries (Holschneider et al2008).

2.2.5The impact of screening

The WHO has identified screening coverage as being crucial for providing effective early detection of the cervical cancer. In high income countries, declines in cervical cancer incidence and mortality have been largely accredited to effective screening programmes (Gakidou et al 2008:0863). In such countries, cervical cancer has become a relatively rare disease with the Age Standardised Incidence Rate (ASIR) of less than 10/100 000 compared to developing countries with the ASIR ranging from 25 to 55/100 000 (Denny et al 2010). The WHO (2002:20) states that, in most middle income countries such as China and Brazil, screening is in place but may be largely restricted to maternal child health services. However, this could result in those screened tending to be at low risk for the disease, because of their younger ages. Several pilot projects in India found that 99.0% of participants had never been screened despite the massive effort to implement cytology screening during the previous 30 years (WHO 2002:20).

Latin American countries remain among those with the highest cervical cancer incidence rates of 52000 new casesper year (Creel 2010). In parts of SSA where cytology screening programmes have been attempted, data suggest that cervical cancer rates are rising. For example in South Africa, pathology-based information reported by 80 private and public laboratories in 1986 demonstrated an increase in cervical cancer rates. In 1986 the total number of 16 559 cervical cancer cases were reported, of which 2897 were new cases of histologically confirmed cervical cancer.

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In 1992, the total number of reported cases had increased to 25 143, of which 4 467 were new cases (Denny et al 2006:S3/75). The problem stems not only from failing healthcare infrastructures but also from the tradition of targeting prevention programmes on opportunistic screening of relatively young women who attend clinics for pregnancy-related care. Minimal outreach programmes for the screening of older women have been implemented in Malawi. As a result, screening among the majority of at-risk women occurs too early to be useful, or not at all until symptoms occur during the later stages of cervical cancer (Pollack, Balkin & Denny 2006:334).

Excellent compliance with periodic screening, evaluation of abnormal Papanicolaou smears, and treatment of precursor lesions correlate with decreased incidence and mortality of cervical cancer. In developed countries there has been a 75.0% decrease in the incidence of mortality of cervical cancer, but not in developing countries. A meta analysis of studies evaluating cervical cancer in developing countries revealed that a poor screening history was the primary contributing factor to high mortality; 54.0% of invasive cervical cancer patients had inadequate screening histories and 42.0% had never been screened (Holschneider et al2008).

In addition, Gakidou et al (2008:0865) conducted a study on the coverage of cervical cancer screening in 57 countries. The results indicated that high rates of effective coverage of cervical cancer screening had been achieved in developed countries. The population-weighted means of crude coverage and effective coverage of screening across all included countries were 68.0% and 40.0% respectively. In the 30 developing countries surveyed, these rates were much lower 45.0% and 19.0% respectively. It also indicated that over 80.0% of women in Australia had received effective screening as compared to 1.0% in Ethiopia and Bangladesh. In some middle-income countries such as China, Braziland former communist countries, themajority of women had pelvic examinations during their lifetimes thoughcervical cancerscreening was not included. This indicates that a large proportion of women in these countries had contact with obstetric or gynaecological health services and that the health system might have the capacity to provide effective screening to a large proportion of these women, but failed to do so. It might be possible to build on

missed opportunities or insufficient screening using the existing health services in these identified countries (Gakidou et al 2008:0865; Crosta 2008).

In most developed countries, such as the USA, it is estimated that between 50 and 60 million (94.0%) cervical Pap tests are performed each year while the populationweighted means of crude coverage and effective coverage of cervical cancer screening across 30 developing countries were 68.0% and 40.0% respectively. The proportion of unscreened women was highe in Malawi, Ethiopia and Bangladesh where more than 90.0% of the women reported that they had never been screened. In developed countries this high rate of screening has resulted in cervical cancer being a relatively rare disease with an ASIRof less than 10/100 000 versus 25 to 55/100 000 in developing countries (Gakidou et al 2008:0864; Sirovich, Feldman, Goodman,Goff, Fletcher & Sokol 2010).

2.2.6 Knowledge and utilisation of health screening services

According to Fronk (2005:9), health literacy is the ability to read and comprehend medical terminology, understand and act on health information such as medication instructions, appointment slips, and complete health-related forms. The author adds that ninth grade education or higher is associated with health literacy. Thus, to a large extent, knowledge is correlated with health literacy. The more literate a person is, the more knowledgeable the person will be and the more likely he or she is to gain access to socially privileged positions and thereby gain the capacity and the information to influence thoughts, plans and behaviours. Astudy conducted by Peterson, Dwyer, Mulvaney, Dietrich and Rothman (2007:1110), reported that low health literacy correlated with less knowledge about breast and cervical cancer screening.

Gazmararian, Williams, Peel and Baker (2003) reported that patients with inadequate health literacy, and a significantly lower level of knowledge about diseases, had poorer health outcomes due to a lack of information regarding their diseases. Fortenberry, McFarlane, Lawrence, Hennessy, Bull, Grimley, St Lawrence, Stoner and Van Deventer's (2001:210) research results demonstrated an increased

incidence of gonorrhoea screening in participants with adequate health literacy. A reading grade of level 9 or higher was associated with a 10.0% increase in the probability of having had a gonorrhoea test during the previous year. Thus patients with low health literacy levels had a lower incidence of gonorrhoea screening as well as a decreased perceived risk for contracting gonorrhoea.

In a study on health literacy and cervical cancer screening, results showed that women who had health literacy levels of lower than 9th grade,had decreased knowledge about the purpose of a Pap test. The results also demonstrated that they had problems with how they responded to an abnormal test, how likely they were to seek medical care, and asking for assistance or clarification. Additionally the results demonstrated that women with higher health literacy levels were more likely to comply with cervical cancer screening guidelines. Furthermore, younger women were more likely to comply with screening guidelines than older women possibly related to literacy levels. This might be partly due to the increased likelihood of younger women having contact with the professional healthcare system during pregnancy and reproductive health visits (Fronk 2005:17).

Studies suggest that the level of education of 9th grade or higher correlate with higher knowledge about health-related issues and behaviours. Thus, health literacy is an important aspect influencing women's intentions to use cervical cancer screening services.

2.3HEALTH BELIEF MODEL (HBM)

The HBM is a psycho-social model developed in the 1950s to explain and predict the lack of use of screening and preventive services for the detection and early treatment of asymptomatic diseases. It has also been shown to be a useful model for explaining more of the variance of intentions to take action than that of actual behaviour. People's intentions totake a specific actionare immediate predecessors of that action or behaviour. Intentions, in turn, originate from certain beliefs related to the behaviour(Groenewald et al 2006:3; Soskolne, Marie & Manor 2007:666).The modelassumes that health behaviours and intentions are motivated by the following

five elements: perceived susceptibility, perceived severity, perceived benefits, perceived barriers and cues to action. A review of research studies involving the HBM across a range of health behaviours indicates that many studies have reported the predictability of the model concerning the variance in health behaviour intentions and the factors that act as personal barriers to participating in health-related tests (Allahverdipour & Emami 2008:25: Nejad, Wertheim & Greenwood 2005:74). For example, studies by Allahverdipour and Emami (2008:31-32) as well as Nejad et al (2005:74), showed some connections between the HBM variables and cervical cancer screening-related behaviours, the HBM variables and prediction of diet and fasting behaviours respectively.

In addition, Grarcés (2006:57) asserted that the HBM has provided a valuable theoretical framework for investigating and identifyingfactors that contribute to poor attendance and uptake of preventive services. The HBM postulates that a feeling of being vulnerable to a condition and perceiving it as being a serious health problem are motivational factors that increase the likelihood that people will take actions towards early identification and treatment. The model further states that actions will be taken if one gets cues of action and if barriers to action are outweighed by the anticipated benefits of the action. Individuals who have such perceptions can be positively influenced to plan to take action and that adoption and maintenance of the behaviour can be predicted.

According to the University of Twente Health Communication (2004), the HBM has been applied to broad ranges of health behaviours. These include preventive health behaviours, which incorporate health promotion activities and health risk behaviours; sick role behaviours, which refer to compliance with recommended medical treatment following professional diagnosis of illness and clinic use, including physician visits for a variety of reasons. The model contends that what people believe about a health condition or behaviour determines what they will plan to do. Factors associated with an individual's intentions to perform a health behaviour are individual perceptions of the problem (susceptibility, severity, benefits, barriers) modifying factors (demographic, socio-psychological and structural) and the

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likelihood of taking the action (self efficacy, cues to actions) to contribute toward attainment of the goal (Groenewald et al 2006:5; McFarland 2003:169).

Health behaviour change is an area that has been widely studied. The HBM, which suggests that health behaviours are as a result of a set of six core beliefs, has been used to predict a variety of health behaviours (McClenahan, Shevlin, Adamson, Bennett & O'Neill 2006:273). The model postulates that one's beliefs are associated withone's knowledge. Thus health knowledge impacts on the person's perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and perceived self efficacy (Kahn et al 2001). Additionally, the HBM supports the contention that knowledge regarding a health condition, is associated with preventive actions (Lopez & McMahan 2007:14).

Therefore, studies have demonstrated thatthe HBM provides the perfect framework for the investigation of factors affecting health behaviour. For this study factors associated with intentions toutilisecervical cancer screening services will be framed within the concepts of the HBM, especially knowledge and screeningintentions.

2.4 FACTORS ASSOCIATED WITH INTENTIONS TO BE SCREENED FORCERVICAL CANCER IN RELATION TO THE HEALTH BELIEF MODEL'S (HBM) COMPONENTS

Multiple factors are associated with women's intentions to utilise cervical cancer screening services. Knowledge is one important factor and studies have demonstrated that there is a link between knowledge and health behavioursand intentions. A study on cervical cancer and Pap smear screening in Botswana,which investigated women's knowledge and perceptions, revealed that the women with higher socio-economic status had greater knowledge about cervical cancer and screening. This was attributed to the fact that women with higher socio-economic status had health insurance and therefore had access to private doctors and more health information. The private doctors reportedly provided adequate information about cervical cancer. In contrast, women without health insurance only had access to providers at the government clinics. Providers at these clinics reportedly did not

inform the women about cervical cancer and screening. Half of the women with good to fair knowledge of cervical cancer also had prior experience with cervical cancer through knowing about, or taking care of, someone who had died from the disease (McFarland 2003:173). Therefore, women's knowledge about cervical cancer is an essential factor influencing the intentions to utilisecervical screening services.

2.4.1 Demographic, socio-psychological and structural factors associated with intentions touse cervical cancer screening services

Personal and social demographics of participants have been identified as factors influencing the intentions to utilise screening services. This is supported by Holroyd, Twinn and Adab's (2004:46) reported investigation of cultural and social factors contributing to Chinese women's utilisation of cervical screening services. The results demonstrated that the social factors of cost, education, knowledge of risk, the social value of early detection, and cultural issues such as modesty and embarrassment were associated withscreening attendance. An important finding that emerged was the fact that Chinese women viewed cervical screening as a means of self-protection and frequently, participation was prompted by marriage and childbirth. Findings also indicated that women with young children sought to stay healthy so that they could continue to be available for their children and therefore utilised cervical cancer screening services.

Similarly, a study examining Pap test utilisationamong Chinese American women, identified variables significantly associated with having had a Pap test within the previous three years. The most significant variables identified were being married or living with a partner, having a higher than elementary education, and being employed. Additionally, positive beliefs about having regular cervical screening tests were significantly correlated(P< 0.05) with being married (Lee-Lin et al 2007:1204). Participants also reported that the experience of having personal contact with friends or relatives who had experience of cervical or other types of cancer acted as a promoter to utilise screening services (Tacken, Braspenning, Hermens, Spreeuwenberg, Van den Hoogen, Bakker, Groenewegen & Grol 2006:187).

Socio-economic status is also associated with cervical screening utilisation (Peterson, Murff, Cui, Hargreaves & Fowke 2007:942). Studies have revealed that direct and indirect costs areassociated with nonadherence to cervical cancer screening. These include costs of travel to the clinic, costs of home and child care while away, costs of missed office hours, and costs of the tests and treatment (Collymore 2004; Hou, Fernandez & Parcel 2004:81; Oscarsson, Wijma & Benzein 2008:188; Smith 2008:S195). According to Jeronimo et al (2005:2) and Eiser and Cole (2002:103), individuals did not utilise screening services if the anticipated costs outweighed obvious benefits. In Northern California, one disabling factor to adhere to cervical cancer screening was the cost of Pap testing, influencing 25.0% of the women not to be up to date with cervical screening(Peterson et al 2008:941; Tsui & Tanjasiri 2008:397; Ackerson & Gretebeck 2007:598). In a study by Gany, Herrera, Avallone and Changrani, (2006:27) with Caribbean, Latino, Korean and Chinese communities, financial burden was reported to be a hindrance to keeping to the schedule for cervical screening. Focus group participants from these communities stated that their inability to pay for regular check-ups and prescribed medicines was the primary reason why they did not visit doctors regularly. Similarly, Balajadia, Wenzel, Huh, Sweningson and Hubbell's (2009) study with Chamorro people on Guam (Micronesia's largest island) revealed that women with household incomes of more than \$25,000 per year (p<0.05) were more likely, than those with lower incomes, to have had Pap smears within the past two years.

In summary, many demographic factors that are associated with women's intentions to utilisation of cervical cancer screeningservices are cited in the literature. These factors include income levels, distance from screening centers, education and experience of having personal contact with friends or relatives with cervical or other types of cancer, marital status, and personal beliefs.

2.4.2 Perceived susceptibility to cervical cancer

This section reviews studies on women's perceptions of themselves to be at risk of having cervical cancerand how their knowledge of the aetiology of cervical cancer could beassociated with their perceived susceptibility to cervical cancer. According to

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Green's (2008:1) and Soskolne et al's(2007:666)study findings, personal beliefsaboutone's health and vulnerability to a diseaseinfluences planning and engagement in utilisingscreening services for asymptomatic diseases such as tuberculosis, hypertension, or early cancer. In order to utilise screening services, a person must believe that she or he can have the disease, even without having any associated symptoms. Therefore, the likelihood of taking preventive action is increased when the individual has a sense of perceived vulnerability (Russell 2006:115).A randomised trial on cervical screening was conducted in Birmingham. Three hundred women attending three general health practices were involved. Findings indicated that after receiving information on how cervical cancer is acquired, and the pros and cons of screening, women requested more frequent screening from general practitioners (Bingham, Bishop, Coffery, Winkler, Bradley, Dzuba&Agurto2003:s408; British Medical Journal (BMJ)-Health Intelligence 2007).

Kahn et al (2001:337) conducted a study on adolescent girls' intentions to return for Pap smears. The study concentrated on knowledge related to Pap smears, beliefs, perceived control over follow-up visits, perceived risks, cues for Pap smears, risk behaviours, and past compliance. The results demonstrated that perceived susceptibility was highly associated with these adolescents' intentions to return for a pap smears. Those who perceived themselves to be highly susceptible to an abnormal Pap smear, progressing to cervical cancer, were more likely to intend to return (85.0%) than those who did not (75.0% P = .008).

A study evaluating knowledge, attitudes and practices about cervical cancer screening among the medical workers of Mulago Hospital, Uganda, discovered that female respondents believed they were not vulnerable to cervical cancer. These medical workers did not perceive any health risk and were not motivated to be screened themselves and therefore were not motivated to screen others or to advise them to do so (Mutyaba,Mmino & Weiderpass2006). In addition, in honour of cervical cancer awareness month, which is January, the University of Michigan's experts identified common myths and misconceptions which make women feel not to be susceptible to cervical cancer. Respondents reported the following misconceptions: "cervical cancer development cannot be prevented; I am too young to worry about

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cervical cancer; I do not need a Pap test; I am too old to need a Pap test; my doctor gave me a pelvic examination, which is the same as a Pap test; my Pap test was abnormal, which means I must have cancer; cervical cancer has no symptoms; if I am diagnosed with cervical cancer I am going to die; after I finish treatment, I will live the rest of my life worried about cancer returning; I must have a hysterectomy to treat cervical cancer; I won't be able to conceive a child after cervical cancer treatment; taking hormone replacement therapy will increase my risk of cervical cancer" (Fawcett 2007).

Studies have revealed a significant association between low perceived risk of cervical cancer and limited utilisation of screening services (Bessler & Jolly 2007:403). According to Nelson, Geiger and Mangione's (2002) study, respondents stated that "a woman can tell if she has cervical cancer without going to the doctor". Similarly, in India and in Trelawney, Jamaica, studies by Dabash, Vaipayee, Jacob, Dzuba, Lal, Bradley, and Prasad(2005) as well as by Bessler and Jolly (2007:400) revealed thatwomen indicated that they did not need Pap tests because theyhad no problems and/or pain.In addition, one of the providers in Bessler and Jolly's(2007:400) studyexplained that "for many of the patients, meeting daily needs is the most crucial; preventive care and detecting cervical cancer is not the priority".

Women are more likely to be screened when they understand the procedure and when they consider themselves to be at risk (Nene, Jayant, Arrossi, Shastri, Budukh, Hingmire, Muwonge, Malvi, Dinshaw & Sankaranarayanan2007:268). Perkins, Langrish, Jo Stern and Simon (2007:190) conducted a study on a community-based education programme about cervical cancer and how improved knowledge affects screening behaviour in Honduran women. One area emphasised during the education programme was to identify who is at risk of developing dysplasia. Following the programme, the proportion of women who attended the organised screening activities increased from 64.0% to 74.0% (P=0.02) with those who had not been screened during the past two or three years increasing from 30.0% to 65.0% (P=0.0001). This demonstrates a relationship between knowledge of risk factors and perceived susceptibility.

Although women might be knowledgeable about the risk factors of developing cervical cancer, some perceived themselves to be at little or no risk of developing the condition (Tsui & Tanjasiri 2008:396). In the United Kingdom, Armstrong (2005:170-171) explored how individual women dealt with and reacted to very general information on cervical cancer risks. One participant stated that two normal smear tests meant she no longer needed to be screened. She further supported her position by her current lack of sexual activity. Additionally, how she perceived her identity as a Muslim woman emphasised that her sexual activity was limited to her late husband. Consequently, she viewed herself as being less susceptible because of her religious and cultural background. In the same study, some participants felt they were not at risk of developing cervical cancer because they took care of themselves while another participant considered herself to have been at a greater risk in the past when she had numerous sexual partners. However, she did not perceive herself to be at risk at that stage of her life as she had fewer sex partners. She stated that she was more settled and did not consider screening to be important. Furthermore, one participant stated that "I don't smoke, I don't drink a lot, and we (her family) try to eat healthy." Therefore, living a healthy lifestyle was perceived as making one less susceptible to cervical cancer.

Literature has therefore demonstrated that women's perceptions of being susceptible to cervical cancer is associated with knowledge of risk factors. Some women rate their relative risk of cervical cancer as being significantly lowerbecause of the absence of signs and symptoms such as pain and bleeding.

2.4.2.1 Knowledge about aetiology of cervical cancer

Knowledge about HPV as the primary causative organism of cervical cancer increases women's perceived susceptibility to the condition. In a study on college women's knowledge, perceptions, and preventive behaviours regarding HPV infection and cervical cancer, results demonstrated significant relationships between knowledge about HPV and behaviour. Those who had Pap tests during the preceding year were significantly (p<0.001) more knowledgeable about HPV and cervical cancer (Ingledue, Cottrell & Bernard 2004). The following section therefore,

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presents literature reviewed on women's knowledge about the transmission of HPV, the link between HPV, cervical screening and cervical cancer as it influences women's perceptions of being susceptible to cervical cancer and in turn impact onwomen's intentions to utilise cervical cancer screening tests.

HPV infection is transmitted by sexual partners during intercourse(Winer et al 2006:2653). A study was conducted at the University Health Services of the University of Hawaii at Manoa from February 2005 through November 2006.The main objective of the statistical analysis was to evaluate HPV transmission between partners.The results showed that the overall rate of transmission from the penis to the cervix/urine was 4.9 per 100 person-months of exposure (95% CI 1.6–10.0). By contrast, the overall rate of transmission from the cervix/urine to the penis was 17.4 per 100 person-months of exposure (95% CI 10.6–25.8).Few HPV-transmitting couples in the study reported alwaysusing condoms during recent sexual activity, comparedwith more than half of nontransmitting couples(Hernandez, Wilkens, Zhu, Thompson, McDuffi, Shvetsov, Killeen, Goodman, Kamemoto 2008:891).

However, in a study exploring the level of HPV knowledge, attitudes, and cultural beliefs among Hispanic men and women on the Texas-Mexico border, both genders reportedly had almost no knowledge about HPV and believed that most people did not know about HPV either. They were unfamiliar with HPV's transmission, its symptoms, and consequences. Men and women tended to compare it with AIDSor other STIs. Throughout their discussions,participants continued to show confusion about the STIs, cancer, and other illnesses.Men did not know that males could transmit the virus, and that it could lead to cervical cancer in women. One participant asked the leader of the discussion to tell him how it could be transmitted. Another one said: "[I'd like to know] if it is transmitted through blood, sperm... Since this is the first time [I'veheard of HPV], when you tell us that we've all been exposed... how? Could it havebeen in some clinic that someone could have been exposed to this [virus] withoutknowing what it was?"
After learning that HPV could affect both genders, one woman felt that only women could get infected by HPV since only women suffered from cervical cancer and had Pap tests done. She said: "Because if you have cervical cancer, a cancer you would think only affects women; like Papsare only for women.... My partner has never gone to get a Pap test, never. They [men] just goto a general doctor..."(Fernandez, McCurdy, Arvey, Tyson, Morales-Campos, Flores, Useche, Mitchell-Bennett&Sanderson 2010:5).

However, McNair, Power and Carr's (2009:91) study revealed that the general public's knowledge about HPV transmission and the link between cervical cancer and HPV was overall poor. Their study revealed that 68.0% (n=236) of the women had heard of HPV. Of those who had heard about HPV, 44.0% (104) did not know how HPV was transmitted. In addition, although bisexualwomen (women having sexual partners who were men and women) had greater levels of HPV knowledge, they were significantly less likely to know that it could be transmitted by sexual intercourse with men (odds ratio 0.46).

Similarly, Anhang, Goodman and Goldie (2004:250) reviewed existing research and recommendations about patient education. Findings demonstrated that, knowledge of HPV and its signs, symptoms and treatment was higher among women who had been diagnosed with HPV or who had received previous abnormal Pap test results. More than half of surveyed women at universities in the USA reported they did not know how HPV was transmitted. Of those who had heard about HPV, few were aware that it is associated with cervical carcinoma. They were unaware that it could be present without symptoms and that it could be transmitted by genital contact, regardless of vaginal penetration or condom use. They were also unaware that HPV could spread by skin contact in area unprotected by condoms.

In addition, Kamphinda-Banda (2009:91) conducted a study exploring factors that act as barriers to the uptake of cervical cancer screening programmes among urban and rural women in Blantyre, Malawi. These results demonstrated that the majority of both urban (96.9%) and rural (87.9%) women had heard about cervical cancer. However, despite this, the majority (98.5%) of both urban and rural women were ignorant about the causes of cervical cancer. Only (11.5%) urban and (1.5%) rural women knew that early sexual activity is a risk factor for cervical cancer.

Dabash et al's (2005)study, reported results of a strategic assessment of cervical cancer detection and treatment services in three districts of Uttar Pradesh in India. These results demonstrated that most community members reported familiarity with other forms of cancer but were rarely knowledgeable about cervical cancer. Few respondents knew that early detection prevented advancement of cervical cancer. They reported believing that cervical cancer was caused by poor hygiene, use of contraceptive pills or intra-uterine contraceptive devices (IUCDs), fibroids, high parity, or pelvic examinations. Many also feared that a cervical cancer diagnosis would bring a woman shame, blame and even abandonment by her husband and family. Similarly, women who were undergoing treatment for early and late stages of cervical cancer were unaware of their diagnosis or cause of the disease. One patient, undergoing radiotherapy for cervical cancer, stated: "I only know cancer by name. It is a disease which cannot be treated, so a person dies. My grandmother had some genital cancer about 5-6 years back. She was treated, but ultimately she died. I am ashamed of this disease in this old age".

Furthermore, the belief that cancer is exclusively the woman's responsibility might originate from the lack of knowledge about the disease process. In a qualitative study on cervical cancer investigating family, gender, and healthcare services, women reported that cervical cancer stemmed from their own bodies, not as an effect of an external agent. Consequently, women blamed themselves for the suffering from cervical cancer (Pelcastre-Villafuerte, Tirado-G'omez, Mohar-Betancourt & Lo'pez-Carvantes 2007).

In contrast, women attending the Margret Pyke Center, well woman clinic in central London, generally knew that HPV was sexually transmitted (64.9%) and could be carried by men (63.9%). However, fewer than half (40.2%) knew that it is the main cause of cervical cancer (Waller, McCaffery, Forrest, Szarewski, Cadman & Wardle 2003:320). Significantly, a higher percentage of older women (47.0%) knew about HPV being sexually transmitted than the younger women (25.0%). This indicated an

important gap in knowledge particularly among younger women (McNair et al 2009:01; Waller et al 2003:320).

The literature reviewed has demonstrated that overall there is apoor level of knowledge surrounding HPV.Knowledge gaps exist specific to women's understanding of the linkage between sexual behaviour, HPV, cervical screening, and cervical cancer. In addition, the knowledge level among women who have had previous experiences of abnormal results did not differ from those who previously had only normal results or had never been screened (Breitkopf, Pearson & Breitkopf 2005:82).

2.4.3 Perceived severity/seriousness of cervical cancer

This section presents literature reviewed on the perceived severity or seriousness of cervical cancer and its association with women's intention to utilise cervical cancerscreening services.

According to the University of Twente Health Communication (2004), perceived severity refers to the person's beliefs about the seriousness of contracting a health condition or one's opinion of how serious a condition is and what its consequences are. The consequences of a health condition may include pain, death and financial expenses (Russell 2006:111). Women participants in McFarland's (2003:172) study expressed the belief that cervical cancer was fatal. This was attributed to a high mortality rate secondary to late detection. These women believed that cervical cancer was a serious condition because it is fatal (50.0%), incurable (57.0%) and it couldnecessitate a hysterectomy (37.0%).In Dabash et al's (2005) study on the strategic assessment of cervical cancer detection and treatment services in India, female community members, equated cervical cancer with death.

McFarland's (2003:172) study's results further indicated that women believed that cancer eats body parts, therefore even when detected early it is not curable. They described cervical cancer as a disease that "eats the inside of a womb" and slowly eats the inside of the person's nose. Women also perceived the disease as being

severe because of its serious social consequences. They reported that loss of a uterus would lead to divorce or failure to get a husbandbecause culturally men desire to be recognised as fathers. They also stated that women who underwent hysterectomies would scare men away because the absence of the uterus implied the absence of sexual pleasure.Furthermore, Pelcastre-Villafuerte et al (2007) reported that in a Mexican city, terms used to describe cervical cancer as a serious condition included "rotting or devouring of the womb". In Kenya, women believed that inevitably with cervical cancer, the womb would be cut out resulting in loss of womanhood and sexuality.

Women who have experienced cervical cancer in their families could be more aware of the seriousness of the condition. This knowledge could increase their commitment to planning for regular cervical cancer screening. In a study on resistance through risk, women and cervical cancer screening in the United Kingdom, one participant stated that every person in her family had died of cancer. The participant's awareness of the particular cancers present within the family, and the associated potential risk to her own health, motivated her to engage in regular screening. She considered her own position with respect to cervical cancer and her potential risk to developing the disease as being high. Drawing on her family history of cancer, she further suggested that cancer of some kind is almost a certainty due to her 'cancerous genes' (Armstrong 2005:168). Similarly, in Ackerson et al's (2008:54) study of African American women and factors affecting the utilisation of cervical cancer screeningservices, one participant utilised routine cervical cancer screening services because both her grandmothers had been diagnosed with cervical cancer and one had died from it aged 50. Neither of the grandmothers had a history of obtaining routine cervical cancer screening. The participant stated that:"... just watching them go through with what they had to go through with it, I really need to have my stuff done... I would prefer to go on and not wait for six years and be told I have cervical cancer."

Kahn, Goodman and Slap (2005:18), stated that young women who reported a family history of cervical cancer might perceive themselves to be at a higher risk of cancer. This might lead to non-adherence to follow-up appointments because of fear

of the diagnosis, wishes to avoid procedures such as colposcopies, or preferring not knowing if they had cancer because they perceived it to be an incurable disease.

In summary the literature indicates that women perceived serious consequences of cervical cancer in terms of the experience of pain, loss of the uterus leading to abandonment by husbands, and death. These consequences might act as motivators to having the condition detected early or inhibitors in cases of women who might fear the diagnosis.

2.4.4 Perceived benefits of cervical cancer screening

This section outlines literature related to perceived benefits of being screened for cervical cancer. This been presented in terms of benefits of being screened, women's knowledge aboutcervical cancer screening, and knowledge about cervical cancer treatment in relation to their intentions to be screened.

2.4.4.1 Benefits of being screened for cervical cancer

Perceived health beliefs play an important role in behavioural changes and in one's involvement in a health action (Sullivan, White, Young & Scott 2008:20). According to Durvasula Regan Uremo and Howell(2008), patients who possess more knowledge and hold more positive beliefs about gynaecological screening procedures are more willing to undergo screening and adhere to screening schedules than those who have negative beliefs.

In Gaberone, Botswana, women attending a government clinic who knew about Pap smear tests perceived the test as being beneficial and important for early detection of cervical cancer. One woman who knew about the Pap smear test but had never had the test commented that "I have never had the test but I consider a Pap smear very beneficial because cancer is a hidden disease and Pap smear can detect it early" (McFarland 2003:173).

Knowledge about the purpose of cervical cancer screening, the benefits, the age when to start having the test, the frequency of testing, and the fact that it can be treated if detected early positively impacted on women's actions regarding testing. The knowledge enabled men to encourage their wives and enabled women to encourage other women to be screened (Dabash et al 2005; Leyva, Byrd & Tarwater 2006:18). Misconceptions, fears and myths about cervical cancer can lead to conflicting perceptions about cervical cancer screening. According to Garbers and Chiasson (2004) women with inadequate functional health literacy in New York City, proved to be significantly less likely to have had Pap tests in the previous three years due to misconceptions, fears and myths about cervical cancer screening.

McFarland (2003:171) found that knowledge about cervical cancer, and screening for early detection and treatment measures, was inadequate among the majority of women in Botswana. Similarly, a study on factors affecting the utilisation of early detection cervical cancer screening services in low resource settings revealed limited or incorrect knowledge about cervical cancer screening in Bolivia, Peru, Kenya and South Africa. Many women and their partners stated that cervical screening tests are used to detect STIs or HIV and therefore many decided not to get screened. The same study revealed that in South Africa women believed that a positive screening test meant that the individual had AIDS. Similarly in Kenya, cervical screening was often confused with the "AIDS test" or STI testing because women had been told that cervical cancer was caused by the Human Papiloma Virus (HPV), sounding very similar to HIV (Human Immuno-deficiency Virus). This had a negative connotation since in Kenya; there was also severe stigmatisation of HIV/AIDS. Positive STI test results were often viewed as proof of marital infidelity. Due to this stigma, some women were fearful about explaining the results of the examination to their spouses, and some women decided not plan to be screened at all (Bingham et al 2003:3) in order to avoid the necessity of informing their husbands about their test results.

The study by Dietrich et al (2006:569) on a telephone care management protocol, to improve cancer screening among low income women, supported that consistent and quality information increased the rate of Pap testing by 10.0% over baseline. In

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addition, in Botswana, both healthcare providers and the clients expressed the need for the public to be better informed about cervical cancer and Pap smear tests (McFarland 2003:171-172) in order to increase utilisation of cervical screening services. Contradictory results were found in a study conducted among Asian and Latina university students, where cancer screening knowledge did not emerge as a significant predictor of screening behaviour (Durvasula et al 2008).

Therefore, studies revealed that women with knowledge about the purpose of cervical cancer screening anditsbenefits could consider it to be useful for the earlydetectionand treatment of hidden cervical cancer. On the other hand, women with inadequate knowledge might fearthat cervical cancer screening tests are used to detect STIs or HIV, and therefore might decide not to be screened(Dabash et al 2005; Leyva, Byrd & Tarwater 2006:18; McFarland 2003:171)).

2.4.4.2 Knowledge about cervical cancer screening

In Mulago hospital, Uganda, a study on knowledge, attitudes and practices of cervical cancer screening among the medical workers revealed that 93.0% of the respondents agreed that cervical cancer was a public health problem, they knew about Pap smear tests, and that cervical cancer is curable if detected early. Despite this, 81.0% of eligible female respondents had never been screened, mostly because they did not feel vulnerable to the disease. It was therefore unlikely that these medical workers would have felt motivated to screen others or to advise them accordingly (Mutyaba et al 2006).

Women's knowledge about Pap smear tests, the purpose of the test, and the recommended frequency could be associated with their adherence to cervical cancer screening schedules. Additionally, improvement in patients' understanding of correct follow-up procedures for abnormal Pap smear results would increase their adherence rates to screening.

Investigators have suggested that a lack of knowledge about cervical cancer screening and its benefits might explain the low rates of screening behaviour. There

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is a misconception that a Pap smear is needed only if experiencing gynaecologicalproblems and this contributes to delays in screening. In theLos Angeles, USA, metropolitan area, a study on predictors of cervical cancer screening among Asian and Latin university students, indicated that the most powerful predictor of screening was sexual activity. Sexually active Latin and Asian women were 37 and 18 times respectively, more likely to have undergone screening for cervical cancer than their sexually in-experienced counterparts. One possible explanation for this finding was that women who are sexually active mightbe more likely to see a gynaecologist for sexual healthcare needs, or visit family planning clinics where they could receive appropriate health education, regarding the benefits of early detection and screening. Among the women who were not sexually active, only 7.0% had visited a gynaecologist, whereas 27.0% of those with a history of sexual intercourse had been examined by a gynaecologist. Of women who had Pap examinations, 40.0% had a specific gynaecologist, suggesting that sexually active women were more likely to be receiving gynaecologic healthcare, and consequently receive Pap examinations as part of these evaluations (Durvasula et al 2008) than sexually inactive women. The author further stated that women who viewed gynaecological care as optional or as necessary only at the onset of sexual activity, might miss important opportunities for early cancer detection later on during their sexual relationships.

A study on knowledge of Pap testing, among low income women undergoing routine screening at university affiliated clinics in southern Texas, showed that women who underwent cervical cancer screening, lacked appropriate understanding specific to the Pap test. Of the respondents, 29.0% desired further information about the Pap test's accuracy, 26.0% had a desire to know more about abnormal Pap tests, including information on early detection to prevent advancement, causes, symptoms, severity, treatment, follow-up, and the significance of multiple abnormal tests. Another 14.0% wanted more information about the mechanics and procedures of the Pap examination including risks of the test and discomfort during the examination. A small proportion(5.0%), indicated a need to know more about the timing of the Pap test, especially the timing of receiving the results, as well as when and how often to have the test done (Breitkopf et al 2005:83).

Salvador-Davila (2002:22), conducted a study on cervical cancer screening and an early treatment programme in Mulanje and Blantyre, Malawi. The results indicated that despite the high level of understanding of cervical cancer identified among women in these districts, there was a knowledge gap about cervical cancer amongst male Malawians. According to Salvador-Davila (2002:22), it was demonstrated over the 16 months of the programme's implementation that both rural and urban communities maintained a number of misconceptions. They expressed a great deal of fear. Male participants believed that their wives were being screened for cervical cancer and received the treatment for abnormal findingsto stop them from bearing children. As a result these men stopped their wives from going to health facilities for screening. This might be attributed to the fact that the test and treatment services were offered at family planning clinics. The author further stated that community members believed that provided family planning methods caused cervical cancer. Participants expressed fears of cervical cancer screening, because they believed that if they are VIA positive, it would indicate they are also HIV positive. (Salvador-Davila 2002:23).

In summary, women and their partners who have positive beliefs about cervical cancer screening are more likely to request the test (Taylor, Yasui, Burke, Nguyen, Acorda, Thai, Qu & Jackson 2004:617). Studies have also demonstrated that knowledge of the benefits of early diagnosis is a motivator forplanning to utilise cervical cancer screening services.

2.4.4.3 Knowledge about treatment for precancerous lesions

This section summarises literature reviewed on the association of women's knowledge about the availability of treatments for pre-cervical cancer changes and intentions to be screened forcervical cancer.

Individuals need to have the reassurance that once subjected to a screening procedure, treatment will be available to address discoveredhealth problems.

Awareness that there is treatment for precancerous changes of the cervix and for cervical cancer, if detected early, and accurate information about the types of treatments offered can promote screening (Wong, Wong, Low, Khoo & Shurib 2009:49). These authors conducted a study investigating knowledge, attitudes, and beliefs regarding cervical cancer screening among Malaysian women. The results demonstrated that few respondents, older and married, were aware that early detection and treatment can save lives. Younger respondents had little knowledge of the role of the Pap smear test in the early detection of precancerous changes and treatment options if abnormal results are found. Therefore, these women stated that they would rather not know if they had the disease (Wong et al 2009:50). In Nelson et al's (2002:711) study, women reported that they avoided cervical cancer screening because they believed that treatment for cancer was worse than the disease. They also believed that there is little a person can do to reduce the risk of cancer and that cutting into cancer makes it spread throughout the entire body. Similarly they reported that a bump or a bruise on the cervix can cause cancer. These findings demonstrated a lack of knowledge about the importance of Pap smears in cervical cancer.

In Manchester, in the United Kingdom, a study evaluating the psychosocial impact of taking part in repeated testing for HPV, within the context of cervical cancer screening, revealed that women were disappointed with a persistent presence of the virus. Some reported that the offer of a colposcopy and additional monitoring led to feelings of reassurance. This was particularly true if women knew that the cervical abnormalities which developed could be easily treated. Women preferred regular testing and colposcopies (Waller, McCaffery, Kitchener, Nazroo & Wardle 2007:199-200).

In summary, the literature has demonstrated that there is a connection between knowledge about cervical cancer screening, benefits of being screened, availability of treatment for precancerous and intentions to be screened. Women need to be assured of an available healthcare solution before agreeing to a screening test.

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2.4.5 Perceived barriers to cervical cancer screening

Studies have investigated cervical cancer screening behaviours and thefactors that act as personal barriers to intentions to participatein screening. Factors identified include embarrassment, fear, and anxiety about the pain involved with Pap screening (Allahverdipour & Emami 2008). In addition women's cultural values, beliefs, perceptions, and health delivery issues have a crucial impact on attitudes towards health, illness and health behaviours. These can hinder women from accessing cervical cancer screening (Azaiza & Cohen 2008:34).Barriersinfluencing women'sintentions to be screened forcervical cancer include stigma, embarrassment and fear, social support system, theinvolvement of traditional medicine and traditional healers.

2.4.5.1 Stigma, embarrassment and fear

A feeling of stigmatisation and embarrassment poses a major barrier to planning for a cervical cancer screening test. These deter women from accessing screening services because they might fear discouraging comments from others. Baral, Karki and Newell (2007) defined stigma as an "attribute that is deeply discrediting and that reduces the bearer from a whole and usual person to a tainted, discounted one." In Goffman's view, stigma commonly results from a transformation of the body, blemish of the individual character, or membership of a despised group. He emphasises the relationship between an attribute and a stereotype. Many communicable diseases such as TB, HIV/AIDS, and leprosy are associated with stigma and discrimination. The discrimination also occurs for non-infectious diseases such as cancers (Baral et al 2007). Stigma and discrimination for cervical cancer is related primarily to the sexually transmitted nature of the virus, linked with immoral behaviour (Gany et al 2006:22; McCaffery et al 2006:7).

Negative perceptions about cervical screening by sexual partners, family members, and close friends can lead to avoidance of planning to utilise the screening services.

Women have expressed concerns about being seen by neighbours or acquaintances at a screening clinic. They fear this might spark rumours about their health and, in turn, harm their status in the society (Azaiza & Cohen 2008:39; McCaffery et al 2006:173-174). The fact that cervical cancer can be caused by HPV and that it is a STI, is associated with social stigma. This is because, in contrast to the status of genetic risk, sexually acquired risk is morally charged and potentially carries implications of individual responsibility and blame (Armstrong 2005:173; Gany et al 2006:22; Guilfoyle, Franco & Gorin 2007:938; Cadman 2006:4).

Furthermore, cervical cancer screening is associated with embarrassment because cervical cancer affects the reproductive organs (Pollack et al 2006:325). In South Africa pelvic examination was referred to as "hanging the legs" and the experience was described as "surrendering oneself." A positive cervical screening test implied that the woman was "dirty or promiscuous". It could therefore challenge the male partners' "ownership" of and control over their wives (Bingham et al 2003:S409).

Culturally, African women might perceive the cervix as a private matter, and the word "cancer" as a taboo and not a topic for discussion even among women. Furthermore, disclosing HPV or a positive cervical cancer test result to partners, family members or friends might be frightening. Stigma could create an indirect threat to women by influencing and limiting their health seeking behaviours. This could interfere directly with the screening for and the required management and support services for an abnormal result (Lee et al 2008:720-721; McCaffery et al 2006:171-172; Thomas, Saleem & Abraham 2005:566; Van Til 2003:1128).

In England, a qualitative study on the social and psychological impact of HPV testing revealed that women felt stigmatised, anxious, stressed, and concerned about disclosing their results to others. Shock, embarrassment, and shame were common responses to the infection with HPV. Women used terms such as "unclean" "dirty" "cheap and nasty" to describe how they felt in response to positive HPV results. Women might also be disinclined to submit to screening because of the nature of the examination (Pollack et al 2006:335). This might further discourage women from disclosing the HPV positive test results to family members. Others gave family and

friends information only related to the smear result rather than HPV. Again, worries around disclosure centered on concerns about the stigma of an STI and its association with promiscuity (McCaffery et al 2006:2&6). In addition, in Mexican City, Pelcastre-Villafuerte et al (2007) found that women neglected their own health or placed it in the last place until problems became unmanageable. Women felt if they were faced with a possibility of a diagnosis of cervical cancer, it would mean disclosure of socially unacceptable behaviour of promiscuity. Furthermore, Bingham et al (2003:s412) stated that women worried more about the frightening images of cancer and the stigma associated with it than about the disease. These might contribute to women's reluctance to intend to bescreened for cancer of the cervix.

Reynolds (2004:147) stated that women felt embarrassed about discussing "private body parts" and exposing such areas during physical examinations, especially when the healthcare provider is a male. In a study by Van Til et al (2003:1120) conducted at Prince Edward Island, Canada, women were asked what came to mind when they thought about Pap screening. Women talked about the position of their body as "being exposed," one woman disclosed being "sexually assaulted" by a physician during the test. Other women also described feeling a lack of dignity during the test. In Lagos, Nigeria, only 60 (11.9%) of general practitioners informed their patients about cervical cancer and cervical cancer screening. Female general practitioners were more likely to give this information than their male counterparts (P=0.001). The reason was that male practitioners perceived patients' embarrassment as a barrier to offering cervical cancer screening services (Anorlu, Ribiu, Abudu & Ola 2007:182).

Some women might believe that cervical cancer screening could be painful, embarrassing, or frightening. This is supported by a study conducted in the urban and rural areas of Blantyre in Malawi. As many as 92.4% of the respondents from rural and 73.8% from urban areas had never been screened for cervical cancer. Fear was one of the barriers to cervical cancer screening cited by 33.3% of rural and 9.2% of urban women (Kamphinda-Banda 2009:91).

In addition, many women assumed that if one has a Pap test, it means you are having sex. Azaiza and Cohen's (2008:37) study in Israel, found that all 51 women

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revealed feelings of embarrassment and discomfort at being examined by a male doctor. Some asserted that according to their religion, a woman may not expose her body to a man and that it should be done only if it is not possible for her to be examined by a female doctor. Others also found it difficult in cases where the doctor lived in the same village. However, Levya et al's (2006:17) study revealed that women would still get a Pap test even if they were worried that it would be painful (74.0%) or if they were worried that it would be embarrassing (49.6%).

Therefore, stigma, fear and myths could affect one's intention to use cervical screening services. Women might refuse screening as a way to avoid negative attitudes from others. They might fear others would associate their participation in cervical cancer screening with being involved in immoral behaviours. In addition, women who perceive the test as being embarrassing might be less likely to intend to utilise screening services than other women.

2.4.5.2Socioeconomic factors

Support from individuals who are important to the woman and/or trusted by her, can influence or facilitate women's intrinsic motivation for obtaining cervical cancer screening. It is evident from the studies that psychosocial and socio-economic support from significant others can reduce barriers and increase the likelihood of women being up-to-date with cervical screening schedules (Bolen et al 2007:588; Bradley, Risi, & Denny2004:235). Specifically, higher spousal support has been associated with positive intentions to use screening services. Therefore, there is a strong association between social support and motivating an individual to perform a health preventive behaviour (Ackerson et al2008:52). Perceived low spousal support was a predictor of lower perceived benefits, higher spousal support has been associated with positive intentions to screening (Hou et al 2006:161). Support from spouses, significant others, or family members who understand the benefits and importance of the test, is associated with maximum cervical cancer screening participation. Thus, support from significant others is an important influencing factor

associated with adherence to routine Pap screening (Hou et al 2006:162; Ackerson et al2008:54).

Social support from significant others might be in the form of spiritual, financial, advisory, and motivational support (Pelcastre-Villafuerte et al 2007). According to Ackerson et al (2008:54) and Hou et al (2006:162), sources of support could include family members, peers, physicians, and communities. Supportive mothers, relatives, and peers are influential in facilitating routine Pap screening. In northern California, the women who were encouraged and had a doctor's recommendation for a Pap test, were seven times more likely to have had a Pap test compared with women who did not have this type of support(Tsui & Tanjasiri 2007:396). Social support systems that address psychological and economic problems encourage women to be up-to-date with their cervical cancer screening schedules. Studies on factors determining the utilisation of cervical cancer screening have revealed that lack of socio-economic support, hinders adherence to screening. Some cultural factors affect women's abilities to make decisions. These include societies where husbands and mothers-in-law have to be consulted before any treatment can be undertaken. There is often resistance to a woman going to a clinic to be screened while she is "feeling healthy," as she must convince her partner to give her money for transport to the healthcare facility (Bingham et al 2003:s409; Nene et al 2007:269; Pollack et al 2006:335). Thus, psychosocial and socio-economic support from significant others can reduce barriers and increase the likelihood of women utilising cervical screening services (Bolen et al 2007:588; Bradley et al 2004:235).

A study to analyse the role of social and cultural factors in the timely detection of cervical cancer among the Mexican working age population, revealed that less support from family members and husbands attributed to delayed visits for screening. The results also demonstrated that women, who were diagnosed with cervical cancer, recognised an increased desire for moral support from their partners but sometimes the spousal reaction was to abandon them. Therefore the women perceived their partners as estranged and not concerned about them and their health. Women in the control group admitted having problems and misunderstandings with their husbands on the issue of whether or not they would

seek a Pap smear test. Men reported "shame" that their wives' bodies had been seen during the test. In general, women reported feeling alone and facing psychological barriers for early detection and timely treatment for cervical cancer (Koval et al 2006:14; Pelcastre-Villafuerte et al 2007).

According to Pelcastre-Villafuerte et al's (2007) study with women diagnosedas having abnormal Pap results; women stated that when they wanted to share their feelings regarding their diagnosis, they usually did so with acquaintances or people of similar religious beliefs. The purpose of sharing was to offer advice and motivate them to undergo further screening.

Thus, studies haverevealed that social support from important people in an individual's life was essential and a major component of health behavior. The significant other's understanding on the importance of screening might have promoted women's adherence to routine cervical screening (Ackerson et al 2008:54).

2.4.5.3Traditional medicine and traditional healers

This section summarises literature reviewed on traditional medicine and traditional healers and the role they play in relation to cervical cancer and screening both nationally and internationally.

Individuals who become ill are often faced with a number of options when selecting a source of healthcare. In most of SSA, these options would usually include traditional healers. Traditional medicine poses a barrier to screening for and care of cervical cancer. Traditional medicine and traditional healers might be favoured because they are accessible, culturally important, acceptable, and affordable for all, even for those coming from lower socio-economic classes. Traditional medicine differs greatly from region to region and is often location specific (Broome & Broome 2007:162; Kirksey 2007; Erah 2008; IRIN 2005).

Traditional healers are abundant in developing countries (Richter 2003:11), with an estimated 69 000 traditional healers practicing in Southern Africa. The WHO estimated that 80.0% of the African population used traditional medicine for primary healthcare (Erah 2008; Wani 2007; Kirksey 2007). Lam's (2001:763) study results in Hong Kong island, showed that local populations used Western and traditional Chinese medicine concurrently.

Wheat and Currie (2008:1) stated that patients with cancer,or fear of cancer,are a vulnerable population due to the seriousnessand often terminal nature of the condition. Patients are faced with large financial and psychological challenges. The patients' yearning for recovery (Suwastoyo 2009) is what drives them to traditional medicine in order to fight or alleviate their suffering. Kazaura, Kombe, Yuma, Mtiro and Mlawa's (2007:21) study with cancer patients attending the Ocean Road Cancer Institute in Tanzania, revealed that 101 (30.7%) patients used herbalists, and/or traditional healers for the management of cancer-related complaints. Some cancer patients, also often used traditional medicine to address side effects of conventional cancer treatment. Similarly, Balajadia et al (2008) stated that approximately one third of the study participants had visited a "Suruhano" (traditional healer) for some type of medical care.

The large patient to doctor ratio in most African countries, particularly in rural areas, has made reliance on traditional medicine common. A New York Times report, as cited by Kirksey (2007), indicated that South Africa had approximately 23 000 physicians while there were 322 000 traditional healers. In Kenya there was a ratio of one medical doctor to 7 142 patients whereas there was one traditional medical practitioner to 987 patients. Uganda had one medical doctor to 25 000 patients against one traditional medical practitioner to 700 patients. Similarly, in Malawi there was one medical doctor to 50 000 patients while there was one traditional medical practitioner to 138 patients. Pilly (2002:112) further states that, in consideration of the number of traditional healers it would be important and very strategic that they be included in cancer programmes. Bearing in mind their highly influential position, efforts would also be needed to engage them in promoting early screening in the communities they serve. Actually, the WHO hadidentified traditional medicine as one

of the surest means of achieving total healthcare coverage of the world's population (Erah 2008).

Many patients come to traditional healers after medical treatment sought elsewhere has failed (Suwastoyo 2009). According to Broome and Broome (2007:3), Thomas et al (2005:5680), Pelcastre-Villafuerte et al (2007), Vorobiof, Sitas and Vorobiof (2001:127s) black patients seek a cause for illness within the framework of their indigenous beliefs. Good health is perceived as consisting of a healthy body as well as healthy social, emotional and spiritual life. Therefore, cervical cancer is interpreted as a reflection of conflict, particularly in social relationships. Patients with cancer believe that a special type of witchcraft caused their cancer. In such situations, their first priority is to reverse the source of the curse before presenting to a hospital for modern medical treatment. This frequently results in people presenting themselves to the hospital at a very late stage of the disease (Kazaura et al 2007:21; Suwastoyo 2007; Wani 2007; Wheat & Currie 2008).

Herbalists and other traditional healers might not always be trained to identify the "red flag sign" of serious diseases. Consequently they might delay referral of the patients to a doctor. Additionally, they might not know how to identify or to treat side-effects from herbal remedies.

The results of a qualitative study conducted in Uganda revealed that women perceived cervical cancer as a traditional condition called "Kikulukuto." Most of the women cited their "Senga" (paternal aunt), mother, elderly women and peers as the authoritative sources of knowledge about the illness and other reproductive problems. One woman in a postnatal clinic stated that, "if my mother told me that the illness is traditional; I would believe her and seek treatment at a traditional healer even if a doctor said it is not so" (Mutyaba, Faxelid, Mirembe & Weiderpass 2007). On the other hand, Balajadia et al's study (2008:5), demonstrated that the respondents were unlikely to believe that cancer had supernatural causes. Only 3.8% of theserespondentsreported that they would go to a traditional healer for treatment of cervical cancer but one third had visited a traditional healer for some other type of medical care.

Pillay's (2002:108) study among rural and urban South African women showed that rural women were significantly more inclined than urban women to consult traditional healers than Western doctors about abnormal vaginal bleeding (133 out 140). The reasons for preferring traditional medicine included that rural communities were less acculturated than urban communities and preferred traditional ways of life. Consequently indigenous healing was a high priority in help-seeking behaviour. Rural women also made significant use of indigenous healing for problems related to sexual and reproductive health. Therefore, it would be understandable for such communities to have had less faith in "western" medicine and more in indigenous healing (Pillay 2002:112).

In summary, even though traditional medicine and/or traditional healers seemednot to participate in screening for cervical cancer, their psychological support might be essential. Therefore, it is important and very strategic that traditional healers should be included in cervical cancer screening programmes. Their significant influence needs to be utilised by engaging them in promotional activities for early cervical cancer screening in the communities they serve. This requires working in collaboration with them rather than competing against them.

2.4.6 Cues to action

This section covers literature related to cues to intention of utilising cervical cancer screeningservices. Cues might include the use of developedmaterials such as: information brochures, leaflets, pamphlets and flyers, posters and banners, photo comics, women's educational guides/manuals, men's educational guides/manuals, educational flip charts, outreach workers' job aids, training manuals for community health workers and counseling job aids for healthcare personnel(Coffery, Arrossi, Bradley, Dzuba & White 2004:25).

Gutune and Nyamongo (2005:1058), stated that inadequate and misconceived information on cervical cancer and the lack of awareness of where these services are provided pose barriers to women's seeking of cervical cancer screening

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services. This leads to needless suffering of women, especially those in the rural areas. In Kenya, Peru, South Africa, Ghana and El Salvador some projects targeting cervical developed aids to assist healthcare cancer, workers in standardisingeducational messages. The project aimed to reduce the spread of false information and associated rumours. The materials developed included information brochures, leaflets, pamphlets and flyers, posters and banners, photo comics, educational guides/manuals, men's educational women's quides/manuals, educational flip charts, outreach workers' job aids, training manuals for community healthcare workers and counseling job aids for health personnel (Coffery, Arrossi, Bradley, Dzuba & White 2004:25).

Assessment of the impact of informational brochures on adherence revealed that patients receiving these brochures along with appointment reminder letters reported reduced emotional stress. Additionally, their use resulted in significantly more follow-up visits than those who received only reminder letters (75.0%) versus (30.0%) respectively. Similarly, Khanna & Phillips's (2001:127) study evaluated the use of telephone counseling in enhancing adherence to cervical cancer screening. Results demonstrated a high adherence rate to initial and repeat colposcopy visits in the group of patients who received telephone counseling as compared to the group who received only a letter informing them of the Pap results and follow-up recommendations.

A study carried out with under graduates of the University of Ibadan in Nigeria, revealed that lack of awareness about Pap test (64.1%) and the lack of knowledge of centers where the test could be offered(16.0%) were the most cited reasons for not having had the test. Those who were aware of the screening test mentioned the following as sources of information: hospital visit (64.3%; n=91), mass media (15.4%; n=21), friends/colleagues/relatives (12.6%; n=18), Internet (1.4%; n=2), and books (2.1%; n=3) (Ayinde, Omigbodun & Ilesanmi 2004:72). Similarly, a study conducted in urban and rural Malawi on barriers affecting cervical cancer screening showed that women considered the unavailability of cervical cancer screening services (11.5% urban and 4.5% rural) and lack of publicity about the screening services (50.0%)

urban and 40.0% rural)to be barriers to the utilistion of the screening services (Kamphinda-Banda 2009:91).

Additionally, Gutune and Nyamongo's (2005:1052 & 1055) ethnographic study on cervical cancer among women in rural Kenya, revealed that the most common sources of information on cervical cancer were: friends (73.4%), radio (21.9%), books and magazines (20.3%), and educational talks at the hospital (18.8%). Despite the variety of sources of information about cervical cancer and screening women identified their preferred sources. In order of priority, the following were identified asmost preferred sources: seminars in churches, health education sessions in hospitals, seminars for women's groups, education outreach by community health workers, and information from the radio.

In a study by Boyer, Williams, Callister and Marshall (2001:243), one participant stated that the only way the Hispanic women's cervical cancer screening behaviourcouldchange was through television programmes watched in their homes. This was feasiblebecause most women spent much time at homeproviding child care. She further suggested that education programmes should have included a wide range of information. Specific information on the purpose of cervical screening, the process, the recommended frequency, the consequences of not having Pap smear tests, and financial information should have also been provided. In addition, some information regarding the economic impact on the family, in the event that an abnormal smear or cervical cancer was detected, should have been included as well. Participants in the study also suggested that sharing the harsh reality of a woman dying of cervical cancer might havehelped in overcoming the relaxed cultural attitude toward cervical cancer screening. One participant stated that: "when one doesn't see or doesn't know about the consequences, one tends to be more careless about it.....eyes that do not see, heart that doesn't feel. I just happened to see somebody die of cancer. It affected me quite a bit to see somebody suffering so much. I remembered thinking at that moment how important it is that we do these tests.....that catch things early."

Winkler et al's (2007:4 &13) study findings in Northern Peru, revealed that awareness raising was a more important component of mobile outreach than of facility based promotion efforts in changing attitudes and perceptions of cervical screening. Topics in the awareness raising activities included early detection and treatment of precancerous lesions, where services are provided, knowing my body, vaginal infections and prevention, importance of participating in cervical cancer screening activities, and follow-up with positive results for appropriate examinations or treatment.

Therefore, studies have demonstrated that providing information on cervical cancer and screening, utilising various existing community resources, can successfully improve cervical cancer knowledge and screening intentions. In addition, it is evident that women'sparticipation in cervical cancer screening tests might be associated withimplementing methods of information giving and disseminating in preferred environments(Perkins,Langrish, Jo Stern & Simon 2007:192).

2.5CONTEXTUALISING THE LITERATURE REVIEWED WITHIN THE HEALTH BELIEF MODEL

This chapter has discussed the literature relevant to cervical cancer and the factors associated with women's intentions to use cervical cancer screeningservices. The literature reviewed has contributed to identification of topics of interest and studies on factors associated with cervical cancer screening behaviours and treatment, using the HBM components. According to Grarcés (2006:57) the model has provided a valuable theoretical framework in relation to the difficulties encountered in planningto take up preventive services such as cervical cancer screening. The HBM postulates that a feeling of being vulnerable to a condition and assuming it to be a serious health problem are motivational factors that increase the likelihood that people would take action toward its early identification and treatment. The model further states that an action can be planned, if one gets cues of action, and if barriers are outweighed by the benefits of the intended action. Individuals who have such perceptions can be predicted.

McClenahan et al (2006:272) and Soskolne, Marie and Manor (2007:666) stated that the HBM suggests that health behaviours intentionsare a result of a set of core beliefs. The model has been used to predict and explain variances in intended health behaviours.

CONCEPTS		DEFINITION	APPLICATION
Individual Percep- tion	Perceived suscepti- bility	One's beliefs about the chances of getting a condition, such as cervical cancer. That is, believing that one is at risk of having cervical cancer (Groenewold et al 2006:3-4; University of Twente Health Communication 2004).	Awareness raising sessions in the community or hospital setting should be aimed at sensitising women about their risk status for cervical cancer, implications and consequences of developing the condition. Clarification should be made to individuals and communities on the efficacy of regular cervical cancer screening in detecting cervical lesions at an early stage and treatment of precancerous lesions and where to get the services.
	Perceived severity	One's belief of how serious or severe a condition (cervical cancer) is and its consequences (Groenewold et al 2006:3-4; University of Twente Health Communication 2004).	
Likelihood of taking action	Perceived benefit	One's belief about the effectiveness of a strategy (such as regular VIA, Pap smear test and cervical cancer treatment) to reduce the threat of illness (Groenewold et al 2006:3-4; University of Twente Health Communication 2004)	
	Perceived barriers	One's belief about the tangible and psychological costs of the advised action (screening for cervical cancer) (Groenewold et al 2006:3-4; University of Twente Health Communication 2004)	Educational counseling should also be aimed at addressing myths and cultural beliefs acting as barriers tothe utilisation of the services.Healthcare
Modifying factors	Cues to action	Events or experiences that motivate an individual to take action or a strategy to activate "readiness" (Groenewold et al 2006:3-4; University of Twente Health Communication 2004)	providers need to ensure that the target population gets information about cervical cancer, screening and treatment through available and appropriate
	Self-efficacy	Confidence in one's ability to successfully execute the action. (having cervical cancer screening and follow-up care according to schedule) (Groenewold et al 2006:3-4; University of Twente Health Communication 2004)	means for a particular group. These would act as cues to action in increasing access to cervical screening (Gracés 2006:57; McFarland2003:174; Winkler, Bingham, Coffery &
	Demogra- phic variables	Knowledge about cervical cancer, screening and treatment. Perceptions towards cervical cancer	Handwerker 2008:2021).

TABLE 2.1 Summary	of the HBM components	utilised for the study
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Sociopsy- chological variables	Personality, social class, peer (Hazavehei et al 2007:3)	
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According to the University of Twente Health Communication (2004), three broad ranges of health behaviours, to which HBM has been applied, include preventive health behaviours, which incorperate health promotion activities and health risk behaviours, sick role behaviours, which refer to compliance with recommended medical treatment, usually following professional diagnosis of illness and clinic use, including physician visits for a variety of reasons. The model argues that what people believe about a health condition or behaviour determine what they would do about it. Motivating factors for an individual to perform health behaviours are: individual perceptions of the problem (susceptibility, severity, benefits, barriers; modifying factors (demographic, sociopsychological and structural) and the likelihood of the action (self efficacy, cues to action) to contribute toward attainment of the goal (Groenewold, de Bruijn & Bilsoborrow 2006:5; McFarland 2003:169). Table 2.2 shows a summary of the HBM components utilised in this study.

The following variables/associations of variables were used in the formulation of the research instruments, analysis of data collected and discussion of the research findings:

- demographic variables for women aged 42 and older and their intentionsto be screened for cervical cancer
- relationship between perceived susceptibility tocervical cancerin women aged 42 and older andtheir intentions to be screened
- relationship between perceived seriousness tocervical cancerin women aged 42 and older andtheir intentions to be screened
- relationship between perceived benefits tocervical cancerin women aged 42 and older andtheir intentions to be screened
- relationship between perceived barriers to being screened for cervical cancer among women aged 42 and older and their intentions to be screened.
- relationship between sources of information (cues to action) on cervical cancer screening among women aged 42 and older and intention to be screened.

 Nurse/midwives'perceptions about factors that are associated withcervical cancer screening in women aged 42 and older.

2.7 SUMMARY

This chapter has summarisedliterature related to cervical cancer, its aetiology, progression and screening. Research reports regarding the impact of knowledge onhealth behaviours demonstrated a strong association with behaviour change. The HBM providesa suitable framework for investigating factors affecting screening behaviours. It provides a framework to investigate demographic, socio-psychological and structural, perceived susceptibility, perceived severity, perceived benefits, perceived barriers and cues to action with regard to health behaviours. The significance of cervical cancer screening and factors associated with screening behaviourshasbeen shown to be multifactoral. A review offactors associated within the concepts of the HBM and with specific attention to knowledge and screening behaviours. The factors impacting on the utilisation of cervical cancer screening has been provided and framed within the concepts of the HBM and with specific attention to knowledge and screening have also been reviewed.

A combination of quantitative and qualitative research methodologies will be adopted for this study. This will provide an in-depth investigation of factors influencing the utilisation of cervical cancer screening services. The research methodology will be discussed in chapter 3.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the methodology that was used for this study, including the research design, setting, target population, sampling techniques, sample size, data collection plan and procedure, validity and reliability of the research instrument, pretesting of the research instrument, data analysis procedures and ethical considerations. This study was conducted in two phases. Phase 1, the quantitative phase, involved the use of structured interviews with women aged 42 and older attending clinics at three health centres in Blantyre; and phase 2, the qualitative phase, involved the use of semi-structured interviews with nurse/midwives providing healthcare services at the selected health centres. The results from a combination of these two phases have provided a comprehensive investigation of factors associated withwomen's intentions to be screened for cervical cancer among women aged 42 and older in Blantyre, Malawi.

3.2 PURPOSE AND OBJECTIVES

The purpose of this study was to identifyand explore factors associated with the intention to be screened for cervical cancer among Malawian women aged 42 and older in Blantyre, Malawi. This group of women was chosen because they are no longer in the child bearing age; therefore, they only come to the hospitals or clinics when sick. However, the literature review has shown that this group is at high risk of cervical cancer (Tsu& Levin 2008:105; Twinn, Holroyd, Fabrizio, Moore &Dickison 2007:16; Pollack, Balkin& Denny 2006:334). Women in the child bearing age groupget information on cervical cancer and are screened while being attended to for other health ailments. However, older women do not receive this information and might be unable to access this care at the stage of their lives when they are at high risk of cervical cancer.

The specific objectives guiding the study were to:

- Identify demographic variables for women aged 42 and older and their association with these women's intentions to be screened for cervical cancer.
- Describe the association between perceived susceptibility to cervical cancer in women aged 42 and older and their intentions to be screened.
- Determine the association between perceived seriousness of cervical cancer in women aged 42 and older and their intentions to be screened.
- Determine the association between perceived benefits of cervical cancer screening in women aged 42 and older and their intentions to be screened.
- Identify the association between perceived barriers to being screened for cervical cancer among women aged 42 and older, and their intentions to be screened.
- Analyse the association between cues to action (sources of information) for cervical cancer screening among women aged 42 and older and their intentions to be screened.
- Identify, from nurse/midwives' perspectives, which factors are associated withintentions to be screened for cervical cancer among women aged 42 and older in Malawi.

3.3 RESEARCH DESIGN

A researcher faces certain fundamental problems that must be resolved before a study can be started. These include: who is to be studied, what is to be identified, when the identificationsshould be made and how data should be collected and analysed. The research design is the 'blueprint' that enables the researcher to come up with solutions to these problems and to guide the researcher in the various stages of the study (Nachmias&Nachmias 2004:99). A cross-sectional exploratory descriptive study, using quantitative and qualitative designs and methods ndifferent phases of the study, was used for the current study.

Triangulation of research methods and a combination of data sources from women and nurse/midwives allowed the researcher to attain a holistic examination of the research topic and enhanced confidence in the comprehensiveness of the study results. This is



because different methods and designs generate different kinds of data. The advantages of integrating designs include: complementing each other, enhanced validity and creation of new information (Polit& Beck 2006:285). The quantitative part (phase 1) was consistent with the the HBM's concepts, exploring women's knowledge about factors associated with their intentions to utilise cervical cancer screening services. The qualitative component explored what nurse/midwives considered to be factors associated with their intentions to be screened for cervical cancer. Therefore, the combination of the two paradigms in this study allowed aninvestigation of the factors associated with intentions of women aged 42 and older to utilise cervical cancer screening services.

3.4 PHASE 1: QUANTITATIVE COMPONENT

For this study a quantitative descriptive research method was used for phase 1. This methodology was implemented in order (for the researcher) to understand the full nature of the phenomenon of interest (women's intentions to utilise cervical cancer screening services) and the other associated factors at three health facilities(Polit& Beck 2006:22). Structured interviews were conducted to collect data for phase 1 of the study.

3.4.1 Researchdesign

A quantitative, exploratory, cross-sectional and descriptive research design involves observing, describing and documenting the behaviour of subjects without influencing it in any way. In a descriptive design the researcher describes the results without intervening (Polit& Beck 2006:189). Descriptive studies are aimed at providing an accurate portrayal or account of the characteristics of individuals, events, or groups with the purpose of problem identification, justifying actions, making judgments, or finding out what others are doing in similar situations. The design does not involve manipulation of variables and there is no attempt to establish causality.

A cross-sectional, exploratory, descriptive study generates insights about a phenomenon. Data collection takes place during one data collection period from a cross-sectional sample, appropriate for the description of the phenomenon under study (Polit& Beck 2006:239).

Descriptive studies also aim at determining the frequency with which events occur and classifying information (Burns & Grove 2005:26). Phase 1 of this study explored thefactors associated with intentions to be screened for cervical cancer (among women aged 42 and older). A structured interview schedule was used to simultaneously collect data from these womenat three health centres. The activities in this phase included: recruitment and training of three research assistants, selection of study settings, selection of study population, sampling, data collection, data management and data analysis.

3.4.2 Study settings

Study settings are specific places where information is gathered (Polit& Beck 2006:31). This study utilisedthree government health institutions as settings. In Malawi, there were eight government health centres offering cervical cancer screening services in the three major cities during the period of the study.Four of the health centreswere located in the southern region. Three sites in the southern region, which actively provided cervical cancer screening during the period of the study, were conveniently selected for the study. Convenientsampling is one of the non probability sampling methods that allows the researcher to deliberately choose the sources of data, knowing that they would contribute towards the required research information (Polit& Beck 2006:320), based on one or more known characteristics.

3.4.3 Study population

A population is an aggregate of all cases that meet specified criteria set for a study. These specific criteria of the population depend on the research problem. The total population in which the researcher is interested and to which he/she wishes to generalise results is called the target population, while an accessible population is part of the target population which the researcher can access (Burns & Grove 2005:341-342; Polit& Beck 2006:511).

The target study population for phase 1 of this study comprised women, aged 42 and older, attending government health service clinics providing cervical cancer screening services in the southern region of Malawi. The accessible population comprised women aged 42 and older attending clinics at Chilomoni, Ndirande and Bangwe health centres.

3.4.4 Sample

A sample is a subset of the population. Individual units of a sample and population are called elements. Elements can be in any form such as humans and events. The researcher works with samples rather than the entire population. Samples are smaller groups. Representative samples have all the characteristics of the population. The sample is drawn from the population that the researcher can access. However, findings of the study are initially generalised to the accessible population then to the entire population in similar settings (Polit& Beck 2006:260), provided the sample was representative of the population.

The researcher utilised a convenient sample of women aged 42 and older attending health service clinics at the three selected health centres during the study period. A convenient sample includes respondents that happen to be in the right place at the right time. The respondents were recruited into the study until the desired sample size had been achieved. The utilisation of a convenient sample, implied that the findings of this study might not be generalisable to the population of women aged 42 and older in Malawi.

3.4.4.1Sampling design

Sampling refers to the process of selecting units from a population with one or more important attributes relevant to the research. The selected portion has to be representative of the entire population under study. A sample is considered representative if it has similar characteristics of the population from which it has been drawn. If all critical attributes in a population are identical to those in a sample, a sample is representative of the population. If the population is homogeneous, a sample would be sufficient for drawing conclusions

about the population because the effect of the attributes on the variables under study in the sample and population would be the same. Sampling is more economical than studying the entire population, though it is a challenge for researchers to obtain representative samples (Burns & Grove 2006:351).

The quantitative research method may utiliseone of the two broad types of sampling: probability and non probability sampling. Non-probability sampling involves the selection of subjects by non random methods while in probability sampling elements are randomly selected from the population (Polit& Beck 2006:264). In this study, the researcher utilised a non probability sampling design to select the sample; a convenient sampling method. The convenient sampling method is used when the researcher selects the most conveniently available subjects of the population in question, or those particularly knowledgeable about the phenomenon of interest. The sample is selected based on the predetermined inclusion criteria (Polit& Beck 2008:309). The women who met the inclusion criteria were recruited to comprise the sample for the study.Convenientsampling impacts negatively on the generalisability of the research findings.

3.4.4.2 Sample selection procedure

The clinics at the government health centres operate on a non appointment system. Clients begin arriving at the clinics before 07:00 but clinic hours begin at 7:30. The researcher took the opportunity to utilise a few minutes for a "health talk session" to provide information about the study. The explanation included details about the purpose of the study, sampling and study procedure. This aimed tofamiliarise women with the study procedures and allowing them to make informed decisions about whether to participate or not. Interested women met the researcher in a room identified for data collection at the outpatient department after receiving the healthcare they required. In the data collection room, the volunteers were provided with detailed information regarding the study. They were also asked about their willingness to participate and sign an informed consent form, after responding to any questions they might have wished to ask. Those women who could not be interviewedon the sameday returned ata convenient date and time, arranged with them.

3.4.4.3 Selection of sample size

In quantitative research, the sample size can be determined by using statistical computations. This is based on the assumption that data would be available for calculation of the sample size. Some of the factors utilised in calculating sample size include: effective size, standard error, confidence interval (power) (Burns & Grove 2005:354-355; Sarantakos 2005:171) and the size of the total population from which the sample will be drawn (Saunders, Thornhill, & Lewis 2003:173). For this study the accessible population could not be predetermined because women aged 42 and older rarely attend healthcare clinics. However, the population of women aged 42 and older who had visited the three participating study sites during the previous year, was used as an estimate for the population of such women during the study period.

The researcher obtained a convenience sample of women, aged 42 and older, from those who sought health services from the three health centres during the study period. According to the National Cervical Cancer Coalition in Malawi (2008), the prevalence of cervical cancer among women was 28.0%. Considering this prevalence level nationwide and assuming a precision level of 3% with a confidence level of 95% the sample size required for this study would be 439 women. However, the final population correction factor indicated that 2 711 women, aged 42 and older, had received care for different health problems at Chilomoni, Ndirande and Bangwe health centres from July 2008 to August 2009 (MOH clinic attendance registers, Chilomoni, Ndirande, Bangwe July 2008-August 2009). Based on the calculation of the finite population for the three health centres, the sample size was reduced to 378.Other researchers have allowed for an anticipated non-responses rate of 10.0% (Turner 2003:2-13). However, in the current study, an additional three interviews were recommended by the statistician as the trained interviewers were expected to obtain responses to almost all questions. Therefore the total sample was 381.The sample size was calculated using the following formula:

Sample size = $Z^2 P (1-P) = 1.96 \times 0.28 \times 0.72 = 439$ women

 $C^{2} 0.03^{2}$ $n = \underline{n^{0}} = \underline{439} = 378 \text{ women}$ $1 + \underline{n^{0} - 1} + \underline{439 - 1}$ N 2711 Z = confidence level P = estimated prevalence of cervical cancer C = precision/accuracy level at 3% $n^{0} = \text{ Sample calculated with the assumed large population}$ N = known population at the sites n = new sample size from the finite population

The sample was distributed among the three health centres proportionally to the catchment area population of women in the child bearing age group. These proportions were used for calculation of the sample size because the estimated population for women aged 42 and older were not available. According to the MOH, the estimated population of women in the child bearing age for the Blantyre district 2010-2011 was 28 317, 45 940 and 17 407 for Bangwe, Ndirande and Chilomoni respectively. Therefore, the samples comprised 126, 190 and 65women respectively.

3.4.4.4 Inclusion and exclusion criteria for respondents

Inclusion criteria or eligibility criteria is a list of characteristics designated to delimit the study population while exclusion criteria include characteristics that study units must not posses in order to be involved in the study (Polit& Beck 2006:259). These criteria are defined by a researcher to promote the selection of an appropriate sample. According to Burns and Grove (2005:342), sources to determine the criteria include the research problem, the purpose of the study, the conceptual and operational definitions of the study variables and the study design. Inclusion criteria or eligibility characteristics for the study included women:

• aged 42 and older (client or guardian to a client attending one of the health centres)

- able to speak Chichewa or English
- willing to participate and provide consent to participate in the study

The exclusion criteria included women:

- aged 41 and younger
- unable to speak Chichewa or English
- who were critically ill
- who had a total hysterectomy (removal of uterus and cervix) or Wertheim's hysterectomy (surgical removal of uterus cervix and fallopian tubes).

3.4.5 Research instruments

Research instruments are devices used to collect data. These can be in a form of a questionnaire, test and an observation schedule (Polit& Beck 2006:502). Structured interviews, using interview schedules, were used for phase 1 of this study (See annexures E and G). The structured interview schedule may contain closed-ended questions with pre specified response alternatives by the researcher. According to Polit and Beck (2006:294), in structured interview schedules respondents are asked to respond to the same questions in the same order, and they are given the same set of options for their responses. However, structured interview instruments could also include some open-ended questions, which allow subjects to respond in their own words. In this case the interviewer writes down responses verbatim.

3.4.5.1 Structured interview schedule

The structured interview schedule for phase 1 was developed based on the study objectives, literature review and the HBM constructs. The researcher adapted questions from studies conducted by others, and included sections pertaining to: demographic characteristics, knowledge and awareness in relation to cervical cancer risk factors, symptoms and screening (Yare, Ozkilinc, Guler&Oztop 2008:283); level of knowledge (Gonzalez-Losa, Canto-Perèz& Puerto-Solis 2006:207); and barriers to cervical cancer

screening (Holroyd, Twinn&Adab 2004:48). The interview schedule comprised six sections A to F, with the following subsections: demographic, socio-psychological and structural, perceived susceptibility to cervical cancer, perceived severity or seriousness of cervical cancer, perceived benefits of being screened for cervical cancer, perceived barriers to cervical cancer screening and cues to taking a cervical cancer screening test.

This instrument comprised close-ended and open-ended questions (See annexures E andG). One-on-one individual structured interviews were conducted. Closed ended questions required the interviewer to tick available responses and items but where options were provided for the respondent to give 'other responses' and 'specify' the interviewer was expected to write down the respondent's answers verbatim. Items accompanied by an option of 'true' or 'false' or 'do not know' response to several declarative statements that express a point of view on a topic were also included. For the open-ended questions respondents were allowed to respond freely and the interviewer recorded the responses verbatim.

Advantages	Disadvantages			
Easy to ask and quick to	Introduction of bias, either by forcing respondents to			
answer.	choose from predetermined alternatives or by offering			
	respondents alternatives that might not be in their minds.			
Analysis is straight forward	Difficult to construct			
, ,				
Less time consuming to	Can source less rich information than open-ended			
code and analyse	questions			

Table 3.1 Advantages and disadvantages of closed-ended questions

Source: Nachmias and Nachimias (2003:254)

Section A: Modifying factors

According to Glanz, Rimer, Marcus and Lewis (2002:500), different modifying factors such as demographic, socio-psychological and structural variables may indirectly influence an individual's perceptions. This, in turn, affects health-related behaviours such as cervical cancer screening. Some of these demographic factors might include, age, marital status, educational attainment, occupation, number of children, household income, religion and tribe. This section therefore, in questions 1.1 to 1.13 identified respondents' sociodemographic information.

Section B: Perceived susceptibility to cervical cancer

Section B included questions that assessed respondents' perceptions of being susceptible to cervical cancer. Questions were designed to determine whether eachrespondent intended usingcervical screening services in the near future; had undergone a cervical screening testpreviously; considered cervical cancer to be a health concern to her and whether she felt she should initiate the idea of having a cervical cancer screening test done. This data established how respondents perceived their risksof having cervical cancer, and their intentions of using cervical screening services. This was addressed in questions 1.10 to 2.21.

Section C: Perceived severity/seriousness of cervical cancer

This section determined how women aged 42 and older perceived the seriousness of cervical cancer. Questions enquired about women's knowledge on the part of the body affected, signs and symptoms, whether they perceived the condition as a curse and how removal of the uterus would affect them. This was explored through questions: 3.1, 3.2, 3.3, 3.4, 3.5 and 3.6 - 3.15.

Section D: Perceived benefits of being screened for cervical cancer
This section determined perceived benefits of being screened for cervical cancer by women aged 42 and older. Areas assessed included knowledge of available diagnostic procedures, where they could access these services, purpose of the screening procedures, and availability for treatment of early stages of the condition. This was addressed through questions: 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9 - 4.16, 4.17, 4.18 and 4.19 - 4.21

Section E: Perceived barriers to cervical cancer screening

Section E concentrated on the exploration of perceived barriers to cervical cancer screening. Questions in this section were categorised into sub-sections E-1 to E-3 covering stigma, embarrassment, discrimination and fear; socio-economic factors; and traditional practices and the influence of traditional healers.

Sub-section E–1: Stigma, embarrassment and fear

This sub-section contained questions structured to determine social factors associated with women's intentions to be screened for cervical cancer such as stigma, embarrassment and fear. These might affect regular attendance for screening and sharing of information for support purposes. This was addressed in questions 5.1 to 5.8.

Sub-section E – 2: Socio-economic factors

Questions 5.9 to 5.15 explored social and financial determinants associated with women's intentions to utilise cervical screening services. The section covered areas such as discomfort, cost, and accessibility to cervical cancer screening services.

Sub-section E– 3: Traditional practices and traditional healers



This section comprised questions 5.16 to 5.19. They explored how respondents incorporated traditional beliefs in addressing cervical cancer-related problems. The information collected from this section assisted in identifying how the "use of traditional healers" is associated with early detection and treatment for cervical cancer. These could act as barriers to using cervical cancer screening services.

Section F: Cues to taking a cervical cancer screening test

This section explored cues to having cervical cancer screening testing done by Malawian women aged 42 and older. Questions were designed to determine respondents' knowledge about available sources of cervical cancer screening information, preferred venues and methods of sharing cervical cancer screening-related information. This was addressed by items 6.1-6.3 and 11.7.

3.4.6 Data collection procedure

3.4.6.1 Pretesting the research instrument

Pretesting of a research instrument is the trial administration of the developed instrument in order to identify anomalies, assess time requirements and make necessary adjustments. Pretesting also determines whether the instrument is useful for generating desired information. In addition, clarity and sensitivity of the questions are also assessed during the process (Polit& Beck 2006:296&507).

Prior to data collection for phase 1 the researcher pre-tested the instrument with five women at the Queen Elizabeth Central Hospital outpatient department. Information collected from these women was not included in the final analysis of data for phase 1. The health facility was also excluded from data collection for the main study.

3.4.6.2 Refinement of the research instrument

The instrument was pretested with fiverespondents in order to identify ambiguous questions, sensitive and inappropriate words, and to estimate the appropriateness of the length of time for the interview. It was necessary to estimate the required time for each interview, considering the age and educational background of the subjects. Comments on the questionnaire by the Malawi College of Medicine Research and Ethics Committee included that the questionnaire was too long and that question 1.3 had not been well phrased. In order to address these issues, some questionswhich were not deemed to generate relevant data were deleted. Question 1.3 was rephrased. The pretest with five women and comments from colleagues who reviewed the questionnaire revealed that question 1.10, 2.1 and 4.16 were not clearly understood. To improve clarity these questions were reviewed and refined by considering all suggestions received. These modifications contributed to the refinement of the instrument. The fiverespondents involved in the pretest, were excluded from the main study. The data yielded from the pretest was also excluded from the final analysis.

3.4.6.3 Recruitment and training of three research assistants

The researcher utilised research assistants during phase 1 for data collection. Three nurse/midwives were recruited and trained as research assistants. To ensure quality of data collection, a training session was conducted. The researcher conducted the training, which included the following areas: overview of the study, how to recruit subjects, how to use the structured interview schedule, ethical considerations adhered to throughout this study, how to ensure quality data collection (see annexure C).

3.4.6.4 Data collection technique phase 1

Data collection refers to gathering information to address a phenomenon under study. Researchers can gather data using existing records in the form of written, narrative records of the past (diaries, letters, newspapers and minutes of meetings); observations of activities; interviews (face to face, through telephone); focus group interview discussions and through the use of questionnaires (Nachmias&Nachmias 2004:224; Polit& Beck 2006:253).

In phase 1 of this study, structured interviews were conducted with women, aged 42 and older, attending clinics at three health centres in Malawi. An interview is an interpersonal communication process during which an interviewer asks questions with the aim of eliciting respondents' answers pertinent to the phenomenon under study. In structured interviews the number of questions, the wording of questions, and the sequence of questions are identical for all respondents (Nachmias&Nachmias 2004:232). Some of the major advantages of structured interviews include: it provides increased amounts of control by the researcher over the content of the interview, questions are designed by the researcher in advance with predetermined responses at times, the sequence of the questions is specified and identical for all interviewees, the interviewer is required to ask the questions precisely as it has been planned and in certain situations the interviewer can explain the meaning of a question or rephrase a question for respondents' improved understanding (Nachmias&Nachmias 2004:237; Polit& Beck 2006:343).Data collection for phase 1 was conducted by three research assistants. The data collection process proceeded as follows:

- A talk, explaining the purpose of the research as well as the criteria for selecting respondents, was presented at 07:30 and at13:00 while clients were waiting to be attended to at theoutpatient department.
- Those interested in participating were asked to meet the researcher in a room identified for data collection, after their consultations with their healthcare providers.
- In the private data collection room, interested women met the interviewer individually and were provided with further information regarding the study and the women's questions were answered.
- An informed consent form was reviewed with each subject and a signature or finger print was obtained if the woman was willing to be interviewed.
- The research assistant then interviewed each woman privately using the structured interview schedule.
- The interviewer asked the questions precisely as stated on the instrument.

The researcher trained the research assistants, and compared their completed structured interview schedules to ensure interrater reliability (Nachmias&Nachmias 2004:347). The researcher and assistants completed information obtained from the first client on separate structured interview schedules concurrently during an interview. The calculated interrater reliability was 92.0%. The differences identified were clarifiedwith the research assistants (Burns & Grove 2009:378) before they embarked on conducting individualstructured interviews at three participating sites. The researcher regularly checked completed interview schedules, to address missing information or to query unexpected responses, such as women who might have indicated that they had annual cervical screening tests, which would be most unusual in Malawi.

During the data collection period each research assistant interviewed a minimum of five women each day. Each interview took about 30 minutes. Data collection occurred concurrently at the three sites until the target number of women (N=381) had been interviewed.

3.5 VALIDITY AND RELIABILITY

Validity and reliability are two important criteria for assessing the quality of a design and instruments for quantitative research (Nachmias&Nachmias 2004:165). Design validity is a quality criteria which measures the degree to which inferences made in a study are accurate and well founded. In a research instrument, validity is the degree to which an instrument measures what it is supposed to measure. Thus, validity ensures that appropriate steps are followed in designing instruments and that results reflect the variables under study, not some other concepts (Nachmias&Nachmias 2004:328; Polit& Beck 2006:571).

Reliability is the consistency with which an instrument measures the concept of interest. This means the less variation an instrument produces in repeated measurements of an attribute, the higher is its reliability. Thus, a reliable instrument should obtain similar scores when it is used with the same people on separate occasions or with a similar sample (Polit& Beck 2006:324).

3.5.1 Validity of the research design and instrument

In order to ensure validity of the research design, sometimes there must be a balance between internal and external validity. Internal validity refers to the ability of a researcher to establish that changes in the independent variable indeed have an effect on the dependent variable. This guides the researcher in choosing the design and implementation of the research process. External validity is the extent to which research findings can be generalised to other settings and samples (Nachmias&Nachmias 2004:106; Polit& Beck 2006:554).

3.5.1.1 Internal validity

The quantitative instrument for this study was developed by the researcher by adapting questions from tools used in other studies. To address validity issues, the instrument was reviewed by content and structure experts including two nurse/midwives providing cervical cancer screening at a familyplanning clinic in Blantyre and twonurse educators from Kamuzu College of Nursing. In addition, representatives from the following research and ethics committees reviewed the proposal: Unisa's Department of Health Studies (see annexurel),Kamuzu College of Nursing, and Malawi College of Medicine Research and Ethics Committee (see annexuresO1& O2).

3.5.1.2 External validity

The findings of a study can be generalised to other settings and samples if the sample accurately represents the relevant attributes of the whole population. A sample is considered to be representative if the characteristics identified by the researcher in the sample are similar to the ones that would be obtained if the entire population had been

studied(Nachmias&Nachmias 2004:179 & 183). A convenience sample, that met the inclusion criteria, was used for this study. This was a non probability sampling method where the researcher selected a sample subjectively in an attempt to obtain a sample that appeared to meet the criteria of the study (Nachmias&Nachmias 2004:264), namely women aged 42 and older who agreed to be interviewed at the three participating study sites in Blantyre.

Although this approach might have compromised the external validity of the study's findings, no other option was available as no census existed of women aged 42 and older in Blantyre, comprising the study population.

3.5.2 Validity of the structured interview schedule

Validity of the study instrument refers to the extent to which an instrument actually reflects the abstract construct being examined (Burns & Grove 2005:755). It is important for an instrument to be valid. The types of validity include, face, content, predictive and construct validity (Nachmias&Nachmias 2004:328-331). For this study, face, content and construct validity were used to determine the validity of the quantitative instrument.

3.5.2.1 Face validity

In face validity, the main concern is the extent to which the instrument is believed to be appropriate for the construct to be measured. In this case, face validity depends on the researcher and specialists in the area for their subjective evaluation of the validity of the research instrument (Nachmias&Nachmias 2004: 165). During this study, face validity of the instrument was enhanced by using ideas from the literature review, derived from similar studies. In addition, each question was reviewed against the objectives of the study. The research instrument was also examined by experts in the study areas to ensure that it was appropriate for measuring the construct under study. These experts included two study supervisors who are experienced researchers, two nurse-midwives providing cervical screening services in Malawi, the members of the Research and Ethics

Committees of the Department of Health Studies, Unisa; the Kamuzu College of Nursing; and the Malawi College of Medicine.

3.5.2.2 Content validity

Content validity deals with the adequacy of coverage of the content on the topic of interest being measured. It assesses the degree to which the statements, questions or indicators contained in the instrument adequately represent the characteristics of the construct being measured (Nachmias&Nachmias 2004:170; Polit& Beck 2006:328). In this study, content validity of the instrument was enhanced by incorporating ideas from the literature review of similarstudies done by others. Experts in cervical cancer and in the development of research instruments also analysed the representativeness. adequacy and appropriateness of items representing the construct being tested. In addition, the experts assessed the wording of each item for clarity, sensitivity and bias. Sequence of the items was also assessed so that there was a meaningful order (Polit& Beck 2006:294). The review was followed by removal or rewording of the inappropriate items. New items were added to enhance content validity of the quantitative instrument.

3.5.2.3 Construct validity

Construct validity involves relating an instrument to a theoretical framework in order to determine whether the instrument measures the concepts and theoretical assumptions that are employed (Nachmias&Nachmias 2004:587; Polit& Beck 2006:330). It emphasises the fact that the instrument should measure the intended concept (or construct) not something else. Construct validation also employs statistical procedures to measure some underlying attributes in order to distinguish them from measures of different attributes (Polit& Beck 2006: 330). To enhance construct validity for this study, the researcher identified variables to be measured in relation to the HBM. These variables guided the development of items for the structured interview schedule to ensure it measured what it was supposed to measure. These variables included: modifying variables such as demographic data and knowledge about cervical cancer, perceived susceptibility, perceived severity, perceived

benefits of being screened, perceived barriers to cervical cancer screening, and cues to action(implying cues to using cervical screening services).

3.5.3 Reliability of the instrument

Reliability of a quantitative instrument is the consistency and accuracy of an instrument in reflecting results of a construct being measured. Reliability of an instrument is considered high if it produces fewer variations following repeated measurements of an attribute and if all subparts measure the same characteristics (Polit& Beck 2006: 324-326). For this study three research assistants collected data during phase 1. This poses a potential threat to reliability in terms of consistency. To address this threat the researcher trained the research assistants how to ask questions. On the first day of data collection, the researcher and the three research assistants completed structured interview schedules recording the same interview. These findings were then compared and an inter-rater reliability coefficient of 92.0% was attained. The researcher supervised the data collection processes on an ongoing basis. This confirmed consistency of the data collected. In addition, reliability was also addressed by pre-testing the instrument with five women at one hospital, which did not form part of the three study sites. The pre-test assisted the researcher to identify anomalies and make the necessary adjustments. Three clinical and two academic experts in cervical cancer also ensured that every item in the structured interview schedule was relevant to identifying women's intentions to utilise cervical cancer screening services.

Cronbach's alpha, also referred to as coefficient alpha, was used to assess the internal consistency of the structured instrument. Cronbach alpha values range from 0.0 to +1.00. An instrument is defined as having good internal consistency if Cronbach's alpha is in the vicinity 0.7 (Wilson, Magarey & Mastersson 2008) or 0.6 for making group level comparisons (Polit&Hungler1989:252), as was the case in this study's phase 1.Cronbach's alpha is a test of homogeneity, examining "... the extent to which all the items in the instrument consistency... If

the coefficient value were 1.00, each item in the instrument would be measuring exactly the same thing. When this occurs, one might question the need for more than one item" (Burns & Grove 2001:398). The Cronbach alpha, as an internal consistency measure, "... estimates the extent to which different subparts of an instrument are equivalent in terms of measuring the critical attribute" (Polit&Hungler 1989:252).

The internal consistency yielded for all five items: perceived susceptibility, perceived severity, perceived benefits, perceived barriers and cues to action to cervical cancer assessed in the current studywas 0.62(refer to table 3.2). Polit and Hungler(1989:252) emphasised that reliability scores are related to the sample's heterogeneity, implying that the "...more homogeneous the sample (i.e. the more similar their scores), the lower the reliability coefficient will be... If the sample is homogeneous, then it is more difficult for the instrument to reliably discriminate among those who possess varying degrees of the attribute being measured". This implies that in phase 1 of the current study, the low Cronbach alpha measures did not discriminate among women (aged 42 and older) with different intentions of utilising cervical screening services in Blantyre, Malawi. Some of the contributing factors to the low Cronbach alpha values might be:

- Low education levels of the interviewedwomen
- Women were interviewed after attending the clinics. They could have been tired
- Sources of their cervical cancer screening information differed, which included friends, media and health education.
- A convenient sample which included any woman who met the criteria and had attended any clinic (or accompanied anybody to a clinic),not necessarily the cervical cancer clinic.
- Interviewed women might have had no background information in relation to cervical cancer and screening.
- The interviewed women's ages ranged from 42 to 70 (see section 4.3.1.1). There might have been a substantial difference in women's intentions to utilise cervical screening services at the age of 42, compared to those aged 70 (28 years older).

There might have been substantial differences between the women who had utilised cervical cancer screening services (group 1) and those who had not done so (group 2).

Various steps were taken to ensure that the instrument was valid despite the low initial Cronbach alpha values calculated for the entire sample. These steps included re-affirming that a sufficient number of items had been included in the instrument. The face, content and construct validity indications were acceptable, The next step was to ensure that the scoring procedure had been correctly done. With the help of the statistician, the scoring of negatively phrased items was reversed.

The next statistical procedure undertaken was to calculate specificCronbach alpha coefficients for specific groups of women. Initially the women who had used cervical screening services (group 1) were placed into one group and those who had not done so (group 2) in another group, but no major differences were identified. Thereafter specific Cronbach alpha values were determined for the interviewed women grouped according to their ages: 42-50, 51-60, 61+ years of age (see table 3.2).

Finally specific Cronbach coefficients were calculated for each age group (42-50, 51-60, 61+) differentiated according to group 1 (who had used cervical screening services) and group 2 (who had never used cervical screening services). These results are portrayed in table 3.3.

TABLE 3.2CalculatedCronbach alpha coefficients for the different subsections of the interview schedule according to users (group 1) and non-users (group 2) of cervical screening services

VARIABLE UNDER	Cronbach alpha for specific groups of women						
MEASURE							
	All women	Group 1	Group 2	Ages	Ages	60+ years	
				42-50	51-60	of age	
Perceived susceptibility	0.604	0.448	0.516	0.555	0.658	0.729	
Perceived severity	0.424	0.508	0.389	0.427	0.672	0.701	
Perceived benefits	0.408	0.501	0.402	0.512	0.530	0.572	
Perceived barriers	0.658	0.508	0.231	0.603	0.807	0.406	



TABLE 3.3 CalculatedCronbach alpha coefficients for the different subsections of the interview schedule, according to different age groups and differentiated according to users (group 1) and non-users (group 2) of cervical screening services

VARIABLE UNDER	Cronbach alpha coefficients for specific age groups of women:							
MEASURE	differentiated according to users (group 1) and non-users (group 2) of							
	cervical screening services							
	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2		
	Ages	Ages	Ages	Ages	60+ years	60+ years		
	42-50	42-50	51- 60	51- 60	of age	of age		
Perceived susceptibility	0.388	0.486	0.625	0.628	0.667	0.632		
Perceived severity	0.531	0.386	0.700	0.678	0.702	0.671		
Perceived benefits	0.576	0.354	0.705	0.702	0.921	0.494		
Perceived barriers	0.483	0.220	0.958	0.805	0.667	0.388		

The results in tables 3.2 and 3.3 indicate that differences existed between the different age groups and between those women who had utilised cervical cancer screening services (group 1) and those who had never done so (group 2).

The overall Cronbach alpha of 0.62 was deemed to be acceptable for a newly developed instrument, by the statistician, the academic advisers and the experts working in the field of cervical cancer in Malawi.

3.5.4 Quantitative data analysis for phase 1

Quantitative data analysis is the systematic manipulation of numerical data through statistical procedures in order to describe the phenomenon under study or assess the magnitude and reliability of relationships among them (Polit& Beck 2006:508). Data analysis for phase 1 of this study was guided by the study objectives and questions derived from the HBM's constructs. The numerical data wereanalysed using the computerised Statistical Package for Social Sciences (SPSS version 16.0)for closedended questions which had been captured, using a computer designed data entry base. In order to detect the trends and patterns of the construct under study, descriptive statistics were used to summarise and describe the data.

The responses to open-ended items on the structured interview schedule were coded and also prepared for computer analysis. Descriptive data were presented as numbers, charts, frequency distribution tables, percentages and proportions. This helped to describe and summarise the data and to provide a pictorial view of the distribution of the study's findings.

According to Nachmias&Nachmias (2004:359) charts show differences in frequencies or percentages among categories of nominal or ordinal variables. These provide researchers with an alternative method of communicating information in a more effective way by displaying the information to create a visual impression of the data. In the currentstudy pie charts, bar charts and histograms were used to present the findings.

Frequency distributions show the frequency of occurrences in each category of the variable in a study (Nachmias&Nachmias 2004:355). This is done by simply listing the categories of the variables and counting the number of occurrences in each category. This can be applied at allfour levels of data measurements which are nominal, ordinal, interval and ratio. Percentages and proportions show the relative weight of a specific variable in the distribution. They also allow the investigator to compare two or more frequency distributions (Nachmias&Nachmias 2004:358). Proportion values are obtained by dividingthefrequency of a category by the total number of responses in the distribution; percentages are obtained when the number of units in a sample with a certain characteristic is divided by the total number of units in the sample and then multiplied by 100. Percentages allow meaningful comparisons to be made between different categories of responses, irrespective of the number of responses in specific categories.

In addition, following frequency distribution calculations, findings were summarised and analysed using contingency tables. Contingency tables or cross tabulations, allowed the researcher to visually compare summarised data related to two variables within the sample. To test the significance of the association between variables under study, the Chi-square (X²) was usedand P-values were calculated. The Chi-square is defined as a test used to evaluate whether a relationship between two variables is statistically significant.

The Chi-square is usually applied in situations involving two nominal variables. To calculate X², firstly a table with two nominal cross-classified variables was created by summing the differences between the observed frequencies in each cell and the expected frequencies. (This is alsoknown as the 2X2 table). The larger the difference between the observed and the expected frequencies, the larger the value of X². Thus, proving that the findings could not be attributed to chance (Nachmias&Nachmias 2004:496-497; Polit& Beck 2006:374). The level of significance or alpha (α) entails the probability that the observed differences are due to chance. This is referred to as a P-value. Usually the level of significance is set at .05 or .01, which means, chances that the findings would have occurred by chance are not more than 5% or 1% respectively (Nachmias&Nachmias 2004:483; Polit& Beck 2006:366).

3.6 PHASE 2: QUALITATIVE COMPONENT

A qualitative research design was used for phase two of the current study. This enabled the researcher to explore what nurse/midwives considered to be factors associated with intention to be screened for cervical cancer. Data were collected by conducting semistructured interviews with nurse/midwives at the three participating healthcarecentres.

3.6.1 Research design

A cross-sectional, exploratory, descriptive design using qualitative methods was used for phase2 of the study. This involved using a semi-structured interview guide (see annexuresK and M) with nurse/midwives working at the three selected health centres. The semi-structured interviews aimed to identifyfactors nurse/midwives considered to be associated with intention to utilisecervical cancer screening services by women, aged 42 and older. It was argued that findings obtained from this phase would enrich the findings obtained from this phase would enrich the findings obtained from phase 1. Therefore, triangulation of data gathering methods and data sources was used in this study in order to have results that are supported by multiple and complementary approaches (Polit& Beck 2006:245).

3.6.2 Qualitative research

Qualitative research is defined as an enquiry that attempts to understand behaviour and institutions by getting to know the persons involved and their values, rituals, symbols, beliefs, and emotions (Nachmias&Nachmias 2004:281). The method takes into consideration the inherent depth of human experiences, their ability to shape and create their own experiences and the idea that truth is a composite of realities (Polit& Beck 2006:16). Phase 2 of this study used a qualitative, descriptive research method to obtain adeeper understanding from the nurse/midwives' perspective as to factors influencingthe utilisation of cervical cancer screening servicesamong women aged 42 and older. This involved the use of a semi-structured interview guide (see annexuresK and M).

3.6.2.1 Characteristics of a qualitative research design

Researchers consider six significant characteristics of qualitative research methods. These include that a qualitative method:

- Is flexible and elastic, capable of adjusting to what is being learned during the course of data collection
- Requires the researcher to become intensely involved, often remaining in the field for lengthy periods of time
- Requires the researcher to become the research instrument
- Requires ongoing analysis of the data to formulate subsequent strategies and to determine when field work has been completed, implying that data saturation has been reached
- Follows a holistic approach, striving for an understanding of the whole and
- Typically involves a merging of various data collection strategies (Polit& Beck 2006:210; Streubert-Speziale& Carpenter 2003:16).

In phase 2 of this study, a non-probability sampling method was used to select the participants. Apurposivesampling design was utilised in order to obtain a sample that met the inclusion criteria (Burns & Grove 2005:352). According to Streubert-Speziale and Carpenter (2003:67) the logic and power of purposeful sampling is in the selection of information-rich participants to obtain an in-depth understanding of a phenomenon of interest. In this type of method, biases such as non-representativeness might exist in the sample. However, this method has been used by social scientists with some success (Nachmias&Nachmias 2004:184). For this study nurse/midwives working at the three participating health centres were involved in the study.

3.6.4 Target population

The target population refers to the whole population in which the researcher is interested (Polit& Beck 2006:206). The target population for this phase of the study included all the nurse/midwives working in the government health centres providing cervical cancer screening in the southern region of Malawi. The nurse/midwives had been chosen for this study for two reasons: that they had knowledge regarding cervical cancer screening from their training background and previous working experience and that they had an important role in the education of women about the symptoms of and screening for cervical cancer.

3.6.4.1 Inclusion criteria

The following criteria were used for inclusion of participants:

- Female or male nurse/midwife working at Chilomoni, Ndirande and Bangwehealthcarecentres
- Willing to give consent to participate in the study

Criteria for exclusion to participate in the study included:

- Female or male nurse/midwives unwilling to participate in the study
- Nurse/midwives not working at the three health centres
- Non nurse/midwives

3.6.4.3 Sample size

There were a total of 35 (11, 11 and 13) nurse/midwives working at Bangwe, Ndirande and Chilomoni health centres respectively. Using a purposivesampling design, a total of 14 (40.0%) (5, 5 and 4) nurse/midwives from Bangwe,Ndirande and Chilomoni healthcarecentres respectively were recruited into the study. Data saturationwas attained aftertwelveparticipants; two additional interviews were conducted to ensure saturationbutno new information was revealed by the additional participants' responses.

3.6.5 Research instrument

This phase of the study utilised a semi-structured interview guide (see annexuresK and M) for data collection. The semi-structured interview guide had open-ended questions that addressed areas specific to objectives such as: nurse/midwives' perspectives on women's perceptions about cervical cancer; what they knew about cervical cancer screening tests and early detection; women's sense of being at risk of cervical cancer; women's sense of cervical cancer fatalism; women's perceived benefits of cervical cancer screening; women's perceived barriers to cervical cancer screening; women's knowledge about the cause of cervical cancer and treatment of abnormal cervical screening results; what or who influenced the women who had utilised cervical cancer screening services; perceptions of women's self motivation or intentions to be screened for cervical cancer. During interviews, participants were encouraged to discuss freely and comprehensively all areas included in the interview guide.

3.6.6 Data collection process

The researcher collected datafor phase 2 through conducting semi-structured interviews. The following was the process of data collection:

- On the first day of data collection at each health centre the researcher briefed nurse/midwives working at the health centre regarding the purpose of the study, time required for each individual interview, criteria for selection of participants and expectations from the participants. Appointments for interviews were then made with the nurse/midwives during times when they did not have clinic responsibilities or clients to attend to.
- The researcher met each nurse/midwife privately to review the informed consent form, obtain consent and answer any questions.
- The researcher utilised a private room for data collection. The room was labeled 'Do not disturb.'
- Prior to commencement of each interview, every interviewee was reminded that the session was going to be tape recorded, and every one agreed that it could be done.
- Using a semi-structured interview guide, the researcher conducted a one-on-one interview with eachparticipantthat lasted from 30 to 45 minutes.
- All the information was audio tape recorded starting with verbal consent to be interviewed and that the interview could be audio-taped.
- In addition to audio tape recorded interviews, the researcher also wrote notes on relevant behaviours observed during the semi-structured interviews and quotations to help rememberthe sequence of events (Nachmias&Nachmias 2004:292).

3.6.7Trustworthiness for phase 2

In a qualitative research design, validity and reliability are reflected in terms of truth value of the results. Trustworthiness is defined as the qualitative researcher's degree of confidence in the research findings. Qualitative research findings are assessed for trustworthiness using four areas of criteria: credibility, dependability, confirmability and transferability (Polit& Beck 2006:332).

3.6.7.1 Credibility

Credibility is a criterion for assessing the quality of the data in qualitative studies. Credibility is the faith that can be put in the truth value of research findings. It involves carrying out the study in such a way that the believability of the findings is enhanced by observing all the procedures that enhance the confidence that credible findings will be obtained (Polit& Beck 2006:498; Streubert-Speziale& Carpenter 2003:38).

To enhance believability of the findings duringphase 2, all the procedures that demonstrated confidence in credible findings were maintained (Polit& Beck 2006:498; Streubert-Speziale& Carpenter 2003:38). The relevant activities for improving and documenting the credibility of qualitative data included prolonged engagement, triangulation, external checks for example peer debriefing, member checks and the researcher's credibility.

• Prolonged engagement

Prolonged engagement enhancethe credibility of a study's findings. To arrive at credible findings and interpretations, Polit and Beck (2006:332) recommended activities that invest sufficient time for data collection so that in-depth understanding of the phenomenon of interest, and testing for misinformation, isattainable. A researcher can also build trust and establish good rapport through prolonged engagement with participants. This encourages participants to freely communicate with the researcher (Polit& Beck 2006:333). Credibility of findings and interpretations in this study has been enhanced by the researcher's lengthy period of work experience in a cervical cancer screening clinic at QECH. As a nurse/midwife the researcher worked in the clinic for two years and has been supervising student clinical officers and nurse/midwives in such clinics since 1997 to date. Prolonged engagement was attained by the researcher who established rapport with the nurse/midwives at the health centres from the time of seeking permission to conduct the study throughout the data collection period for phase 1, until conducting the semi-

structured interviews with the nurse/midwives. The researcher spent 30-45 minutes with each participant during individual semi-structured interviews. The researcher ensured clear understanding of questions and getting comprehensive responses by repeating, rephrasing or restating questions and by probing for further responses, where appropriate.

• Triangulation

Triangulation involves the use of multiple research methods in one study. This increases the validity of research results yielded by different data collection methods rather than by the use of a single method (Burns & Grove 2005:224; Nachmias&Nachmias 2004:205). In addition, triangulation ensures completeness of the research results and confirms these results. Completeness provides breadth and depth to an investigation and offers investigators a more accurate understanding of the phenomenon being studied. It also reveals different dimensions of a variable under study and helps to create a precise description thereof (Streubert-Speziale& Carpenter 2003:300).

Triangulation might also be used by researchers to confirm results and conclusions based on a study's findings. The use of any qualitative research method on its own has limitations. However, limitations of a single method may be addressed by combining different research methods (Streubert-Speziale& Carpenter 2003:300). In addition, confirmation of findings occurs when researchers compare and contrast the information from different types of approaches. Obtaining some findings from more than one research approach helps researchers to understand how the findings occurred under different circumstances and assist them to confirm the trustworthiness of the findings. Thus, trustworthiness is used to provide increased understanding and a more accurate picture of a phenomenon under study rather than finding an ultimate truth (Streubert-Speziale& Carpenter 2003:300).

Streubert-Speziale and Carpenter (2003:301) describe Denzin's (1970) four types of data triangulation as:

- Data source triangulation: Data triangulation can be in a form of time, space, source or person. Relevant to this study was source triangulation, because nurse/midwives and patients were interviewed about the same research topic (Polit& Beck 2006:333). In phase 1 of this study women were interviewed to determine their perspectives on factors that might be associated withtheir intentions toutilisecervical cancer screening services. Phase 2 involved the use of semi-structured interviews on the same topic but with nurse/midwives, working in the three healthcare facilities where the women were interviewed. In this case women and nurse/midwives provided different views on the same topic. This helped the researcher to understand the phenomenon of interest in a more comprehensive manner. It also created an opportunity for the researcher to compare and contrast the findings obtained from patients and nurse/midwives.
- Method triangulation: refers to a situation where researchers combine two or more research methods in one study. This can be applied at design or data collection level (Streubert-Speziale& Carpenter 2003:303). Most often, design method triangulation uses a combination of quantitative and qualitative methods in one study. Two different types of research designs and data collection methods wereutilised in this study. Phase 1 utilised a quantitative research methodwith structured interviews and phase 2 utiliseda qualitative research methodwith semi-structured interviews. The use of two research methods might reveal the broad realities of the phenomenon being studied (Streubert-Speziale& Carpenter 2003:303).
- Investigator triangulation: this means using two or more researchers with different areas of expertise in research. These would be working on the same phenomenon of interest in a study. Each one concentrating on the area of expertise, in turn contributing to every aspect of the study (Streubert-Speziale& Carpenter 2003:306). This did not apply directly to the current study. However, experts in the field of cervical screening were consulted about the factual content of the instruments and



the study's two supervisors were consulted throughout the entire research process on the methodology used. The statistician was consulted about the structured interview schedule in phase 1 and two experienced qualitative researchers rendered inputs during phase 2 of the study.

• External checks

As an ongoing activity during data collection and analysis, member check procedures, which are part of external checks, would allow study participants to check and verify the accuracy of preliminary information and interpretations of data. To achieve this, the final report was read and verified by two participants. This gave an opportunity for the participants to confirm or challenge the findings and interpretations.

Peer debriefing involves reviews and explorations of various aspects of an investigation by objective peers. This exposes the researcher to searching questions from experienced researchers in various aspects of the enquiry (Polit& Beck 2006:333). For this study the researcher got constructive comments from experienced qualitative researchers. These were incorporated in the respective areas. The thematic analysis was also done by an independentcoder, in addition to the researcher, to enhance the trustworthiness of the results.

• The researcher's credibility

The researcher's credibility as a data collector and analyst is fundamental for establishing confidence in the study findings (Polit& Beck 2006:334). This dependson the researcher's training, qualifications and experience. The researcher completed a research methodology coursework while undergoing the master's degree programme. Furthermore, the researcher gained credibility through working with experienced supervisors who had conducted qualitative and quantitative studies and published articles based on qualitative and quantitative studies.

3.6.7.2 Dependability

Dependability is similar to reliability in quantitative studies. Dependability refers to data stability over time and over conditions (Polit& Beck2006:335). Dependability is used as a measure of trustworthiness in qualitative studies. It is attained through the achievement of credible research results (Streubert-Speziale& Carpenter 2003:362). One way of establishing dependability in this study was through pre-testing the instrument with one participant at QECH and presentation of comprehensively transcribed interviews and coded results in chapter 5. This transcribed data were coded for easy referencing. This would enable qualitative researchers to review and validate the transcribed interviews.

3.6.7.3 Confirmability

Confirmability is a process criterion that ensures objectivity or neutrality of the data. Confirmability can also be established through the use of an inquiry audit, requiring the researcherto leave an audit trail. Confirmability, as a measure to ensure trustworthiness of research findings, enables consumers to follow the process in order to reach independent conclusions (Polit&Beck 2006:336;Streubert-Speziale& Carpenter 2003:38). To address this, the systematic collection of raw data of field notes, tape recorded information with nurse/midwives would be presented. Furthermore, recorded information was transcribed, synthesised and presented in forms of common themes and definitions for easy understanding.

3.6.7.4 Transferability

Transferability in qualitative research is similar to generalisability in quantitative research. It means the probability that the findings can be applied to others in similar settings (Polit& Beck 2006:3360; Streubert-Speziale& Carpenter 2003:39). To ensure transferability, the researcher provided consumers of this study with a comprehensive report covering demographic characteristics of participants as well as descriptions of research settings. This should enable other individuals to evaluate the applicability of the findings to other similar situations.

Table 3.4 Measures to enhance trustworthiness

STRATEGY	CRITERIA	APPLICABILITY
CREDI- BILITY	Prolonged engage- ment	Researcher established good rapport with nurse/midwives starting from the time of seeking permission from authorities through the data collection period for phase 1 and has a lengthy working experience in the cervical cancer screening clinic. The researcher ensured clear understanding of questions and getting comprehensive responses by repeating, rephrasing, restating questions and probing for more in-depth responses.
	External checks: member checks	The researcher shared the results through a report read bytwo nurse/midwives at the twohealth centres to provide opportunities for the participants to confirm or challenge the findings and interpretations.
	Triangu- lation	Quantitative and qualitative methods were utilised. Women aged 42 and older as well as nurse/midwives provided data for the study.
	Researcher credibility	At master's level, the researcher studied qualitative methods as part of the course on research methodologies. She had also been involved in qualitative research studies.
DEPEN- DABILITY	Inquiry Audit	Comprehensive report on the study has been prepared for other researchers to scrutinise.
	Coding of findings	Findings were categorised and coded, for easy following and verification by other researchers. Coding was done independently by the researcher and one experienced qualitative researcher. Categories were compared and discussions pursued until consensus had been reached.
CONFIR- MABILITY	Audit trail	Recorded interviews, transcribed notes, field notes, data reduction and analysis notes and research report document were prepared by the researcher.
TRANS- FERA- BILITY	Sample and setting	A comprehensive description of demographic characteristics and setting for the study has been provided.

Data analysis for phase 2 was conducted with the purpose of organising, providing structure to and eliciting meaning from the data (Polit& Beck 2006:397). Open coding was followed.

3.6.8.1 Qualitative data analysis

Qualitative data analysis is an active and interactive process which involves organising, structuring and eliciting meaning from narrative materials. The activity is labour intensive requiring creativity, conceptual sensitivity and perseverance (Polit& Beck 2006:397). The process of data analysis in qualitative research starts with data collection (Streubert-Speziale& Carpenter 2003:36).

The process of data analysis for the qualitative phase started with the researcher's immersion in the data, since the data collection phase. Data analysis involved clustering similar ideas into themes, using the immersion/crystallisation style as discussed by Morse and Field (in Polit& Beck 2006:398-399). These authors identified four cognitive activities that play a role in qualitative analysis as, comprehending, synthesising, theorising and recontextualising (Polit& Beck 2006:398-399). For the current study comprehending and synthesizing activities were used.

Comprehending

- To ensure comprehension of the data, in the early part of this stage the researcher attempted to make sense of the data and to become familiar with the progression of events through data immersion.
- Firstly, data immersion was achieved through the researcher's listening to the initial audio taped semi-structured interview, and through transcribing it verbatim in order to provide material for the subsequent intensive analysis and reviews of native expressions.

- The researcher then read the transcribed data several times. Using the initial transcribed semi-structured interview, a provisional set of categories was created. This initial set was highly flexible.
- Using Atlas ti scientific software, a list of the categories and their labels was formed.
 Following this, a description for each category devised was produced. The researcher then wrote appropriate code labels for these categories alongside the text in the right hand margin.
- Once the units of data had been allocated to the set of categories, they were sorted into appropriately labeled themes with reference to a particular interview and location of the text in the transcript.

Synthesising

The synthesis of the data involved that:

- the researcher refined the categorisation of data
- the researcher then produced a summary of major themes identified in each interview attached to a copy of the transcript.
- repetition of the procedure for each subject's interview data.
- compilation of thematic analysis to create a comprehensive set of themes that represented the entire study population
- the independent coder followed the same steps, and then compared her major themes with those of the researcher. Discussions continued until consensus was reached about the major categories.

3.6.8.2 Dissemination of research findings

Upon completion of the study, the researcher presented the results to nurse/midwives and women attending healthcare service clinics at the research settings. Subsequent to the acceptance of the thesis, three copies would be submitted to the Unisa library andone copy to the Kamuzu College of Nursing library. Findings would also be disseminated at the College of Medicine's research conferences in Malawi. In addition, any published papers

or abstracts would be submitted to Kamuzu College of Nursing's Research and Publication Committee. Furthermore, the researcher would ensure that findings of this research will be disseminated at national as well as international research forums and that Malawi's MOH will be informed about the research results. Research reports will also be supplied to the managers of the three participating research sites.

3.7 ETHICAL CONSIDERATIONS

Ethical considerations in research are ways of ensuring that the rights and welfare of persons and communities participating in scientific studies are not violated (Nachmias&Nachmias 2004:78). A researcher has to consider ethical issues that might arise due to the type of phenomenon being studied or method used in order to ensure that participants are not exposed to any harm. The ethical issues and principles considered in this study were principles of respect for human dignity, beneficence and justice. These were considered in relation to their influence on institutions used for the study, respondents, participants and the researcher's integrity.

3.7.1 Institutional review

The researcher conducted the study at three health centres in Blantyre, Malawi. Prior to conducting the study, permission was sought from the Research and Ethics Committee of the Department of Health Studies, Unisa (see annexurel), Kamuzu College of Nursing research and Ethics Committee and from the Malawi College of Medicine Research and Ethics Committee (see annexuresO1 and O2]). Permission was also sought from the Blantyre District Health Officer (see annexuresNand Q) and from the three participating health centres' administrators at these study sites (see annexures R, S and T).

3.7.2 Respondents and participants

The principle of respect for human dignity encompasses the right to self determination and the right to full disclosure of information (Polit& Beck 2006:88). This principle also states

that humans should be treated as autonomous agents, capable of controlling their own activities. Therefore prospective participants had the right to decide voluntarily to participate in a study, ask questions, refuse to give information or to withdraw from the study at any stage without incurring any negative consequences whatsoever.

Participants of this study were treated respectfully. They were given full explanations of what the investigator intended to do, including the purpose of the study, type of data required and procedure of data collection, potential costs, risks, benefits, maintenance of confidentiality and contact information in the event of further questions, comments or complaints related to the study. Participants were informed that they had the right to ask questions for clarification, to refuse to respond to specific questions about which they felt uncomfortable or not to participate at all. The participants were also informed that they could withdraw from the study at any time and they were not going to be punished for that. The researcher obtained informed consent from each participant (see annexures D1 and D2, F1 and F2, J1 and J2 and L1 and L2]). It was also ensured that participants were not hindered from achieving their planned objectives of visiting the health facility. Therefore, for phase 1, participants were interviewed after receiving their clinic services, and for phase 2 interviews were conducted at a time convenient for each nurse/midwife. This avoided participants being in a hurried mood, providing socially acceptable responses with the aim of getting the interview over and done with as quickly as possible.

The participants, who were willing, voluntarily signed a consent form after being taken through the research information sheet and having established that they had comprehended the contents. The consent form and structured interview schedule were both translated from English to a local language "Chichewa" (see annexures F1 and F2) using the 'back forth' translation method by specialists in linguistics in the Community Department for the John Hopkins Project, Malawi. The John Hopkins Project in Malawi is involved in many studies conducted in local Malawian languages. (For the certificate of translation, see annexure H). In addition the researcher ensured that the research assistants were fluent in both languages.

Beneficence is a fundamental principle in research. It imposes a duty on the researcher to minimise harm, discomfort and exploitation of participants. Researchers should ensure that research, involving human beings, maximises benefits for participants (Polit& Beck 2006:87). There were no anticipated risks attached to this study except for the feeling of being tested for knowledge on cervical cancer. If respondents or participants were unhappy with some of the questions they were allowed to refuse to respond or to withdraw at any time. Furthermore, it was communicated that there were no direct benefits attached to participating in the study. However, findings would be useful for women of the same age group, to enhance their intentions to utilise cervical cancer screening services in future. In the event of having further questions, comments or complaints relating to the research, participants were given contact details of the researcher and the chairpersonof College of Medicine Research and Ethics Committee.

The principle of justice encompasses the participants' right to fair treatment and their right to privacy (Polit& Beck 2006:90). This principle was applied to both phases of this study. To address this, participants were given contact information of the researcher and the chairpersonof Research Ethics Committee for College of Medicine. These enabled participants to communicate easily in the event of having further questions, comments or complaints relating to the study. Privacy was maintained by conducting interviews in a private room away from others with a "do not disturb" sign on the door. Participants were also assured that all the information was confidential. Numbers, instead of names, appeared on the completed interview schedules. Signed consent forms were kept separately from completed interview schedules. Therefore no responses could be linked to any specific individual.

To further enhance privacy and confidentiality, all completed questionnaires, audio tapes containing participants' responses were kept under lock and key. These would be kept for three years, after the acceptance of the research report, before destroying them. Only the researcher had access to this locker. Participants were also assured that the research report would not contain any information identifying any particular individual.

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3.7.3 The researcher's integrity

The researcher's integrity is reflected in the application of ethical issues to the research process. These included: significance and feasibility of the research problem, balanced discussions in literature review, acknowledgement of sources and contributors to the study, participants'/respondents' risk benefit ratio,rigour in handling data collection and analysis processes (Polit& Beck 2006:493).

For this study, the researcher had chosen the research problem in the field (cervical cancer screening services) in which she has some prior knowledge and experience. In collaboration with research supervisors the research problem passed the tests of being researchable, significant and feasible, based on the evaluations of two different research ethics committees. It was also envisaged that the research problem was going to extend the researcher's knowledge as well as the knowledge of others. In the literature review, the researcher discussed both ideas supporting and those opposing the phenomenon of interest with balanced views. It has also been ensured that all sources of literature reviewed and contributors to the study have been acknowledged. According to the researcher and research supervisors, the benefits of this research outweighed the risks that participants mighthave experienced (mainly potential discomfort to answer some questions, but they could decline to answer any specific question). The participants were given information about the study to enable them to make informed decisions as to whether or not to participate in the study.

During data collection rigour was maintained by keeping records of the entireresearch process. No other question was asked for the researcher's own interest about something outside the study. Data collected for the quantitative phase wereanalysed using appropriate statistical methods while for the qualitative phase, it was presented word for word as indicated by participants. This ensured that data had not been manipulated. This was followed by honest discussions of the results. The ideas, with which the researcher did not agree were also presented in an unbiased manner.

3.8 LIMITATIONS OF THE STUDY

Though it was assumed that this study would generate significant findings, there were some anticipated limitations which had to be considered if results were to be generalised to other settings. These limitations include:

- This study involved onlywomen aged 42 and older visiting the three health centres in Blantyre. Therefore results cannot be assumed to reflect the perceptions of all women in the southern regions in Malawi.
- The researcher utilised a non probability, convenientsampling method for phase 1. This might not reflect a true representation of the characteristics of the population from which it had been drawn.
- It is possible that participants for phase 2 (nurse/midwives) might have given responses to please the researcher knowing that she is also a nurse/midwife.
- The researcher being a nurse educator expected all the nurse/midwives to be knowledgeable about most of the aspects of cervical cancer and screening acquired through basic training. This might have introduced some bias for phase 2 (nurse/midwives).

3.9 SUMMARY

The research methodologies used in this study explored factors that might be associated with the intentions to utilise cervical cancer screening services by women aged 42 and older in Malawi. A cross sectional exploratory, descriptive design with quantitative and qualitativeresearch methodologies were used for phase 1 and 2 respectively. The instruments used for data collection were based on the HBM'sconcepts. Data were collected for phase 1 from women aged 42 and older using structured interviews. To explore what factors nurse/midwives perceived as influencing intentions to utilise cervical cancer screening services among women aged 42 and older, individual semi-structured interviews were conducted with nurse/midwives.The combination of quantitative and qualitative methodologies provided a comprehensive investigation of factors that might



influence women's intended utilisation of cervical cancer screening services. Data collected for phase 1 wereanalysed using the SPSS version 16.0. Findings are presented in the form of charts, frequency distribution tables and graphs generated from the Microsoft Excel programme. Following frequency distribution calculations, findings were summarised and analysed using contingency tables or cross tabulations. The Pearson's test was used to compute the relationship between HBM concepts and women's intention to be screened for cervical cancer. For the qualitative design, data wereanalysedand categories were developed using Atlas.ti version 4.2.

The researcher adhered to professional, legal and social obligations. Therefore, to protect participants the following ethical issues were considered in relation to institutional reviews, participants/respondents and researcher integrity. Ethical principles of respect for human dignity, beneficence and justice were maintained throughout the research process.

The findings of this study are presented as follows: chapter 4, quantitative research findings; chapter 5, qualitative findings. Chapter 6 covers conclusions and comparisons on the two phases of the study, limitations of the study and recommendations based on the conclusions of the study.

CHAPTER 4

DATA ANALYSIS AND DISCUSSION: PHASE 1: STRUCTURED INTERVIEWS CONDUCTED WITH WOMEN AGED 42 AND OLDER ON CERVICAL CANCER SCREENING

4.1 INTRODUCTION

Chapter 1 presented information on cervical cancer, the importance of screening, available screening tests, study objectives and questions, the significance of the study, and an overview of the HBM and its components. In chapter 2, the literature review on factors associated with cervical cancer screening has been presented. Chapter 3 outlined the research methodology that was used for the two phases of this study.

In chapter 4, the quantitative study results of data analysis for phase 1 are presented. Structured interviews were conducted with 381 women aged 42 and older, investigating their awareness regarding cervical cancer screening and their intentions to be screened. The results for the qualitative portion of the study, phase 2 of this study are presented and discussed in chapter 5.

4.1.1 Statement of the problem

Malawi's cervical cancer statistics for 2000-2006 indicate that out of the 3221 women diagnosed with cervical 1 991 aged 42 and cancer. were older. ManyMalawianwomen, aged 42 and older, who had been diagnosed with cervical cancer, had never been screened preceding their diagnoses, though all of them had visited government health facilities, providing cervical cancer screening services at least once during the preceding 5-10 years (Taulo, Malunga & Ngwira2008:141). The government's healthcare facilities provide cervical cancer screening services free of charge. This study, therefore attempted to answer the question: why women, aged 42 and older, rarely intend to utilise cervical cancer screening services in Malawi.

4.1.2 Purpose of study

The purpose of the study was to determine factors, with emphasison knowledge, that are associated withintentions to utilise cervical cancer screening services among Malawian women, aged 42 and older.

The specific objectives for this study were to:

- Identify demographic variables for women aged 42 and older and their association with these women's intentions to be screened for cervical cancer.
- Describe the association between the perceived susceptibility tocervical cancerin women aged 42 and older and their intentions to be screened.
- Determine the association between perceived seriousnessofcervical cancerin women aged 42 and older and their intentions to be screened.
- Determine the association between perceived benefits of cervical cancerscreening in women aged 42 and older, and their intentions to be screened.
- Identify the association between perceived barriers to being screened for cervical cancer among women aged 42 and older, and their intentions to be screened.
- Analyse the association between cues to action (sources of information) for cervical cancer screening among women aged 42 and older andtheir intentions to be screened.

4.2 DATA ANALYSIS

The activities involved in data analysis included: coding, categorising, ordering, systematic organisation, summarising and synthesising the data with the aim of generating meaning from the results (Polit & Beck 2006:498). Descriptive analyses were used to summarise and organise the data. The results have been presented according to the study objectives and questions which were formulated consistent withthe HBM's constructs. Data weresummarised using frequency distribution

polygons and tables. Results are presented in the form of charts, accompanied by percentages, to facilitate the comprehension of the results. The charts most frequently used for data presentation include histograms, pie charts and bar charts. The SPSS version 16.0 computer package was used for data entry and analysis, while charts and graphs were created using the Microsoft Excel program.

The following conventions have been adopted to present and discuss the quantitative research findings in chapter 4:

- N = total sample
- n = total of sub variables or topics
- f = frequency within N or n

4.3 PHASE 1: RESULTS: STRUCTURED INTERVIEWS CONDUCTED WITH WOMEN AGED 42 AND OLDER ON FACTORS ASSOCIATED WITH THEIR INTENTIONS TOUTILISE CERVICAL CANCER SCREENING SERVICES

Phase 1 of this study was conducted at three health centres, providing cervical cancer screeningservices in Blantyre, Malawi. Data were collected during February and March 2011. A total of 381 women, comprising the sample for this study (N=381), were interviewed using structured interview schedules.

4.3.1 Socio-demographic data about the women

The information presented in this section presents the respondents'demographic information. This was captured inresponses to questions in section A of the structured interview schedule. Demographic data included respondents' ages, marital status, education status, religions, number of children, ethnic groups, employment status, their husbands' and their families' monthly incomes.

4.3.1.1 Age(n=378)

The respondents' ages in the current study ranged from 42 to 70 years. The median age was 48 years and the standard deviation (SD) was 5.975. Table 4.1 indicates

that 25.9% (f=98) of the respondents were in the age group of 42-44, 36.0% (f=136) were aged 45-49, 18.5% (f=70)fell into the age group of 50-54, 9.3% (f=35)were 55-59 years old and 10.3% (f=39) were older than 60 years.

A woman's age is essential for interpreting of the current study results as it impacts on her intention to seek cervical cancer screening services. Women in developing countries are more likely to die from cervical cancer because the elderlygroup might be lesslikely to usecervical cancer screening services (Tsu & Levin 2008:105).

4.3.1.2 Marital status (n=378)

Table4.1 shows that out of the 378 respondents, 65.6% (*f*=248)were married, 25.9% (*f*=98) were widowed, 7.4% (*f*=28) were divorced and 1.1% (*f*=4) had never been married. The National Statistics Office(2010:7) shows that of the Malawian women 58.7% were married, 19.7% had never been married, 9.3% were divorced and 3.6% widowed. The findings also indicate that of the136 women, aged 45-49, who participated in the current study, 72.8% (*f*=99)were married women, 9.5% (*f*=12)were divorcees and 19.0% (*f*=24) were widows.

			Clients'marital status							
	Never	r married	Married		Divorced		Widow		Т	otal
Age in years	f	(%)	f	(%)	f (%)		f	(%)		(%)
42 – 44	1	(25.0)	78	(31.5)	10 (35.7)		9 (9	.2)	98 ((25.9)
45 – 49	1	(25.0)	99	(39.9)	12	(42.9)	24	(24.5)	136 ((36.0)
50 – 54	1	(25.0)	44	(17.7)	3 (10.7)		22 (2	2.4)	70 ((18.5)
55 – 59	0	(0)	15	(6.0)	2 (7.1)		18 (1	8.4)	35	(9.3)
60 and older	1 (25.0)	12	(4.8)	1 (3.6)		25 (2	25.5)	39 ((10.3)
Total	4 (10)))	248 (99.9)	28 (100)		98 (1	00)	378 ((100)

Table 4.1: Age in years and marital status (n=378)

4.3.1.4 Number of children (n=375)

Out of the 375 respondents who answered this question, 228 (60.8%) had 4-6 children, 75 (20.0%) had 3 or fewer children and 72 (19.2%) had 7 children or more as shown in figure 4.1. According to the National Statistics Office (2010:7), Malawian women bear an average of 5.7 children.
The number of children a woman has might be associated with her intention to utilise cervical cancer screening services. Women have a significant influence on familywelfare throughout their lives, playing central roles to ensure that food is available, taking care of children and grandchildren, and of those who are ill(Tsu & Levin 2008:107). In Nene, Jayant, Arrossi, Shastri, Budukh, Hingmire, Muwonge, Malvi, Dinshaw and Sankaranarayanan's (2008:266) study, parity was significantly associated with participation in cervical cancer screening services.



Figure 4.1: Respondents' number of children (n=375)

4.3.1.3 Education status (n=378)

The results shown in table 4.2 indicate that out of the 378 respondents, 64.0% (f=242) had primary school education, 19.8% (f=75) had no education at all, 13.5% (f=51) had secondary school education and only 2.6% (f=10) had college education. In addition, 27.2% (f=103) of these 378 interviewed womencould not read or write. Low educational levels might impact negatively on women's comprehension about the necessity for preventive healthcare services such as cervical cancer screening. Of the respondents, 83.9% (f=317) had no education or only primary school education. These women might be unable to benefit from health promotion

messages in newspapers or client information brochures. They might also have problems to comprehend the aetiology and risk factorsfor cervical cancer compared to respondents with higher education levels. Furthermore, women with college education might have greater opportunities of being employed than those with primary or no education at all. In 2005 the female literacy rate in Malawi was 52.4%, with only 28.0% of girls aged 13-18 attending secondary schools(White2007:5 &11). A recent study by Denny, Goff and Falk (2010) revealed that in developing countries screening is estimated at 19.0% ranging from 1.0% in Bangladesh, Ethiopia and Myanmar to 73.0% in Brazil. According to Dzamalala, Mdokwe and Chimwemwe (2004) and JHPIEGO (2002) many women in these countries remain unaware of cervical cancer screening services and its necessity.

Table 4.2 Highest education level attained and employment cross tabulation (n=378)

			In what type of			
			Unemployed	Self em- ployed	Employed	Total
Highest	Never	Count % within	67	7	1	75
educa- tion	attended school	highest education	89.3%	9.3%	1.4%	100.0%
level	Primary	Count % within	140	81	21	242
attained	school	nignest education	57.9%	33.5%	8.7%	100.1%
	Seconda-	Count % within	10	20	21	51
	ry school	highest education	19.6%	39.2%	41.2%	100.0%
	College	Count % within	1	1	8	10
		education	10.0%	10.0%	80.0%	100.0%
Total		Count % within	218	109	51	378
		highest education	57.7%	28.8%	13.5%	100.0%

4.3.1.5Employment (n=378)

Employment and income levels of women reflect their socio-economic status. This data were collected from respondents in order to determine their ability to pay for transport to health facilities for preventive health services. Lack of finances for transport to a health facility, or for basic needs at home, could be associated with low intentions to utilise preventive health services. Tsu and Levin (2008:7) state that

women have a significant influence on family welfare throughout their lives, playing centralroles as managers of food security and wage earners. In both urban and rural areas in SSA, women are the main income earners in approximately one-third of households as men migrate for employment. In such circumstances women's health is not a priority.Data of the current study show that 57.7%(f=218) of the respondents were unemployed, 28.8%(f=109) were self employed and only 13.5%(f=51) were employed. Respondents' high unemployment rate could be due to lack of education as reflected by 64.0% (f=242) of respondents who had some primary education and 19.8%(f=75) had no education (refer to table 4.2).

In Malawi, dropout rates for girls in primary school continueto increase. Reasons why Malawian girls drop out of school includeearly marriages, pregnancy, responsibilities in the home, poor clothing, sexual harassment by teachers as well as lack of role models (White 2007:13). Also girls who cannot afford sanitary wear cannot attend school while they menstruate causing them to lose a number of school days every month (Oster & Thornton 2010:7).

In addition, table 4.2 indicates that 80.0% (f=8) of the 10 women who had acquired college education, were employed compared to 1.3% (f=1) of the 75 who had never attended school. According to White (2007:1), in Malawi, it was noted that only 18.5% of the women were employed at managerial or higher level positions while 81.6% were employed at clerical or lower levels.

The respondents were also asked about their partners' employment in order to determine the socioeconomic status of their husbands as their support persons. As portrayed in table 4.3, 49.0% (f=99)out of the 202 husbands in the current study were employed compared to 13.5% (f=51)out of the 378 respondents. Out of the 202 husbands, 33.7% (f=68)and out of the 378 respondents,28.8% (f=109),were self employed, as shown in tables 4.2 and 4.3. Having unemployedpartnersmight imply less financial support for the women, implying less money for transport to access cervical cancer screening services.

Table 4.3 indicates a significant relationship between "within group" employment status of the spouses and the clients' intentions to use cervical cancer screening services. Out of the 99 respondents whose spouses were employed, 80.8% (f=80) intended to be screened compared to 62.9% (f=22)of the 35 women whose husbands were unemployed, and 57.4% (f=39)of those 68 women whose husbands were self employed.

If a woman does not have money for transport to a health facility, or for basic needs at home, the husband as the support person is supposed to help. This could contribute tolow intentions toutilise preventive health servicesbecause oflack of money for associatedtravel and informal costs. In Uganda, a patriarchal society, even when a woman is employed, she will expect the partner to meet the costs for healthcare (Mutyaba, Faxelid, Mirembe & Weiderpass 2007).

Table 4.3 Respondents' husbands'	employ	ment status	and	women's	intentions
to be screened for cervical cancer ((n=202)				

	Unemp	loyed	Self emp	bloyed	Employ	yed	Total	
Planning to use cervical screening services within 1 year	f	%	f	%	f	%	f	%
YES	22	15.6	39	27.7	80	56.7	141	100.0
NO	13	21.3	29	47.5	19	31.1	61	99.9
Total	35	17.3	68	33.7	99	49.0	202	100.0

Furthermore, a comparative analysis of within the women's employment status showed that of their spouses, 27.0% (f=34) of the 126 unemployed women were married to unemployed husbands. Interestingly 74.3% (f=26) of the 35 women who were employed, were married to men who were also employed. Out of those 86 respondents who were self employed and who answered this question, 52.3% (f=45) were married to self employed men (refer to table 4.4).

	Women'semployment status								
Husbands'empl oyment status	Unemployed		Self employed		Employed		Total		
	f	%	f	%	f	%	F		
Unemployed	34	27.0	3	3.5	3	8.6	40		
Self employed	41	32.5	45	52.3	6	17.1	92		
Employed	51	40.5	38	44.2	26	74.3	115		
Total	126	100.0	86	100.0	35	100.0	247		

Table 4.4 Women within their employment status groupscorrelated with their husbands'employment status (n=247)

4.3.1.6 Income (n=283)

Respondents were also asked about their families' total incomes per month. From the 283 respondents who knew their families' total monthly incomes, 64.0% (*f*=181) earned Mk1000-Mk10 000;20.1% (*f*=57) earned Mk10 001-Mk20 000), 6.7% (*f*=19) earned Mk20 001–Mk30 000, 4.6% (*f*=13) earned Mk30 001-Mk 40 000, 4.2% (*f*=12) earned Mk40 001–Mk 50 000 and only 0.4% (*f*=1) earned above Mk 50 000.These figures are shown in figure 4.2. The Malawi GDP per year in 2010 was at \$369 (Reserve Bank of Malawi Statistics 2010).The current results show that 109(38.5%) respondents earned below the Malawi poverty lineof\$1.25 per day (World Bank Development Indicators March 2011) an equivalent of Mk209.18 per day converted at the National Bank of Malawi's average exchange rate of Mk167.34 on 23rd September 2011(The Malawi Daily Times Newspaper 23/09/2011:6).In Malawi's government health institutions, cervical cancer screening services are offered free of charge. Despite this, some women might require transport to access these services. Low household incomes might have a negative impact on women's intentionsto utilise cervical cancer screening services.





Figure 4.2: Income (n=283)

4.3.1.7 Tribal affiliations (N=381)

All 381 women responded to this item, and indicated that they belonged to the following tribes: Lomwe (27.3%; f=104), Yao(19.9%; f=76),Ngoni (14.7%; f=56), Sena (10.2%; f=39), Chewa (10.0%; f=38), and a variety of other tribes (17.8%; f=68), as indicated in figure 4.3. The respondents were asked abouttheir tribal affiliations because culture couldaffect their healthcare seeking behaviours, especially in relation to reproductive health. According to the National Statistics Office (2010:8), the common tribes in the Southern part of Malawi were: Chewa (34.1%), Lomwe (16.3%), Yao (13.1) and Sena (4.6%).



Figure 4.3 Tribal affiliations of the respondents (N=381)

4.3.1.8 Religion (N=381)

All 381 women indicated their religious affiliations. The most represented religious groups were Roman Catholic (20.7%; *f*=79), Church of Central African Presbyterian (18.6%; *f*=71), and Islam (11.0%; *f*=42) and a variety of other religions (49.6%; *f*=189). These findings are consistent with the National Statistics Office's (2010:7) findings, indicating that major religious groups in Malawi were Roman Catholic (20.6%), Church of Central African Presbyterian (16.6%) and Muslims (13.0%). Some religions provide guidelines to their members regarding healthcare issues, which might impact on women's utilisation of cervical cancer screening services.

4.3.2Correlations between intentions to be screened for cervical cancer and age, marital status, religion, number of children, income, education levels and employment status

A Chi-square test was used to assess the possible association between intention to be screened for cervical cancer and age, marital status, education status, income, education level and employment (see table 4.5).

Demographics	X ²	df	Р
Age	9.9	4	0.042
Marital status	18.5	2	0.001
Religion	0.5	3	0.909
Number of children	10.0	2	0.07
Income	1.5	2	0.475
Education level	20.8	3	0.001
Employment status	5.4	2	0.021
Within group employment status of	11.5	2	<0.003
the spouse			

Table 4.5: Association between demographic data and women's intentions tobe screened for cervical cancer

In the age group of 45 to 49, 62.5% (85 out of 136) of the women intended to be screened for cervical cancer. These results were found to be statistically significant at the 5% level (X²=9.9, df=4, p=0.042). The correlation between marital status and intention to gGo for screening was also statistically significant (X²=18.5, df=2, p=<0.001). There was no evidence at the 5% level of significance to suggest any association between intention to go for cervical cancer screening and respondents' religious affiliations (X²=0.5, df=3, p=0.909). There was also a correlation between intention to go for cervical cancer screening and respondents'employment status (X²=5.39, df=2, p=0.021) at the 5% level of significance. In addition, a significant relationship was observed between within group employment status of their spouses and the clients' intentions to go for cervical cancer screening (X²=11.49, df=2, p= <0.003). There were more respondents with fewer than three children who intended to go for cervical screening, but this was not significant at the 5% level (X²=10.0, df=2, p=0.07). There was no association between women's intentions to be screened for cervical cancer and income (X²=1.5, df=2, p=0.475). These findings appear to be inconsistent with previous studies that reported associations between demographic, socio-psychological and structural characteristics with women's intentions to be screened for cervical cancer (Holroyd, Twinn & Adab 2004:46; Tacken, Braspenning, Hermens, Spreeuwenberg, Van den Hoogen, De Bakker, Groenewegen & Grol 2006:187; Balajadia, Wenzel, Huh, Sweningson & Hubbell 2008).

There were 31 out of 75 (41.3%) respondents with no education, and 58 out of 242 (24.0%) with primary school education who had no intention to go for cervical screening as compared to 7 out of 61 (11.5%) with secondary and college education. Education level influences health seeking behaviour. A Chi-square test was applied to identify possible relationships between the intentions to be screened and women's education levels. The results showed that there was a strong association at the 5% significance level (X²=20.8, df=3, p=0.001), with better educated women indicating stronger intentions to utilise cervical cancer screening services.

Peterson, Dwyer, Mulvaney, Dietrich and Rothman(2007:1110b) stated that low literacy levels correlate with less knowledge about cervical cancer screening. Reportedly women who had health literacy levels of lower than 9th grade had decreased knowledge about the purpose of cervical cancer screening tests. These women also encountered problems with seeking medical care and asking for assistance or clarifications, as indicated by Fronk (2005:17).

4.4 PERCEIVED SUSCEPTIBILITY TO CERVICAL CANCER

Section B,questions 1.10 to 2.15 (see annexures Eand G) of the structured interview schedule included specific questions that assessed respondents' perceptions of being susceptible to cervical cancer. Questions assessed their knowledge about the cause of cervical cancer or abnormal cervical changes; HPV as causative organism for cervical cancer; transmission of HPV; being at risk of having cervical cancer; long term effects of HPV; risk factors; perception of cervical cancer as a health concern; and whom they felt should initiate the idea of having cervical cancer screening.

Regarding the 381 respondents' plans to participate in cervical cancer screening in the following year, 57.2% (f=218) were planning to be screened. However, 42.8% (f=163) of the respondents did not have plans to be screened during the coming year. Of the 163 respondents who were not planning to have a cervical cancer screening test,41.1% % (f=67) were planning to have an HIV test or blood pressure check during this time, which would bring them in contact with healthcare services where free cervical screening tests are provided.

As a follow-up question, respondents were asked if they had previously been screened for cervical cancer. This was done in order to obtain baseline information regarding their previous health seeking behaviours relevant to cervical cancer. Out of these376respondents, only 25.0% (f=94) had been screened for cervical cancer previously while 75.0% (f=282) had not been screened. For those who had not been screened, the most frequently cited reasons from 211 respondents are shown in table 4.6.

Table 4.6: Reasons for not having used cervical cancer screening services(n=211)

Reason	Frequency	%
I am always busy	24	11.4
Lack of knowledge on screening tests	21	10.0
I am not sick and have no pain	135	64.0
I don't know where to go	7	3.3
Fear of the procedure/disease	9	4.3
Facility factors (distance, attitudes of healthcare providers, lack of		
equipment)	15	7.1
TOTAL	211	100.1

In addition, those 94 respondents who indicated that they had been screened previously were asked when they were last screened. In response to this question, 35.1% (*f*=33) of the respondents indicated a year ago, 23.4% (*f*=22) less than a year ago, 17.0% (*f*=16) three years ago, 14.9% (*f*=14) two years ago and 9.6% (*f*=9) more than three years ago (see figure 4.4).

Out of 94 respondents who had been screened previously and who replied to this item, 79.8% (f=75) indicated that their results were normal, 17.0% (f=16) stated that their results were abnormal while 3.2% (f=3) did not know the results.



Figure 4.4: Respondents' previous utilisation of cervical cancerscreening services (*n*=94)

The respondents were asked whether they knew the cause of cervical cancer or abnormal cervical changes. Of the 380 respondents, 92.3% (*f*=351)admitted that they did not know the cause of cervical cancer, while 6.8% (*f*=26)claimed that they knew the cause. The 26 respondents who claimed knowledge of HPV were further asked to state the actual cause of cervical cancer. Out of these 26 women, 7 (26.9%) women cited traditional medicines inserted into the vagina, 5 (19.2%) mentioned sexual intercourse, 4 (15.4%) indicated STIs, 3 (11.5%) considered multiple sex partners to cause cervical cancer and 2(7.7%) said giving birth while 519.2%) said they had forgotten what causes cervical cancer. Though some respondents had indicated knowledge of the cause of cervical cancer, these cited causes revealed a lack of knowledge. In a qualitative study by Pelcastre-Villafuerte, Tirado-G'omez, Mohar-Betancourt and Lo'pez-Carvantes (2007), women reported that cervical cancer stems from their own body and is not affected by any external agent, blaming themselves for the disease.

The 377 respondents'answersrevealed that 94.4% (f=356) had no prior HPV knowledge. The 5.6% (f=21) who indicated to be knowledgeable about HPV were asked to state what it was, and how it could be contracted. Out of these 21 women, 52.4% (f=11) stated that it was a virus that causes cancer, 42.9% (f=9)stated that they could not explain or had forgottenwhat it was, 4.8% (f=1) reported that STIs caused cervical cancer. Therefore, almost all(97.1%; f=366) respondents did not know what HPV infection was.

On the contrary, women attending the Margret Pyke Centre, a well woman clinic in central London, generally knew that HPV was sexually transmitted (64.9%) and could be carried by men (63.9%). However, similar to the findings of this study, 40.2% of these women knew that HPV was the main cause of cervical cancer (Waller, McCaffery, Forrest, Szarewski, Cadman & Wardle 2003:320).

In response to the question enquiring whether they felt they were at risk of having cervical cancer, 86.2% (f=325) of the 377 respondents did not think they were at risk of having cervical cancer. Only 5.8% (f=22) felt they were at risk and 8.0% (f=30)had no opinionsabout their self perceived risks of having cervical cancer.Similarly, in the UK, Armstrong's (2005:170-171) exploratory study findings revealed that some participants felt that they were not at risk of developing cervical cancer because they had fewer sex partners and were not smoking or drinking.

The responses (n=377) in this study included that HPV causes pelvic infections (53.3%; f=201); cervical cancer(15.9%; f=60) and 31.2% (f=120) did not know what effect it could have. These findings appear to be consistent with Anhang, Goodman and Goldie's (2004:250) reported findings indicating that few of their respondents had heard about HPV, and knew that it was associated with cervical carcinoma.

A total of 320 responses were provided onknowledge about risk factors for cervical cancer. The most cited risks were: STIs 59.4%(f=190), smoking 21.6% (f=69), genetics 13.8% (f=44), HPV 4.7% (f=15) and early age of sexual debuts0.6% (f=2). These findings indicate that respondents were knowledgeable about risk factors for developing cervical cancer although only 4.7% (f=15) mentioned HPV.

Out of 379 respondents, 86.8% (*f*=329) indicated that cervical cancer was a health concern and only 13.2% (*f*=50)indicated that it was not a health concern to them. These findings are consistent with those of a study done among Hispanic men and women on the Texas-Mexico border which demonstrated that the participants had almost no knowledge about HPV. They were also unfamiliar with HPV, its transmission and the consequences of HPV. Participants showed confusion about STIs, cancer and other illnesses (Fernandez, McCurdy, Arvey, Tyson, Morales-Campos, Flores, Useche, Mitchell-Bennett &Sanderson 2010:5).

The question on who should initiate the idea of having cervical cancer screening produced the following 353 responses: self 35.7% (*f*=126), healthcare providers 22.7% (*f*=80), friends 17.6% (*f*=62), husbands 12.2% (*f*=43, family members 10.8% (*f*=38 and colleagues 1.1% (*f*=4).

This section also assessed respondents' perceptions of being susceptible to cervical cancer by indicating "True" or "False" in response to different statements presented to them. If the "True" or "False" response did not apply, there was an option "Don't know." As shown in table 4.7,73.5% (f=277) respondents indicated "False", while 24.4% (f=92) indicated "True" to the statement that 'if one does not have any discomfort or pain, one does not need a cervical cancer screening test' and 2.1% (f=8) indicated "Don't know." In response to the statement that 'cervical cancer screening test is for sexually active women,' 67.4% (f=254) stated that it was "False"; 30.0% (f=113) indicated that it was "True" while 2.7% (f=10) indicated "Don't know." Therefore, 30.0% (f=113) of the respondents agreed that cervical cancer screening is for sexually active women. This reveals some misconceptions and a lack of knowledge about cervical cancer screening.

Out of a 375 respondents, 49.9% (f=187) stated that it was "false" in response to the statement 'my chances of getting cervical cancer are high,' 29.6% (f=111) felt that it was "True" while 20.5% (f=77) indicated "Don't know." These findings are similar to those reported by a study conducted in Uganda among medical workers. These authors' results revealed that 93.0% of the respondents agreed that cervical cancer was a public health problem; they knew about Pap smear tests and that cervical cancer is curable if detected early. Despite this, 81.0% of the female respondents

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had never been screened, mostly because they did not feel vulnerable to cervical cancer(Mutyaba, Mmino & Weiderpass 2006).

When the following statement was posed to the respondents (n=377), 'having cervical cancer is a matter of bad luck or fate,' 70.6% (*f*=266) specified that it was "False,"22.0% (*f*=83) thought that it was "True" while 7.4 (*f*=28) indicated "Don't know." Another statement presented to the respondents was 'I do not need a cervical cancer screening test because there is no history of it in our family.' The responses (n=374) revealed that only 7.0% (*f*=26) indicated that this was "True," 90.9% (*f*=340) stated that it was "False" and 2.1% (*f*=8) indicated "Don't know." Therefore, most respondents (90.9%; *f*=340) felt it was "False" that one does not need cervical cancer screening tests if there is no such a history in the family. This finding implies that the respondents indicated that women should utilise cervical cancer screening services, even if they have no family history of cervical cancer. This is contrary to the findings reported by a study conducted among African American women (Ackerson, Pohl & Low 2008) where a family history of cervical cancer influenced women to use cervical cancer screening services.

Respondents' replies to Tr		ue	False		Do not		TOTAL	
statements					know			
	f	%	f	%	f	%	n	%
If you do not have any discomfort or	92	24.4	277	73.5	8	2.1	377	100.0
pain you do not need cervical cancer								
screening test								
Cervical cancer screening test is for	113	30.0	254	67.4	10	2.7	377	100.1
sexually active women								
My chances of getting cervical	111	29.6	187	49.9	77	20.	375	100.0
cancer are high						5		
Having cervical cancer is matter of	83	22.0	266	70.6	28	7.4	377	100.1
bad luck or fate								
I do not need cervical cancer	26	7.0	340	90.9	8	2.1	374	100.o
screening test because there is no								
history of it in our family								
I am old, so I do not need cervical	59	15.6	307	81.4	11	2.9	377	99.9
cancer screening any more								

Table 4.7: Perceived susceptibility to cervical cancer

In addition, these responses (N=381) indicated that only 15.6% (f=59) replied "True" to the statement 'I am old so I do not need cervical cancer screening anymore,' 81.4% (f=307) indicated "False" while 2.9% (f=11) stated "Do not know." This is

consistent with findings obtained by University of Michigan's experts as they were honouring the cervical cancer awareness month of January. One of the misconceptions, reported by these respondents in Michigan, was 'I am too old to need a Pap test,' (Fawcett 2007).

4.4.1Correlation between the intentions to be screened for cervical cancer and knowledge of the cause of cervical cancer, HPV infection and cervical cancer as a health concern

to be screened										
Knowledge		Χ2	df		р					
Cause of cervical canc	er 8.	.9	1 0.0	03						
HPV infection	4.2		1	0.041						

2 0.130

Cervical cancer as a health concern

2.6

Table 4.8 Association between perceived susceptibility to cervical cancerand intention

Table 4.8 shows that there was a statistically significant association between women's
intentions to be screened for cervical cancer and knowledge of the cause of cervical
cancer at the 5% significance level (X2=8.9, df=1, p=0.003). There was also a
statistical significant association between intention to go for cervical cancer
screening and having heard of HPV infection (X2=4.2, df=1, p=0.041) at the 5%
significance level. Knowledge about HPV, as the primary causative organism of
cervical cancer, increases women's perceived susceptibility to the condition. In a
study on college women's knowledge, perceptions and preventive behaviours
regarding HPV infection and cervical cancer, results demonstrated significant
relationships between knowledge about HPV and behaviour. Those who had Pap
tests during the preceding year were significantly (p<0.001) more knowledgeable
about HPV and cervical cancer (Ingledue, Cottrell & Bernard 2004).

When a Chi-square test was used to assess possible associations between intentions to be screened for cervical cancer and respondents' perceptions on whether cervical cancer was a health concern to them. The findings indicate that there was a difference between 86.8% (f=329)out of 379 respondents who stated that cervical cancer was a health concern to them as compared to 13.2% (f=50) which List of research project topics and materials

whoindicated that it was not. However, this difference was not statistically significant ($X^2=2.6$, df=2, p=0.130).

4.5 PERCEIVED SEVERITY OF CERVICAL CANCER

In section C of the structured interview schedule specific questions were asked to assess the respondents' perceived severity or seriousness of cervical cancer.

The respondents were asked to mention the part of the body that is affected by cervical cancer. Out of 369 respondents, 59.3% (*f*=219) mentioned the uterus, 25.2% (*f*=93)mentioned vagina, 14.1% (*f*=52)indicated the cervix and 1.4% (*f*=5) thought it was the vulva. These findings imply that none of these 369 respondents knew exactly what part of the body is affected by cervical cancer. Knowledge could help women understand the risks, essence of early detection and treatment, and therefore encourage them to use cervicalcancer screening services.

The respondents were also asked to identify the signs and symptoms of cervical cancer. This question allowed respondents to give multiple responses (n=631), as shown in table 4.9. Of these 631 responses, only 1.7% (*f*=11) indicated that cervical cancer would usually present without any signs and symptoms, 39.5% (*f*=249) mentioned irregular vaginal bleeding, 34.7% (*f*=219)indicated pain with sexual intercourse, 18.7% (*f*=118)said it involved vaginal itching or irritation while 5.4% (*f*=34) indicated that one would have frequency of urination. These perceptions imply that respondents would be unable totell if they had the condition by noting the expected signs and symptoms. Similarly, in India studies revealed that women indicated that they did not need Pap smear screening because they had no problems and/or pain (Dabash, Vaipayee, Jacob, Dzuba, Lal, Bradley, & Prasad, 2005;Bessler, & Jolly, 2007:400).

The 'yes or no' responses (n=378) from the question 'have you known or heard about any woman with cervical cancer' revealed that 72.5% (f=274) of the respondents had indicated 'no,' while 27.5% (f=104) stated 'yes.' Most respondents were not aware of the experiences that individuals with cervical cancer go through. Such experiences may act as motivators for using cervical cancer screening services

in order to ensure early detection or inhibitors in cases of women who might fear the consequences of such a diagnosis. In a study on African American women on factors affecting the utilisation of cervical cancer screening, one participant stated that watching her grandmothers suffer from cervical cancer, she needed to have cervical screening tests done (Ackerson, Pohl& Low2008:54).

Signs and symptoms of cervical cancer cited by respondents	f	%
Irregular vaginal bleeding	249	39.5
Pain with sexual intercourse	219	34.7
Vaginal itching or irritation	118	18.7
Frequency of urination	34	5.4
No signs and symptoms	11	1.7
Total	631	100.0

 Table 4.9 Signs and symptoms of cervical cancer cited by respondents (n=631)

When respondents (n=378) were asked if they wanted to know more about cervical cancer, 98.1% (*f*=371) indicated 'yes' while only 1.9% (*f*=7) said 'no.' These results concur with findings of a study on knowledge of Pap testing among low income women undergoing routine screening at university affiliated clinics in southern Texas, USA. These participants from Texas, lacked understanding specific to the Pap test results. Of the respondents to this American study, 29.0% desired information about the Pap test's accuracy, 26.0% had a desire to know more about abnormal Pap test, including information on early detection to prevent advancement, causes, symptoms, severity, treatment, follow up, and the significance of multiple abnormal tests. Another 14.0% wanted more information about the mechanics and procedures of Pap tests while 5.0% needed to know more about the timing of Pap tests, especially the timing of receiving the results, and when and how often to have the test done (Breitkopf, Pearson & Breitkopf 2005).

In this section respondents were also asked to respond with "True", "False" or "Don't know" to statements concerning their perceptions regarding the seriousness of cervical cancer. As shown in table 4.10, out of 379 respondents, 76.8% (f=291) indicated that it is "False" that cervical cancer is a curse from God, 13.2% (f=50) stated that they 'didn't know,' while 10.0% (f=38) felt that it was"True". Thus most respondents (76.8%; f=291) indicated that it was a misconception that cervical

cancer is a curse from God.Contrary to Broome and Broome (2007:3), Thomas et al (2005:5680), Pelcastre-Villafuerte et al (2007), Vorobiof, Sitas and Vorobiof (2001:127s) who reported that black patients sought a cause for illness within the framework of their indigenous beliefs.

Statement	True		False		Do not know		TOTAL	
	f	%	F	%	f	%	n	%
Cervical cancer is a curse from God	38	10.0	291	76.8	50	13.2	379	100.0
I would not get cervical cancer screening test because of fear of the results	98	25.9	276	73.0	4	1.1	378	100.0
Cervical cancer eats internal organs	343	90.5	8	2.1	24	6.4	375	100.0
There is very little one can do about cervical cancer	143	38.8	77	20.9	149	40.4	369	100.1
If I am diagnosed with cervical cancer I will die	125	33.1	240	63.5	13	3.4	378	100.0
I would rather take the test and discover the hidden disease than go through the pain	118	31.3	234	62.1	25	6.6	377	100.0
Loss of the cervix or uterus through surgery would affect women sexually	354	93.9	19	5.0	4	1.1`	377	100.0
A woman would lose a husband if diagnosed with cervical cancer	128	33.9	232	61.4	18	4.8	378	100.1
Seeing somebody suffering from cervical cancer would encourage women to go for test	361	95.8	13	3.4	3	0.8	377	100.0

Table 4.10 Perceived severity/seriousness of cervical cancer

In response (n=378) to the statement 'I would not get cervical cancer screening test because of fear of the results' 73.0% (f=276) said "False", 25.9% (f=98) indicated "True" and 1.1% (f=4) stated "Don't know."Thus as many as 25.9% (f=98) of the respondents would use cervical cancer screening servicesfor fear of potential abnormal results. Kahn, Goodman and Slap (2005:18) stated that young women with a family history of cervical cancer might perceive themselves to be at a higher risk of cancer. This could lead to non-adherence to follow up appointments because of fear of the diagnosis. They preferred not knowing if they should have cancer because they perceived it to be an incurable disease.

Out of 375 respondents, 90.5% (*f*=343) indicated "True" to the statement 'cervical cancer eats internal organs,' 2.1% (*f*=8)indicated "False" while 6.4% (*f*=24)indicated

"Don't know." Therefore, the majority (90.5%; f=343) considered cervical cancer to be a serious condition affecting one's internal organs.

In addition, out of 369 respondents, 38.8% (f=143) indicated that it is "True"that 'there is very little one can do about cervical cancer,' 40.4% (f=149)indicated "Don't know"and only 20.9% (f=77) indicated "False". Similar results were revealed in McFarland's (2003:172) study in which women described cervical cancer as a disease that 'eats the inside of a womb', implying that even when detected early it is incurable. In Mexican city, terms used to describe cervical cancer as a serious condition included "rotting or devouring of the womb" (Pelcastre-Villafuerte et al 2007).

Another statement posed to the respondents (n=378) was 'if I am diagnosed with cervical cancer I will die.' As many as63.5% (f=240)of the respondents considered this to be "False" whilst 33.1% (f=125) thought it was "True" and 3.4% (f=13) "did not know". These findings imply that 63.5% (f=240) of the interviewed women indicated that they would not die if diagnosed with cervical cancer at an early stage despite the fact that out of the 381 respondents 90.0% (f=343) indicated that cervical cancer eats internal organs. This misconception might affect women's attitudes towards regular cervical screening.

In response (n=377) to the statement 'I would rather take the test and discover the hidden disease than go through the pain', 62.1% (f=234) indicated it to be"False", 31.3% (f=118) stated "True,"6.6% (f=25) indicated "Don't know". Thus a greater number 62.1% (f=234) indicated "False" that they would rather take the test and discover the hidden disease than go through the pain, implying that they would not use cervical screening services to discover the hidden disease even if meant they could avoid pain by doing so. This finding appears to contradict the response indicating that 73.0% (f=273) of the respondents would use cervical cancer screening services despite their fears of the test results. Many interviewed women might not have understood this negatively phrased statement becaue of their low educational status.

When the statement (n=377) was posed to them that 'loss of the cervix or uterus through surgery would affect sexuality' 93.9% (f=354) indicated that it was "True," 5.0% (f=19) found it "False," and 1.1% (f=4) stated that they didnot know. This implies that almost all respondents feared that their sexuality would be affected following surgical removal of the uterus and/or cervix. When the respondents (n=378) were further asked whether 'a woman would lose a husband if diagnosed with cervical cancer,' 61.4% (f=232) stated that it was "False", 33.9% (f=128) thought it was "True" while 4.8% (f=18) indicated that they 'didn't know.' These findings indicate that although 61.4% (f=232) of the women did not consider a diagnosis of cervical cancer to be a threat for losing their husbands, 33.9% (f=128) indicated that this could be the case. Consistent with McFarland's (2003:172) study's results, women perceived cervical cancer as severe because of its serious social consequences such as death or loss of a uterus. In McFarland's (2003:172) study, women reported that loss of a uterus would lead to divorce or failure to get a husband because culturally men desire to be recognised as fathers. They also stated the belief that a hysterectomy would scare men away because the absence of the uterus meant no sexual pleasure.

Respondents (n=377) were also asked whether seeing somebody suffering from cervical cancer would encourage women to go for screening. It was observed that 95.8% (*f*=361) indicated"True", 3.4% (*f*=13) found it "False", while 0.8% (*f*=3) stated "Don't know."Almost all respondents (95.8%;*f*=361) considered that seeing somebody suffering from cervical cancer would encourage women to go for cervical screening. Boyer, Williams, Callister and Marshall's (2001:243) findings are similar to these. One participant stated that "when one doesn't see or doesn't know about the consequences, one tends to be more careless about it.....eyes that do not see, heart that doesn't feel. I just happened to see somebody die of cancer. It affected me quite a bit to see somebody suffering so much. I remembered thinking at that moment how important it is that we do these tests.....that catch things early."

Findings have demonstrated that although a greater percentage of the respondents appreciated that cervical cancer is a severe condition and a health concern, some did not have any intention of having the test. In addition, some respondents felt that they would be helpless even if cervical cancer was to bediagnosed at an early stage. Surgical management of the condition was also believed to have some serious consequences, such as an inability to enjoy sex after a hysterectomy and possibly losing their husbands.

Perceived susceptibility and perceived severity comprise what is known as the perceived threat of illness sometimes known as vulnerability. The HBM postulates that one's opinion of how serious a condition isshould be considered in relation to the consequences. These may include pain, discomfort or inability to function normally. However, this would be a problem in cases where the condition such as cervical cancer does not show signs in the early stages. In such cases where individuals do not consider themselves to be susceptible to a specific condition, appreciation of the severity of the condition and uptake of health preventive measures mightalso pose problems (Glanz, Rimer& Marcus Lewis 2002:3-4; Groenewald, De Bruijn& Bilsborrow 2006:52).

*4.5.1*Association between perceived severity/seriousness of cervical cancer and intentions to be screened

A Chi-square test was used to assess a possible association between intentions to be screened for cervical cancer and respondents'knowledgeof the experiences of women who had cervical cancer or who had heard of any woman with cervical cancer (refer to table 4.11).

 Table 4.11Association between perceived serverity/seriousness of cervical cancer and intentions to be screened

Knowledge	χ²	df	p
Experiences of woman who			
has had cervical cancer	0.0	1	0. 915

There was no evidence at the 5% level of significance to suggest any association between the intention to go for cervical cancer screening and respondents' knowledgeof the experiences of a woman with cervical cancer or having heard of any woman with cervical cancer($X^2=0.0$, df=1, p=0. 915). Therefore, from these results it can be concluded that at the 5% level of significance, the difference in their intentions to go for cervical cancer screening between respondents who know about the experiences of a woman with cervical cancer, or having heard of any woman with cervical cancer, and those who did not, were statistically insignificant.

4.6 Perceived benefits of cervical cancer screening

In order to assess respondents' perceived benefits of cervical cancer screening, questions were posed asking respondents to indicate "True", "False" or "Don't know" and in some cases only "yes' and "no" and "don't know" options were supplied.

In response (n=377) to the question 'do you know if there is a way to diagnose or detect cervical cancer at an early stage' 80.9% (f=305) stated 'no' while 19.1% (f=72) indicated 'yes.' Furthermore, those who indicated that they knew were asked how it is diagnosed. Of these72 respondents, 73.6%; (f=53) mentioned VIA, 4.2% (f=3)indicated Pap test while 22.2% (f=16) stated that they had forgotten or mentioned others such as 'screening in the vagina or uterus.'

The results indicate that only 14.9% (f=56)out of the 377 respondents knew about the procedures (VIA and Pap tests) used for early detection of cervical cancer. This implies that 85.1% (f=321) of the respondents lacked knowledge about diagnostic tests for cervical cancer.

The respondents were also asked to mention all known facilities where cervical cancer screening services were offered. This question allowed multiple responses, and obtained a total of 630 responses. Out of these 630 responses, 36.3% (f=229) indicated Queen Elizabeth Central Hospital, 26.8% (f=169) mentioned Ndirande, 16.3% (f=103 cited Bangwe,11.0% (f=69) talked about Chilomoni and 9.5% (f=60) pointed out Banja La Mtsogolo clinic. The results suggest that each respondent knew at least one or more health institutions that offered cervical cancer screening tests.

When the respondents were asked 'when should a woman start having cervical cancer screening tests,' the following responses (N=381) were supplied:

- 19.2% (f=73) thought three years after commencement of sexual intercourse
- 14.7% (f=56) suggested at 21 years of age
- 66.1% (*f*=252) stated when she starts giving birth' or when she starts menstruating and any other time'.

Although 33.9% (f=129) knew when to start having cervical screening tests, 66.1%(f=252) lacked this knowledge. This means eligible women might not know when they would benefit from using cervical cancer screening services so that the condition could be detected at an early stage.

In South Africa pathology-based information, reported by 80 private and public laboratories in 1992, demonstrated an increase in cervical cancer rates. The problem was attributed to the fact that screening forthe majority of at risk women occurred too early to be useful or too late and not until symptoms occurred during later stages of the disease (Pollack, Balkin& Denny2006:334). Those women,who might view gynaecological care as optional or as necessary only at the onset of sexual activity, might miss important opportunities for early detection of cervical cancer (Durvasula, Regan, Uremo& Howell2008).

A follow-up question enquired from the respondents whom they specificallythought should be screened for cervical cancer. A total of 651 responses were obtained:

- 51.2% (*f*=333) every woman
- 15.8% (f=103) all married women
- 14.9% (f=97) all sex workers
- 12.9% (f=84) single women and
- 5.1% (*f*=33) women over 21 years of age.

According to the Mayo Clinic Staff (2008) and Zoorob, Anderson, Cefalu and Sidani(2001:1102), the guidelines recommended for cervical cancer screening by the American Cancer Society(ACS), American College of Obstetricians and Gynaecologists (ACOG) and the United States Preventive Services Task Force (USPSTF) are that a woman is supposed to start having the cervical screening

testsat 21 years of age or three years after commencement of sexual intercourse, whichever comes first. In the current study only5.1% (f=33) of the responses indicated that women over 21 years of age should use cervical cancer screening services.

The respondents were further asked 'how often a woman is supposed to be screened for cervical cancer.' The respondents (N=381) had the following perceptions:

- 32.5% (f=124)indicted every 5 years
- 24.9% (*f*=95) thought it should be done annually
- 10.8% (*f*=41) said every two years
- 10.0% (f=38) indicated every three years and
- 21.8% (*f*=83) cited wrong answers such as twice in a year or indicated that they did not know.

These results demonstrate that most women did not know how often women should have cervical cancer screenings done. This could have an effect on adherence to regular screening. In Malawi a woman is supposed to be screened every five years if the VIA is negative or every three years if the Pap test is negative (MOH 2005:38).

The respondents (n=342) cited the following as reasons for having a cervical cancer screening test done:

- 51.8% (*f*=177) said to know about your health
- 26.9% (f=92) indicated that it was to diagnose the disease
- 15.5%(f=53) assumed it was for early detection and treatment
- 5.3% (f=18) stated, to know about their uterus and
- 0.6% (*f*=2) had no idea what the purpose was.

These results, indicating women's lack of scientific knowledge about the reasons for having cervical screenings done, are similar to those reported by a study that investigated knowledge, attitudes and beliefs regarding cervical cancer screening of Malaysian women. Few older and married Malaysian respondents were aware that early detection and treatment could save lives. Younger Malaysian respondents also had limited knowledge of the role of Pap smear tests in early detection of precancerous changes (Wong, Wong, Low, Khoo& Shurib2009:49).

The respondents (n=367) did not necessarily knowthe significance of an abnormal cervical screening:

- 39.2% (f=144) did not know about any significance of an abnormal cervical screening
- 27.7% (f=100) stated that it indicates precancerous cells
- 16.1% (f=59)thought cervical cancer
- 1.4% (*f=*5) said STIs
- 16.1% (*f*=59) indicated others such as that one can die soon and that one's health is not good.

Thus the women lacked knowledge about the significance of abnormal cervical screening results.

Statement	True		Fal	se	Do no	ot know	Total		
	f	%	f	%	f	%	n	%	
Cervical cancer screening could unveil a hidden disease	275	72.8	80	21.2	23	6.1	378	100.1	
Cervical cancer screening could save life if detected and treated at an early stage	374	98.2	4	1.0	3	0.8	381	100.0	
Cervical cancer screening is humiliating	88	23.3	245	65.0	44	11.7	377	100.0	
Cervical cancer is curable if detected early	357	93.7	13	3.4	11	2.9	381	100.0	
Regular cervical cancer screening decreases risk of cervical cancer	15	4.0	354	93.7	9	2.4	378	100.1	
Regular asymptomatic screening is a waste of time and money	361	95.5	9	2.4	8	2.1	378	100.0	
Financial constraints affect uptake of cervical cancer screening tests	365	96.8	9	2.4	3	0.8	377	100.0	

Table 4.12 Perceived benefits of cervical cancer screening



In determining whether respondents perceived any benefits from cervical cancer screening, the researcher also posed statements that required "True", "False," "Don't know" responses. Table 4.12 summarises the respondents' answers to these statements.

Of the respondents (n=378),72.8% (f=275) stated that it is "True" that cervical cancer screening would unveil a hidden disease,21.2% (f=80) indicated "False" while 6.1% (f=23) did not know.All respondents (N=381) answered the question about cervical screenings' possibilities of saving lives, as follows:

- 98.2% (*f*=374) agreed that cervical cancer screening could save lives if cervical cancer is detected and treated at an early stage
- 1.0% (f=4)regarded the statement as being "False"
- 0.8% (*f*=3) did not know

In addition, responses (n=377) to the statement that 'cervical cancer screening is humiliating' revealed that 65.0% (*f*=245) indicated that it is "False,"23.3% (*f*=88) stated that it is "True,"and 11.7% (*f*=44) did not know. The majority 93.7% (*f*=357) indicated that cervical cancer is curable if detected early, but 3.4% (*f*=13)stated that it is "False" while 2.9% (*f*=11)did not know. These results show that most respondents appreciated the benefits of cervical cancer screening and early detection.

In response (n=378) to the statement that 'regular cervical cancer screening decreases the risk of cervical cancer,93.7% (f-354) indicated that it is "False", 4.0% (*f*=15) mentioned that it is "True" while 2.4% (*f*=9) did not know. These results indicate respondents' lack of knowledge about the purpose and frequency of the cervical cancer screening tests. Similar perceptions were also reflected in responses (n=378) to the follow-up question which stated that 'regular asymptomatic screening is a waste of time and money.' The majority of the respondents(95.5%;*f*=361) indicated that it is "True," 2.4% (*f*=9) stated "False" while 2.1% (*f*=8) did not know.

Furthermore, respondents were asked to indicate if 'financial constraints affected the utilisation cervical cancer screening services.' The 377 responses were as follows: 96.8% (*f*=365) mentioned "True," 2.4% (*f*=9)"False" while 0.8% (*f*=3) did not know.Other studies have revealed that direct and indirect costs are associated with non-adherence to cervical cancer screening. These include costs of travel to the clinic, costs of home and child care while away from home, costs of missed office hours, and costs of the tests and treatment (Collymore 2004; Hou, Fernandez & Parcel 2004:81; Oscarsson, Wijma & Benzein 2008:188; Smith 2008:S195). In Northern California, one enabling factor enhancing adherence to cervical cancer screening was the cost of Pap testing. Overall the most common reason specified for not being up to date with screening was the cost by 25.0% of that study's respondents (Peterson, Murff, Cui, Hargreaves & Fowke 2007:942).

In the current study 57.7% (f=218 – see table 4.2) of the respondents were unemployed, and 74.1% (f=280 – see table 4.1) were aged 45 years and older, which is above child bearing age. Consequently, the costs of home and child care while away, costs of missed office hours and costs of the tests (provided free of charge in Malawi) did not apply tomost of this study's respondents.

4.6.1Association between perceived benefits of cervical cancer in women aged42 and older and their intentions to be screened

A Chi-square test was used to assess a possible association between the intentions to be screened for cervical cancer and respondents'knowledge of how it is diagnosed (n=215). Findings indicate that there was no statistical difference between those who stated that they knew the diagnostic tests for cervical cancer (20.5%; *f*=44) as compared to (79.5%; *f*=171) who indicated that they had no such knowledge. This difference was not statistically significant (X²=0.5, df=1, p=0.489). There was no evidence at the 5% level of significance to suggest an association between intention to go for cervical cancer screening and respondents'knowledge of diagnostic tests for cervical cancer (see table 4.13).

Table	4.13	Association	between	perceived	benefits	of	cervical	cancer
screen	ing in	women aged	42 and old	ler and inter	ntion to be	e sci	eened.	

Knowledge	Χ2	df	р
Diagnostic tests forcervical cancer	0.5	1	0.489

4.7 PERCEIVED BARRIERS TO THE UTILISATION OF CERVICAL CANCER SCREENING SERVICES

This section of the structured interview schedule posed statements to determine what respondents perceived as barriers to the utilisation of cervical cancer screening services. To share their opinions, respondents indicated"True", "False" or "Don't know" to the statements posed to them. These statements covered issuesregarding stigma, fear and discrimination as well as socio economic factors and traditional practices.

4.7.1 Stigma, fear and discrimination

Respondents' answersto statements in relation tostigma, fear and discrimination as perceived barriers to cervical cancer screeningare presented in table 4.14.

In response to the statement that 'I would not want to be seen in a cervical cancer screening clinic by my friends or colleague' the majority 87.0% (f=327) indicated "False," 12.0% (f=45) confessed it to be "True" while 1.1% (f=4) said "Don't know." The results also (as shown in table 4.14) indicate that 70.2% (f=264) respondents stated "False" in response to the statement 'women with cervical cancer are considered to be dirty,' 8.8% (f=33) stated "Don't know." However, 21.0% (f=79) reportedly perceived women with cervical cancer to be considered dirty. This misperception might have had negative effects on cervical cancer screening uptake.

Statement		True		False		Do not		Total	
						know			
	f	%	f	%	f	%	n	%	
Women with cervical cancer are	79	21.0	264	70.2	33	8.8	376	100.0	
considered to be dirty.									
I would not want to be seen in a	45	12.0	327	87.0	4	1.1	376	100.1	
cervical cancer screening clinic by									
my friends or colleagues									
It is too embarrassing to have a	26	6.9	346	92.0	4	1.1	376	100.0	
cervical cancer screening									
test									
Being screened by a male	41	10.9	333	88.3	3	0.8	377	100.0	
healthcare provider would									
discourage me from being screened									
for cervical cancer									
Cervical cancer screening is painful	17	4.5	174	46.4	184	49.1	375	100.0	
If I had an abnormal result for	349	92.6	27	7.2	1	0.3	377	100.1	
cervical cancer test I would inform									
my husband or family member									

Table 4.14 Stigma, fear and discrimination

In response to the statement that 'it is too embarrassing to have a cervical cancer screening test' 92.0% (f=346) indicated "False" 6.9% (f=26) indicated "True"while 1.1% (f=4) indicated that they did not know. Another statement posed was 'being screened by a male healthcare provider would discourage me from being screened for cervical cancer.' Of the 377 respondents, 88.3% (f=333) indicated that it was "False" 10.9% (f=41) indicated "True" and 0.8% (f=3) had no opinion about this. Thus these results imply that respondents would utilise cervical cancer screening services even if provided by male healthcare workers. Contrary to this, Azaiza and Cohen's (2008:37) study in Israel, found that all 51 women in their study revealed feelings of embarrassment and discomfort by being examined by a male doctor. Some asserted that according to their religion, an Israeli woman may not expose her body to a man and that it should be done only if it is not possible for her to be examined by a female doctor. Others also found it difficult in cases where the doctor lived in the same village.

Responses to the statement 'cervical cancer screening is painful' showed that 49.1% (f=184) did not know, 46.4% (f=174) indicated "False" while 4.5% (f=17) stated that it is "True."Almost half (49.1%; f=184)of the respondents indicated "Don't know" on whether cervical cancer screening is painful because most of the respondents had

not been screened before. However, 46.4% (f=174) of the respondents indicated that it is not painful. Contrary to these findings, Leyva, Byrd and Tarwater's (2006:17) study revealed that women perceived cervical cancer screening to be painful. However, that study's respondents stated that they would still get a Pap test done even if it might be painful (74.0%) or if they were worried that it would be embarrassing (49.6%).

The respondents were asked to respond to the statement 'if I had an abnormal result for cervical cancer test I would inform my husband or a family member.' Even though the majority92.6% (*f*= 349) indicated "True" in response, other respondents 7.2% (*f*=27) still felt that they might not share the information with a family member. In England, a qualitative study on the social and psychological impact of HPV testing in cervical screening revealed that women felt stigmatised, anxious, stressed and concerned about disclosing their results to others, even family members. Their worries around disclosure centred on concerns about the stigma of an STI and its association with promiscuity. As a result women used terms such as 'unclean' 'dirty' 'cheap' and 'nasty' to describe how they felt in response to positive HPV results. This could influence women not to use cervical screening services (McCaffery, Waller, Nazroo&Wardle2006:2&6; Pollack, Balkin&Denny2006:335).

4.7.2 Socio- economic factors

Socio economic factorsinfluence health-related behaviours. Individuals might encounter many challenges in order to reach healthcare services. This study assessed women's available support systems and how easily respondents could access cervical cancer screening services. To assess these aspects, respondents were asked to indicate "True", "False" or "Don't know" in response to statements posed to them (see table 4.15 for these responses).

Table 4.15 shows that 91.2% (f=343) indicated "False" in response to the statement 'it would be difficult to find somebody to care for your child or older person while you go for cervical cancer screening,' 8.0% (f=30) indicated that it is "True" while 0.8% (f=3) chose the "Don't know" option. The respondents were also asked to respond to the statement 'I would have to get permission from my significant others prior to having a cervical cancer screening test.' The responses were as follows: 92.0% (f=347) "False," 7.7% (f=29) "True" and 0.3% (f=1) "Did not know." These responses indicated that most women would not encounter difficulties to find someone to look after their children or elderly people while they visit clinics and would not need permission from significant others to use cervical cancer screening services.

Statement		"True"		False		Do not know		TOTAL	
	f	%	f	%	f	%	n	%	
It would be difficult to find somebody to care for your child or older person while you go for cervical cancer screening	30	8.0	343	91.2	3	0.8	376	100.0	
I would have to get permission from my significant other/s prior to cervical cancer screening	29	7.7	347	92.0	1	0.3	377	100.0	
It is difficult to take time off to have a cervical cancer screening test	26	6.9	350	92.8	1	0.3	377	100.0	
It is too expensive to have a cervical cancer screening test	9	2.4	341	90.5	27	7.2	377	100.1	
Limited access to screening services affects regular uptake of cervical cancer screening	299	79.5	73	19.4	4	1.1	376	100.0	
Financial constraints affect uptake of cervical cancer screening test	89	23.7	280	74.7	6	1.6	375	100.0	
Cervical cancer services should be provided near their homes or offices	222	58.9	151	40.1	4	1.1	377	100.1	

Table 4.15 Socio e	economic factors
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Culture is an important factor in relation to health seeking behaviour. Hou et al's(2006:162), as well as Ackerson et al's(2008:54) study findings demonstrated thatsupport from spouses, significant others, or family members who understood the benefits and importance of cervical cancer tests, was associated with maximum cervical cancer screening participation. Thus, support from significant others is an important influencing factor associated with adherence to routine Pap screening. Contrary to the current study, other studies on factors determining the utilisation of cervical cancer screening revealed that in some cultures, where husbands and mothers-in-laws have to be consulted before using any healthcare services, women's abilities to make decisions were affected. There was often resistance to a woman going to a clinic to be screened while she is "feeling healthy," as she might need to convince her partner to give her money for transport (Bingham, Bishop, Coffery, Winkler, Bradley, Dzuba& Agurto2003:S409; Nene, Jayant, Arrossi, Shastri,

Budukh, Hingmire, Muwonge, Malvi, Dinshaw& Sankaranarayanan2007:269; Pollack, Balkin& Denny2006:335).

With regard to taking time off work to have the screening test, out of 377 respondents, 92.8% (f=350) indicated that it would not be difficult for them to find time to go for cervical cancer screening, 6.9% (f=26) stated that it would be a challenge to create such time while 0.3% (f=1)"Did not know." These results demonstrate that taking time off work to go for screening was not a challenge for the majority (86.5%; f=327) of the respondents who were self employed or unemployed. In addition, the respondents were asked if they felt that it was too expensive to have a cervical cancer screening test.' The results show that as many as 90.5% (f=341)indicated "False," 2.4% (f=9)"True" while 7.2% (f=27) had no idea what it takes to be screened for cervical cancer. In addition, respondents were also asked whether financial constraints would affect the uptake of cervical cancer screening tests. The results also indicated that 74.7% (f=280) felt it was "False" but 23.7% (f=89) stated that it was "True" while 1.6% (f=6) did not know. In Malawi cervical cancer screening tests are free in government health institutions, consequently financial constraints should not deter women from utilising these services. Furthermore, 79.5% (f=299) of the respondents indicated that limited access to screening services would affect regular uptake of cervical cancer screening, 19.4% (f=73) stated that it is "False" while 1.1% (f=4)"Did not know."

This finding appears to be inconsistent with other studies' results indicating that direct and indirect costs had an influence on cervical cancer screening. These included costs of travel to the clinic, costs of home and child care while away, costs of missed office hours, and costs of the tests and treatment (Collymore 2004; Hou, Fernandez & Parcel 2004:81; Oscarsson, Wijma & Benzein 2008:188; Smith 2008:S195). In Northern California, one enabling factor to adherence to cervical cancer screening was the cost of Pap testing. Overall the most common reason specified by 25.0% of these respondents in California for not being up to date with screening was cost (Peterson et al 2008:941; Tsui & Tanjasiri 2008:397; Ackerson & Gretebeck 2007:598). Table 4.15 indicates that the majority (90.5%; f=341) and (92.8%; f=350) indicated that it was not expensive to have a cervical cancer screening test and that it was not difficult to take time off to have the screening test respectively. Howver,58.9% (f= 222) would have preferred it if the screening services could be provided near their homes or offices while 40.1% (f=151)did not mind where the services were provided. These findings are similar to those reported by Chang, Hsiung, Chen, Yen and Chen (2007:167) who aimed toassess whether an outreach service would lead to increased utilisation of cervical cancer screening services at Li-shin Hospital (in Pingjen, Taoyuan, Northern Taiwan) between 1999 and 2004. Findingsrevealed that the outreach service independently provided screening to 89.0% of eligible women andthat coverage was inversely associated with distance from the pre-existing hospital provision. After controlling for age, education and maritalstatus, there was a statistically significant increase (53%; 95% CI: 25, 80%) in utilisation of cervical cancer screening services in Northern Taiwan. The results also demonstrated that the elderly, widowed and less educated Taiwanesewomen were more inclined to take up Pap smear screening offered through the outreach services.

4.7.3 Traditional practices

Traditional practices havebeen identified to influence the uptake of preventive health services (Hausmann-Muela, Ribera, &Nyamongo, 2003:24). The large patient to doctor ratio in most African countries combined with traditional communities has contributed to the reliance on traditional medicine(Erah 2008:Kirksey 2007:Pillay (2002:112).In order to assess respondents' traditional practices related to cervical cancer screening, questions were posed asking respondents to indicate "True", "False" or "Don't know" as summarised in table 4.16.

The current study assessed the respondents' perceptions about traditional practices and cervical cancer screening seeking behaviours. As shown in table 4.16, 95.7% (*f*=360) of the respondents indicated "False" to the statement 'cervical cancer is caused by evil spirits,' 0.5% (*f*=2) indicated "True" while 3.7% (*f*=14) "Did not know." With regards to the statement that 'in case one has cervical cancer, the evil spirits have to be dealt with first before going to the doctor' as many as 95.5% (*f*=358) respondents disagreed and only 0.8% (*f*=3) regarded this statement as being "True".

Statement	"True"		Fa	lse	Do no	ot know	Total		
	f	%	f	%	f	%	Ν	%	
Cervical cancer is caused by evil spirits	2	0.5	360	95.7	14	3.7	376	99.9	
In case one has cervical cancer, the evil spirits have to be dealt with first before going to the doctor	3	0.8	358	95.5	14	3.7	375	100.0	
I would trust traditional healer to treat cervical cancer	9	2.4	364	96.8	3	0.8	376	100.0	
I would prefer consulting a traditional healer rather than a doctor for abnormal vaginal cervical bleeding	5	1.3	368	97.9	3	0.8	376	100.0	

Table 4.16: Traditional practices

These findings appear to be inconsistent with those reported by Broome and Broome (2007:3),Thomas,Saleemand Abraham (2005:5680), Pelcastre-Villafuerte et al (2007), Vorobiof, Sitas and Vorobiof (2001:127S). These researchers' results indicated that patients with cancer believed that a special kind of witchcraft caused their cancers. In such situations their first priority was to reverse the source of the curse before presenting to a hospital for modern medical treatment. This could cause women to report to a hospital during the late stages of cervical cancer.

Another statement posed to the respondents (see table 4.16) was 'I would trust traditional healers to treat cervical cancer,' 96.8% (f=364) agreed with this statement, 2.4% (f=9) disagreed while 0.8% (f=3) did not know. Furthermore, the findings show that 97.9% (f=368) indicated "False" to the statement that 'I would prefer consulting a traditional healer rather than a doctor for abnormal vaginal bleeding,' 1.3% (f=5) agreed with this statement while 0.8% (f=3) indicated "Don't know."The respondents would not prefer visiting the traditional healer first on issues related to cervical cancer, they did not believe that traditional healers could treat cervical cancer successfully. Different findings were reported from South Africa,where rural women were more inclined to consult traditional healers rather than western doctors about abnormal vaginal bleeding (Pillay 2002:108).

4.8 CUES FOR USING CERVICAL CANCER SCREENING SERVICES

Section F of the structured interview schedule covered respondents' sources of information on cervical cancer screening, available sources in their communities, preferred methods of providing information about cervical cancer screening and preferred venues for cervical cancer information sharing. These issues might influence respondents' uptake of cervical cancer screening tests.



Figure 4.5: Sources of information (n=636)

4.8.1 Respondents' sources of information about cervical cancer and screening

The respondents were asked about the sources from which they acquired information about cervical cancer and screening, allowing multiple responses, amounting to a total of 636 answers. As indicated in figure 4.5, the commonly mentioned sources were: healthcare providers (36.2%; *f*=230), friends (26.3%; *f*=167), radio (22.2%; *f*=141), television (7.7%; *f*=49), family members (6.3%; *f*=40), posters (0.5%; *f*=3) and other sources including magazines and newspapers (0.9%; *f*=6). This shows that most respondents agreed that healthcare providers are

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sources of information about cervical cancer. Similar findings were revealed in a study with under graduatestudents of the University of Ibadan, Nigeria. Participants who were aware of the cervical screening tests mentioned hospital visits (64.3%; f=91), mass media (15.4%; f=21), friends/colleague/relatives (12.6%; f=18), the Internet (1.4%; f=2), and books (2.1%; f=3) (Ayinde, Omigbodun & Ilesanmi 2004:72). In the current study friends also featured as sources of information on cervical cancer cited by women was friends (73.4%), followed by the radio (21.9%), books and magazines (20.3%) and educational talks at the hospital (18.8%) (Gutune& Nyamongo2005:1052-1055). Therefore, these studies' findings also show that in general, friends and colleagues play an important part as a source of information on cervical cancer, similar to this study's findings.

4.8.2 Available sources of information

The respondents were asked about their available sources of information. This question also enabled respondents to give multiple answers, totalling 716 replies. Figure 4.6 shows that the most cited available sources were:healthcare providers (43.2%; f=309), radio(23.9%; f=171), friends(15.4%; f=110), television(11.3%; f=81), family members(5.7%; f=41) and other sources such as newspapers (0.4%; f=3) and posters (0.1%; f=1).


Figure 4.6: Available sources of information (n=716)

In addition the question on available sources of information the respondents were asked what they felt would be the best method of providing information about cervical cancer and screening, and these responses are portrayed in figure 4.7.



Figure 4.7: Preferred methods of receiving information (N=381)

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The most frequently mentioned methods were advertisement campaigns on radio (54.9%; f=209), advertisement campaigns on television (28.9%; f=110), health talks by healthcare providers, (14.4%; f=55) and (1.6%; f=6) did not respond while only 0.3% (f=1) preferred talks from community leaders. Health talks by healthcare providers were not a popular response yet they are the most common methods of passing on information, advice or instructions to clients/patients about available preventive services. The findings on the 'best method of providing cervical cancer information' mentioned in the current study also concur with an ethnographic study on cervical cancer among women in rural Kenya. The Kenyan study's results revealed that despite the variety of sources of information about cervical cancer and screening women identified their preferred source in order of priority as follows: seminars in churches, health education sessions in hospitals, seminars for women groups, education out-reach by community health workers and information from the radio (Gutune & Nyamongo 2005:1052-1055). Therefore, the current study's findings indicate that though motivation talks on available preventive health services, given in healthcare institutions, are usually used by nurse/midwives as a method of reaching out to clients, they are not considered to be the most effective methods of providing health information according to clients/patients.

As a follow-up question, the respondents were asked about the preferred venues for cervical cancer information sharing, allowing multiple responses. Figure 4.8 displays these responses.



Figure 4.8: Preferred venues of cervical cancer information sharing (n=943)

Of the 943 responses, the commonly mentioned sites as shown in figure 4.8 were; hospital clinics (37.8%; *f*=356), ladies' seminars in churches (30.4%; *f*=287), ladies community meetings (21.3%; *f*=201) and ladies seminars in schools (10.5%; *f*=99). In total, the findings show that more than half (62.2%; *f*=587) of the responses indicated sites other than hospitals and clinics.

The frequently mentioned suggestions (n=275) on how cervical cancer screening service provision could be improved to increase utilisation of these services included: door to door campaigns encouraging women to go for screening (60.4%; *f*=166), sharing information on cervical cancer with friends at work or home (21.1%; *f*=58), hospitals to ensure the availability of human, equipment and material resources for screening (15.6%; *f*=43), health workers to always enquire how much knowledge women have on cervical cancer (2.5%; *f*=7) and chiefs to encourage people (0.4%; *f*=1). The results show that more than half of these responses favoured campaigns in the community encouraging women to go for screening. Results consistent with these findings were reflected in a study done in Northern Peru. The results revealed that increased awareness was an important component of mobile outreach

programmes rather than of facility-based talks (Winkler, Bingham, Coffey& Handwerker2007:4 & 13).

4.9 SUMMARY OF DATA ANALYSIS FOR PHASE ONE

Phase 1 of this study aimed to identify the factors associated with cervical cancer screening among women, aged 42 and older, at three government health centres in Blantyre, Malawi. The respondents were asked questions with emphasis on knowledge about their perceived susceptibility to and severity of cervical cancer; perceived benefits and barriers; and cues to taking cervical cancer screening tests.

4.9.1 Demographic, socio-psychological and structural characteristics

The respondents' characteristics covered in this section included age, marital status, highest education level attained, number of children, income, employment status of respondents and their husbands, religion and tribal affiliations. Most of the respondents were aged 45 to 49 and there were more married respondents than ones who were single or widowed. The majority had attained primary school education. Low literacy levels probably affected their knowledge levelsabout cervical cancer issues such as the cause of cervical cancer andthe purpose of cervical cancer screening. This lack of knowledge couldinfluence theirutilisation of cervical screening services. A large percentage of the respondents had 4 to 6 children. The results also revealed that many respondents were unemployed while many of their husbands were also employed. Many families had monthly incomes ranging from Mk1 000 to Mk10 000. The most common religious groups were Roman Catholics, Protestants and Islam. The most represented tribes were Lomwe, Yao, Ngoni and Chewa.

4.9.2 Knowledge about cervical cancer screening issues

Most respondents (74.0%; *f*=282) had never been screened for cervical cancer. Of the respondents, 57.2% (*f*=218) had intentions to go for screening while 42.8%(*f*=163) did not. Thus, (24.0%; *f*=58) without education had no intention to go for cervical cancer screening, followed by 31(41.3%) with primary school education

while few (11.5%; *f*=7) had no intention to go for screening. A Chi-Square test for association showed that it was statistically significant (X^2 =18.0, df=2, p=0.0001) at the 5% level of significance.

4.9.2.1 Correlation between intention to be screened for cervical cancer and age, marital status, religion, number of children, income and employment

A Chi-Square test was used to assess if there was any correlation between intention to be screened for cervical cancer and age, marital status, religion, number of children, income and employment. The findings revealed that there was no evidence at the 5% level of significance to suggest anyassociation between intention to be screened for cervical cancer and marital status, religion and income. However, it was revealed that there were more respondents in the age group of 45-49 who intendedto go for cervical cancer screening. These results were statistically significant at the 5% significance level (X²=9.9, df=4, p=0.042). There was also a correlation between the intention to go for cervical cancer screening and employment status (X²=5.4, df=2, p=0.021) at the 5% level of significance. There were more respondents with fewer than three children who intended to go for screening. These results were not statistically significant at the 5% significance level (X²=10.0, df=2, p=0.07).

In addition, the majority of the 381 respondents (74.0%; *f*=282) had never been screened for cervical cancer. Of the 282 respondents who had not been screened previously,64.0%(*f*=135) indicated not being sick and not having pain as the major reasons for not having had the test and 11.4%(f=24) mentioned that they were always busy. This implies that respondents had inadequate knowledge about the significance of cervical cancer screening.

4.9.3 Perceived susceptibility to cervical cancer

The results further show that 93.1% (*f*=351) of the respondents did not know the cause of cervical cancer. On the other hand those who had indicated being knowledgeable about the cause, mentioned traditional medicinesbeing inserted into the vagina, giving birth, sexual intercourse and STIs. Of the respondents,

94.4%(*f*=356) indicated that they had never heard about HPV infection. In addition, 86.2%

(f=325) of the respondents did not think they were at risk of having cervical cancer. However, most respondents (86.8%; f=329) indicated that cervical cancer was a health concern to them. These results also indicate some deficits in women's knowledge about their susceptibility to cervical cancer. These misconceptions might influence them not to use cervicalcancer screening services.

A Chi-Square test demonstrated that there was a statisticallysignificant association between women's intentions to be screened for cervical cancer and their knowledge of the cause of cervical cancer at the 5% significance level (X^2 =8.9, df=1, p=0.003). There was also a statistically significant association between the intention to go for cervical cancer screening and having heard about HPV infection (X^2 =4.2, df=1, p=0.041) at the 5% significance level.

4.9.4 Perceived severity of cervical cancer

The results regarding the severity of cervical cancer showed some misconceptions among respondents. A total of 39.5% (f=249) and 34.7% (f=219) mentioned irregular vaginal bleeding and pain respectively as signs and symptoms of cervical cancer. These misconceptions might impactnegativelyon cervical cancer screening seeking behaviour. Women might wait for these signs before they consider taking up a screening test. According to Russell (2006:111) some individuals perceived severity when they considered the associated consequences of pain, discomfort or one's inability to function normally. This could pose problems in cases where the conditions do not show signs during the early stages, such as cervical cancer.

There was no evidence at the 5% level of significance to suggest any association between intention to go for cervical cancer screening and respondents' knowledgeof the experiences of a woman who had cervical cancer or having heard of any woman with cervical cancer (X^2 =0.012, df=1, p=0.915).

4.9.5 Perceived benefits of cervical cancer screening

Respondents'lacked knowledge about the purpose of cervical cancer screening and who should be screened, but they appreciated that cervical cancer screening could unveil a hidden disease and savelives.

However, when a Chi-square test was used, there was no evidence at the 5% level of significance to suggest any association between the intention to go for cervical cancer screening and respondents' knowledge about diagnostic tests for cervical cancer (X^2 =0.479, df=1, p=0. 0.489).

4.9.6 Perceived barriers to cervical cancer screening

This section assessed respondents' perceived barriers to cervical cancer screening with regards to the following issues: stigma embarrassment and fear, socioeconomic factors and traditional practices.

This study's findings revealed that most (92.0%; *f*=346) respondents perceived the procedure for cervical cancer screening as not being embarrassing, even if the examining person was a male.

Most respondents (95.6%; f=349) would share information about abnormal results for cervical cancer tests with their husbands or family members. Some women (21.0%; f=79) indicated that women with cervical cancer are considered to be dirty. This could cause women not to take up the screening test for fear of stigmatisation, should their result indicate cervical cancer.

This study has demonstrated that most of the respondents felt that finding time or somebody to take care of domestic issues at home while they go for screening was not a problem. However, 74.7%(f=280) of the respondents admitted that financial constraints would affect the uptake of cervical cancer screening tests.

Furthermore, the majority (90.5%; f=341) indicated that it was not expensive to have a cervical cancer screening test and (92.8%; f=350) that it was not difficult to take

time off to have the screening test done. However, 58.9%(*f*=222) preferred the screening services to be provided near their homes or offices.

Most respondents disagreed with the misconceptions that cervical cancer is caused by evil spirits but they would trust traditional healers to treat cervical cancer. Some would consult traditional healers rather than medical doctors for abnormal vaginal bleeding. This implies that such misconceptions could delay early detection and treatment of cervical cancer.

4.9.7 Cues for using cervical cancer screening services

This section covered the respondents' sources of current information on cervical cancer, available sources in their communities, preferred methods of providing information and preferred venues for sharing information about cervical cancer and screening. Most respondents mentioned healthcare providers as their source of information about cervical cancer screening. In addition, hospital clinics were the most cited preferred venues (37.8%;*f*=356) for sharing cervical cancer screening information. However, health talks by healthcare providers were not frequently cited as the best method of providing information about cervical cancer screening.

Cues for respondents to use cervical screening services included door to door campaigns, encouraging women to go for screening, as the best way to improve cervical cancer screening uptake. The respondents also stated the need for healthcare facilities' improved availability of human, equipment and material resources. Some respondents had been sent back from clinics due to the non-availability of screening resources. These would discourage already motivated individuals to utilise cervical cancer services.

Table4.17SUMMARYOFFACTORSASSOCIATEDWITHWOMEN'SINTENTIONSTOUSECERVICALCANCERSCREENINGSERVICESACCORDING TO THE HBM'S CONSTRUCTS

CONCEPTS		DEFINITION	IDENTIFIED FACTORS
ptions	Perceived	One's belief about the chances of	Many respondents' perceived
	susceptibility	getting cervical cancer;being at an	themselves not to be susceptible to
		increased risk or vulnerability to	cervical cancer
		cervical cancer (Russell	
2č		2006:111; Groenewald et al	
be		2006:34; Janz et al 2002:48)	
a	Perceived	An individual's beliefs aboutthe	Most of the respondents perceived
idu	severity	seriousness of cervical cancer	cervical cancer as a serious condition
li		and its consequences (pain,	and a neath concern but did not consider
lnc		and death) (Russell 2006:111)	Inemserves to be at fisk
	Porcoivad	An individual's bolief about the	Many respondents admitted that
uo	bonofite	offectiveness of cervical cancer	screening would belp to detect a hidden
cti	Denenits	screening to be able to detect the	condition at an early stage for treatment
a a		earliest stage in turn avoid the	condition at an early stage for treatment.
inç		serious impact of the condition	
ak		Involves weighing costs versus	
of 1		gains (Russell 2006:111).	
p	Perceived	A person's beliefs about the	These aspects include embarrassment,
00	barriers	potential negative consequences	stigma, social support, financial costs,
lih		of having cervical cancer	time of work. traditional practices
ike		screening tests (Russell	
		2006:111)	
	Cues to	Motivating events or experiences	 Readily available sources of
	action	that activate an individual to	information (healthcare
		engage in cervical cancer	providers, friends and radios)
		screening actions (Russell	 Preferred venues for sharing
		Health Communication 2004)	Information – nospital clinics,
			churches, community meetings
			 Best methods of providing information including radios
			television and health talks)
			 Taking information to the people
ors			through door to door campaigns
č			Readily available screening
fa			resources (human equipment
ing			and material)
lify	Other	Demographics, socio-	 Inadequate knowledge about
00	variables	psychological and structural	causes of cervical cancer and
2		variable that determine an	parts of the body affected,
		individual's perception, including.	screening tests used
		knowledge	 Inadequate knowledge about the
			purpose of cervical cancer
			screening tests
			Respondents with low education
			(primary and no education at all)
		TO an 12 months	demonstrated less knowledge of
		TRE STR	The causes of cervical cancer
		000	Inere was an association

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	between the intention to be screened for cervical cancer and
	level of education (X ² =20.8,
	df=3, p=0.001) at the 5% significance level
	• There was evidence at the 5%
	an association between the
	intention to go for cervical
	knowledge of the cause of
	cervical cancer

The findings for Phase two will be discussed in chapters 5. The conclusions for this thesis will be presented in chapter 6 by comparing and contrasting findings from phases 1 and 2 presented in chapters 4 and 5 respectively.

CHAPTER 5

DATA ANALYSIS AND DISCUSSION: PHASE 2: SEMI-STRUCTURED INTERVIEWS CONDUCTED WITH NURSE/MIDWIVES AT THREE HEALTH CENTRES PROVIDING CERVICAL CANCER SCREENING SERVICES IN BLANTYRE, MALAWI

5.1 INTRODUCTION

Chapter 4 has presented the data analysis and discussion of the results for phase 1 of the current study. A quantitative research design was used for phase 1. Data for this phase were collected using a structured interview schedule with 381 women, aged 42 and older. Three health centres (referred to in this phase 2 of the current study as health centres A, B, C) were chosen as sites for data collection. Semi-structured interviews, using an interview guide with open-ended questions, were utilised for collecting qualitative data for phase 2 of the study. The formulation of open-ended questions for the semi-structured interview guide was guided by the HBM's concepts. Data were collected from nurse/midwives working at the three health centres utilised for phase 1. Therefore, triangulation of research methods and a combination of data sources were used in order to ensure comprehensiveness of the study results.

The instrument for the qualitative part, phase 2 comprised:

Section A: demographic data of the nurse/midwives

This section had questions 1.1 to 1.6 on demographic information. These demographic factors included age, marital status, professional qualifications, years of experience while working at an institution providing cervical cancer screening services, role played by nurse/midwife in providing cervical cancer screening services, if she had been screened for cervical cancer and "*if not*" whether she

wasplanning to go for screening. The responses to this section were analysed quantitatively and presented in a frequency table.

Section B: Factors associated with intentions to be screened forcervical cancer among women aged 42 and older

This section generated qualitative data on factors identified by nurse/midwives that are associated with women's intentions to be screened for cervical cancer among women aged 42 and older. The semi-structured interview guide used for data collection had open-ended questions that enquired from the nurse/midwives' perspective: women's perceptionsabout cervical cancer; women's knowledge about cervical cancer screening tests and early detection; women's sense of being at risk of cervical cancer; women's sense of cervical cancer fatalism; women's perceived benefits of cervical cancer screening; women's perceived barriers to cervical cancer screening; women's knowledge about the cause of cervical cancer and treatment of abnormal cervical screening results; what or who influences the women most when it comes to cervical cancer screening; perceptions of women'sself motivation or intentions to be screened for cervical cancer. The responses from this section were analysed qualitatively and have been discussed according to themes, categories and subcategories that emerged from the data.

5.1.1 The objectives

The objectives for phase 2 of this study were to:

- Identifynurse/midwives' perspectives about factors associated with women'sintentions to be screened for cervical cancer among women, aged 42 and older.
- obtain the nurse/midwives' suggestions on how to generate interest in cervical cancer screening among women aged 42 and older.

5.1.2 Research question

The study aimed to answer the following question:

• What factors, identified by nurse/midwives,were associated with the intentions to be screened for cervical cancer among women aged 42 and older.

5.1.3 Sample size

The sample for this phase comprised 14 nurse/midwives working at three participating healthcare centres in Blantyre, Malawi.

Data were collected during the months of February and March 2011. During this period some nurse/midwives were on annual holiday while others were conducting school health activities and training for Health Surveillance Assistants with the district health office. As such four nurse/midwives were interviewed at one health centre, and five at each of the other two participating health centres, amounting to a total of 14 semi-structured interviews.

5.2 DATA ANALYSIS FOR PHASE 2

This section presents quantitative data analysed from the closed ended questions (section A) and qualitative data analysed from the open-ended questions (section B).

5.2.1 Quantitative data analysis (Section A)

The close ended questions for the participants' demographic information was analysed quantitatively. These have been summarised and presented in the form of figures and frequency tables.

5.2.2 Demographic information

The demographic data for the participants was obtained in order to have a background picture of the participants. This information included participants' ages at their previous birthdays, their marital status, professional qualifications, years of work experience at a health institution providing cervical cancer screening services, their roles played in cervical cancer screening service provision, whether they had been screened before or not and future plans in relation to cervical cancer screening for those who had not been screened before.

The current study's results (refer to table 5.1) show that 57.1% (n=8) of the 14 participants were aged 49 and older while 6 (42.9%) were younger than 40 years of age. Of the 14 participants, 64.3% (f=9) were married, 28.6% (f=4) were widowed and only 7.1% (f=1) had never been married. All the participants 100.0% (N=14) enrolled nurse/midwives. However, 21.4% were (*f*=3) were enrolled nursing/midwifery technicians. Out of the 14 nurse/midwives, only 21.4 (f=3) had specialised in community nursing. Ten (71.4%) participants reportedly had 5 or more years of working experience at a healthcare institution providing cervical cancer screening services, 21.4% (f=4) had up to 4 years of experience. All nurse/midwives had knowledge about cervical cancer and screening from their basic professional training. The period of experience at a health institution providing cervical cancer screening services was therefore important for determining their experiences of factors associated with intentions to be screened for cervical cancer among women, aged 42 and older. In addition, the results indicated that 42.9% (f=6) (3 for Bangwe, 2 Chilomoni, 1 Ndirande) of the participants were trained as providers of cervical cancer screening services; 42.9% (f=6) mentioned that they were involved in giving motivation talks while14.3% (f=2) stated that they were not involved in activities related to cervical cancer screening. In Malawi, training for nurse/midwives for providing cervical cancer services had been conducted through project Hope and JHPIEGO since 1999 (JHPIEGO 2002; Muula&Geubbels 2006:186). In Malawi, cervical cancer providers aretrained by the MOH (Reproductive Health Unit). As of March 2010 there were 128 actively practicing cervical screening providers in Malawi (MOH 2011).

Each nurse/midwive was asked whether she had been screened for cervical cancer. As shown in table 5.1, 57.1% (*f*=8) indicated that they had been screened while 42.9% (*f*=6) had not been screened. As a follow up question, those who had never been screened were asked about their plans in relation to cervical cancer screening. Responses included: "*I am not decided as to when I will go for screening," "I will go for screening should I have a problem.*" At Mulago hospital, Uganda, a study on knowledge, attitudes and practices of cervical cancer screening among the medical workers revealed that 93.0% of thoserespondents agreed that cervical cancer was a public health problem, they knew about Pap smear tests, and that cervical cancer is curable if detected early. Despite this, 81.0% of eligible female respondents of the Ugandan study had never been screened, mostly because they did not feel vulnerable to the disease. It was therefore unlikely that these Ugandan medical workers would have felt motivated to screen others or advise them accordingly (Mutyaba, Mmino&Wedirpass 2006).

Category	Frequency	Percentage		
Age				
<40 years	6	42.9		
40 and above	8	57.1		
Total	14	100,0		
Marital status				
Married	9	64.3		
Widowed	4	28.6		
Never married	1	7.1		
Total	14	100.0		
Professional qualifications				
	7	50.0		
Enrolled nurse midwives community	1	50.0 21.4		
Enrolled nurse midwife psychiatry	3	21.4		
Enrolled nurse midwives technisisns	1	7.1		
	3	21.4		
TOTAL	14	99.9		
institution providing cervical cancer screening services				
up to 4 years	4	28.6		
5 – 9 years	4	28.6		
10 years and longer	6	42.9		
TOTAL	14	100.1		
Role played in cervical cancer service provision				
Providers	6	42.9		
Non providers	8	57.1		
Total	14	100.0		
Ever been screened for cervical cancer				
Screened before	8	57.1		
Never been screened before	6	42.9		
Total	14	100.0		
Plans for those "never screened before"	4	66.7		
Not decided when to have the test	1	16.7		
To have the test should there be a problem	1	16.7		
Total	6	100.1		
	-			

Table 5.1 Demographic data for participants (n=14)

5.2.3 Qualitative data analysis

Qualitative data analysis is an active and interactive process which involves organising, structuring and eliciting meaning from narrative materials (Polit& Beck 2006:397). The process of data analysis for the qualitative phase, as discussed by Morse and Field (in Polit& Beck 2006:398-399) started with immersion into data. This was achieved through the researcher's listening to the initial audio taped semi-structured interview and through transcribing it verbatim in order to provide material for intensive analysis. This wasfollowed by viewinglocal expressions, using the initial transcribed semi-structured interview, as a provisional highly flexible purpose of the study. The researcher then wrote appropriate code labels for these categories.Codes are symbols or abbreviations used to classify words or phrases in the data while coding is a process of reducing the data into smaller groupings to become moremanageable. The coding process also helps the researcher to link relationships between these categories and patterns of interaction(Burns & Grove 2005:548).

Using Atlas ti scientific software, the codes were used for labeling selected categories of data alongside the transcribed text in the right hand margin. A list of these categories and their labels were then formed. Following this, a description for each unit of data was allocated to each set of categories; these were sorted into appropriately labeled themes with reference to a particular interview and location of the text in the transcribed document. The researcher refined and produced a summary of major themes. Lastly a comprehensive set of themes, categories, subcategories was compiled from all the semi-structured interviews to represent the entire study population.

5.3 THEMES AND CATEGORIES

The major themes for this study (see table 5.2) included perceptions of cervical cancer as a condition, knowledge about cervical cancer screening and early detection, women's perceived susceptibility to cervical cancer, women's perceived fatalism about cervical cancer; women's perceived benefits for cervical cancer screening, women's perceived barriers to cervical cancer screening, knowledge about the aetiology of cervical cancer, knowledge about the treatment for abnormal

cervical cancer screening results, motivators to cervical cancer screening, women's self motivation/intention to be screened for cervical cancerand generating increased cervical cancer screening intentions.

DATA DISPLAY	THEMES AND CATEGORIES	
5.1	Theme 1	Perception of cervical cancer as a condition
5.1.1	Category 1.1	Knowledge about cervical cancer
5.1.2	Category 1.2	Disease progression
5.1.3	Category 1.3	Serious and mysterious condition
5.2	Theme 2	Knowledge about cervical cancer screening tests and early detection
5.2.1	Category 2.1	Lack of knowledge about screening tests and the significance of early detection
5.2.2	Category 2.2	Knowledge about further examinations(by taking samples)
5.2.3	Category 2.3	Information provided aboutcervical cancer screening methods
5.2.4	Category 2.4	Knowledge about the significance of early detection
5.3	Theme 3	Women's perceived susceptibility to cervical cancer
5.3.1	Category 3.1	Perception of being at low risk
5.3.2	Category 3.2	Perception of being at increased risk
5.3.3	Category 3.3	Opportunistic screening due to presenting signs and symptoms
5.4	Theme 4	Women's perceived fatalism concerning cervical cancer
5.5	Theme 5	Women's perceived benefits of cervical cancer screening
5.5.1	Category 5.1	Knowledge of the status of one's cervix
5.5.2	Category 5.2	Trust in nurse/midwives for treatment of cervical cancer (with early detection)
5.5.3	Category 5.3	Screening for other reproductive tract problems
5.5.4	Category 5.4	Post screening counseling
5.6	Theme 6	Women's perceived barriers to cervical cancer screening intentions
5.6.1	Category 6.1	Health institutional factors
5.6.2	Category 6.2	Client factors
5.6.3	Category 6.3	Nurse/midwives factors
5.7	Theme 7	Knowledge about etiology of cervical cancer
5.7.1	Category 7.1	Traditional vaginal preparations
5.7.2	Category 7.2	Disease of the elderly
5.7.3	Category 7.3	Information provided about the cause of cervical cancer
5.7.4	Category 7.4	Human ImmunoDeficiency Virus (HIV)
5.8	Theme 8	Knowledge about treatment for abnormal cervical screening results
5.8.1	Category 8.1	Awareness of available treatment
5.8.2	Category 8.2	No cure
5.8.3	Category 8.3	Information provided about treatments for cervical cancer
5.9	Theme 9	Motivators to intend to have a cervical cancer screening test done
5.9.1	Category 9.1	Health institutional
5.9.2	Category 9.2	Media
5.9.3	Category 9.3	Community
5.10	Theme 10	Preferred venues for sharing information about cervical cancer screening
5.11	Theme 11	Women's self motivation/intentions to be screened for cervical cancer
5.12	Theme 12	Enhancing women's cervical cancer screening intentions

Table 5.2 Themes and categories

5.4 DISCUSSION OF PRESENTED THEMES AND CATEGORIES

The discussion of findings for the qualitative section will be presented in relation to the themes and categories that emerged from the collected data. Relevant quotations from participants are presented where necessary to provide a dense description of the results. The current study's findings will be presented, followed by discussions, supported by relevant literature where appropriate.

5.4.1 Theme 1: Perceptions of cervical cancer as a condition

Data display 5.1 shows the categories under the theme, perceptions of cervical cancer as a condition. The other categories presented are all linked to this main theme.

DATA DISPLAY 5.1		
PERCEPTIONS OF CERVICAL CANCER AS A CONDITION		
5.1.1 Knowledge about cervical cancer		
5.1.2 Disease progression		
5.1.3 Serious and mysterious condition		

5.4.1.1 Category 1.1:Knowledge about cervical cancer

Knowledge about cervical cancer is also found to be significantly lower with increased age (Twinn et al 2007:17). The nurse/midwives who were interviewed asserted that women aged 42 and older had limited information about cervical cancer. This might contribute to their low intentionsto undergo cervical cancer screening tests by women of this age group. Some of the nurse/midwives' responses on this subject are presented in data display 5.1.1.

DATA DISPLAY 5.1.1		
	Knowledge about cervical cancer	
•	They have not heard clearly the information about cervical cancer.	
٠	They would like to find out what it is.	
•	Some women feel it is a condition that is passed on from one person to the other.	
•	Women say "if they discover it, that will be my problem throughout my life, so, whatever the case let me stay on."	
•	Some women say the situation in which such and such a person is going through we did not know that was cervical cancer.	

Lack of knowledge about cervical cancer has shown to be a major barrier to women's utilisation of cervical screening services (Sheila, Holroyd, Fabrizio, Moore & Dickinson 2005:3). Awareness of the condition, and having a sense of being at risk of developing the condition, increases the need to use cervical cancer screening services (Twinn, Holroyd, Fabrizio, Moore & Dickinson 2007:19). In Kuala Lumpur, Malaysia, a qualitative study investigating knowledge, attitudes and beliefs about cervical cancer screening, revealed that women had poor knowledge and awareness of cervical cancer. When these Malaysian women were asked about cervical cancer, they often referred to their knowledge about cancer in general (Wong, Wong, Low, Khoo&Shuib 2009:50). Knowledge about cervical cancer has been found to be significantly lower among older women (Twinn et al 2007:17).

5.4.1.2 Category1.2Disease progression

In the current study participants stated that several women have commented that there was nothing they could do if cervical cancer was diagnosed. The participants further said "But we emphasise to them that there are different stages of cervical cancer that can be identified on assessment. The problem is they cannot see what is inside but we communicate to them that: we are able to treat stage 1 of the condition by freezing the cells and they fall off. The cervical cells then grow back. The difficult one is the last stage – 3 which an individual does not get cured." According to Amarin, Badria and Obeidat (2008:393) in order to have a screen test, women have to be aware of the disease and the means of early detection to prevent its progression. In their study among ever-married Jordanian women, 80.0% of those interviewed knew cervical cancer could be detected but only 30.9% referred to the Pap test as a means of early detecting and preventing spread. This bars women from benefiting from the Pap test.

The findings of this study are consistent with Wong et al's (2009:50) study with Malaysian women. Only a few of the participants, the majority of whom were older and married, were aware that early detection and treatment can save women's lives.

Lack of understanding of what cervical cancer is, leads to considering it to be a mysterious disease with a complex origin. Coupled with shared information that it has no cure, it might then be linked to witchcraft. Consistent with these findings, in four selected districts of Uganda, a study revealed that women believed that cervical cancer was due to witchcraft was a curse from God (Okwi, Othieno, Byarugaba, Okoth, Wandabwa&Ocaido 2007:16).

5.4.2 Theme 2: Knowledge about cervical cancer screening tests and early detection

During the current study the participants reported that women had limited information on the available screening tests, frequency of cervical screening and the meaning of early detection of cervical cancer while others stated that the women had some knowledge about this. Among those who stated that some women knew about the tests, most of them just mentioned "*the one which uses vinegar and one which uses the speculum*."

Knowledge about existing cervical cancer screening tests would increase awareness and, in turn, increase women's intentions to have the tests done. Regular uptake of the test would enable early detection of cervical cancer thereby reducing morbidity and mortality from cervical cancer. Wong et al's (2009:51-52) study revealed that women had no knowledge about the Pap smear test and some of them had never heard of this term. Some could not even explain what a Pap smear test was despite saying that they knew about it. The ones who knew about the existence of the Pap smear had poor understanding of the purpose of the test. Many participantsin Wong's (2009:51) study, thought the test was performed in order to detect existing cervical cancer. The participants in the current study mentioned that they explained the types of cervical cancer screening test in simple terms during motivation talks with women who showed interest to be screened. The participants further responded that they explained to the women how often they were supposed to be screened as well as the follow up tests in the event that they were diagnosed with abnormal results. Those women diagnosed with early stages of cervical cancer, were told that they would be treated at a healthcarecentre. If the cervical cancer was beyond the

healthcarecentre's management capabilities, they would be referred to the tertiary hospital. Data display 5.2.1 shows the nurse/midwives' responses on information shared with women about screening tests.

DATA DISPLAY 5.2.1

Information given about screening tests

- We tell them about one method of screening which we use, which is one that uses vinegar.
- They are shown the equipment used for screening. These include the metallic speculum.
- We explain to them that the results may present in two ways. Either it would be normal or there could be a problem.
- If the results are normal, they are supposed to come again for screening after 5 years. If there is a problem the dates vary depending on the results.
- We tell them that for early stages of the condition, treatment is provided at the health centres while for the advanced stages they are referred for higher level management.

Similarly, in the Island of Crete, Vivilaki, Romanidou, Theodoralis and Lionis (2005:4) held educational discussions with 48 women at rural primary healthcare centres with the aim of assessing whether there was an effective method for recruiting women for cervical cancer screening programmes. Some of the key health education messages during the discussion included:

- Cervical screening reduces the risk of developing cervical cancer.
- Due to cervical screening, cervical cancer becamean uncommon disease in many countries.
- Cervical cancer can often be prevented, early detection and treatment can prevent 80.0-90.0% of cancers' development but, like other screening tests, it has its limitations.
- All women can have a test free of charge offered by the National Health System of Greece.
- A midwife is the one who usually carries out the test.
- The women who live in a specific community are responsible at both an individual and on a social basis for cervical cancer prevention

5.4.3 Theme 3: Women's perceived susceptibility to cervical cancer

The participants in the current study indicated that there was a low perception of being at risk of cervical cancer among the women aged 42 and older. These

participantsthoughtmany older women considered this condition to be for the young women who were still giving birth. For them they had passed the period of having such a condition. One participant stated that some women are just lazy they would say *"I should come all the way from here, I am not sick and I should go to the hospital to be screened for cervical cancer, I won't go."* Similarly, low priority was accorded to women's health as cited by Were,Nyaberi and Buziba (2011:62) as one of the factors contributing to the observed reluctance of women to access screening services at Moi teaching and referral hospital in Kenya. In their Kenyan study,42.0% of theparticipants had no opinion about their own risk, andthis was further reflected in 54.0% ofparticipants who did not have any opinion about whois at risk of cervical cancer.lbekwe, Hoque and Ntuli-Ngcobd's (2010:19) study on perceived susceptibility of cervical cancer among women attending Mahalapye district hospital in Botswana suggested that high perceived susceptibility to cervical cancer screening services.

The findings of the current study further showed that most of the women, aged 42 and older, had opportunistic screening after presenting themselves at the hospital with other problems suchas abdominal pains or bleeding during sexual intercourse. Similarly, in Mulanje, Malawi, a qualitative study revealed that one woman had heard about cervical cancer screening while at the district hospital during a motivation talk in the out-patient department but she thought it was useless until she suffered from constant abdominal pain. She then came for screening to rule out cancer as the cause of her chronic abdominal pain (Fort, Makin, Siegler, Ault &Rochat 2011:127-128). However, the participants reported that only those women who would have heard about the advantages of cervical cancer screening during motivation talks would be requesting screening tests. Some of them even came on the days not scheduled for cervical cancer screening or came earlier than the recommended scheduled date.

During the current study nurse/midwives cited some information which was given to women during counseling, as shown in data display 5.3.1.

DATA DISPLAY 5.3.1

Information providedto women about cervical cancerrisks factors

- We explain to them that if they smoke they can have it. If they have several sexual partners, this can put them at risk of having sexually transmitted infections such as gonorrhea, syphilis, warts and trichomonasvaginalis.
- We tell them that sometimes it can also be inherited from their mothers or sisters because it runs in families.
- We also advise them that they do not need to use traditional medicine that is inserted into the vagina in order to reduce the lumen to pre-pregnant state. It could be destroying the cervix.
- Women are told how the causative organism is transmitted and how one knows that she has got a problem.
- We explain to them that low immunity (such as being HIV positive), puts women at a higher risk of having cervical cancer
- We explain to them that those women who start having sexual intercourse before 18 years are at a higher risk of having cervical cancer
- Women are told the consequences of not knowing the risk factors and importance of regular screening.
- We counsel them that cervical cancer does not present with signs and symptoms in early stages. If one starts experiencing pain or vaginal bleeding it may mean that the condition is in advanced stages
- Women are told that HPV present on the vulva or penis could be transferred to the cervix and could cause cervical cancer.

One nurse/midwife in the current study reported that after motivation talk sessions explaining the risk factors, cause, signs and symptomsof cervical cancer, women become interested saying *"may be now we also need to go and be screened for cervical cancer. We were also involved in the same bad practices you have mentioned. We didn't know that theywere bad practices.We will stop using the traditional medicines, now that we know."* The motivation talks could help to address misconceptions.

Women who are aware of the risk factors for cervical cancer development, are more likely to use cervical cancer screening services (Were et al 2011:62). Comprehensive information is essential for ensuring higher perceived susceptibility to cervical cancer among women. Nurse/midwives, as resource persons for the general public, need to have adequate knowledge of the risk factors for the transmission of HPV, prevention strategies, signs and symptoms in order to motivate women to utilise cervical cancer screening services(Urasa&Darj 2011:56).

According to Twinn et al's (2007:18) study, a health education campaign for cervical cancer screening increased attendance from 217 (75.0%) to 232 (80.0%) for women reported ever having used screening services. Six women stated that they were first

time attendees. When the women were asked about their perceptions of the effectiveness of the campaign, women described it as being helpful by acting as a prompt for them to use cervical cancer screening services.

5.4.4 Theme 4: women's perceived fatalism of cervical cancer

The fourth theme that emerged from the data was women's perceived fatalism of cervical cancer. All the nurse/midwives who participated in this study reported that some women felt cervical cancer was fatal because it is a silent condition not easily identifiable, an untreatable condition, it could lead to the surgical removal of the uterus and women also feared death fromcervical cancer. Data display 5.4.1 shows replies in this regard.

DATA DISPLAY 5.4.1			
Women's perceived fatalism of cervical cancer as cited by participants			
 When women hear about cervical cancer they have great fears because they consider it to be one of the conditions that kills 			
 What they know is cancer is a condition that has no treatment 			
 Some of them state that when one has cervical cancer sometimes their uterus is removed which means that the individual will no longer have children again 			
 They say the main problem with cervical cancer is people realise very late that they have the condition 			
 Women consider that for a person to function normally, blood is very vital. So for somebody to be bleeding continuously they feel that is a threat 			

The current study's findings concur with those of McFarland (2003:172) where women participants reportedly expressed the belief that cervical cancer was fatal. This was attributed to high mortality rate secondary to late detection. These women believed that cervical cancer is a serious condition because it is fatal (50.0%), incurable (57.0%) and it could necessitate a hysterectomy (37.0%). They further described cervical cancer as a disease that *"eats the inside of a womb."* The condition was also perceived as being fatal because of its serious social consequences. They reported loss of a uterus would lead to divorce or failure to get a husband because culturally men desire to be recognised as fathers.

One's beliefs about the seriousness of contracting a health condition should be considered in relation to its expected consequences. The consequences of a health condition may include, pain, death and financial expenses (University of Twente Health Communication 2004; Russell 2006:111).

According to Pelcastre-Villafuerte, Tirado-Gómez, Mohar-Betancourt and López-Cervantes (2007) women, who have experienced cervical cancer in their families, are more aware of the seriousness of the condition. This knowledge increases their commitment to regular screening. One participant from health centreC said "I remember there was a woman who died of cervical cancer within the health centre's catchment area. After her death people talked about it a lot. This made a lot of women from that area to come for screening. So I felt women learnt from this experience that the condition is fatal such that one can even die ifcare is not sought in time." Similarly, in Ackerson et al's (2008:54) study of African American women, and factors affecting the utilisation of cervical cancer screening services, one participant was motivated to utilise routine cervical cancer screening services because both her grandmothers had been diagnosed with cervical cancer and one had died from it at the age of 50. Neither of these grandmothers had a history of utilising routine cervical cancer screening. Based on these experiences, the granddaughter stated that she used regular cervical screening services to avoid a late diagnosis of cervical cancer. This implies that the participant's awareness of the family history, and the associated potential risk to her own health, motivated her to undergo regular cervical cancer screening tests.

5.4.5 Theme 5: Women's perceived benefits of cervical cancer screening

Women's perceived benefits of cervical cancer screening emerged as one of the themes during data analysis. Data display 5.1 depicts the categories of this theme.

	DATA DISPLAY 5.5
	Women's perceived benefits of cervical cancer screening
5.5.1 K	nowledge of the status of one's cervix
5.5.2 Ti	rust in the nurse/midwives for the treatment with early detection
5.5.3 P	ost screening counseling

5.4.5.1 Category 5.1 Knowledge of the status of one's cervix

In the current study the participants mentioned that most of the women appreciated the information given to them regarding their cervical cancer screening results. This enabled them know the status of their cervix. Data display 5.1.1 shows participants' responses in this regard.

	DATA DISPLAY 5.5.1
	Knowledge of the status of one's cervix
•	They would want to be screened in order to know exactly what is happening in their bodies because sometimes they would think everything is fine when in actual fact it is not.
•	Women who come for screening say if they know that they have negative results, they have peace of mind. If they have positive results they will be assisted accordingly

They say "it is good that at least you have been able to detect it. Please assist me."

An individual's value of good health plays an important role in one's involvement in a health action (Sullivan, White, Young& Scott 2008:20). In Kenya, one woman reported that during a funeral ceremony, a community health worker spoke about a chronic disease that affects women – cancer of the cervix. He explained that the disease could be treated if detected early. She added that this inspired her and created a sense of urgency to undergo cervical cancer screening tests in order to get treatment timeously, should this be required (Mwakisha 2004:6).

In addition, Hispanic women involved in Byrd, Chaves and Wilson's (2007:131) study, recognised the importance of screening to themselves and to their families. Reportedly a benefit of screening was the re-assurance that no cervical cancer had been detected. Furthermore, several of the focus groups in that study indicated that women should adopt the 'rather safe than sorry' approach to cervical screening. This implies that women who value good health status would appreciate the necessity of regular cervical cancer screening for early detection and treatment.

5.4.5.2 Category 5.2: Trust in the nurse/midwives for treating early cervical cancer

Cervical cancer screening without the possibility for treatment would be pointless (Dabash et al 2005). The results for the current study showed that participants from

all the three health centres indicated that women trusted nurse/midwives to provide help in the event that cervical screening results were positive. This gave them reassurance to plan for the screening procedure. One participant from health centreA commented that the women felt that it is very beneficial to be screened. They would actually say *"we should go at the earliest so that we can be examined just in case we have the micro-organism which causes cancer, and then they can assist us. We have heard that if the micro organism is detected one would be assisted and can be cured."*One participant in the current study also mentioned that if the women have negative results they are advised to come for reviews after specific periods of time and indeed they would come as recommended.

Cervical cancer screening without the possibility for treatment would be pointless (Dabash et al 2005). According to Mwakisha (2004:6), in Kenya, one participant attending cervical cancer screening services for the first time, was diagnosed with a lesion requiring further analysis and treatment at the district hospital in Busia. She stated that the nurse informed her that her cervical abnormalities could be treated because of timely diagnosis. If she had delayed her cervical screening, it might have been too late for effective treatment. Motivation for cervical cancer screening uptake could be achieved with perceived support and trust from healthcare providers. O'Malley, Forrester and Mandelblatt (2002:144) echo that comprehensive service delivery and higher patient satisfaction with the relationships with healthcare practitioners is associated with higher adherence rates to regular screening recommendations. O'Malley et al (2002:144) further commented that having a physician's recommendation for screening is one of the most consistent predictorsfor increased intentions to usecancer screening services among women of all income and demographic groups.

Although chronic diseases, like cervical cancer, might not have cures, a study in Mulanje, Malawi, revealed that the women who were interviewed maintained a high level of faith in Western medicine. Participants used words like *"trust"* and *"faith"* to explain that they believed their doctors would discover what was happening inside their bodies. When one of the participants was askedwhat she would do if diagnosed with cervical cancer, she responded that she would not be worried as she

would follow the doctor's and the hospital's advice (Fort, Makin, Siegler, Ault & Rochat 2011:126).

5.4.5.3 Category 5.3 Post screening counseling

Women require a lot of counseling in order for them to understand the importance of adhering to regular cervical cancer screening. According to Forrester (2004:22), women need more information about the resources available for those who suspect or are told that they have cervical cancer or precancerous cells, including the names of doctors who specialise in gynaecology and oncology. In addition, that author cited one womanwho emphasised that education is the key to prevention and that any woman with diagnosed cervix abnormalities should co-operate with doctor that she trusts.

In the current study, results reflected that counseling was also critical when the cervical cancer screening results were negative. One participant reported that, according to cervical screening results, women are advised about the date for their next visit, those negative are also advised on how to stay healthy. She further stated that women appreciated this advice because they could remain safe from cervical cancer. Data display 5.1.2 shows information reportedly provided to patients/clients during counseling sessions.

DATA DISPLAY 5.5.2 Information given during counseling as stated by participants			
•	Women are told that if they are diagnosed with early signs of cervical cancer they will be treated with cold air (cryotherapy)		
•	When a woman is found to be negative for cervical cancer she is advised to remain faithful to her sexual partner. This encourages the woman to share the news with their partners.		
•	They are advised on how often they can come for screening depending on the results.		
•	Even if their results are negative they may be advised to be using condoms during sexual intercourse.		
•	If the problem of bleeding per vagina which brought them to the hospital is due to an infection they are advised to be seen by the clinician for prescription of treatment.		

Post cervical cancer screening counseling would have a positive impact in that women would have the required health information and would adhere to a regular screening schedule. In Mutyaba et al's (2007) study, women expressed that there was no proper feedback or counseling following the cervical screening procedure. One woman from that research community indicated that healthcare workers

sometimes failed to inform patients about their diagnoses and might treat patients without explaining for what illnesses the patients were being treated. Ignorance about issues such as the required frequency of screening, risk factors, meaning of pre-cancerous cells and treatment would affect women'senthusiasm for continuity of uptake of healthcare services.

5.4.6 Theme 6:Perceived barriers influencing women's cervical cancer screening intentions

The major issues that emerged from the data concerning barriers to cervical cancer screening were: health institutional factors, client factors and nurse/midwives' factors. Other subcategories discussed are linked to these main categories.

5.4.6.1 Category 6.1 Health institutional factors

Factors affecting service delivery may determine the level of interest individuals would show in service utilisation. Data display 5.6.1 presents subcategories under this theme.

DATA DISPLAY 5.6.1 Health institutional factors influencing intention to usingcervical cancer screening services			
 Shortage of trained cervical cancer screening providers Lack of motivation talks 			
 Inadequate material and structural resources 			
 Unfavourable schedules for screening Distance to health facility 			

Shortage of trained cervical cancer screening providers

In Malawi, basic nurse/midwifery training both at nursing and midwifery technicians as well as registered nursing/midwifery level cover "*cervical cancer*." However, there are nurse/midwives who have undergone post basic training as cervical cancer screening service provider. There were three trained cervical cancer screening service providers at health centreA, four at health centreB and one at health centreC. Due to the shortage of nurse/midwives, these providers are also involved in other activities. This might contribute to the unavailability of screening services. According to Kawonga and Fonn (2008:34), making professional nurses the primary cervical screening providers is logical, given the need to increase access these services. On the other hand, the authors confessed that this solution fails to recognise that a screening programme entails more than just taking Pap smears and has several components that should be well coordinated, including facilities for diagnosis and treatment of precursor lesions.

One participant (nurse/midwife provider)in the current study stated that "sometimes you would be the only nurse/midwife for the whole hospital on that day. As such women are sent back telling them that there is nothing much I can do for you today. And women are sent back without being screened." These would be missed opportunities for screening. If at all such women would plan for another visit to the clinic it may be after a long period of time.

Similarly, Winkler, Bingham, Coffey and Handwanker's (2008:16-17) study findings, in Peru, showed that both screened and unscreened women (16.0% and 24.0%) respectively reported that they had been turned away from a health facility that offered screening services because the providers were too busy.

Lack of motivation talks

The frequency of giving motivation talks about cervical cancer screening varied for each health centre. Many participants indicated that motivation talks were only given on the days scheduled for providing cervical cancer screening services. In addition, these motivation talks were given to clients attending family planning and postnatal care services, where women aged 42 and older and at high risk of cervical cancer would not be reached. At health centreC, it was reported that "according to the programme the message is supposed to be given once a week but sometimes we find that may be in a month it has just been given once or twice." The overall purpose of the motivation talks on cervical cancer screening is to promote women's interest in having cervical checks and the importance of regular screening for eligible women. The current study findings imply that cervical cancer screening talks were targeted at the child bearing age group of women and not at the women aged 42 and older. Those in the post child bearing age group were missedbecause it was reported that they rarely visited the health centres. If they did so, it was for a health problem requiring outpatient department services, where the motivational talks about cervical cancer screening mingt not be provided. In addition, the nurse/midwives in the current research study reported that giving motivation talks was perceived to be the responsibility of the trained providers. Leaving the responsibility to one person might negatively impact on the number of women requiring the information about screening. At health centre C, one participant (provider) said, "When I am around I just decide to give the same talk to the family planning/postnatal clients and outpatient department, but this rarely happens." However, at the same health centre (C) another participant affirmed that "these talks are supposed to be given by any of the nurse/midwives not only the providers. Those who were trained have reference books, which can be used by any nurse/midwife allocated to give a topic for a motivation talk on cervical cancer and screening." At health centre B, motivation talks were at times given by any nurse/midwife on days not scheduled for screening. Brief information was given to other groups such as antenatal women just for their information. This might increase the number of women exposed to cervical cancer screening information, therefore it might increase women's intentions to be screened.

The Program for Appropriate Technology in Health (PATH 2000:160) commented that in many countries, screening programmes tended to be offered only opportunistically and often reached relatively low-risk women. Older women at greatest risk tend to be unaware that cervical cancer is a preventable condition and that having a cervical screening test plays an important role in the prevention, early detection and treatment of cervical cancer.

According to Twinn et al (2007:16), a study aimed at increasing knowledge about and uptake of cervical cancer screening among Hong Kong Chinese women,older than 40 years of age, revealed that health promotion campaigns played an important role in promoting unscreened women to use cervical screening. The authors further acknowledged that the provision of knowledge about cervical cancer, risk factors and screening created a steady, if small, increasedinterest in cervical screening.

Inadequate material and structural resources

The results of the current study indicated that there were irregular supplies or resources such as vinegar, gloves and gas for sterilising equipment. At health centreB one participantreported that "sometimes we run out of sterile equipment such that some women are advised to wait while we sterilise the equipment." To address the problem of shortage of resources especially vinegar, another participant explained: "... at times we, health workers contribute or one of us would just volunteer to buy one bottle of vinegar with her own money, but with one bottle of vinegar, not a lot of women would benefit from it." The minimum requirements for the provision of effective cervical cancer screening services include access to supplies including swabs, slides, fixative equipment such as examining tables, specula and light sources. The regular replenishment of these resources would ensure sustainable service provision.

At health centreC, it was echoed that apart from having inadequate resources and equipment, there was also a problem of infrastructure. One of the nurse/midwives reported that "this programme of cervical cancer screening was introduced after these buildings had already been built. Therefore, sometimes we are in a situation where other health workers would like to use the same room for other services." In such situations some clientscould say "how can we be waiting for the same room, I am rushing for something else." However, the participants at health centreA stated that they had a room designated specifically for cervical cancer screening.

Similar observations were made by PATH (2000:16), healthcare practitioners in lowresource setting frequently reported a lack of access to essential requirements for cervical screening such as equipment, resources and transport.

Unfavourable schedules for screening

Cervical cancer screening clinics at the three health centreswere scheduled as shown in table 5.3:

Table 5.3 Schedules for cervical cancer screening at the three health centres

Health centres	Days scheduled for screening
A	Wednesdays
В	Monday, Wednesday & Friday
С	Monday, Wednesday & Friday

The cervical screening clinics opened 7.30 in the morning and closed at 12:00. During weekends and public holidays the cervical cancer clinics were closed. This implies that the health system might not accommodate women with other commitments such as employment and household chores. The current study's results indicated that on several occasions women had been coming but the clinics were closed. Other participants stated that *"if there was a chance for us to schedule more days for this, let's say providing screening services every day of the week, more women would be motivated to attend."*

Olowokure, Caswell and Duggal (2006 in Gannon & Dowling 2008:1282) highlighted the importance of suitable clinic times for women attending cervical cancer screening. In their post cervical smear test survey, conducted 1-31 January 2001, women reported that one of the factors contributing to their non compliance to screening was inconvenient and incompatible appointment times with their life styles.

Distance to the health facility

The current study's findings revealed that some clients were covering more than 5km to the health centres and transport money was a problem for them. One participant from health centre A reported that "some women come as far as the, boundaries of *Chiradzulu district, Kachere location and Limbe area to Bangwe health centres which is far.*" In Malawi, health centres are located to serve people within every 5 km radius in the urban areas. However, other populations fall outside this radius (McCoy, Ashwood-Smith, Ratsma, Kemp &Rowson 2004:5; Samba 2005-2009:16). During the period of the study (January to March 2011) 3 out of 5 health centres in Blantyre urban area were providing cervical cancer screening services.

Consistent with these findings, Coughlin and King (2010:5) stated that, in contrast with rural areas, distances to facilities in urban areas are shorter and multiple transport pathways are available for urban residents. Nevertheless, accessibility to

health facilities in urban areas could also pose challenges, especially for the low income residents who might be more likely to depend on public transport, and who might not have money for transport.

5.4.6.2 Category 6.2 Client factors

Participantsmentioned several client-related factors which could act as barriers to women's intentions to be screened for cervical cancer. Many participants indicated that women were afraid of the speculum, had misconceptions about the procedure, were negatively influenced by culture, had misconceptionsabout the at risk groups of women, and felt embarrassed about the vaginal examination procedure.

Fear of equipment used for screening

Fear related to equipment used for cervical cancer screening could have negative impacts on women's intentions to be screened. The current study's results showed that some women had fears of experiencing pain during the screening procedure due to the use of the speculum. At all three health centres, participants reported these fears of the speculum. The participants explained that because of the structure of the instrument, the clients felt that its use would be painful. According to the participants some clients revealed after their screening experience that "*I was afraid but the way you have examined me, I cannot believe that you are already done. Are you not going to make me bear down?*" Fears shared among women would discourage women from planningto use the test. Data display 5.6.2 shows information in relation to fears expressed regarding the speculum.

DATA DISPLAY 5.6.2 Women's fears about the speculum	
 They have heard that the procedure is done using a metal and the metal equipment use painful. 	əd is
 They are told that a duck is used for screening. The duck bites you down there. 	
• They hear that a metal is inserted in the private parts and one is made to bear down.	
 They say we understand whatever is used for screening pinches the cervix. 	
• They advise each other saying "you want to be screened for cervical cancer, don't do it. procedure is frightening".	That
 They hear, after inserting the metal the uterus is removed, cleaned and put back 	

The current study's findings are consistent with those of a study done by Carlson (2002). Those women reported a number of negative experiences when having a Pap test. The negative experiences about women's responses included, pain, fear and discomfort. Women disliked undergoing screening because of these rumours. A good technique of using the vaginal speculum can be attained by following the recommended instructions. This would include considering the size, lubrication and warming the instrument, comfortable positioning, explanation of procedure and viewing the instrument (Carlson 2002:16-17; Seehusen, Johnson, Earwood, Sethuraman, Cornali, Gillespie, Doria, Farnell& Lanham 2006).

Furthermore, in the current study, participants echoed the fear of being diagnosed with cervical cancer as a barrier to arranging for a cervical cancer screening test. At health centreC one participant stated that some women say "*we understand there is no treatment for cervical cancer, so if I am found to be positive I won't live long.*" One *nurse stated:* "*If I know that I have cervical cancer I will be very worried.*" Similar findings were reported by another study done inMulanje, Malawi,where a participant reported that most women would worry about the results of cervical screening tests and might even fear death in case the results might indicate cervical abnormalities (Fort, Makin, Siegler, Ault &Rochat 2011:128).

Misconceptions about cervical cancer screening

A lack of clear understanding of cervical cancer screening procedures and the purposefor screening could impact negatively on women's willingness to be screened for cervical cancer. Data from the current study showed that some participants from all three health centres reported that women had misconceptions regarding cervical cancer screening procedures. Data display 5.6.3depicts responses in this regard.

DATA DISPLAY 5.6.3 Women's misconceptions concerning cervical cancer screening

- When checking the cervix they also check one's HIV status
- The speculum pinches the cervix
- During the procedure you are instructed to bear down
- When checking the cervix the whole uterus is removed cleaned and then replaced.

Similar findings were reported by Fort et al (2011:127) in their study, when one participant asked about the screening process, stated that she had heard that uterus was removed and visually inspected during cervical screening. In Wong et al'sstudy (2009:51), most respondents were unsure about the way in which the test was performed. Their common replies included that these women lacked exact information, but knew that something (including liquid) was taken from the vagina and sent away for tests. In Zambia, when women were asked why they had not been screened for cervical cancer, the top ten myths and misconceptions included:

- The nurses who do the screening are Satanists and may take out children
- The instruments they use are painful
- We are afraid to be cut by the nurses
- After screening you have long periods and discharge
- Screening destroys the ability of a woman to have a baby
- Screening enlarges the vagina and reduces sexual enjoyment
- There is no privacy and I'm scared to be screened by people who know me
- I am worried about how clean the instruments are and I am scared of being infected with HIV or any other disease
- People think that if you have cancer, they say you have HIV
- When someone is found with cervical cancer, they think that the womb will be removed (Chirwa, Mwanahamuntu, Kapambwe, Mkumba, Stringer, Sahasrabuddhe, Pfaendler& Parham 2010:49).

The authors suggest the combination of service provision interventions along with community-based education in order to help ensure that appropriate goals for cervical cancer prevention in the community are met (Chirwa et al 2010:49).

On the other hand, at health centreC it was reported that women mentioned that "when they are being screened they don't just screen for cervical cancer, should they identify signs of other sexually transmitted diseases such as gonorrhea or if there is an abnormally increased vaginal discharge, the women get treated for that." However, contrary to these current research study findings, Mutyaba et al (2007)
acknowledged that attending cervical cancer screening may have a negative connotation or stigma when it is combined with a gynaecological examination and treatment for reproductive tract infections.

Cultural influence

The most salient cultural barriers cited by participants were embarrassment, young providers, partner resistance to women's participation in screening and traditional beliefs. The social definition of culture is more directly related to psychological processes and health-relatedbehaviours. Aspects of culture are likely to be shared among individuals of an ethnic, racial, socioeconomic status or gender group (Betancourt, Flynn, Riggs &Garberoglio 2010:992).

• Embarrassment

Embarrassment can impact negatively on women's intentions and uptake of cervical cancer screeningservies. The data showed that some women felt shy to have the screening test done. This was compounded by older women being screened by young service providers. Data display 5.6.4 contains evidence in this regard.

DATA DISPLAY 5.6.4
Women's expressions indicating embarrassment about the cervical cancer screening process
 should my private be viewed when I have no problem.
 Some say they should view my private parts as if I am delivering a baby.
 They feel the public will be asking "where is that elderly woman going?"
• When we ask "is there anybody who has come for cervical cancer screening, though there
could be some among the group for family planning who were willing to be screened, they just
feel, if I say yes the other women will know that I have a problem."
• The women feel if I sit on such and such a place even if I have gone there with my own
intentions they will say "even this elderly woman has come for family planning?"
• They would be considering that "ah! That nurse is of the same age as my daughter, so should
she be viewing my private parts"
• The women think it is not right for the examiners who are usually young nurses to be viewing
their private parts

These findings are comparable with those from other studies (Carlson 2002:16; Waller, Bartoszek, Marlow & Wardle 2009:200). In a study done by Byrd, Chavez and Wilson (2007:131) with Hispanic women in El Paso, USA, many women felt that embarrassment would be a strong barrier for older women regardless of the physician's gender. One respondent stated that her mother had never undergone a

cervical screening test as she would be too embarrassed because merely buying sanitary towels embarrassed her mother.

According to Baral, Karki and Newell (2007) a feeling of being embarrassed deters women from accessing screening services. Culturally, African women may perceive the cervix as a private matter and the word "*cancer*" as a taboo and not a topic for discussion even among women (Lee-Lin et al 2007:1206-1208;McCaffery et al 2006:171-172; Thomas, Saleem& Abraham 2005:566; Van Til 2003:1128). Furthermore, in South Africa the pelvic examination was referred to as "*hanging the legs*." A positive cervical screening test implied that the woman was "*dirty or promiscuous*." It therefore challenged the male partners' "*ownership*" of and control over their wives (Bingham et al 2003:S409).

• Partner resistance to women's participation

The nurse/midwife participants in the current study reported that some women had to sneak behind their husbands' backs to be screened for cervical cancer. The husbands did not support the idea that their wives should be screened for cervical cancer. This behaviour was displayed when theyrealised that they had been promiscuous and felt that their partners would be at risk of the condition. One participant revealed that the husbands would say "doesn't go for screening you are fine, you do not have the problem." Some women would indeed not attend because culturally the man is considered to be the head of the family and the decision maker. Higher spousal support has been associated with positive intentions to use screening services (Ackerson et al 2008:52). A study conducted by Koval et al (2006:140) with Mexican working age people showed that less support from husbands attributed to delayed visits for screening: women admitted having problems and misunderstandings with their husbands on the issue of whether or not they would seek a Pap smear test. The significant others' understanding on the importance of screening might promote women's adherence to cervical screening (Ackerson et al 2008:54).

• Traditional practices

Data from the current study showed that at health centre C it was reported that due to lack of knowledge about cervical cancer some elderly women wasted time going to traditional healers for help. One of the participants said *"I have come across such type of women especially the ones who have continuous menses. They would have visited several traditional healers and they would be reporting that they feel they have been bewitched. To them, if the menstrual bleeding does not stop as expected, somebody must be responsible for that."*

Good health is perceived as consisting of a healthy body as well as healthy social, emotional and spiritual life. Patients with cancer might believe that a special witchcraft caused it (Kazaura et al 2007:21; Suwastoyo 2009; Wani 2007; Wheat & Currie 2008). According to Broome and Broome (2007:3), Thomas et al (2005:5680), Pelcastre-Villafuerte et al (2007), Vorobiof, Sitas and Vorobiof (2001:127s) in such situations black patients with cancer seek a cause for the illness within the framework of their indigenous beliefs.Suwastoyo (2009) comments that many patients come to traditional healers after medical treatment sought elsewhere has failed.

Similarly, the results of a qualitative study conducted in Uganda revealed that women perceived cervical cancer as a traditional condition called *"Kikulukuto."* Most of them cited their *"Senga"* (paternal aunt), mother, elderly women and peers as authoritative source of knowledge about the illness and other reproductive problems. In addition, Pillay's (2002:108) study also showed that South African women were inclined to consult traditional healers rather than Western doctors about abnormal vaginal bleeding. Patients also use herbalists, and/or traditional healers for the management of cancer related complaints and side effects of conventional cancer treatments(Kazaura et al 2007:21). In consideration of the large patient to doctor ratio in most African countries, particularly rural areas, reliance on traditional medicine is common. Bearing in mind the traditional healer's highly influential position, Erah (2008) suggested that efforts should be made to engage traditional healers in programmes motivating women for early screening in their communities.

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Misconceptionsof the at risk women

The data of the current study revealed misconceptions about which group of women were at risk of cervical cancer. A low perception of being at risk of cervical cancer can impact negatively on the uptake of the screening test. At all three health centres, participants reported that elderly women felt that they did not need the cervical cancer screening test due to their advanced age. The participants explained that because these women were no longer having menses and did not have sex often, the screening test was not applicable to them. Data display 5.6.5 shows information related to these misconceptions.

DATA DISPLAY 5.6.5		
Low perception of risk status		
 Mainly this group of women feels that somebody is going to laugh at them saying "as old as you are, how can you be going for screening for cervical cancer?" They think that it is only for young ladies. 		
• This age group has stopped bearing children so they feel even if they are not screened there is no benefit as they will not have any more children, most of them think if they have cervical cancer it can be passed on to the baby.		
• Most of them feel that just because they have completed their families, there is no need to be screened. The reason being that most of the predisposing factors discussed with them are to do with sexual intercourse.		
• The women's belief is they are too old and they are not having menses and most of them are widowed or divorced. So they feel they cannot have cervical cancer.		
• Some women say "we are almost at the end of life. Whether we are going to have it or not it's only God's mercy."		

These findings are consistent with a study done with Hong Kong women aged older than 40. Participants' consistently citeda lack of anyneed toate attend screening clinics. This was a major barrier to theirutilisation of cervical cancer screening services and demonstrated their lack of awareness of personal risk as 94.0% described themselves as having been sexually active (Twinn et al 2007:19; Fawcett 2007). Women older than 60 years of agestated that they could not accept the idea of being screened as they were too old for screening. At three teaching hospitals in Addis Ababa, Ethiopia, women revealed that some of the reasons they did not have the cervical cancer screening testsincluded that they were waiting until they got older and that they considered it to be unimportant (Terefe&Gaym 2008:19). Provision of appropriate information to overcome barriers to intentions to use cervical cancer screening servicescould increase the rates of cervical cancer screening uptakes (Gannon & Dowling 2008:1282-1283).

At health centres A and C some nurse/midwife participants stated that "women may just be lazy thinking as long as they do not experience any problem, cervical cancer screening is not important, their days are numbered any way." Others say "I should come all the way from here, I am not sick and I should go to the hospital to be screened for cervical cancer, I won't go" and others say they are always busy with household work such that they do not find time to come for screening." According to Terefe and Gaym (2008:62) low priorities accorded to women's health have been cited as observed reluctance of women to access cervical cancer screening services.

Lack of knowledge about the places offering cervical cancer screening services

During the current study the results showed that women's knowledge about the available cervical cancer screening services as well as where they could access them was very poor. See data display 5.6.6 for the relevant information.

DATA DISPLAY 5.6.6			
Lack of knowledge about available screening services and where they are provided			
	• It would be difficult for them to have adequate information and they would not know what to do even if they heard about it in the community.		
	• They do not have adequate information for them to come for screening after attendingout patient's department services		
	I can say it could be due to lack of knowledge of the services being provided.		
	• The main problem could be that we started the programme while the concerned individuals in the community, those aged 42 and older, do not have the required information.		

• May be they do not get the information clearly for them to be attracted to the service.

Similar findings have been reported by Terefe and Gaym (2008:19). One of the reasons given for not having the cervical cancer screening test by clients at three teaching hospitals in Ethiopia was, not knowing the place where it was done. This might have been attributed to insufficient publicity of the disease and the limited availability of the screening tests in Ethiopia. Therefore, this might imply that messages about cervical cancer screening required detailsof health institutions

where the services could be accessed. Women's awareness of the availability of cervical cancer screening services and where the services are provided are other significant factors that could influence one's intention and use of available facilities (Were, Nyaberi&Buziba 2011:61).

5.4.6.3 Category 6.3 Nurse/midwives' factors

The third category that emerged from the data for barriers was nurse/midwives factors. Data display 5.6.7 outlines the subcategories under this.

DATA DISPLAY 5.6.7 NURSE/MIDWIVES' FACTORS		
٠	Lack of knowledge about cervical cancer screening	
٠	Negative attitudes	
٠	Confidentiality and privacy.	

Lack of knowledge about cervical cancer screening

Data from the current study showed that at health centreC the nurse/midwives were not confident providing information about cervical cancer and also not to provide screening services because they lacked knowledge and skills. One participant commented that "some of us would just give the motivation talk without going into the details.... She laughed." Another one said "sometimes the other nurse/midwives are afraid of giving wrong results. For instance according to my assessment, I may say the woman has cervical cancer, only to be surprised that the provider says, sorry it was a mistake, you do not have cervical cancer." The provision of appropriate and comprehensive information about cervical cancer screening requires that the service providers be knowledgeable about the subject matter.

Terefe and Gaym (2008:7) state that in their study at three teaching hospitals in Ethiopia, even from the group of women who had heard about the cervical cancer screening test, very few had adequate knowledge. This was attributed to the inappropriate or incomplete information delivered by healthcare workers who also had inadequate knowledge. Similarly, Urasa and Darj's (2011:53) study at a regional hospital in Tanzania, revealed that most nurses had inadequate knowledge about the transmission of HPV as well as about the causes, risks, symptoms, treatment

and prevention of cervical cancer. However, studies have indicated that the intention to utilise screening services depends on an individual's awareness of the importance of cervical cancer screening (Mutyaba, Mmiro&Weiderpass 2005; Urasa&Darj 2011:55).

In the current study 6 (42.9%) nurse/midwives of the 14 (100.0%) had never been screened for cervical cancer. According to Urasa and Darj 2011:55), from the HBM's conceptual framework one can deduce the hypothesis that the nurses' screening practices were influenced by their perceptions of their own susceptibility to the disease, benefit of screening and barriers to screening which were in turn influenced by their knowledge about the disease. At Mulago hospital, Uganda, a study done by Mutyaba, Mmino and Weiderpass (2006) revealed that female medical workers did not perceive any risk for cervical cancer and were not motivated to be screened themselves and therefore were not motivated to screen others or advise them to do so. The nurses in a study by Urasa and Darj (2011:55) echoed the need for further education regarding cervical cancer screening after being dissatisfied with their knowledge. They also recommended that nursing schools' curricula should emphasise the importance of cervical cancer so that nurses will become more knowledgeable about this condition, and especially about the potential value of regularly using cervical cancer screening services.

Negative attitudes

The current study findings revealed that some of the participating nurse/midwives felt the negative attitudes accorded to the women might have contributed to their low intentions and uptake of cervical cancer screening services. The participants cited the use of bad language and the unwelcoming reception of women at the clinics as examples. Data display 5.6.8 shows information in this regard.

DATA DISPLAY 5.6.8

Information on negative attitudes of nurse/midwives as stated by participants

• Sometimes women do not attend for screening because of the reception at different hospitals.

• If the reception is bad women share the information with others saying, I went to the hospital for cervical cancer screening. The reception is bad.

• May be our attitude. Attitudes can also prevent them from having the interest to come.

• They advise each other that don't go there again. The nurses are rude, they just scold you. So women rely on experience that others have had.

Negative attitudes of healthcare personnel towards women could have negative effects on women's intentions to access cervical cancer screening services. According to Szczepura (2005:142) a review on access to and uptake of National Health Services by ethnic minorities indicated that only if these groups could use healthcare services easily and confidently, and if they were treated respectfully, then healthcare services could be regarded as being equitable to these groups. A culturally sensitive healthcare service for diverse populations would promote utilisation. Patients also value how illness, disease and their causes are perceived by others (Szczeparu 2005:143).

The current study results demonstrated lack of respect and anger from the nurse/midwives towards the clients seeking cervical cancer screening. One participant shared an example of an elderly woman who would be showing signs of being shy to be screened and the provider just says, "elele! You woman, you are taking my time, I won't attend to you." Such shared experiences among women would result in negative intentions towards cervical screening practices. Similarly, in Mutyaba, Faxelid, Mirembe and Weiderpass's (2007) qualitative study with patients and nurse/midwives at Mulago hospital, a concern was raised by the researcher during the discussion with nurses in a postnatal/family planning clinic. The nurse/midwives were asked why they were sometimes unfriendly to the women. Their responses were: "we lack equipment to use. We run out of slides to do Pap smears. We are understaffed. You lose your temper when you have to do so many things at a go. Take the example of labourward; you can face a line of fifty mothers. Nobody appreciates and when things go wrong you are blamed instead. Possibly that is why you transfer the anger to the patients." On the other hand, the Physician-Hospital OrganizationPerformance Programme (PHO Performance Programme) (2010:50-51) states that a clinician who is not rushed is more likely to have success with women who have previously avoided having a cervical cancer smear than someone who is time pressured. A healthcare system that does not respect a patient's culture may lead to reluctance to seeking help resulting in late presentation (Szczceparu 2005:143).

Confidentiality and privacy

During the current study some of the participants indicated that sometimes women felt that their privacy and confidentiality would not be maintained. Data display 5.6.9 contains information in this regard.

DATA DISPLAY 5.6.9 Confidentiality and privacy		
	•	Sometimes women feel, should this young lady view my private parts, is she going to maintain my privacy and confidentiality, maybe she will be going round saying, that woman uh! uh!
	٠	Some of the women may be discouraged with the system at the out patient's department

• Some of the women may be discouraged with the system at the out patient's department where two patients come into the consultation room at the same time and they think the same should be happening at the cervical cancer screening clinic.

• They just feel if they come for screening all the findings will be revealed to other people.

The respect for confidentiality and privacy are important factors that influence a woman's experience with care. Screened women who were interviewed in Peru, Kenya, Mexico and South Africa expressed the need for confidentiality. Women who had been screened commonly reported feeling ashamed and or shy when privacy was not observed. A feeling of embarrassment had also been echoed for having to expose their genitals (Bingham, Bishop, Coffey, Winkler, Bradley, Dzuba&Agurto 2003:s414). Although most women could view the screening test as an accepted part of womanhood, dignity remains important. Benchmarks for privacy and confidentiality of patients include sharing of patients' information to enable care, with consent (Challinor 2007:24).

The findings of data display 5.6.9 are similar to those of a study done at Mulago hospital in Uganda. Women felt that their privacyas well as confidentialityhad not been maintained. It was observed that many students converged on one patient. One woman indicated that there was a lack of privacy as up to four healthcare workers could examine her '*private parts*' while a number of students could be watching. In order for the cervical cancer service providers to win women's confidence, PHO Performance Programme (2010:51) suggests that women should be reassured that the consultation is entirely confidential and that all health workers are bound by that confidentiality. They should also be reminded that they do not need to disclose to others the reason for their consultation. Where possible, women should be given the choice of who they wish should screen them. It is therefore important that the

experience of cervical cancer screening is as positive as possible. Women who have positive cervical cancer screening experiences are more likely to return and to encourage their friends and family to attend screening services (PHO Performance Programme 2010:51).

5.4.7 Theme 7: Knowledge about the aetiology of cervical cancer

The other theme that emerged from the data was knowledge about the aetiology of cervical cancer. Data display 5.7 shows the categories regarding this theme.

DATA DISPLAY 5.7		
THEME 7: KNOWLEDGE ABOUT THE AETIOLOGY OF CERVICAL CANCER		
5.7.1 Traditional vaginal preparations		
5.7.2 Disease of the elderly		
5.7.3 Information given on causes of cervical cancer		
5.7.4 HIV		

5.4.7.1 Category 7.1 Traditional vaginal preparations

The participants mentioned that women perceived traditionalvaginal preparations to be the cause of cervical cancer, as depicted in data display 5.7.1.

DATA DISPLAY 5.7.1 Traditional vaginal preparations		
•	They usually mention the traditional medicine which they use to help in reducing the size of the vagina.	
•	Women don't know about the organism called HPV. In the community women believe inyou know us women have the tendency to believe that we should have a tight vagina. So that men are sexually satisfied. In order to do this women insert traditional medicine	
•	Some mention the use of some traditional medicine inserted in the vagina as treatment for trichomonasvaginalis.	
•	Some say "I used to insert traditional medicine in the vagina, now I have just noticed that I am having a heavy watery discharge."	

Knowledge gaps have been affirmed to exist specifically about women's understanding of the link between sexual behaviours, HPV, cervical cancer screening and cervical cancer (Breitkopf, Pearson &Breitkopf 2005:82). The WHO (Erah 2008; Wani 2007; Kirksey 2007) estimated that 80.0% of the African population used traditional medicines for Primary Health Care. Mangoma, Chirenje, Chimbari and Chandiwana (2006:100) also reported that some women engage in

practices like use of vaginal preparations, which are perceived as causes of reproductive health problems and diseases like cervical cancer. In their study 83 (44.1%) women in Mutoko and 70 (41.7%) in Shurugwi had used various forms of vaginal preparations during their lives. One of the reasons given for using these preparations was to enhance sexual satisfaction and enjoyment for their partners. Their belief is that men enjoy "*dry sex*" and the vagina should be tight. The herbs are then used to dry and tighten the vagina. However, these traiditonal practices have not been proven scientifically to cause cervical cancer (Mangoma et al 2006: 96).

5.4.7.2 Category 7.2Disease of the elderly

Some participants in the current study indicated that some women might be interested in attending cervical cancer screening because having the condition is a sign that one is now old. At health centre B one participant stated that "some women referred to it as a disease for the elderly. That is saying the person is now old."

Women's knowledge about causes of cervical cancer is an essential factor influencing their intentions to utilise screening services. This enhances their risk status perceptions. In a study with Israeli lesbian women, differences were observed between the compliance rates of various age groups both regarding their actual testing and their intentions to be tested, with older women (above 30) undergoing testing three times more often than younger women (aged 18-29) and expressing an intention to be tested almost twice as oftenas younger women. This might be explained by the fact that medical personnel tend to recommend screening for early identification of cancer, including Pap tests to older women more often than to young women (Ben-Natan&Adir 2009:436-439).

5.4.7.3 Category 7.3Information provided about the cause of cervical cancer

Findings for the current study demonstrated that women had limited knowledge about the cause of cervical cancer. With this in mind, the researcher wanted to know how this was addressed. The participants explained that women would only be knowledgeable of this following motivation talks. At health centreC one participant stated that "we do not go into detail explaining about the HPV we just mention it if the women ask. Women only appreciate after the motivation talk." Data display 5.7.2 contains information in this regard.

DATA DISPLAY 5.7.2		
Information provided about the cause of cervical cancer		
 Only after teaching them and explaining to them that an organism called HPV causes cervic cancer, that is when they get to know 	al	
 Women are told that cervical cancer is caused by an organism that cannot be seen by nake eyes. We still call it a virus, meaning that it does not respond to any type of medicine. I would advise her that you should not use any traditional medicine in the vaging to reduce the variant of the vaging to reduce the variant of the	ed of	
lumen		
 After getting the information from the health education that we give them that is when the realise that oh! oh! So some of these things I was just doing them ignorantly not knowing the they can cause this problem 	∍y at	

Knowledge about HPV, as the primary causative organism of cervical cancer, increases women's perceived susceptibility to the condition. Ingeldue, Cottrell and Bernard's (2004) study demonstrated a significant relationship between knowledge about HPV and behaviour. Those who had Pap tests during the preceding year were significantly (p<0.001) more knowledgeable about HPV and cervical cancer.

An understanding of the factors that influence women's decision to use cervical screening is essential for any attempts to increase uptake. During literature searches for "*main predictors of participation in cervical screening programmes and interventions*" using CINAHL, Science Direct (Elsevier), MEDLINE (Ovid) and Blackwell synergy databases, influences of women's decisions to attend for screening emerged (Gannon & Dowling 2008:1283). Providing more information, increases knowledge and assists in decision making according to Adab, Marshall, Rouse, Randhawa, Sagha and Bhangoo (2003:592). On the other hand in their study undertaken in Birmingham, in the UK, provision of more information to the women resulted in a small reduction in their expressed willingness to usecervical cancer screening services. However, the question of how much information should be given to women is an important factor (Gannon & Dowling 2008:1282).

5.4.7.4 Category 7.4Human ImmunoDeficiency Virus (HIV)

The participants in the current study explained that there was a tendency of some women to confuse HPV and HIV during motivation talks. One participant mentioned

that the ones who seemed to be concerned were those with HIV positive status. When they got the information they expressed that, according to their understanding, the organisms were similar, therefore being HIV positive meant they could also be having cervical cancer. Participants' responses in the current study also indicated that some women were confused about the origin of both HIV and cervical cancer. According to the participants, these elderly women would question that *"in the past all these conditions were not there? These must been have brought into the country by the people who come from other countries or they say those who usually travel outside the country are the ones who bring in these strange diseases." The participants further mentioned that details about the difference between cervical cancer and HIV infection were given to womenin simple terms when they ask for them. Data display 5.7.3 shows the nurse/midwives' explanations when addressing the thoughts that <i>"HIV causes cervical cancer."*

DATA DISPLAY 5.7.3 HIV as a cause of cervical cancer

- We explain that HPV and HIV infections are two different conditions though the causative organisms are in the same group of viruses.
- We also explain that it is possible that one can have cervical cancer but not being HIV positive or one could have HIV infection but without cervical cancer.
- When they hear of HPV for the first time it is something they cannot even mention very well. But after discussions they are able to know the difference.
- When we mention of the virus, we differentiate by saying, the virus for HIV is found in blood while HPV for cervical cancer is found on the cervix and on the penis

Similar to the current study's findings are study results among Hispanic men and women on the Texas–Mexico border, in the USA. Both genders tended to compare HPV with AIDS or other STIs. Throughout their discussions participants continued to show confusion about the STIs, cancer and other illnesses (Fernandez, McCurdy, Arver, Tyson, Morales-Campos, Flores, Useche, Mitchell-Bennett & Sanderson 2010:5).

HIV infection is one of the risk factors for HPV infection. Cervical intraepithelial neoplasia (CIN) is common in HIV infected women because both HIV and HPV are sexually transmitted and HIV infected women are more likely to have persistent HPV infections (Robinson, Goff & Falk 2009). In Bolivia, Peru, Kenya and South Africa, many women and their partners stated that cervical screening tests were used to detect STIs or HIV and therefore many decided not to get screened. In Kenya, the

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confusion was attributed to women who had been told that cervical cancer was caused by HPV. This had negative connotations since at that time there was heavy stigmatisation against HIV. Positive STI test results were often viewed as proof of marital infidelity. Due to this stigma some women were fearful about explaining the results of the examination to their spouses or women decided not to be screened at all (Bingham et al 2003:3).

5.4.8 Theme 8: Knowledge about treatment for abnormal cervical cancer screening results

Data display 5.8outlines the categories under the theme: Knowledge about treatment for abnormal cervical cancer screening results.

DATA DISPLAY 5.8		
KNOWLEDGEABOUT TREATMENT OF ABNORMAL CERVICAL SCREENING RESULTS		
5.8.1 Awareness of available treatment		
5.8.2 No cure		
5.8.3 Information given about treatment		

It is essential that individuals have the reassurance that once subjected to a screening procedure, treatment would be available to address discovered health problems.

5.4.8.1 Category 8.1 Awareness of available treatment

In the current study, results demonstrated that all participants at health centreA said the women showed some awareness of available treatment for cervical cancer symptoms. At health centresB and C participants were divided in their responses. Some women had some knowledge while others had no idea about the availabletreatment. At health centreA, the participants mentioned that the women knew the different types of available treatment following individual counseling, and after sharing information with friends who had been diagnosed with the problem. The participants' responses in this regard are presented in data display 5.8.1.

DATA DISPLAY 5.8.1

Methods of information acquisition on available treatment for cervical cancer

- Sometimes we get surprised to hear them say "I thought I will be referred to a central hospital. They have just sorted it out right here." This would be the group of women having minor problems.
- They have started knowing, through the information which they share.
- Discussions are done with the group that will have come for screening.
- After screening those interested, results are communicated and together with the client, we review what was discussed during the group counseling on the type of treatment available.

Findings of this study concur with a study done in Manchester, UK, evaluating the psychological impact of taking part in repeated testing for HPV in the context of cervical cancer screening. Some women were disappointed with a persistent presence of the virus. Some reported that the offer of a colposcopy and additional monitoring led to feelings of reassurance. This was particularly true if women knew that their cervical abnormalities could be easily treated. Women preferred regular testing and colposcopies (Waller, McCaffery, Kitchener, Nazroo& Wardle 2007:199-200). Wong, Wong, Low, Khoo and Shurib (2009:49) also stated that awareness of the available types of treatment for pre-cancerous changes of the cervix and for cervical cancer, if detected early, could motivate women's interest in cervical cancer screening.

5.4.8.2Category 8.2: No cure

The role of the cervical cancer screening test in the early detection of precancerous changes would be defeated if women state that they would rather not know if they had the disease or if nothing would be done about abnormal findings (Wong et al 2009:50). Participants during the current study indicated that some women had expressed feelings of hopelessness in the event that they were diagnosed with cervical cancer. The nurse/midwives indicated that this negatively affected women's intentions to use cervical cancer screening services. Similarly, Nelson et al's (2002:711) study revealed that women reported that they avoided cervical cancer screening because they believed that there was little that a person could do to reduce the risk of cancer and that cutting into cancer makes it spread throughout the entire body. These findings demonstrated a lack of knowledge about the importance of cervical cancer screening for early detection and treatment to reduce morbidity

and mortality rates from cervical cancer. The role of the cervical cancer screening test in the early detection of precancerous changes would be defeated if women state that they would rather not know if they had the disease or if nothing would be done about abnormal findings (Wong et al 2009:50).

5.4.8.3Category 8.3Information given on treatment for cervical cancer

In the current study, inadequate information on treatment for cervical cancer came out strongly as one of the factors that negatively affected women's intentions to have cervical cancer screening. The nurse/midwife participants in this study mentioned that information on cervical cancer treatment was given to women with whom they were in contact at the healthcarecentre. In the current study, inadequate information on treatment for cervical cancer became evident as one of the factors that negatively affected women's intentions to have cervical cancer screening. When giving motivation talks, the importance of early detection and treatment for the early stages of the condition was emphasised. One participant said, "We tell them that if a woman is diagnosed with early signs, treatment is available." For the treatment they are advised that "you will be given treatment that freezes all abnormal cells on the cervix then you will come for review. During review, should the results show that there isn't much improvement you are referred to a specialist for further management at tertiarylevel."

According to Path (2001:5) service challenges for cervical cancer screening and treatment include, lack of knowledge about screening and treatment. In three districts of Uttar Pradesh, India, a strategic assessment of cervical cancer prevention and treatment revealed that most community members reported familiarity with other forms of cancer but rarely knew about cervical cancer and its treatment options (Abash, Vajpayee, Jacob, Dzuba, LI, Bradley&Prasad 2005:5).The quality and accuracy of information given to clients has been shown to influence their treatment choices (Selman, Parkash& Khan 2006). In their assessment of the quality of health information for cervical cancer treatment available for clients on the Internet, it was revealed that the information was accurate but that major gaps existed. The information posted on the treatment of stage "0" of the condition was the only option correctly reported in over90.0% of the websites.It was also noted that there were

deficiencies in a website'sability to publish information suitable for a lay person. If women are to be motivated to plan for cervical screening, adequate and appropriate information on treatment options is essential (Selman, Prakash& Khan 2006).

5.4.9 Theme 9: Motivators for cervical cancer screening intentions

In the current study, participants mentioned some of the motivators for women to attend cervical cancer screening services. These were health institutional, media and community motivators. Motivating women to consider having a cervical cancer screening test is one way of ensuring early detection and treatment of cervical cancer. Various existing resources can successfully motivate women through the improvement of their level of knowledge about cervical cancer screening and treatment (Perkins, Langrish, Jostern& Simon 2007:192). Motivators might include the use of developed materials such as information brochures, leaflets, pamphlets and flyers, posters andbanners, photo comics, women's or men's educational guides/manuals, educational flip charts, outreach workers' job aids, training manuals for community health workers and counseling job aids for health personnel (Coffey, Arrossi, Bradley, Dzuba& White 2004:25).

5.4.9.1 Category 9.1 Health institutional motivators

The participants interviewed during the current study mentioned that women perceived motivation talks given by nurse/midwives and lay health workers(known as health surveillance assistants), mother-to-mother groups and community-based distributors of family planning methods as cues fortaking up cervical cancer screening. During motivation talks women were encouraged to use cervical cancer screeningservices.

Gannon and Dowling (2008:1282; Twinn et al 2007:18) affirm that invitation and educational interventions by healthcare personnel are the most effective methods of increasing cervical cancer screening uptake. Similarly, a study byBessller, Aung and Jolly (2007:400) demonstrated that women who had received a recommendation from their physician were also more likely to have been screened for cervical cancer during the previous year (prevalence odds ratio: 2.08, 95% CI: 1.11, 3.92). In Kenya,

Peru, South Africa, Ghana and El Salvador projects, targeting cervical cancer, developed aids to assist healthcare workers in standardising educational messages. This was aimed at reducing the spread of false information and unfoundedrumours (Coffey, Arrossi, Bradley, Dzuba& White 2004:25).

5.4.9.2 Category 9.2 Media

Strategies to increase the women's intentions to use cervical cancer screening services, demonstrated that specifically targeted mass media campaigns can create a steady, if small, increase in cervical cancer screening rates. These are effective methods of reaching a broad section of the population. Evidence has also suggested that informed women are more willing to respond to requests from practitioners to be screened for cervical cancer during consultations (Sheila,Holroyd, Fabrizio, Moore and Dickinson 2005:5). The participants interviewed during the current study stated that media had also enabled women to access information on cervical cancer and screening. The most commonly mentioned means were radio, television and newspapers. Data display 5.9.1 demonstratesparticipants' replies on types of media cited by women as sources of information on cervical cancer and screening.

DATA DISPLAY 5.9.1 Media motivators as stated by nurse/midwives		
•	The women say, they have heard about it on the radio announcements and that will have motivated them.	
•	If they watch something being aired on the television, a lot of women get interested and they would say ooh! So there are these issues. It also gives them reassurance that if they get screened they will not have the condition.	
•	There was a time a nurse from Mulanie used to show a picture of how cervical cancer	

• There was a time a nurse from Mulanje used to show a picture of how cervical cancer presents on television. When women saw that picture that week a lot of women came for screening and they were all referring to the picture that was shown.

• Some read from newspapers for those who are able to read. They would say, "We read from the newspaper that at such and such a place they are offering cervical cancer screening services."

Strategies to increase the women's intentions to use cervical cancer screening services, demonstrated that specifically targeted mass media campaigns can create a steady, if small, increase in cervical cancer screening rates. These are effective methods of reaching a broad section of the population. Evidence has also suggested that informed women are more willing to respond to requests from practitioners to be

screened for cervical cancer during consultations (Sheila, Holroyd, Fabrizio, Moore and Dickinson 2005:5).

Findings, similar to those in data display 5.9.1, were observed in a study by Anderson, Mullins, Siahpush, Spittal and Wakefield (2009:871 & 873). A mass media campaign broadcast in 2004 and 2005, targeting women aged 40-69 years whose pap tests were overdue, increased the number of women screening by 27.0%. In addition, one participant in Boyer, Williams, Callister and Marshal's (2001:243) study acknowledged that the only way the Hispanic women's cervical cancer screening behaviour could change was through television programmes watched in their homes. This was the case because most women spent more time at home providing child care. She further suggested that the education programme should include specific information on the purpose of cervical screening, the process, the recommended frequency, the consequences of not having Pap smear tests and financial information.

During the current study participants also expressed that women's intentions to come for screening tests was very low. Data display 5.9.2 depicts the participants' replies to this regard.

DATA DISPLAY 5.9.2		
Low intentions to use cervical cancer screening services		
 Most of them have no intention to come unless you explain to them. 		
 A lot of women wish they were screened for cervical cancer but most of them are below 40 years. This could be due to the fact that the information is not reaching those 42 and above as required. 		
• May be the intention could be there but because many women of this age do not come to the hospital which means we are missing them.		
 As of now the intention among those above 42 years is not high may be if we intensify our promotion. 		
 Most of the times they would present themselves here when they have complaints but not just coming for screening. It does not happen. 		
• I have not come across women aged 42 and older. So may be in the other health centres the attendance is high but here they don't come as many.		
• I feel the attendance is not that high. There are very few. That is considering the ones we see when rendering screening services.		

These findings have implications on the amount of information to which this group of women might be exposed. According to Twinn et al's (2007:17 & 19) study results, before implementation of a health promotion campaign, only 19.3% (36 out of the

197) of women who, at baseline, had either never attended or were unsure whether they had ever been screened, had ever thought about attending for cervical screening. Older women were less likely to re-attend (p<0.001). However, following the health promotion campaign participants had more positive attitudes towards health screening practices.

5.4.9.3Category 9.3Community motivators

From the data it was shown that friends, husbands, chiefs and victims of cervical cancer were cited by participants to have motivated women to use cervical cancer screening services. Community members form a trusted source of information on cervical cancer and screening. In a study conducted with undergraduates of the University of Ibadan in Nigeria, the students who were aware of cervical cancer screening, mentioned friends and colleagues as their sources of information. Data display 5.9.3 shows replies from participants in this regard.

DATA DISPLAY 5.9.3 Friends as sources of information

- Their friends who have been screened before would encourage them saying "*my friend, you are delaying, I went to the clinic, it is just fine, actually it's not what we were thinking that they remove the uterus, clean it or that there is a painful metal. I have been screened. Do not waste time.*"
- They would say, I heard women talking about it then I thought "ah! Let me also go and find out."
- They would say, "My friend came here and she said she was diagnosed with cervical cancer and has been assisted."
- Some women would come together with those who have been screened before. The other women would be waiting outside. Then after being screened they go back together.
- They would be saying"I went for cervical cancer screening ih! ih! ih! They do not take long to communicate the results."

Winkler et al (2007:17) found that a supportive social environment was critical in influencing women to plan to be screened for cervical cancer. In their study it was shown that screened women were more likelyto have friends that encouraged each other to get screened (p<0.04) and knew more family members,friends or acquaintances who had gone for screening during the past three years than unscreened women (p<0.001). The screened women also reported knowing an average of seven other women who had been screened, compared with 5.8 women reported among the unscreened sample (p<0.001). In Bolivia, Peru, Kenya, South Africa, and Mexicostudy findings on factors that affect participation rates in cervical

cancer prevention programmes, suggested that women were more likely to be screened when they had heard about the services through a women'sor a church group. In one South African Alliance for Cervical Cancer Prevention research project, womenreported enjoying group information sessions, knowing they could bring their friends and neighbours. Indeed, inthis setting, women often came to the health facility once or twice with a friend to learn about the servicebefore they agreed to be screened. This allowed them to be convinced about the need to do so (Bingham et al 2003:s412).

In the current study, one participant from health centreB stated that some husbands would share information on cervical cancer after motivation talks. The aim of sharing would be to encourage and motivate their wives so that they could benefit from the cervical cancer screening services. Spousal support has a positive effect on intentions to use screening services. Social support may be in a form of financial, advisory and motivational (Pelcastre-Villafuerte et al 2007). In Uganda, a patriarchal society, women attending postnatal care were asked how they managed to come to hospital for postnatal care (cervical cancer screening inclusive) since the majority of women did not come back for their postnatal checkups. One participant's response was "*my husband facilitated me. I told him and showed him the discharge form with the appointment date and he gave me the money*" (Mutyaba 2007:5).

During a strategic assessment of cervical cancer prevention and treatment services in three districts of Uttar Pradesh, India, some men reported discomfort discussing matters of reproductive health or sexuality with women. However, after having learned about the potential benefits of screening, most were willing to encourage their wives and female relatives to be screened (Dabash et al 2005:5). These findings demonstrate how influential men could be if their roles are knowledgeablepertaining to cervical cancer and screening.

Sharing the harsh reality of a woman dying of cervical cancer was suggested to be one of the factors that could have helped to overcome the relaxed cultural attitude towards the initiative to be screened for cervical cancer among Hispanic women. One participant declared that a lack of knowledge could create a false sense of security. Only after she had witnessed someone suffering from cervical cancer did she realise the importance of cervical screening for the early detection of cervical cancer (Boyer et al 2001:243).

During the current study one participant from health centreA, revealed that some months back a lady had died of cervical cancer within the health centre's catchment area. The period following that incident the health centre registered an increased number of women for cervical cancer screening tests. The women who witnessed her death were saying "*eh! eh! the way ……...died! They say it was the same condition.*"

During the current study it was clear that chiefs were considered to be strategically placed for passing on information, about cervical cancer screening, to their people. The chiefs were considered to be, living close to the women, present during meetings or when there were funerals. These gatherings were regarded as being the best opportunities for sharing such information and women would value it. Community leaders such as chiefs are influential in motivating their people to be involved in different health activities. They are also perceived as role models because they share the same cultural background (Dabash et al 2005:5-6).

Community leaders involved in a study by Dabash et al (2005:5-6), though unaware of the cause and magnitude of cervical cancer, were particularly interested in learning how they could facilitate prevention and awareness, particularly information education and communication and screening campaigns. The leaders stressed the importance of access to these services, especially at the PHC level.One community leader declared that she would prioritise cervical cancer screening services and request midwives to do home vistis to educate the women. This implied that information and screening opportunities could then be accessible even to the old, widowed women in the community. 5.4.10 Theme 10: Preferred venues for sharing information about cervical cancer screening

The participants from all three health centresconfirmed that women, aged 42 years and older, rarely visited the health centresunless they had health problems. The researcher, therefore, wanted to find out from the participants' perspective at which venues these women would prefer to meet to share information about cervical cancer and screening. The participants felt this group of women could best be reached through visits to the communities. Commonly mentioned community groups in which these women, aged 42 and older, would mostly be reached were during functions such as: churcheservices, weddings, bridal showers, funerals, community development meetings, chief community meetings, outreach clinics and work places or school activities. Data display 5.10.1 depicts the participants' replies in this regard.

DATA DISPLAY 5.10.1		
Preferred venues for sharing cervical cancer and screening information		
 Those with information on cervical can needle work or cookery meetings. 	ancer screening can share with others during knitting,	
 At our church there is a medical com programmes so that we can share info 	mittee. We sometimes ask them to include us on their rmation on cervical cancer.	
 When women are having church meet African Presbyterian) Doricawomen's invite us to talk about health issues. 	ings such as Women's Guild group (Church for Central group (Seventh Day Adventist Church) they used to	
 When I am given a chance to talk ab included cervical cancer screening. T including the elderly ones. 	out "hygiene issues" during bridal shower, I have also his would be explained to the whole group of women	
 At work places that is where this info where there is a good number of me wives. 	rmation can also be promoted greatly because that is n. If men get the information they will share with their	
 We can also go through the chief or elderly women. If the message comes 	the chief's wife. She usually has meetings with fellow from the chief's wife, women easily accept it.	
 In this area my observation is, inforn during funeral ceremonies. 	nation to do with the hospital or community is shared	
 Through the chief, women can be acce 	essed during outreach clinics.	

Similarly during an ethnographic study on cervical cancer among women in rural Kenya, it was revealed that the most preferred venues for information sharing included seminars in churches, seminars for women's groups in community and health education outreach activities by community health workers (Gutune&Nyamongo 2005:1055).



5.4.11 Theme 11: Enhancing women's cervical cancer screening intentions

The participants in this study recommended thatwomen's intentions to be screened for cervical cancer could be improved, aspresented in data display 5.11.1.

DATA DISPLAY 5.11.1			
Strategies used to increase women's intentions to use cervical cancer screening services as			
cited by participants			

- We need to change the bad perception that people have about us health workers and portray a good picture to them.
- We need to treat others the way we would also love to be treated especially our interactions with people.
- There is a need to intensify health education giving especially in the communities, including those far from the hospitals
- We need to change our screening schedules and inform women that if they cannot manage to come in the morning, they should be free to visit the clinics in the afternoon
- We need to give information on cervical cancer to all women who come here for different healthcare services, not only family planning and postnatal services
- There is a need to assess the adequacy of the information that we give to the women
- Need for more providers to be trained and adequate supply of resources so that women are not sent back without being screened
- We need to reach out women through outreach clinic just like for under fives
- Emphasis on cervical cancer should be made in thenursing schools' curricula in order to reach out to many nurse/midwives

Achieving adequate motivation levels for women to be screened for cervical cancer is critical among older women to reduce morbidity and mortality rates from cervical cancer. Strategies to improve screening uptake might vary according to context, type of test and target group (Weller & Campbell 2009:S57).

Regular utilisation of cervical cancer screening services is crucial for early detection. To ensure regular attendance, healthcare workers need to access those who have never been screened and encourage those who had been previously screened to influence their intentions to attend for screening in future. Improving cervical cancer screening service provision includes increasing community awareness and motivation, addressing accessibility to quality health services, addressing staffing, scheduling and counseling issues (Coffey, Arrossi, Bradley, Dzuba& White 2004:31). It is also essential to engage community leaders and groups for improving motivation levels for the utilisation of cervical cancer screening services (Dabash et al 2005:70).

5.5 SUMMARY

This chapter discussed the findings from the semi-structured interviews with the nurse/midwives from three health centres in Blantyre. The first part in this chapter presented the results from the quantitative analysis of responses to the close ended questions followed by qualitative data analysed from the open-ended questions. The qualitative section has been presented according to the major themes that emerged from the data. Table 5.4 presents a summary of the major themes and categories for the qualitative section.

Table 5.4: Summary of phase 2:	Findings 1	from the	semi-structured	interviews
conducted with nurse/midwives				

RESEARCH QUESTION	What are the factors identified by nurse/midwives that are associated with intentions to be screened for cervical cancer among women aged 42 and older
STUDY OBJECTIVES	 Identify from midwives' perspective, which factors are associated with intensions be screened for cervical cancer among women aged 42 and older determine the nurse/midwives' suggestions on how to generate women's interest in cervical cancer screening among women aged 42 and older

THEMES	MAJOR CATEGORIES
	 Knowledge about cervical cancer Unclear and inadequate information provided about cervical cancer and screening
THEME 1: Perceptions of cervical cancer as a condition	 Disease progression A few women were aware that early detection and treatment saves lives
	 Women sharing information that it has no cure and it is linked to witchcraft
THEME 2: Knowledge about cervical cancer screening tests and early detection	 Limited information about the available screening tests, frequency of cervical screening and the meaning of early detection of cervical cancer Information on screening tests and purpose of the testgiven briefly
THEME 3: Women's perceived susceptibility to cervical cancer	 Low perception of being at risk of cervical cancer Information on risks factors to cervical cancer given to women
THEME 4:	Cervical cancer is an incurable and killer condition

THEMES	MAJOR CATEGORIES
Women's perceived fatalism of cervical cancer	
THEME 5: Women's perceived benefits of cervical cancer screening	 Knowledge of the status of one's cervix Women wanting to know exactly what is happening in their bodies Trust in the nurse/midwives for the treatment with early detection Nurse/midwives being trusted to provide help in the event that cervical screening results were positive. Post screening counseling Information given during counseling according to cervical screening results
THEME 6: Women's perceived barriers to cervical cancer screening	 Healthinstitutional factors Shortage of trained cervical cancer screening providers Lack of motivation talks Shortage of material resources Distance to facility Inadequate infrastructure Client factors Fear of equipment (steel speculum) used for screening Misconceptions about cervical cancer screening Cultural influence Inconvenient screening schedules Long distance to health facility Low perception of the risk status Lack of knowledge of the places where cervical cancer screening screening services are provided Nurse/midwives' factors Lack of knowledge about cervical cancer screening Negative attitudes of nurse/midwives towards women Lack of confidentiality and privacy
THEME 7: Knowledge about the aetiology of cervical cancer	 Traditional vaginal preparations Use of traditional vaginal preparations to help dry and tighten the vagina (for enhanced sexual pleasure) Disease for the elderly Having the condition is considered to be a sign of old age Information given on the cause of cervical cancer Nurse/midwives briefly explaining about HPV as the major cause of cervical cancer HIV as a cause of cervical cancer HIV positive women considering themselves as also having cervical cancer Inability to differentiate HIV and HPV, both being viruses
THEME 8: Knowledge about treatment for abnormal cervical cancer screening results	 Awareness of available treatment Nurse/midwives hold discussions with the women who will have come for cervical cancer screening No cure

THEMES	MAJOR CATEGORIES
	 Women feel even if the condition is detected early there is no effective treatment
	 Information provided about treatment Nurse/midwives emphasisethe importance of early detection and treatment ofcervical cancer
THEME 9: Motivators forusing cervical cancer screening services	 Health institutional motivators Nurse/midwives Health surveillance assistants Mother-to-mother groups Community based distributors of family planning methods Media Radio Television Newspapers Community motivators Friends Husbands Chiefs Victims of cervical cancer
THEME 10: Preferred venues for sharing information about cervical cancer screening	 Church Wedding and bridal shower Funeral Community developmental meeting places Chief community compound Outreach clinics Work places and schools
THEME 11: Enhancing women's intentions to use cervical cancer screening services (suggestions from nurse/midwives)	 Intensify health education treat others the way you would also love to be treated change the bad perception that people have about us health workers change our screening schedules information on cervical cancer to all women who come here for different healthcare services not only family planning and postnatal services assess the adequacy of the information that we give to the women More providers should be trained for provision of screening services Adequate supply of resources Establish outreach clinics to capture the old and widowed Emphasis on cervical cancer screening in thenursing/midwifervcolleges' curricula

The researcher used the results from chapters 4 and 5, quantitative and qualitative data respectively, to formulate conclusions for the current study. These conclusions from chapters 4 and 5 are compared and contrasted in chapter 6. Limitations and recommendations are also presented in chapter 6.

CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS OF THE STUDY

6.1 INTRODUCTION

The results obtained for this study have been discussed in chapters 4 and 5 being the quantitative and qualitative phases respectively. Chapter 6 presents the conclusions based on these two phases of the study. This is followed by a comparison and synthesis of the results from both phases. Recommendations drawn from the two phases have been presented. Limitations impacting on the generalisability of the study's findings willalso be addressed.

6.2 CONCLUSIONS AND RECOMMENDATIONS FOR QUANTITATIVE PHASE 1: STRUCTURED INTERVIEWS CONDUCTED WITH WOMEN AGED 42 AND OLDER

This study aimed toidentify factors associated with women's intentions to be screened for cervical cancer. The quantitative phase was guided by the HBM's five components. These were perceived susceptibility, perceived severity/seriousness, perceived benefits, perceived barriers and cues to action. The objectives that guided the study were also based on the HBM's components. These objectives enabled the researcher to identify and discuss factors associated with women's intentions to utilise cervical cancer screening services. Therefore, conclusions and recommendations are presented according to these objectives.

6.2.1 Purpose of the study

The purpose of this study was to determine the factors associated with women's intentions to be screened for cervical cancer if they are aged 42 and older. The specific objectives for this phase were to:

- identify demographic variables for women aged 42 and older and their association with these women's intentions to be screened for cervical cancer
- describe the association between perceived susceptibility to cervical cancer in women aged 42 and older and their intentions to be screened
- determine the association between the perceived seriousness of cervical cancer in women aged 42 and older and their intentions to be screened
- determine the association between the perceived benefits of cervical cancer screening in women aged 42 and older and their intentions to be screened
- identify the association between perceived barriers to being screened for cervical cancer among women aged 42 and older and their intentions to be screened
- analyse the association between cues to action (sources of information) for cervical cancer screening among women aged 42 and older and their intentions to be screened

6.2.2Women's intentions to usecervical cancer screening services

Findings:

More than half 57.2%(f=218) of the respondents were planning to be screened for cervical cancer. However, 42.8% (f=163) did not have plans to be screened within the following year. The results also demonstrated that only 25.0% (f=94) had been previously screened for cervical cancer while 75.0% (f=282) had not been screened. The most cited reasons for not having been screened included:"I am not sick and have no pain"and "I am always busy."

Conclusions:

Almost three quarters of the women had not been screened for cervical cancer and almost half had no plans of doing so. Screening for cervical cancer would help to detect cervical cancer at an early stage in order to institute timely treatment. This could reduce the mortality andmorbidity rates related to cervical cancer.

Recommendations:

Healthcare providers should educate women, especially those aged 42 and older, about the available cervical cancer screening services so that women would be more knowledgeable and make better informed decisions about utilisingthese free services in Malawi.

6.2.3 Perceived susceptibility to cervical cancer

The objective was to describe the association between perceived susceptibility to cervical cancer in women, aged 42 and older, and their intentions to be screened.

Findings:

The results of the current study demonstrated that the women had some misconceptions about their susceptibility to cervical cancer. These misconceptions included that cervical cancer screening is meant only for sexually active women(30.0%; f=113) and that their chances of getting cervical cancer were not high(49.9%; f=187).As many as 22.0% (f=83)of the respondents indicated that "having cervical cancer is a matter of bad luck or fate." Using traditional vaginal preparations"to dry and tighten the vagina for increased sexual pleasure" was cited as one of the risk factorsby 26.9% (f=7) of the interviewed women. Other respondents felt that "if one does not have any discomfort or pain there is no need for a cervical cancer screening test."The 377 respondents' answers revealed that 94.4% (f=356) had no prior HPV knowledge and did not know how it was transmitted. A statistically significant association was observed between intention to be screened for cervical cancer and knowledge about the cause of cervical cancer at the 5% level (X²=8.9, df=1, p=0.003). There was also a significant association between the intention to undergo cervical cancer screening and having heard about HPV infection (X²=4.2, df=1, p=0.041) at the 5% level. Thus, knowledge about HPV, as the primary causative organism of cervical cancer, might increase women's perceived susceptibility to cervical cancer and their intention to have the screening test.

Conclusion:

Some of the women had inadequate knowledge about the transmission of HPV and their risk status for cervical cancer. Lack of understanding of how HPV is contracted, and their risk status, might impact negatively on women'sabilities to preventHPV infections and to utilise screening services for early detectionand treatment of cervical cancer.

Recommendations:

Health workers should emphasise the risks of cervical cancer and should dispel misconceptions that having cervical cancer is a matter of bad luck or fate.Commonly used traditional vaginal preparations should be tested scientifically to determine their effects on the cervixso that women can be given scientific explanations of these effectsdepending on the outcomes of such research.

6.2.4 Perceived severity/seriousness of cervical cancer

The objective was to determine the association between perceived seriousness of cervical cancer in women aged 42 and older, and their intentions to be screened.

Findings:

Mostrespondents 90.5%(f=343) considered cervical cancer to be a serious condition rendering one hopeless, although they did not consider themselves to be at risk. Some respondents indicated that surgical removal of the uterus or cervix would affect their sexuality and cause their husbands to divorce them. However, some women 95.8% (f=361) agreed that seeing somebody suffer from cervical cancer would encourage women to utilise the screening test. Therefore, despite fear of divorce,due tosurgical removal of the uterus, some respondents 31.3% (f=118) agreed that they would rather take the test and discover the hidden disease than go through the pain of cervical cancer.

Conclusion:

Cervical cancer was not perceived as a serious condition by women.

Recommendations:

- There is a need to provide health education on cervical cancer and screening, including details about the seriousness of cervical cancer.
- Each clinic should strive to advise women aged 42 and older, attending any clinic, to utilise cervical screening services. A pamphlet with information about cervical cancer and cervical screening services should be provided to every woman aged 42 and older who visits any clinic or any healthcare service (see annexuresX1 and X2).

6.2.5 Perceived benefits of being screened for cervical cancer

This objective aimed toidentify the association between perceived benefits of cervical cancer screening among women aged 42 and older, and their intentions to be screened.

Findings:

Almost three quarters 72.8%(f=275) of the respondents were aware that cervical cancer screening could unveil a hidden disease. They also agreed that cervical cancer screening would save lives if detected and treated at an early stage. Each respondent knew at least onehealth institution that offered cervical cancer screening services. However, only 14.9% (f=56)of the respondents knew the procedures used for early detection of cervical cancer. (When a Chi-square test was applied this difference was not statistically significant,($X^2=0.5$; df=1, p=0.49) at the 5% level of significance).

Conclusion:

Most women had adequate knowledge about the benefits of being screened for cervical cancer, but the minority 14.9% (*f*=56) knew about the screening procedure.

Recommendation:

 Women aged 42 and older should be educated about the screening procedures used for early detection of cervical cancer, and about the accessibility of these services.

6.2.6 Perceived barriers to women's intentions to takeup cervical cancer screening tests

The objective was to identify the association between perceived barriers to being screened for cervical cancer among women aged 42 and older, and their intentions to be screened. These included issues concerning stigma, embarrassment and fear, socio economic factors, traditional medicine and traditional healers.

Findings:

Most respondents (92.0%; *f*=346)perceived the procedure for cervical cancer screening as being "not embarrassing" even if the examining person was a male. The majority (92.6%; *f*=349) also stated that they would share information about their results of cervical screening with a family member while 7.2% (*f*=27) would not do so. As many as 21.0% (*f*=79)women indicated that women with cervical cancer are considered to be dirty. However, some respondents (87.0%; *f*=327) had no problem being seen by a friend or colleague at a cervical cancer screening clinic while 45 (12.0%) indicated that they would be concerned about being noticed at such a facility.

The majority of the respondents (90.5%; f=341) indicated that it was not expensive to have a cervical cancer screening test and 92.8% (f=350) reported that it was not List of research project topics and materials

difficult to create time for the screening test. On the other hand 58.9% (f=222) of the respondentswould have preferred the screening services to be provided near their homes or offices.

Most respondents (95.7%; *f*=360) did not believe that cervical cancer is caused by evil spirits. Most of them also disagreed that, if diagnosed with cervical cancer, they would deal with the evil spirits before going to a doctor. However, as many as 96.8% (*f*=364) of the respondents confessed that they would trust a traditional healer to treat cervical cancer.

Conclusions:

Some of the respondents were concerned to be seen at a cervical cancer screening clinic by friends or colleagues, indicating a possible fear of stigma attached to cervical screening, especially since some respondents reported women with cervical cancer to be regarded as being dirty. This might prevent women, who intend to be screened, from using these services.

In Malawi, cervical cancer screening tests are provided free of charge in government hospitals.Most respondents walked to health centres even if the health facility was some distance away from their homes. This might have contributed to the majority stating that cervical cancer screening was not expensive. In addition, finding time to go for screening was not an issue because the majority of the women were unemployed or self employed. However, most women would have preferred these services tobe provided near their homes or offices.

Some women would consult a traditional healer first, rather than modern medical services, should they have cervical cancer related symptoms. This could have a negative impact on early detection and treatment of cervical cancer. In addition, women might not adhere to modern management of cervical cancer if they believed in traditional medicine's curative abilities for cervical cancer.

Recommendations:

- There is a need to enhance the community's knowledge about cervical cancer to dispel misconceptions. This would create a more conducive environment for women to freely utilise cervical cancer screening services without fear of stigmatisation.
- Cervical screening services should be offeredMonday to Friday from 7:30 to 17:00 hours and on Saturday 7:30 to 12:00 hoursin all health centresselected to be providing screening, this would reducewalking distances. These services should be integrated with other services.
- Mobile clinics should be established in order to bring screening services closer to the women's homes or offices. This would reduce distances to health facilities and cut costs especially for the elderly widowed and less educated women. Mobile screening services might offer cheaper and more accessible services to women who might be unable to access these services under the prevailing conditions in Malawi.
- Traditional healersshould be educated aboutcervical cancer, available screening procedures and benefits of early detection and treatment. Traditional healers should be knowledgeable about referring women for cervical screening.
- Traditional healers should help to spread the correct information about cervical cancer screening and early detection and should refer women, aged 42 and older, to utilise cervical screening services. Traditional healers could help to distribute pamphlets (refer to annexuresX1 and X2) with information about cervical cancer and cervical screening for women aged 42 and older.

6.2.7 Cues to action

The objective was to analyse the association between cues to action (sources of information), for cervical cancer screening among women aged 42 and older, and their intentions to be screened.

Findings:

Some respondents (36.2%; *f*=230) mentioned healthcare providers as their source of information about cervical cancer screening. Hospital clinics were the most 37.8% (*f*=356) cited preferred venues for sharing cervical cancer screening information. Despite this, in total, 62.2% (*f*=587) of the responses indicated sites other than hospital clinics such as churches. Some respondents (23.9%;*f*=171) also noted that radios were a good source of information as well as their preferred (54.9%;*f*=209) method of getting information. On the other hand, a considerable number (26.3%;*f*=167) of respondents indicated friends as their source of information. Surprisingly, motivation talks by healthcare providers were not a popular response (14.4%;*f*=55) as an available source of information.

Conclusions:

Most respondents considered the health care providers to be the source of cervical cancer and screening information. Some respondents also felt that friends played a very important role in cervical cancer screening information sharing. It has also been shown that most respondents were aware of one or more available sources of information for cervical cancer and screening. Motivation talks given by healthcare providers were not featured highly, implying that the women had not appreciated the benefits of this approach, or might have had limited access to such health talks as they might not visit healthcare institutions frequently. From these findings, it can also be concluded that women,aged 42 and older,did not consider hospital clinics as their preferred venues for discussing cervical cancer screening issues,but that this information shouldrather be shared among friends in their communities.

Recommendations:

 As more women become aware of the screening services, more women would plan to have the test; hence more nurse/midwives should be trained for providing cervical cancer screening services (see annexuresZ1andZ2).
- Women who have been screened for cervical cancer appear to be the best community advocates for enhancing women's intentions to participate in cervical cancer screening. Therefore, strategies such as peer support and empowerment through information sharing are more likely to influence women's intentions to have the screening test done than just information given by providers of screening services.
- Healthcare providers need to intensify motivation talks targeting women aged 42 and older as they are considered to be major available sources of information. Intensified use of local media, such as local radio and television broadcasts, could reach larger numbers of women aged 42 and older.
- There is a need to consider that pamphlets (refer annexuresX1 and X2) with information about cervicalcancerand screening should be available at all clinics. Such pamphlets must contain contact numbers where more information could be obtained.
- Consider providing volunteers, community and church leaders with information and resources to promote cervical cancer screening. Encourage nurses/midwives to present talks at such community gatherings. All outreach materials should be appropriate for an audience that might have women aged 42 and older, with literacy and cognitive limitations.
- Information should also reach men. In some cultures men play a major role in health decision making, including where and when women could use cervical screening services. Men's approval for their wives to use cervical screening services might play a significant role in enabling Malawian women to access these services.

6.2.8 Suggestions for improvement

Findings:

More than half of the respondents (60.4%; f=166) favoured door-to-door campaigns encouraging women to go for screening and sharing information with friends at work or at home. Some respondents (15.6%; f=43) also mentioned that hospitals should ensure that human, equipment and material resources for screening are always available. The interviewed women cited instances when they had been sent back several times, without cervical screening being done, due to lack of vinegar at the clinics.

Conclusion:

Some respondents would like cervical cancer screening services to be available closer to their homes or workplaces, and that these services should be available when requested at the clinics.

Recommendation:

• Malawi's Ministry of Health and key players in cervical cancer service provision should ensure that resources are readily available in order provide effective services to women when they request for them (refer annexure Y).

6.3 CONCLUSIONS AND RECOMMENDATIONS FOR PHASE 2 OF THE STUDY: RESULTS FROM SEMI-STRUCTURED INTERVIEWS CONDUCTED WITH NURSE/MIDWIVES ATTHREE HEALTHCENTRES

The conclusions and recommendations for phase 2 are presented according to the HBM's majorconcepts. Theseare: knowledge about cervical cancer, screening tests, early detection and treatment; women's perceived susceptibility to cervical cancer; women's perceived fatalism of cervical cancer; women's perceived benefits of early detection and treatment of cervical cancer; women's perceived barriers to cervical cancer screening intentions; motivators for cervical cancer screening intentions; women's self motivation/intentions to be screened for cervical cancer; and suggestions given by participants on how togenerate increased cervical cancer screening intentions.

6.3.1 Knowledge about cervical cancer, aetiology, available screening tests, early detection and treatment

Findings:

Nurse/midwives indicated that women had limited information about cervical cancer, the causative organism (HPV), available screening tests, frequency of cervical screening and the meaning of early detection of cervical cancer. The interviewed nurse/midwives explained that some women felt that there was nothing they could do if cervical cancer had been diagnosed. Some women considered it to be a mysterious disease of which the origin remained so complex that it was linked to witchcraft. However, the nurse/midwives stated that they emphasised the different stages of cervical cancer during motivation talks. The women were also informed that stage one of cervical cancercould be treated effectively by freezing the affected cells.

Conclusions:

Inadequate information about the causative organism, progression of cervical cancer, available screening tests, the meaning of early detection and treatment would impact negatively on women's intentions to be screened because they would not be aware of the existence of cervical cancer which, if detected early,could be cured.Linking it with witchcraft and seeking help from traditional healers is associated with delays in early detection (Kazaura et al 2007:21) and treatment of cervical cancer with modern medical methods.Therefore, women might neither plan nor adhere to regular cervical cancer screening schedules.

Recommendations:

 Messages must be provided in the community and in all health centres on the causative organism, stages of cervical cancer and importance of early detection and treatment, specifically targeted at women aged 42 and older using simple local language. Pamphlets with the relevant information in the local languages (see annexuresX1 and 2) could help to do so.

- Awareness talks, using developed IEC materials, appropriate for women aged 42 and older, should link issues such as HPV, abnormal bleeding, cervix cancer and pain. These could also be related to the consequences oflate diagnosis and treatment, compared to the benefits of early diagnosis and timely effective treatment.
- Research should be conducted on the effect of the traditional vaginal preparations on the cervix. Depending on the outcomes of these tests, healthcare providersshould provide scientific explanations for not supporting the use of such vaginal preparations.
- Acceptable, information on the stages of cervical cancer should be placed within the wider context of other information provided during motivation talks for healthy women aged 42 and older.
- Traditional healers should be trained and involved in providing cervical cancer screening messages considering their influential position in the communities.
- Traditional healers could play an important role in distributing pamphlets (see annexuresX1 & X2) and in referring women aged 42 and older for cervical screening.

6.3.2 Women's perceived susceptibility to cervical cancer.

Finding:

The interviewed nurse/midwives pointed out that most women aged 42 and older, perceived themselves tobe at low risk of cervical cancer. As a result some women accorded low priority to planning for cervical cancer screening.

Conclusion:

Women reportedly hadinadequate information about the risk factors associated with cervical cancer.

Recommendation:

 Clearly displayedposters, depicting risk factors for cervical cancer, at healthcare service centres. Pamphlets (refer annexuresX1 and 2), with relevant information about cervical cancer and its screening services, should be available next to each poster.

6.3.3 Women's perceived fatalism of cervical cancer

Finding:

The nurse/midwives reported that some women felt cervical cancer was fatal because it is a silent condition, not easily identifiable, untreatable, which can cause the surgical removal of the uterus and they also feared death from cervical cancer.

Conclusion:

According to the nurse/midwives, some women perceived cervical cancer to be fatal because of the associated consequences. However, the nurses/midwives maintained that many women lacked information about the prospects of early detection and effective treatment. If women could appreciate of the identification and treatment of cervical cancer at an early stage,more women would utilise screening services and the survival rate for cervical cancer sufferers would improve in Malawi.

Recommendation:

 With consent from women who have benefited from early detection and treatment of cervical cancer, their experiences should be shared with other women, in an attempt to convince women of the dire necessity of cervical cancer screening.

6.3.4Women's perceived benefits of cervical cancer screening

The nurse-midwives cited three major benefits, namely: knowledge of the status of one's cervix, trust in nurse/midwives for the treatment with early detection and post screening counselling.

Findings:

According to the nurse-midwives, some women felt knowing the status of their cervix and trusting nurse/midwives to provide treatment in the event of positivecervical screening results, were benefitsof having the screening test done. In addition, some women were counselled after the cervical cancer screen test according to the screening results. The nurse/midwives reportedly advised women about the date for the next visit, those with no abnormal cervical screening results were advised how to stay healthy.

Conclusion:

According to the nurse/midwives, women's awareness that cervical cancer screening enables them to know the status of their cervix,might inspire them to utilise cervical screening services. This meant that from the nurse/midwives perspective, women felt it was better for them to be safe than sorry. The nurse/midwives also felt that increased intentions for using cervical cancer screening tests would be achieved with enhanced perceived support and trust from health care providers.

Recommendations:

 Ensure that human and material resources are always available for cervical cancer screening,treatment provision for abnormal cervical screen results such as Cryotherapy for early stages of cervical cancer or referral for further management for advanced stages. This might help strengthen and maintain the trusting relationship between clients/patients and service providers.

- Enhance proper feedback or counselling following the procedure so that women are involved in their careand are encouraged to plan for a regular attendance for early detection and treatment.
- Emphasise that women with negative cervical cancer screenresults still need to plan for regular screening. Nurse/midwives need to encourage with negative cervical cancer screening results to the test done at regular intervals in future.
- Ensure that providers are adequately trained in all aspects of cervical cancer service provision, including counselling skills (see annexuresZ1 and Z2).

6.3.5 Women's perceived barriers to using cervical cancer screening services

6.3.5.1 Healthcare institutional factors

The nurse/midwives participants raised five issues in relation to healthcare institutional factors. These were, shortage of trained cervical cancer screening service providers, lack of motivation talks, inadequate material and structural resources, unfavourable schedules for screening and distancesclients/patients needed to travel to reach their nearest healthcare facility.

Findings:

At health centre C nurse/midwives pointed out that there was a shortage of cervical cancer screening service providers. The trained providers also had to work any shifts at the health centre, including night duty. Therefore, at times, cervical cancer screening services were not provided because the provider was engaged in other duties. It was revealed that the frequency of giving motivation talks on cervical cancer screening varied for each health centre,ranged from the days scheduled for cervical cancer screening, targeting clients attending family planning and postnatal care services, to once per week or twice per month. It was also evident that giving of motivation talks was perceived to be the responsibility of the trained providers only. The participants also pointed out that there were irregular supplies of resources such as vinegar, gloves and gas for sterilising equipment. At health centre C it was

V=vI=List of research project topics and materials

reported that there was also a problem with the infrastructure. In terms of clinic hours, services were offered from 7:30 to 12:00 on Wednesdays at health centre A, Mondays, Wednesdays and Fridays at health centres B and C. These clinics were closed during weekends, public holidays and afternoons of week days. The nurse/midwives further reported that some of the women had to travel long distances to access cervical cancer screening services.

Conclusions:

- Regular intentions to have cervical cancer screening tests require regularly available services. When women were turned away without receiving the screening services due tolack of supplies and infrastructure, their motivation and the client-provider trusting relationship could be negatively affected. This might discourage women to come back for the screening test in future.
- Motivation talks were not given regularly because it was perceived to be the responsibility of the trained providers. The women, aged 42 and older, missedmotivation talks because the targeted clinics were not frequented by this group of women. This could lead to low intentions to be screened for cervical cancer in this age group.
- The schedule of opening hours and days followed during the period of the study might have limited women who could not get time off from their offices or household work. This might contribute towards missed opportunities for screening and such women might be disadvantaged to use available healthcare resources.
- Women aged 42 and older, are elderly women who might be unable to travel long distances, hindering these women's intentions to be screened for cervical cancer.

Recommendations:

• Trained cervical cancer screening providers should be exempted from other duties at the healthcarecentreto ensure that services are always available on

the scheduled days. This would assist in creating a trusting client/service providerrelationship.

- All nurse/midwives working at the health centres, providing cervical cancer services, should be trained as providers so that screening services are more accessible (refer to annexuresZ1 and Z2).
- Review and strengthen the cervical cancer screening component in the nursing/midwifery technician training curricula so that all students should graduate as providers of cervical cancer screening services.
- Train and supervise somelay healthcare workers, such as health surveillance assistants, to give talks about cervical cancer screening in the local languages at specific healthcarecentres and community gatherings. This information could then be enhanced by the providers during the cervical cancer screening process.
- Provide motivation talks at all clinics at the health centres not only at the postnatal and family planning clinics to enhance accessibilityfor women aged 42 and older.
- Incorporate cervical cancer screening topics in the schedule for motivation talks not only on the days scheduled for screening. The list should provide a means for signing by the individual providing the talk on each day.
- Formulate guidelines to standardise the information given on cervical cancer screening by any healthcare provider. These would also give confidence to non providers to give the motivation talks.
- Supportively supervise the services being provided in order to note its impact in meeting the planned objectives effectively.
- Commitment from the Ministry of Health to increase budget allocations in order to sustain the supply of screening resources to healthcare centres providing these services. This would also enable the healthcare centres that discontinued providing the service to re-introduce these services.
- Assign a specific room for cervical cancer screening at designated health centres if screening services are to be accessible whenever required.
- Consider opening cervical cancer screening clinics every day of the week (Monday to Friday) from 7:30 until 17:00,Saturdaysand public holidays from

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7:30 until 12:00to accommodate those who would be busy during the morning hours and working days. These could be integrated with other services such as family planning and postnatal services.

- Encouragewomen and their families to prioritise women's health so that they canseek cervical cancer screening services for early detection and treatment.
- Consider creating mobile clinics to serve communities that are far from the healthcarecentres providing screening services.

6.3.5.2 Client factors

The nurses/midwives mentionedfive issues under client factors. These were, fear of equipment used for screening, misconceptions about the cervical cancer screening procedure, negative cultural influences, misconceptions of the at risk group of womenand feeling embarrassed about the procedure.

Findings:

The nurse/midwives at all three health centres reported that women shared similar fears of experiencing pain during the cervical cancer screening procedure and of being diagnosed with cervical cancer. These participants also indicated that many women had misconceptions regarding cervical cancer such as that during cervical cancer screening HIV status was also checked; women were asked to bear down and that the whole uterus was being removed, cleaned and then replaced. Reportedly women's low intentions to be screened for cervical cancer were due to some cultural barriers, including that the women felt embarrassed with the procedure; felt uncomfortable to be screened by young providers;women's partners resisted their participation in cervical cancer screening. Some traditional beliefs included that the women felt because they were no longer having menses and did not have sex often, the screening test was inapplicable to them. Some women also had inadequate knowledge about the available cervical cancer screening services and their accessibility.

Conclusions:

- According to the nurse/midwives, fears shared and misconceptions among the women would hinderthem from planning to have the test.
- The nurse/midwives felt women's cultural factors might influence their intentions to be screened for cervical cancer. When women strongly believed in these cultural factors they might experience many conflicts or discomforts if they plan to use such services.
- From the nurse/midwives' perspective, if women did not consider themselves to be at risk, they would not plan fornor adhere to regular screening for cervical cancer.
- Nurse/midwives felt that the women's lack of awareness of the accessibility of available cervical cancer screening services significantly influenced the women's intentions to use these services. Lack of knowledge might imply that messages about cervical cancer screening did not comprise the required details to enable women to access these services.

Recommendations:

- Service providers need to be understanding and supportive by explaining the procedure step by step to each client/patient, give her the opportunity to see the speculum, reassure her that it is lubricated before use and that different sizes are used for each person's comfort. This might helpreduce the fears attached to the speculum and the procedure
- Invite womenwho have been previously screened to voluntarily share their experiencesabout the cervical cancer screening procedure in public settings or through outreach actions to individual women who had neverused these services.
- Dispelmyths and misconceptions with individuals or groups at the health centres as well as at community levels.
- Train cervical cancer screening providers of different age groupshow to handle elderly women so as to minimise their embarrassment during the procedure.
- Give opportunities, where possible, for the women to choose whom they wish to screen them.

- Involve men during motivation talks conducted at the health centres, community
 or work places so that they can appreciate the importance of cervical cancer
 screening and encourage their wives/partners to use cervical cancer screening
 services.
- Raise community awareness about the dangers of engaging in traditional medicine or faith healing for cervical cancer-related symptoms while cervical cancermight progress to subsequent stages, decreasing the chances of effective treatment and of survival.
- Exploreoptions in the current healthcare systems for opportunistic screening and reminders to he women who are not up to date with their screening schedule.
- Develop information material (depicting healthcare institutions providing cervical cancer screening services) that should be: displayed in strategic places for clients to read and aired on the local radio and television.Drama clubs/role plays could also be utilised to the same effect.

6.3.5.3 Nurse/midwives' factors

Findings:

The nurse/midwives who had not been trained as providers expressed that they were not confident about providing information about cervical cancer screening and even about providing screening services because they lacked knowledge and skills. They feared giving wrong results to women.Participants also reported that some nurse/midwives demonstrated anger and lack of respect to the elderly women who seemed to be embarrassed by the procedure. The nurse/midwives' negative attitudes were transferred to the women when they were required to perform several activities simultaneously due to shortage of staff.

Furthermore, it was explained that sometimes women thought that their private information would be shared with other people. Women also felt their privacy would be interfered assessing them in the presence of other clients, as experienced atsome clinics not rendering cervical cancer screening services.

Conclusions:

- Nurse/midwives should be adequately trained for providing cervical cancer screeningservices because they have a large role to play in informingthe general public and promoting preventive practices. If not, wrong or inconsistent information could be shared and women might not be disouraged from taking up the screening test.
- A good attitude towards women is essential in motivating them to plan for the test and to remain up to date with screening schedule. The negative attitudes displayed towards women who might feel shy and embarrassed might cause fear and create bad client-provider relationship.
- Lack of confidentiality and privacy undermines womanhood and dignity (Challinor 2007:24). This might lead to low intentions for using cervical cancer screening tests. Women who have positive cervical cancer screening experiences are more likely to return and encourage friends and family members to plan to use these services.

Recommendations:

- Clarify clinical guidelines related to screening procedures and encourage the use of standardised IEC materials in order to reduce confusion.
- Provide reference materials and providers who can mentor the other nurse/midwives on cervical cancer screening activities so that theycan become confident service providers.
- Nurse/midwives need to be sensitive to cultural diversity when managing clients/patients and should be especially mindful about discomfort, privacy and embarrassment of clients.
- Nurse/midwives need to have a caring, easy to talk to attitude; provide information and opportunities for women to ask questions in order for them to feelat ease.

• Reassure women that the consultation is entirely confidential and that all providers are bound by that confidentiality.

6.3.6 Motivators for cervical cancer screening

Findings:

The nurse/midwives reported that women perceived motivation talks, provided by health care workers, to be cues for intending to take up cervical cancer screening tests while others were motivated following radio announcements and watching television programmes. According to the nurse/midwives there was also sharing of information and experiences among community members, including sufferers fromcervical cancer. Furthermore, findings demonstrated support among women to the extent some would escort other women to the clinic. This encouraged the women to plan for using the cervical cancer screening test.

The nurse/midwife participants also revealed that women, aged 42 and older, rarely visited healthcare centres unless they had health-related problems. Therefore, they felt this group of women could be reached during church activities, weddings, bridal showers, funerals, community development meetings, outreach clinics and work places or school activities.

Conclusions:

From the nurse/midwives' perspective motivation talks, media and a supportive social environmentplayed important roles in prompting unscreenedand already screened women to plan for a cervical cancer screening test. Inaddition, outreach strategies that work through churches, schools and women's group networks could effectively and efficiently reach many women with the required information about cervical cancer screening.

Recommendations:

- Strengthen and support the existing motivation and counselling sessions at the healthcare centres
- Strengthen and support the existing plans of using media such as local radio and television stations and local newspapers for reaching women aged 42 and older. This would reinforce their knowledge about cervical cancer screening.
- Train outreach workers and or women who are up to date with their screening schedulesso that they could participate in outreach efforts, especially by speaking to other women in the local languages.
- Provide information and support to community leaders, such as chiefs, to encourage women to use cervical cancer screening services. Personal visits to such community leaders by healthcare workers would be a good strategy.
- Women's group leaders, especially if they had been screened would be good role models.
- Integrate cervical cancer screening messages with other health and development activities in the community such as health week in churches and Foundation for International Community Assistance (FINCA) meetings.
- Enhance and support existing opportunities used for giving messages during funerals, bridal showers and wedding functions to reach out majority of the women aged 42 and older.

6.3.7 Generating increased interest in cervical cancer screening

Findings:

Nurse/midwives made some recommendations in order to generate increased interestamong women aged 42 and older to use cervical cancer screening tests. These were:

- Portray a good attitude to motivate women to plan for a cervical cancer screen test
- Intensify health education, especially that provided in the communities
- Establish outreach and/or mobile clinics to reach the old and widowed women

- Reachout to all women aged 42 and older who are already at the health centres with cervical cancer screening messages
- Train more providers of cervical cancer screening services
- Introduce supervision and monitoring of cervical cancer screening activities to ensure quality serviceprovision
- The MOHshould allocate adequate budgetary allowances for resources in the health centres providing cervical cancer screening services
- Review and strengthen cervical cancer screening content in the nursing/midwifery technician colleges' curricula so that all students graduate as providers

Conclusions:

It can be concluded that nurse/midwives acknowledged that cervical cancer screening services provision could be improved in order to increase the number of women aged 42 years and older utilising these services. If these recommendations were addressed, more women aged 42 and older would plan to have cervical cancer screen tests at the recommended intervals.

Recommendations:

 With support from all key players in implementation of cervical cancer screening services, consider implementing recommendations and suggestions depicted in this thesis. This would ensure attainment of the intended purpose for the provision of cervical cancer screening services.

6.4RECOMMENDATIONS FOR FUTURE RESEARCH

Cervical cancer is the second most common cancer in women but the most common cancer among women in SSA (WHO 2002). It has been estimated that women in developing countries account for 85.0% of global annual cervical cancer deaths. Malawi is among the countries with high rates (Chirenje et al 2001:128; Collymore 2004; Sita et al 2006; MOH 2004:4). Cervical cancer screening services were

initiated in Malawi during 1999. However, there are some challenges that need to be addressed to provide these services. The current study sought to identify factors from the perspectives of women and nurse/midwives, concerning intentions to be screened for cervical cancer among women, aged 42 and older. The current study used quantitative (structured interviews) and qualitative (semi-structured interviews) research methods with 381 women and 14 nurse/midwives respectively. To generate increased levels of interest in cervical cancer screening among women aged 42 and older the following recommendations are made for future research:

- Qualitative research should be conducted with women aged 42 and older to explore the barriers experienced in utilising cervical cancer screening services.
- An intervention study on the recommendations made to increase women's intentions to take up cervical cancer screening services among women aged 42 and older.
- It was noted that most women had never participated in cervical cancer screening. More research is needed to fully understand the issues relevant to women, aged 42 and older, who have never participated in screening.
- A pathological research is required regarding the use of traditional vaginal preparations to tighten and dry the vagina and their relation to cervical cancer.
- Further investigations are required to determine whether recommended interventions might lead to intentions and actual screening behaviours.
- Statistics should be acquired from all healthcare services throughout Malawi about the number of cervical cancer screenings done, type of screening done, outcome, treatment and treatment outcomes.

6.5 RECOMMENDATIONS FOR NURSING EDUCATION

The conclusions from the results for phase 1 and 2 of the current study hold implications both for Nursing education and healthcare service. In order to improve women's intention to be screened for cervical cancer among those aged 42 and older the following recommendations should be considered:



- As more women become aware of the screening services, more women would plan to have the test; hence more nurse/midwives should be trained for providing cervical cancer screening services
- Review and strengthen all aspects of cervical cancer service provision, including counselling skills in the nursing/midwifery technician training curricula so that it is competency based (see annexures Z1 and Z2) such that all students should graduate as providers of cervical cancer screening services.

6.6 RECOMMENDATIONS FOR THE HEALTHCARE SERVICES

- Healthcare providers should educate women, especially those aged 42 and older, in the community and all healthcare clinics, emphasising the risks of cervical cancer, available cervical cancer screening services, screening procedures, benefits of early detection and treatment of cervical cancer, and dispel misconceptions so that women would make better informed decisions about utilising these services in Malawi.
- Train and supervise some lay healthcare workers, such as health surveillance assistants, to give talks on cervical cancer screening in the local languages at specific healthcare centres and community gatherings. Guidelines can be formulated for standardisation.
- Clearly displayed posters, depicting risk factors for cervical cancer, at healthcare service centres. A pamphlet with information about cervical cancer and cervical screening services should be provided to every woman aged 42 and older who visits any clinic or any healthcare service (see annexures X1 and X2).
- Cervical screening services should be offered Monday to Friday from 7:30 to 17:00 and on Saturdays 7:30 to 12:00in all health centres providing screening services. This would reduce walking distances. These services should be integrated with other services.
- Trained cervical cancer screening providers should be exempted from other duties at the healthcare centre to ensure that services are always available on the scheduled days and time.

- Commitment by Malawi's Ministry of Health and key players in cervical cancer service provision to ensure that human and material resources are readily available for effective provision of screening services (refer annexure Y).
- Nurse/midwives need to be sensitive to cultural diversity when managing clients/patients and should be especially mindful about their attitude, discomfort, privacy and embarrassment of clients.
- Exploreoptions in the current healthcare systems for opportunistic screening and reminders to the women who are not up to date with their screening schedule.
- Mobile clinics should be established in order to bring screening services closer to the women's homes or offices by reducing distances and costs under the prevailing conditions in Malawi.
- Traditional healers should be educated about cervical cancer, available screening procedures and benefits of early detection and treatment. They should be encouraged to refer women for screening considering their influential position in the communities.
- Consider providing volunteers, community and church leaders with information and resources to promote cervical cancer screening and encourage peer support and empowerment.
- Clearly display posters, depicting risk factors for cervical cancer, at healthcare service centres. Pamphlets (refer annexures X1 and 2), with relevant information about cervical cancer and its screening services, should be available next to each poster.
- Incorporate cervical cancer screening topics in the schedule for motivation talks not only on the days scheduled for screening. The list should provide a means for signing by the individual providing the talk on each day.
- Strengthen the existing plans of using media such as local radio and television stations and local newspapers for reaching women aged 42 and older to reinforce women's knowledge about cervical cancer screening.

6.7 RECOMMENDATIONS ON THE USE OF THE HEALTH BELIEF MODEL IN CERVICAL CANCER SCREENING PROGRAMME

The present study provides indications that the HBM appears to have been effective in guiding the process. According to Lee, Fogg and Menon (2008:97), the HBM is an important model for explaining cervical cancer screening behaviours. It is one of the most widely used frameworks for trying to understand health behaviours, including the use of health screening. In addition, these authors further stated that the HBM has been successful in organising theoretical predictions of preventive health actions, including individual perceptions of disease, individual perceptions of preventive actions and modifying factors. Thus it is a useful framework for studies aimed at understanding health behaviours that involve preventive health services. Therefore, it is essential that health care programme planners and implementers should be knowledgeable aboutand utilise some of these models and theories that have an impact on health seeking behaviour practices.

6.8 COMPARISON OF STUDY FINDINGS FOR CHAPTERS 4 AND 5

6.8.1 Perceived susceptibility

The findings from interviews with women aged 42 and older demonstrated that they had inadequate knowledge about the cause of cervical cancer or about abnormal cervical changes and HPV as the primary causative organism. The women also did not consider cervical cancer to be a health concern to them. In phase 2, the qualitative results also affirmed that there was a knowledge gap about the aetiology of cervical cancer in women. Some women even confused HPV and HIV. However, the nurse/midwives reported that they only mentioned HPV during motivation talks. Brief explanations would be given about HPV only when women asked for such information. The nurse/midwives reportedly also explained the difference between HPV and HIV to the women. In addition, both phases' results indicated that women, aged 42 and older, did not feel at risk of cervical cancer because they were no longer having menses and did not often have sex.

6.8.2 Perceived severity

Women reported that cervical cancer was fatal and that there was very little one could do about it. They further indicated that loss of the cervix or uterus through surgery would make them lose sexual enjoyment. As many as 234 (61.5%) women would rather take the screening test and discover the hidden disease than go through the pain associated with cervical cancer. Similarly, in phase 2, nurse/midwives stated that women considered cervical cancer to be fatal, but still preferred that it should be diagnosed and treated at an early stage. At one health centre a number of women attended the screening services because of the bad experience of one woman who died from cervical cancer in the area.

6.8.3 Perceived benefits

In both phases of the study, knowing the status of one's cervix was cited as a benefit for intending to take up a cervical cancer screening test. These results are consistent with those found by other researchers (Sullivan, White, Young & Scolt 2008:20; Mwakisha 2004:6).

However, in phase 1, some women feared being diagnosed with cervical cancer while phase 2 results showed that women trusted the nurse/midwives to provide help in the event that their cervical cancer screening results would be positive. Dabash et al (2005) stated that cervical cancer screening, without the possibility of treatment, would be pointless.

6.8.4 Perceived barriers

The study results in both phases 1 and 2 indicate similar barriers to women's intentions to be screened for cervical cancer among those aged 42 and older. These included: distance to the healthcare facility, traditional practices and limited access to screening services. Similar findings were cited by others (Peterson et al 2008:941; Tsui and Tanjasiri 2008:397; Ackerson and Gretebeck 2007:598; Vorobiof, Sitas and Vorobiof 2001:127S; Path 2000:16). Women's intentions to be screened for cervical cancer would increase if these barriers could be addressed.

The results for phase 1 suggest that every woman knew at least one or more healthcare institutions that offered cervical cancer screening services. On the other hand in phase 2, nurse/midwives indicated that these women had limited knowledge about the accessibility of the available screening services. Women need to be aware of available services and their accessibility before they can plan to utilise them.

6.8.5 Cues to planning for utilising cervical cancer screening tests

6.8.5.1 Common sources of information

In both phases it was revealed that healthcare providers, friends, radios and television were the common sources of information about cervical cancer screening. The healthcare workers mentioned in phase 2 included, lay healthcare workers such as health surveillance assistants, community-based distributors of family planning methods and mother-to-mother counsellors of HIV positive antenatal and postnatal women. However, in phase 1 motivation talks at the health centres did not feature highly as a means of acquiring information about cervical cancer screening. In phase 2, lack of motivation talks was cited by the nurse/midwives as a barrier impacting negatively on women's planning to usea screening test. At health centre C it was reported that even though motivation talks about cervical cancer screening were supposed to be given once a week, sometimes it was only given once or twice a month. The nurse/midwives further stated that they felt giving motivation talks was the responsibility of the trained providers. In addition, those who were not providers did not feel confident to give these talks.

6.8.5.2 Preferred venues for sharing information about cervical cancer screening

Nurse/midwives indicated that women, aged 42 and older, rarely visited the health centres unless they had health-related problems. Furthermore, motivation talks at the health centres were given to women attending family planning and postnatal clinics, missing out the women aged 42 and older who would be at the health facilities for other reasons. As such, the nurse/midwives felt that this group of women

can best be reached through visits to the communities. Commonly mentioned community gatherings frequented by this group of women were: church activities, weddings, bridal showers, funerals, community development meetings and chiefs' community meetings. Similarly, in phase 1, door to door campaign, sharing information with friends at work or home and involvement of the chiefs were suggested to be the best ways of ensuring that the majority of women become motivated to have the screening test. As long as cervical cancer screening providers target their awareness campaignsat the child bearing age group visiting the family planning and postnatal clinics, intentions to take up the test among women, aged 42 and older, would not succeed.

6.9 LIMITATIONS OF THE STUDY

The current study is unique because it assessed factors associated with intentions to be screened for cervical cancer from the perspective of women aged 42 and older and nurse/midwives. However, there are some limitations in this study that should beconsidered before accepting any of the conclusions, or before generalising any of the results. These include:

- This study involved onlywomen aged 42 and older visiting the three participating healthcarecentres in Blantyre. Therefore these results cannot be assumed to reflect the perceptions of all women in the southern region of Malawi.
- The researcher utilised a non probability, convenient sampling method for phase 1. This might not reflect a true representation of the characteristics of the population from which it had been drawn.
- It is possible that participants for phase 2 (nurse/midwives) might have given responses to please the researcher knowing that she is also a nurse/midwife.
- The researcher, being a nurse educator, expected all the nurse/midwives to be knowledgeable about most aspects of cervical cancer and screening acquired through basic training. This might have introduced some bias duringphase 2 (semi-structured interviews conducted with 14 nurse/midwives).

- The researcher utilised three research assistants to assist with data collection during phase 1, this could have introduced interviewer variability. However, the researcher trained and supervised the research assistants. In addition, the research instrument was pre-tested to ensure consistency among interviewers. Furthermore, the researcher and research assistants completed information obtained from the first client on separate structured interview schedules concurrently during an interview. Queries raised were discussed and addressed at the health centres. The statistician compiled an interrater reliability indicating that no major differences existed between responses obtained by the different interviewers.
- Chichewa is not the researcher's mother language. Therefore, the researcher does not speak Chichewa fluently. However, the instrument was translated into Chichewa by experts at John Hopkins Project.
- Data for phase 2 relied oninformation reported by the nurse/midwives.
 Observations of the nurse/midwives' actual practicesmight have generated additional information, possibly providing different perspectives.

6.10SUMMARY OF THE STUDY

This study concentrated on identifying, from the women's and from the nurse/midwives' perspectives, factors associated with intentions to utilise cervical cancer screening services among women aged 42 and older. It has been confirmed that much needs to be done to address challenges such as shortages of providers, lack of material resources and inadequate infrastructure so that these services could be more accessible to women, aged 42 and older. Many women lacked knowledge about cervical cancer screening and could thus not use these services. Fears, misconceptions, lack of finances, lack of social support, stigma and discrimination also posed barriers to the utilisation of these services.

Comprehensive information about the purpose of the test and unfounded myths and misconceptions (such as confusing HPV and HIV infections) could enhance women's intentions to be screened. Such information sessions were targeted at women attending family planning and postnatal clinics, missing the women aged 42 and

older, the age group with the highest incidence of and mortality from cervical cancer (Gakidou et al 2008:863). Many women aged 42 and older have completed their families and rarely visit healthcare facilities, implying that health education about cervical cancer screening should be provided at places other than healthcare facilities, such as social gatherings and church-related activities. Involvement of community leaders, lay health educators and media for providing cervical cancer screening information would help to reach many women and might influence them to consider using cervical cancer screening services.

Clinics should provide cervical cancer screening services during extendedhours rather than only for a few specific hours during the week when working women cannot access these services. Consistent replenishment of cervical cancer screening resources at healthcarecentres, providing these services, would enhance accessibility of these services.

6.11 SIGNIFICANCE OF THE STUDY

The cervical cancer screening programme in Malawi aimed at achieving an 80.0% coverage rate (MOH 2004:4).Facilities are available in Malawi to provide cervical screening services to large numbers of women, but few women use them. Unless the 80.0% level of cervical screening is achieved, or exceeded, Malawian women remain at risk of high cervical cancer morbidity and mortality. Cervical cancer can be cured but only if detected (by cervical cancer screening procedures) during the early stages.Based on this study's findings, more Malawian women could benefit from early detection and effective treatment of cervical cancer if the following cost-effective actions could be implemented:

- Provide ongoing health education about cervical cancer screening at healthcare facilities, but also at social gatherings and at church-related meetings. Community leaders, women cured from cervical cancer, and radio as well as television broadcasts should emphasise the importance of regular cervical screening.
- Myths and misconceptions (such confusing HPV and HIV) should be addressed.

- All women aged 42 and older who visit any healthcare institution, should be recommended to use cervical cancer screening services.
- Cervical cancer screening services should be available at all healthcare facilities during extended hours, with adequate resources and sufficient staff.
- All nurses should be trained and encouraged to perform VIA cervical screenings (even at PHC level) and to refer women with possible cervical abnormalities to higher level institutions. Nurses should also be trained to perform effective Pap smears, and measures should be instituted for tracing and treating women with abnormal Pap smear results.
- Records should be maintained at every healthcare facility about the number of VIA and Pap smear examinations done, the results, and the follow-up actions.
- The cervical cancer screening history of every woman diagnosed with cervical cancer should be recorded at every healthcare facility. Annual statistics should be compiled for every district and for Malawi as a whole.
- Women who have been successfully treated for cervical cancer should be recruited as health educators.
- Further research should be conducted about the traditional vaginal preparations used by Malawian women and about the possible consequences of such practices.

The importance of these services cannot be exaggerated because the WHO (2010) maintains that cervical cancer is the most common cancer among women in SSA. In Malawi, cervical cancer accounted for 28.0% of all female cancers, and 80.0% of Malawian women with cervical cancer were diagnosed during the advanced inoperable stages of cervical cancer (Dzamalala et al 2004).

University of Malawi College of medicine Obstrectric & Gynaecology Department P. O Box 360 Chichiri Blantyre 3

27th July, 2012-07-27

Professor DJ Ehlers University of South Africa

<u>RE : STATISTICAL ANALYSIS FOR MRS MELANIE YANDAKALE HAMI'S pHd</u> THESIS

Dear Prof,

I am Eddie Malunga an Executive Officer in the department of Obstetrics and Gynaecology at the University of Malawi, College of Medicine. I am responsible for medical auditing and research in the area of data management and analysis. I have a diploma in Business Administration and have worked in the area of statistical analysis in research for over 20 years. I have attended several statistical workshops in both qualitative and quantitative data analysis.

I assisted Mrs Hami with calculation of descriptive statistics, Chi-square, reliability analysis for her data. She then requested me to assist her in computing the reliabilities for the different sections of her instrument. The Cronbach alpha coefficient calculated was very low. Some of the contributing factors to the low Cronbach alpha values might have been:

- Fewer items in each section
- Low education levels of the interviewed women
- Sources of their cervical cancer screening information differed, which included friends, media and health education.
- A convenient sample which included any woman who met the criteria and had attended any clinic (or accompanied anybody to a clinic), **not necessarily the cervical cancer clinic.**
- Interviewed women might have had no background information in relation to cervical cancer and screening.
- Women were interviewed after attending the clinics. They could have been tired

The items contributing to low Cronbach alpha were not removed/manipulated because it was going to reduce the strength of the instrument. These values of reliability were left for the researcher and promoter to consider further research decisions or intervention in this area.



EDUCATIONAL QUALIFICATIONS

Diploma in Business Administration

Master of Public Health - Audited the following modules:

Demography Adolescent Health Maternal Health Health Management Information Systems Advanced Statistics for Epidemiology

Statistical workshops

Qualitative Research for Action Reproductive Health - Analytical Skills for Policies and Programs Statistical Modelling in case-control studies

Statistical competences

Use of qualitative and quantitative statistical software (Nvivo, Anthropac, Epi-Info, SPSS and Stata) Research designs and data collection Descriptive data analysis Statistical modelling (Logistics regression) Survival data analysis

ve.

Administrative Duties and Responsibilities

Community mobilization Coordinating and supervising research activities Maternal Morbidity and Mortality Audits Manuscript preparation Reproductive Health Research dissemination

References

The Head of Department O/G P/Bag 360 Blantyre 3.

Andrew Kumitawa College of Medicine P/Bag 360 Blantyre 3

ANNEXURE A: MAP OF MALAWI SHOWING BORDERING COUNTRIES



Source: Maps of World (2007:1)

ANNEXURE B: Stages of cervical cancer

Stages of Cervical Cancer

Ultrasound Exam

An ultrasound is a procedure in which high-energy sound waves (ultrasound) are bounced off internal tissues or organs, resulting in echoes. These echoes will form a picture (called a sonogram) of body tissues.

MRI (Magnetic Resonance Imaging)

An MRI is a procedure that uses a magnet, radio waves, and a computer to make a series of detailed pictures of areas inside the body. This procedure is also called nuclear magnetic resonance imaging (NMRI).

The results of these tests are viewed together with the results of the original tumor biopsy to determine the stage of cervical cancer.

Stages of cervical cancer include:

- Stage 0
- Stage I
- Stage II
- Stage III
- Stage IV
- Recurrent.

Stage 0 (Carcinoma in Situ)

In stage 0, cancer is only found in the first layer of cells lining the cervix, which means that it has not invaded the deeper tissues of the cervix. Stage 0 is also called carcinoma in situ.

Stage I

In stage I, cancer is only found in the cervix. This stage of cervical cancer is divided into stages IA and IB, based on the amount of cancer that is found.

Stage IA

In stage IA:

- A very small amount of cancer that can only be seen with a microscope is found in the tissues of the cervix
- The cancer is not deeper than 5 millimeters
- The cancer is not wider than 7 millimeters.

Stage IB

In stage IB, one of the following conditions is present:

- Cancer is still within the cervix
- Cancer can be seen with a microscope and is deeper than 5 millimeters or wider than 7 millimeters
- Cancer can be seen without a microscope and may be larger than 4 centimeters.

In stage II, cancer has spread beyond the cervix but not to the pelvic wall (the tissues that line the part of the body between the hips). This cervical cancer stage is divided into stages IIA and IIB, based on how far the cancer has spread.

Stage IIA

In stage IIA, cancer has spread beyond the cervix to the upper two-thirds of the vagina but not to the tissues around the uterus.

Stage IIB

In stage IIB, cancer has spread beyond the cervix to the upper two-thirds of the vagina and to the tissues around the uterus.

Stage III

In stage III, cancer has spread to the lower third of the vagina and may have spread to the pelvic wall and nearby lymph nodes. This stage of cervical cancer is divided into stages IIIA and IIIB, based on how far the cancer has spread.

Stage IIIA

In stage IIIA, cancer has spread to the lower third of the vagina but not to the pelvic wall.

Stage IIIB

In stage IIIB, cancer has spread to the pelvic wall and/or the tumor has become large enough to block the ureters (the tubes that connect the kidneys to the bladder). This blockage can cause the kidneys to enlarge or stop working. In stage IIIB, cancer cells may also have spread to the lymph nodes in the pelvis.

Stage IV

In stage IV, cancer has spread to the bladder, rectum, or other parts of the body. This cervical cancer stage is divided into stages IVA and IVB, based on where the cancer is found.

Stage IVA

In stage IVA, cancer has spread to the bladder or rectal wall and may have spread to lymph nodes in the pelvis.

Stage IVB

In stage IVB, cancer has spread beyond the pelvis and pelvic lymph nodes to other places in the body, such as the abdomen (stomach), liver, intestinal tract, or lungs.

Recurrent Cervical Cancer

Recurrent cervical cancer is cancer that has recurred (come back) after it has been treated. The cancer may come back in the cervix or in other parts of the body.

Last updated/reviewed: December 11, 2008 Written by/reviewed by: Arthur Schoenstadt, MD

Source: Schoenstadt (2008:2-3)

ANNEXURE C: ASPECTS DISCUSSED WITH RESEARCH ASSISTANTS

ITEM		TIME SCHEDUDED
NUMBER	AREA	
1	Overview of the study	8:00-8:30 am
	-Background of study	
	-Objectives	
	-Required sample size and data collection sites	
	-Period for data collection	
2	Recruitment of subjects	8:30-9:30am
3	Conducting structured interviews	10-10:30am
	-Using the instrument developed for current study (structured interview schedule)	
	-Practice session with research assistants	
4	Ethical considerations	10:30-11am
	Ethical principles affecting institutions, respondents and Participants, and researcher integrity.	
5	Ensuring quality data collection	11-11:30am
6	Pre-testing the structured interview schedule at one site that did not participate in the actual study	11:30- 12mid day
7	Reviewing the pretesting experiences and implementing required changes	Morning hours day 2

ANNEXURE D(2): INFORMED CONSENT FORM FOR PHASE 1 (ENGLISH)

I willingly give consent to be interviewed to increase the understanding of women and their knowledge related to the utilisation of cervical screening services. Melanie Yandakale Hami is a doctoral student pursuing a D Litt et Phil degree in Health Studies with University of South Africa. I understand that I will be part of a research study focusing on "Intentions to use cervical cancer screening services among women aged 42 and older in Malawi." I understand that the information obtained will be used to improve women's utilisation of health screening services in order to improve services offered to women.

I understand that I will be asked to respond verbally to questions. I understand that the interview will last approximately 30-45 minutes. I have been informed that my name or other identifying information will not appear on any forms and will not be used when results are presented.

The interview is entirely voluntary and that I am free to withdraw at any time. My decision whether or not to participate will not affect my healthcare in any way whatsoever.

Further information regarding this study can be obtained directly from:

Melanie Yandakale Hami University of Malawi, Kamuzu College of Nursing. Blantyre campus, P. O. Box 415, Blantyre. Telephone number +265(0) 888514485

And

Professor Mfunso-Bengo (chairperson) College of Medicine Research and Ethics Committee. Blantyre Telephone number +265(0) 1 871 911

I have been provided with contact details and can contact the researcher (Ms MY Hami) if further information is desired.

Date of interview:....

Respondent's signature.....

Interviewer's signature.....

ANNEXURE E: STRUCTURED INTERVIEW SCHEDULE FOR WOMEN (ENGLISH)

INTENTION TO USE CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 42 AND OLDER

RESPONDENT'S NUMBER..... HEALTH CENTRE...... INITIALS OF INTERVIWER...... INTERRATER RELIABILITY......

SECTION A: DEMOGRAPHIC, SOCIO-PSYCHOLOGICAL AND STRUCTURAL DATA 1 1 What was your age at previous birthday?

1.1 What was your age at previous bittinday:			
1.2 What is your marital status? (Wait for response)			
Never married Married Divorced Widowed Co-habitation 1.3 What is the highest education level you attain Never attended school Primary school Secondary school College University	ned? (Wait for response)		
1.4 How many children do you have?1.5 What was your last month's income?			
1.6 What is your occupation? (Wait for the respo Unemployed Self employed Employee	nse)		
1.7 What is the occupation of your husband? (Wa Unemployed Self employed Employee	ait for the response)		
1.8 What is your religion?			
1.9 What is your tribe?			
Specify			
SECTION B: PERCEIVED SUSCEPTIBILITY TO CERVICAL CANCER

1.10 Please tell me about whether you plan to participate in the following health checks during this coming year.

CHECK	HIV testing Blood pressure checking Cervical cancer screening	
1.11	Have you ever been screene Yes No	d for cervical cancer?
If No	give reasons	
1.12 L <i>A</i> T T	f yes, when were you screene ess than a year ago A year ago Two years ago Three years ago	d last?
1.13 E Y N E	Did you ever have an abnorma Yes No Did not know results	al result?
2.1 Do Y N	o you know what causes cervi es No	cal cancer or abnormal cervical changes?
2.2 lf	yes, what is the cause?	
2.3 Ha Y N If	ave you ever heard of Human es lo yes, what is it?	Papilloma Virus infection?
2.4 Ho	ow is Human Papilloma Virus	contracted?
2.5 Do Y N	o you think you are at risk of d es No	eveloping cervical cancer?
2.6 W P C	hat effect does the Human Pa elvic infections ervical cancer	pilloma Virus have in long term?

V=v=List of research project topics and materials

. . . .

Others specify.....

2.7 What are some risk factors to cervical cancer? (Ask and wait for answers given by respondents, check all that are mentioned by respondent)

y reependente, eneer an that are mondente	
Smoking	
Heredity	
Sexually Transmitted Infections	
HPV	
Early age of sexual intercourse	
Multiple sexual partners in your lifetime	
HIV positive status	
-	

Others specify.....

2.8 Would you say that cervical cancer is a health concern to you?

Yes			
No			

2.9 Who should initiate the idea of having cervical cancer screening?

Self	
Family member	
Husband	
Friends	
Colleagues	
Health care provider	
Others specify	

Please answer the following questions with either a "true" or "false" response

.

	ITEM	True	False	DO NOT KNOW
2.10	If you do not have any discomfort or pain, you do not need a cervical cancer screening test.			
2.11	Cervical cancer screening test is for sexually active women.	,		
2.12	My chances of getting cervical cancer are high.			
2.13	Having cervical cancer is matter of bad luck or fate.			
2.14	I do not need cervical cancer screening test because there is no history in our family.			
2.15	I am old, so I do not need cervical cancer screening any more.			

SECTION C: PERCEIVED SEVERITY/SERIOUSNESS OF CERVICAL CANCER

3.1 Can you tell me what part of the body is affect by cervical cancer? (Ask and wait for answers given by respondents)

Vagina	
Uterus	
Cervix	
Vulva	
Others specify	

3.2 At what age is cervical cancer most common?

.....

3.3 Can you tell me the signs and symptor ncer? (Ask and wait for answers given by respondents)

Vaginal itching or irritation Pain with sexual intercourse Frequent urination Irregular vaginal bleeding No symptoms Others specify.....

to	oms of cervic	al c	anc

3.4 Have you known or heard about any woman with cervical cancer? Yes

No

3.5 Would you like to know more about cervical cancer?

No

loui	ouncor.	

Please say whether the following statements are "true" or "false"

	ІТЕМ	TRUE	FALSE	DO NOT KNOW
3.6	Cervical cancer is a curse from God			
3.7	I would not get cervical cancer screening test because of fear of the results.	r		
3.8	Cervical cancer eats internal organs.			
3.9	There is very little one can do about cervical cancer.	t		
3.10	If I am diagnosed with cervical cancer will die.			
3.11	I would rather take the test and discover the hidden disease than go through the pain.	r		
3.12	Loss of cervix or uterus through surgery would affect sexuality.	/		
3.13	A woman would lose a husband if diagnosed with cervical cancer.			
3.14	Seeing somebody suffering from cervical cancer would encourage women to go for the test.	5 J		

SECTION D: PERCEIVED BENEFITS OF CERVICAL CANCER SCREENING

4.1 Do you know if there is a way to diagnose or detect cervical cancer at an early stage?

Yes		
4.2 If yes, how is it diagnosed? Pap test VIA Others specify		_
4.3 Do you know where cervical cancer s Chilomoni Health centre Ndirande Health centre Bangwe Health centre Limbe Health centre Queen Elizabeth central hospital	screening services are	e offered? specify
 4.4 When should a woman start having c answers) At 21 years of age Three years after commencement of Others specify 	ervical cancer screer	ning tests? (Wait for
4.5 Who do you think should be screanswer can be given) Every women All women over 21 years of age Single women Married women Sex workers Others specify	ened for cervical ca	ncer? (More than one
4.6 How often should a woman be screer Annually Every 2 years Every 3 years After 5 years Others specify	ned for cervical cance	er? (Mark only one)
4.7 What is the purpose of performing a c	cervical screening tes	st?

4.8 What do	you think an	abnormal cervical screening result means?
_		

Precancerous cells	
Cervical cancer	
Sexually Transmitted Infection	
Do not know	
Others specify	

Please tell me if the following statements are "true" or "false"

	ITEM	True	False	DO NOT KNOW
4.9	Cervical cancer screening would unveil a hidden disease.			
4.10	Cervical cancer screening would save life if detected and treated at an early stage.	r		
4.11	Cervical cancer screening is humiliating	;		
4.12	Cervical cancer is curable if detected early			
4.13	Regular cervical cancer screening decreases the risk of cervical cancer.			
4.14	Regular asymptomatic screening is a waste of time and money	l		
4.15	Financial constraints affect uptake of cervical cancer screening tests			

4.16 What type of treatment do you think are used for treating precancerous cervical cells?

.....

SECTION E: PERCEIVED BARRIERS TO CERVICAL CANCER SCREENING SUB – SECTION E – 1: STIGMA, FEAR AND DISCRIMINATION

Please answer the following questions with "true" or "false"

	ITEM	True	False	DO NOT KNOW
5.1	Women with cervical cancer are considered to be dirty.			
5.2	I would not want to be seen in a cervica cancer screening clinic by my friends or colleagues.			
5.3	It is too embarrassing to have a cervica cancer screening test.			
5.4	Being screened by a male health care provider would discourage me from being screened for cervical cancer.			
5.5	Cervical cancer screening test is painful			
5.6	If I had an abnormal result for cervica cancer test I would inform my husbanc or family member.			

SUB-SECTION E – 2: SOCIO-ECONOMIC FACTORS Please answer the following questions with "true" or "false"

	ITEM	True	False	Do know	not
5.7	It is difficult to find somebody to care for your child or older person while you go for cervical cancer screening.				
5.8	I would have to get permission from my significant other/s prior to cervical screening	,			
5.9	It is difficult to take time off to have a cervical cancer screening test.				
5.10	It is too expensive to have a cervical cancer screening test.				
5.11	Limited access to screening services affects regular uptake of cervical screening test.				
5.12	Financial constraints affect uptake of cervical screening test.				
5.13	Cervical cancer services should be provided near home or office.				

SUB-SECTION E – 4: TRADITIONAL PRACTICES Please answer the following questions with "true" or "false"

	ITEM	True	False	DO NOT KNOW
5.14	Cervical cancer is caused by evil spirits.			
5.15	In case one has cervical cancer, the evil spirits have to be dealt with first before going to the hospital.			
5.16	I would trust at Traditional healers to treat cervical cancer.			
5.17	I would prefer consulting a traditional healer rather than a doctor for abnormal vaginal cervical bleeding.			

SECTION F – CUES TO ACTION

6.1 If you know about cervical cancer and screening services, how did you obtain this information? (More than one can be given)

Friends Family member Health care provider	
Radio	
Posters	
Magazines	
News papers	
Books	
Pamphlets	
Others specify	

6.2 What are the available sources of information on cervical cancer? (More than one response can be given)

Friends	7
Family member	1
Health care provider	7
Television	1
Radio	
Posters]
Magazines	
News papers	
Books	 4
Pamphlets	
Others specify	

6.3 What do you think are the best methods for providing information about cervical cancer and screening? (Wait for answers from respondents)

Campaign advertisement on television Campaign advertisement on radio Health talks by health care providers Health talks by community leaders

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		┥
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		_

Others specify.....

6.4 What are the preferred venues for cervical cancer information sharing? (Wait for responses)

Hospital clinics Ladies seminars in school Ladies seminars in church Community meetings Others specify.....

ls	
nes	

6.5 Any other suggestions on how best cervical cancer screening service provision would be improved to increase uptake?

	 ••••••	••••••	
· · · · · · · · · · · · · · · · · · ·	 T⊦	IANK YOU	

ANNEXURE F(1): RESEARCH INFORMATION SHEET FOR POTENTIAL RESPONDENTS PHASE 1 (CHICHEWA)

Mukupephedwa kutenga nawo nawo mbali mukafukufuku wofuna kupeza "Chilinganilo chogwiritsa ntchito chithandizo choyezetse za matenda a khansa yakhomo la chibelekero pakati pa amayi azaka makumi anayi ndi mphambu ziwiri kapena kupitirira." Kafukufuku uyu akupangidwa ndi Melanie Yandakale Hami. Melanie Yandakale Hami ndiwophunzira wa za unamwino amene akupitiliza maphunziro ake a Phd ndi University ya South Africa. Zotsatira za kafukufukuyu ziza gwiritsidwa ntchito kupititsa patsogolo mwayi wa amayi kuti aziyezetsa komanso kuti chisamaliro chimene chimaperekedwa kwa amayiwa chithe kuchepetsa imfa zobwera kuzera mu matenda a khansa ya chiberekero. Mufunsidwa mafunso okhuza mmene mukuwonera zinthu zosiyana siyana za khansa ya khomo lachibelekero. Kufunsidwa mafunsoku kutenga pafupi fupi mphindi makumi atatu kapena makumi a nayi ndi mphambu zisanu(30 to 45 minutes) za nthawi yanga. Mulembedwa kukhala mukafukufukuyu pamodzi ndi amayi ena 380 amene ali ndi zaka 42 ndi okulirapo amene amapita kukalandira chithazo cha matenda osiyana siyana ku zipatala zazing'ono za Chilomoni, Ndirande and Bangwe.

Kufunsidwa mafunsoku ndi kodzipereka nokha ndipo mutha kusiya nthawi ina ili yonse. Kutenga nawo mbali, kusatenga mbali kapena kusiya sizidzakhudza chisamaliro changa cha kuchipatala. Choncho amene aza tenge nawo mbali mukafukufukuyu ali ndi ufulu kupanga chiganizo kuzipereka potenga mbali; kufunsa mafunso kuti alongosoleredwe bwino bwino: kukana kupereka maganizo awo pa mafunso ena kapena kusiya nthawi ina ili yonse popanda chiri chonse chobvuta.

Zomwe tizakambirana ziza sungidwa mwa chinsisi. Manambala ndi amene azalembedwe pa mapepala a kafukufuku mmalo mwa mayina. Makalata a chiloledzo amene musayine adzayikidwa muthumba losiyana ndi thumba lomwe mukhale chikalata china cha mayankho anu amafunso amene mupereke. Poonetsetsa kuti chinsisi chikusungidwa, mapepala onse ali ndi zimene ayankha amayi azasungidwa mukabati yotsekedwa ndi makiyi. Mulizi wa kafukufukuyu ndi omuyang'anila ndi amene zaakhala ndi mwayi ogwiritsa ntchito mapepala okhala ndi zomwe muyankhe. Zotsatira za kafukufukuyu sizidzakhala ndi chidzindikilo chiri chonse cha mayi wina aliyense.

Sipakumbekezereka kuti otenga mbali mukafukufukuyu kuti azakumana ndi zobvuta ziri zonse zokhuzana ndi kafukufukuyu. Ngati simuza sangalatsidwa kufunsidwa mafunso ena, mutha osayankha kapena kusiya kutenga mbali mukafukufukuyu nthawi ili yonse. Mutha osapeza phindu liri lonse kwainu potenga nawo mbali mukafukufukuvu. Komabe. tikuyembekezera kuti zotsatira zakafukufukuvu zizathandiza kuti ogwira ntchito nchipatala athe ku mvetsa zokhuza amayi pakutenga nawo mbali pa chithandizo choyezetsa khansa ya khomo la chibelekero ndipo potelo kupitisanso nsogolo chisamaliro chimene chimaperekedwa. Kugwiritsira ntchito zotsatira zakafukufukuyu kuzathandiza kusintha mmene amayi amaonera matenda a khansa yakhomo lachiberekero. Ziza thandizanso kupeza mafunso ena ofuna kuyankhidwa okhuza khiansa yachibelekero ndi chisamaliro chake, komanso malamulo okhuza kayendetsedwe ka kuyezetsa khansa ya khomo lachiberekero.

Ngati mungakhale ndimafunso, zowonjezera kapena madandaulo okhuzana ndi kafukufukuyu mutha kuwapeza a Melanie Yandakale Hami ku University of Malawi, Kamuzu College of Nursing, Blantyre campus, P. O. Box 415, Blantyre. Telefoni nambala ndi 0888 514 485 kapena a tcheyamani, a Professor mfuso-Bengo ku University of Malawi, College of Medicine Research and Ethics Committee. Private Bag 360. Chichiri, Blantyre 3. Telefoni nambala ndi 01 871 911.

ANNEXURE F(2): INFORMED CONSENT FORM FOR PHASE 1 (CHICHEWA)

(CHILOLEZO KUTI NDIFUNSIDWE MAFUNSO OKHUDZANA NDI KAFUKUFUKU)

Ndikupereka chilolezo kuti ndifunsidwe mafunso okhudzana ndi kafukufuku amene azathandize kuwamvetsa amayi ndi zimene akuziwa zonkhuzana ndi ndinchitidwe wopewa matenda. Melanie Yandakale Hami, ndi wophunzira wa za unamwino amene akupitiliza maphunziro ake a Phd ndi University ya South Africa. Zafotokozeredwa kwa ine kuti nditenga nawo mbali pa kafukufuku wofuna kupeza "Chilinganilo chogwiritsa ntchito chithandizo choyezetse za matenda a khansa yakhomo la chibelekero pakati pa amayi azaka makumi anayi ndi mphambu ziwiri kapena kupitirira." Ndikumvetsetsa kuti zotsatira za kafukufukuyi ziza gwiritsidwa ntchito kupititsa patsogolo mwayi wa amayi oyezetsa ndicholinga chopititsa mtsogolo chisamaliro chimene chimaperekedwa kwa amayi.

Ndamvetsetsa kuti ndi funsidwa mafunso omwe ndizayankha. Zafotokozedwa kwa ine kuti kufunsidwa mafunsoku kutenga pafupi-fupi mphindi makumi atatu(30 minutes) za nthawi yanga. Ndadziwitsidwa kuti dzina langa silidzatchulidwa ndipo silidzaoneka pa chikalata china chilichonse ndiponso silidza gwiritsidwa ntchito muzotsatira zakafukufukuyu.

Kufunsidwa mafunsoku ndi kodzipereka ndekha ndipo nditha kusiya nthawi ina ili yonse. Kutenga nawo mbali, kusatenga nawo mbali kapena kusiya sikudzakhudza chisamaliro changa cha ku chipatala. Choncho ndikupereka chilolezo pomvetsetsa ndi kuyembekezera kuti kafukufukuyu adzapeza zosowa za amayi pofuna kuziwa zokhudza khansa yakhomo la chibelekero.

Zambiri zokhuzana ndikafukufukuyu nditha kuzipeza kwa:

Melanie Yandakale Hami University of Malawi Kamuzu College of Nursing Blantyre Campus P.O. Box 415 Blantyre.Telefoni : +265 (0) 0888 514 485

Ndi

The chairperson, Professor Mfunso-Bengo College of Medicine Research and Ethics Committee. P/B 360, Chichiri, Blantyre 3.Telephone number +265(0) 1 871 911

Ndidzapatsidwa adilesi ndi telefoni numbala kuti ngati ndingankhale ndizina zomwe ndifune kuziwa zakafukufukuyu nditha kufunsa mulizi.

Tsiku lofunsidwa mafunso
Saini ya otenga mbali
Saini ya ofunsa mafunso

ANNEXURE G: STRUCTURED INTERVIEW SCHEDULE FOR WOMEN IN CHICHEWA

(NDONDOMEKO YOFUNSA MAFUNSO YA AMAYI)

INTENTION TO USE CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 42 AND OLDER

RESPONDENT'S NUMBER......HEALTH CENTRE.....

INITIALS OF INTERVIWER.....INTERRATER RELIABILITY.....

GAWO A: DEMOGRAPHIC DATA

1.1 Munali ndi zaka zingati pa tsiku lobadwa lapitalo?

1.2 Kodi munakwatiwapo? (Dikirani yankho)

Sindinakwatiwepo	
Okwatiwa	
Banja linatha	
Woferedwa	
Kulowana	

1.3 Kodi ndi maphunziro aakulu ati amene munapita? (Dikirani yankho)

Sindinapitepo kusukulu	
Pulaimale	
Sekondale	
Koleji	
Sukulu ya ukachenjede	
1.4 Muli ndi ana angati?	

1.5 Ndalama zanu za mwezi watha zinali zingati?

- 1.6 Mumagwira ntchito yanji? (Dikirani yankho) Sindikugwira ntchito Wodzilemba ndekha Wolembedwa
- 1.7 Amuna anu amagwira ntchito yanji? (Dikirani yankho)
 - Sakugwira ntchito Wodzilemba wokha Wolembedwa

 	, ∝i iji i	(=

1.8 Chipembedzo chanu ndi chani?

 					foto	okozan	19
Ling &	SC	10	TT	С.	C		2
V-VBL	ist of	research	project	topics	and	materi	als

1.9 Mtundu wanu ndi chani?

.....Fotokozani

GAWO B: MMENE MUKUWONERA KUTI MUKHOZA KUKHALA NDI KHANSA **YA KHOMO LA CHIBELEKERO**

1.10 Mungandiuzeko ngati muli ndichiganizo chotenga nawo mbali zoyesengwa

zukhuzana ndiza umoyo zotsatirazi mu chaka chikubwerachi?

Kuyezetsa ngati muli ndi kachirombo koyambitsa Edzi

Kuyezetsa kuthamanga kwa magazi

Kuyezetsa za khansa ya khomo la chiberekero

1.11 Muyamba mwayezedwapo za khansa ya khomo lachiberekelo?

Ayi

Ngati ayi longosolani zifukwa

.....

1.12 Ngati mwa bvomera, munayezedwa liti komaliza? Sipanathe chaka Chaka chatha Zaka ziwiri zapita Zaka zitatu zapita

 	 	••••

1.13 Munakhalapo ndizotsatira zowonetsa kuti mutha kukhala ndi khansa yak homo Lachiberekero?

Inde
Ayi
Sindinanze zotsatira

2.1 Kodi mukuziwa chomwe chimayambitsa khansa yak homo lachiberekero?

Inde	
Ayi	

2.2 Ngati inde, tchulani?.....

.....

		L
		L
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		L
		L
		L
		L

2.3 Munayamba mwamvapo za kachirombo koyambitsa matenda a khansa ya mchibelekero? (HPV)

Inde				
Ayi				
Ngati inde,	ndi chiyani?	I		

2.4 Kodi kachirombo koyambitsa matenda a khansa yakhomo la chibelekero umatengera bwanji?

.....

2.5 Mmene mukuwonera, mukhoza kukhala ndi khansa ya khomo la chibelekero?

Inde

Ayi



2.6 Kodi ndi zotsatira zanji zimene kachirombo koyambitsa matenda a khansa ya khomo la chibelekero (HPV) kangakhale nazo patapita nthawi yotalikirapo?

Cham'mimba

Khansa yakhomo la chiberekero

Zina (fotokozani).....

2.7 Kodi zimene zingamuyike munthu pa ngozi yayikulu yoyambitsa cancer yak homo la chibelekero ndi chani? (funsani ndipo dikirani mayankho operekedwa ndi oyankha mafunso, chongani zonse atatchule)

Uhule

Zakumtundu

Matenda opatsirana pogonana

Kachirombo koyambitsa khansa ya

khomo la chibelekero

Kusuta

Zina (fotokozani).....

2.8 Kodi munganene kuti khansa ya khomo la chibelekero ndi nkhani yokhudza

umoyo?

Inde

Ayi

2.9 Ndani angayambitse nkhani yokayezetsa khansa ya khomo la chibelekero?

M'modzi wa banja	
Mwamuna wako	
amnzako	
Ogwira nawo ntchito	
Health care provider	

Zina (tchulani).....

Yankhani mafunso otsatirawa ponena kuti "zowona" kapena "zonama"

	ZINTHU	ZOWONA	ZONAMA	SINDIKUZIWA
2.10	Ngati ndilibe chili chonse chosowetsa mtendere kapena ululu, sindikufunikira kukayezetsa khansa yakhomo la chibelekero			
2.11	Kuyezetsa khansa ya khomo la chibelekero ndi kwa a amayi omwe amachita zauhure			
2.12	Ndiri ndi mwayi waukulu wotengera khansa yak homo la chibelekero			
2.13	Kukhala ndi khansa ya khomo la chibelekero ndi tsoka chabe			
2.14	Sindikufunika kuyezetsa khansa ya khomo la chibelekero chifukwa ku banja kwathu kulibe mbiriyi			
2.15	Ndine wamkulu sindikufunikira kuyezetsa khansa ya khomo lachibelekero			

GAWO C: M'MENE MUKUWONERA CHIWOPSEZO KU KHANSA YA KHOMO LA CHIBELEKERO

3.1 Mungandiuze chiwalo chimene chimagwidwa ndi khansa yakhomo la chibelekero?

Njira ya abambo

Chibelekero

Khomo la chibelekero

Zina fotokozani.....

3.2 Kodi khansa ya khomo lachiberekero imapezeka kwambiri mu gulu liti la a zimayi?

.....

3.3 Mungandiuze zizindikiro za khansa yakhomo la chibelekero? (funsani ndipo dikirani mayankho operekedwa ndi oyankha mafunso)

Kuvabwa kwa niira ya abambo	
Kumva kuwawa pogonana	
Kukodza-kodza	
Kusamba mopanda dongosolo	
Palibe zizindikiro	

Zina (fotokozani).....

3.4 Munayamba mwakumanapo kapena kumva za mzimayi amene ali ndi khansa yak homo la chibelekero?

inde	
ayi	

3.5 Mukufuna mutadziwa zambiri za khansa yak homo la chibelekero?

[____]

Inde

Bwetete

Ayi

	ZINTHU	ZOWONA	ZONAMA	SINDIKUZIWA
3.6	Khansa yak homo la chibelekero ndi thembelero lochokera kwa Mulungu			
3.7	Sindingakayezetse khansa ya khomo la chibelekero chifukwa cha mantha ndi zotsatira			
3.8	Khansa ya khomo la chibelekero imadya ziwalo za mkati			
3.9	Pali zinthu zochepa zomwe munthu angachite zokhudzana ndi khansa yak homo la chibelekero			
3.10	Ngati ndingapezeke ndi khansa ya khomo la chibelekero ndidzafa			
3.11	Ndi bwino kuti ndikayezetse ndi kupeza nthenda yobisikayo kusiyana ndi			

	kudzakhala mu ululu		
3.12	Kuchotsedwa kwa khomo la chibelekero ndi chibelekero kudzera opareshoni kutha kukhudza moyo ogonana		
3.13	Mzimayi atha kusiyidwa ndi mwamuna wake ngati wapezeka ndi khansa yakhomo la chibelekero		
3.14	Kuona wina wake akudwala khansa yakhomo lachibelekero kudzalimbikitsa amayi kupita kukayezetsa		

GAWO D: PHINDU LOYEZETSA KHANSA YA KHOMO LACHIBELEKERO

4.1 Kodi, mukuziwapo njira zoyezera kuti awone ngati mayi ali ndi matenda a khansa

yakhomo la chiberekero?

Inde

Ayi

4.2 Ngati mwabvomera, ndi mitundu iti woyezetsa khansa yak homo la chibelekero imene mukudziwa?

Pap test	
VIA	

Zina (fotokozani).....

4.3 Mukudziwa kumene amayezetsa khansa yakhomo la chibelekero?

Chilomoni Health centre

Ndirande Health centre

Bangwe Health centre

Limbe Health centre

Queen Elizabeth central hospital

Banja la mtsogolo

al	

4.4 Kodi mayi angayambe liti kuyezetsa khansa yak homo la chibelekero? (Dikirani mayankho)

Pa zaka 21 zakubadwa
Pakatha zaka zitatu atayamba mchitidwe wogonana.
ZIna fotikozani.....

.....

4.5 Mukuganiza kuti angayezedwe khansa ya khomo la chibelekero ndi ndani? (Mutha kupereka mayankho opitilira limodzi)

Amayi onse	
Amayi onse opitilira a zaka 21 zakubadwa	
Amayi osakwatiwa	
Amayi okwatiwa	
Amayi oyendayenda	
Zina (fotokozani)	······

4.6 Kodi mzimayi amayenera kuyezetsa khansa yak homo la chibelekero kangati?

Chaka ndi chaka	
Zaka ziwiri zilizinse	
Zaka zitatu zilizonse	
Pakatha zaka zoposera zinai	
Zina (Fotokozani)	

4.7 Kodi cholinga chazoyeza za khansa ya khomo la chibelekero ndi chani?

.....

4.8 Kodi mukuganiza kuti zotsatira za khansa yakhomo la chiberekero zosakhala bwino zikutanthauza chani?

Zizindikiro zoti utha kudzakhala ndi

khansa ya chibelekero mtsogolo

Khansa yak homo la chibelekero

Matenda opatsirana pogonana

Sakudziwa

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]

Zina fotokozani.....

	ZINTHU	ZOWONA	ZONAMA	SINDIKUZIWA
4.9	Kuyezetsa khansa ya khomo la chibelekero kumavumbulutsa matenda wobisika			
4.10	Kuyezetsa khansa ya khomo la chibelekero kumapulumutsa moyo ngati yapezeka ndi			

	kuchizidwa koyambilira		
4.11	Kuyezetsa khansa yakhomo la chibelekero kumachtitsa manyazi		
4.12	Khansa ya khomo la chibelekero ndi yochizika ikapezeka mwamsanga		
4.13	Kuyezetsa khansa yak homo la chibelekero kumachepetsa kuopsya kokhala ndi khansa yak homo la chibelekero		
4.14	Kuyezetsa mwa ndondomeko palibe zizindikiro ndi kutaya nthawi ndi ndalama		
4.15	Kusowa kwa ndalama kutha ku chepetsa chiwerengero cha oyezetsa za khansa yak homo lachiberekelo		

4.16 Kodi pali chithandizo cha zizindikiro zoti utha kudzakhala ndi khansa yak homo la chibelekero mtsogolo?

Inde	
Ayi	

4.17 Ndi mtundu wanji wa chithandizo umene mukuganiza kuti utha kudzagwiritsidwa ntchito pochiza zizindikiro zoti utha kudzakhala ndi khansa yak homo la chibelekero Mtsogolo?

.....

GAWO E: M'MENE MUKUWONERA ZOTCHINGA PA KUYEZETSA KHANSA YA KHOMO LACHIBELEKERO

GAWO LALING'ONO E-1: KUSALIDWA, MANTHA NDI KUSANKHANA

	ZINTHU	ZOWONA	ZONAMA	SINDIKUZIWA
5.1	Azimayi amene ali ndi Khansa ya khomo lachibelekero amatengedwa ngati a ubve			
5.2	Sindingafune kuwonedwa ndi anzanga ndi wogwira nawo ntchito kuchipatala choyezetsa khansa yak homo la chibelekero			
5.3	Ndizochititsa manyazi kukayezetsa khansa yak homo la chibelekero			
5.4	Kuyezedwa ndi munthu wamwamuna wopereka chithandizo kuchipatala kungandipangitse kuti ndisakayezetse			

	khansa ya khomo la chibelekero		
5.5	Kuyezetsa Cancer ya khomo lachibelekero ndi kopweteka		
5.6	Ngati ndingakhale ndi zotsatira zosakhala bwino ndidzawafotokozera amuna anga kapena m'modzi wa amubanja langa		

GAWO LALING'ONO E-2: ZACHUMA

Yankhani mafunso otsatirawa ponena kuti "zowona" kapena "zonama"

	ZINTHU	ZOWONA	ZONAMA	SINDIKUZIWA
5.7	Ndizovuta kupeza wina aliyense wa mkulu kuti asamale mwana nthawi yomwe ndikupita kukayezetsa khansa yankhomo la chibelekero			
5.8	Ndiyenera kuvomerezedwa kaye ndi achibale anga ndisana kayezetse za khansa yak homo la chiberekero.			
5.9	Ndizovuta kupeza nthawi kupita kukayezetsa khansa yakhomo la chibelekero			
5.10	Ndizodula kwambiri kuyezetsa khansa ya khomo la chibelekero			
5.11	Kuchepa kwa mwayi wounikidwa kumapangitsa anthu wochepa kubwera kudzayezetsa khansa yakhomo la chibelekero.			
5.12	Mavuto a zachuma amapangitsa anthu ochepa kubwera kudzayezetsa khansa yakhomo lachibelekero			
5.13	Chithandizo choyeza khansa ya chibelekero chidzipelekedwa pafupi ndi kunyumba kapena malo wogwira ntchito.			

GAWO LALING'ONO E- 3: ASIN'GANGA

	ZINTHU	ZOWONA	ZONAMA	SINDIKUZIWA
5.14	Khansa yakhomo ya khomo lachibelekero imayamba chifukwa cha mizimu yoyipa			
5.15	Ngati wina ali ndi khansa yakhomo la chibelekero choyambilira ndikuthana kaye ndi mizimu yoipa			

	musanapite kuchipatala		
5.16	Asing`anga atha kuchilitsa khansa yak homo la chibelekero		
5.17	Ndingakonde kukaonedwa ndi asing`anga kusiyana ndi dokotala ngati ndili ndi msambo wosakhala wabwino munjira ya abambo kapena khomo la chibelekero.		

GAWO F: KOMWE MUNGAPEZEPE MAUTHENGA OKHUZA ZA KHANSA YA KHOMO LACHIBELEKERO

6.1 Munadziwa bwanji zokhudzana ndi khansa yakhomo la chibelekero ndi kuyezetsa. (Mayankho angapo atha kuperekedwa)

AmnzangaM'modzi wa pabanja langaAzachipatalaAzachipatalaKanemaWailesiMapositaMagazinesNyuzipepaMabukhuPamphlets

Ndi zina tchulani.....

6.2 Kodi komwe mungapeze mauthenga a khansa yak homo la chibelekero ndi kuti? (Mayankho angapo atha kuperekedwa)

Amnzanga	
M'modzi wa pabanja langa	
Azachipatala	
Kanema	
Wailesi	
Maposita	
Magazines	
Nyuzipepala	

Mabukhu

Zina (Tchulani).....

6.3 Ndizinthu ziti zomwe inu mumakonda zomwe zimapereka uphungu wa khansa yakhomo la chiberekero zoti zikhoza kumukopa nzimayi kuti aka yezetse? (Dikirani mayankho)

Kuulutsa uthenga pa kanema	
Kuulutsa uthenga pa wailesi	
Maphunziro operekedwa ndi a zaumoyo	
Misonkhano ya m'madera	
Zina (Tchulani)	

6.4 Kodi ndi malo ati omwe mungawakonde kuti mugawane uthenga okhudzana ndi khansa yakhomo la chibelekero? (Dikirani mayankho))

Kuchipatala	
Maphunziro a amayi m'masukulu	
Maphunziro a amayi m'matchalicthi	
Misonkhano ya m'madera	
Zina (Tchulani)	

6.5 Mungakhale ndi maganizo ena othandiza kupitsa nsogolo nkhani yo yezetsa khansa yak homo la chiberekero?

 .ZIKOMO	



ANNEXURE H: CERIFICATE OF TRANSLATION OF RESEACH INSTRUMENTS

COLLEGE OF MEDCINE -JOHNS HOPKINS PROJECT

COLLEGE OF MEDICINE CHIPATALA AVENUE P.O. Box 1131 BLANTYRE

Phone (265) 1875-129 Fax (265) 1870-132

CERTIFICATION OF TRANSLATION

Project Title: FACTORS INFLUENCING CERVICAL CANCER SCREENING AMONG WOMEN AGED 42 AND ELDER.

Document Titles: 1. INFORMATION SHEET AND ENROLLMENT INFORMED CONSENT FORM

2. FACTORS INFLUENCING CERVICAL CANCER SCREENING AMONG

WOMEN AGED 42 AND ELDER QUESTIONNAIRE

I, Catherine Ndelemani, certify that, to the best of my knowledge, the translation of the consent, or other relevant, document(s) from English to the local language of Chichewa, for the project above is accurate.

Cndelemani

Signature of Person Providing Certification

COLLEGE OF MEDICINE -JOHNS HOPKINS PROJECT

Organization/Institution

rauth

Signature of Principal Investigator

12 November 2009 Date

Community Outreach Worker Title

13 November 2009 Date

NOTE: The Investigator(s) on the study may not certify the translation; however, the Principal Investigator's Co-signature is required.

ANNEXTURE H

ANNEXURE H: CERIFICATE OF TRANSLATION OF RESEACH INSTRUMENTS

COLLEGE OF MEDCINE -JOHNS HOPKINS PROJECT

COLLEGE OF MEDICINE CHIPATALA AVENUE P.O. Box 1131 BLANTYRE Phone (265) 1875-129 Fax (265) 1870-132

CERTIFICATION OF TRANSLATION

Project Title: FACTORS INFLUENCING CERVICAL CANCER SCREENING AMONG WOMEN AGED 42 AND ELDER.

Document Titles: 1. INFORMATION SHEET AND ENROLLMENT INFORMED CONSENT FORM

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WOMEN AGED 42 AND ELDER QUESTIONNAIRE

I, Catherine Ndelemani, certify that, to the best of my knowledge, the translation of the consent, or other relevant, document(s) from English to the local language of Chichewa, for the project above is accurate.

Codelemani

Signature of Person Providing Certification

COLLEGE OF MEDICINE -JOHNS HOPKINS PROJECT

Organization/Institution

Signature of Principal Investigator

NOTE: The Investigator(s) on the study may not certify the translation; however, the Principal Investigator's Co-signature is required.

12 November 2009 Date

Community Outreach Worker Title

13 November 2009 Date

ANNEXURE I: CERTIFICATE OF CLEARANCE FROM UNISA ETHICS COMMITTEE



UNIVERSITY OF SOUTH AFRICA Health Studies Higher Degrees Committee College of Human Sciences ETHICAL CLEARANCE CERTIFICATE

HSHDC 63/2011

Date of meeting	: 12 December 2011	Student No:	4448-001-6
Project Title:	Intentions to use cervical cancer aged 42 and older in Malawi.	screening services	among women
Researcher:	MY Hami		
Degree:	D Litt et Phil	Code: DIS89	0B
Supervisor: Qualification: Joint Supervisor	Prof VJ Ehlers D Litt et Phil		

DECISION OF COMMITTEE

 $\sqrt{}$

Approved

Conditionally Approved

CPC July Prof E Potgieter CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

Dr MM Moleki

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE J(1): RESEARCH INFORMATION SHEET FOR POTENTIAL RESPONDENTS - PHASE 2(ENGLISH)

You are being asked to participate in a research study that will try to determine the "Intentions to use cervical cancer screening services, among women aged 42 and older in Malawi." This study is being conducted by Melanie Yandakale Hami, a student pursuing a D Litt et Phil degree with the University of South Africa. The information obtained will be used to improve women's utilisation of cervical cancer screening services. You will be asked questions about you perceptions in relation to different areas concerning cervical cancer. The interview will take approximately one hour of your time. You will be recruited into the study along with thirteen other nurse/midwives providing health care services at Chilomoni. Ndirande and Bangwe healthcare centres.

The interview is entirely voluntary and you are free to withdraw at any time. Participation, no participation, or withdrawal will not affect you in any way whatsoever. Therefore prospective participants have the right to decide voluntarily to participate in a study; ask questions for clarification; refuse to give information or to withdraw from the study at any stage without incurring any negative consequences.

All the information collected is confidential. Numbers instead of names will appear on the completed questionnaires. The signed consent form will be placed in a separate bag from the one containing completed interview schedules. To further enhance privacy and confidentiality, all completed interview schedules will be kept under lock and key. Only the researcher will have access to this locker. The research report will not contain any information that would identify any particular individual.

There are no anticipated risks attached to participating in this study. If you are unhappy with some of the questions you are allowed not to respond or to withdraw at any time. You may not receive a direct benefit if you agree to participate. However, it is anticipated that the information obtained from this research would improve health providers' understanding of issues affecting women's utilisation of cervical cancer screening services and therefore improve interventions. Implementation of recommendations based on the results could improve women's perceptions of cervical screening and cervical cancer. It could also help to identify gaps that need to be addressed in the cervical cancer screening and management services and the policies that govern these.

In the event of having further questions, comments or complaints relating to the research contact; Melanie Yandakale Hami at University of Malawi, Kamuzu College of Nursing, Blantyre campus, P. O. Box 415, Blantyr e, Telephone number +265 (0) 888 514 485 or The Chairperson, Professor Mfuso-Bengo at University of Malawi, College of Medicine Research Ethics Committee, telephone number +265(0) 1 871 911.

Thank you for considering to participate in this study.

Yours sincerely

Ms MY Hami

ANNEXURE J(2): INFORMED CONSENT FORM FOR PHASE 2 (ENGLISH)

I willingly give consent to participate in an interview to be conducted to increase understanding of women and their knowledge related to cervical screening behaviours. Melanie Yandakale Hami is a postgraduate student pursuing a D Litt et Phil in Health Studies with University of South Africa. I understand that I will be part of a research study focusing on "Intentions to use cervical cancer screening services among women aged 42 and older in Malawi." I understand that the information obtained will be used to improve women's utilisation of cervical screening services.

I understand that I will be asked to respond to questions and my responses will be audio taped. I understand that the interview will last approximately one hour. I have been informed that my name or other identifying information will not appear on any forms or be used when results are presented.

The interview is entirely voluntary and that I am free to withdraw at any time. My decision whether or not to participate will not have any negative consequences on me.

Further information regarding this study can be obtained directly from: Melanie Yandakale Hami University of Malawi, Kamuzu College of Nursing. Blantyre campus, P. O. Box 415, Blantyre, Malawi. Telephone number +265(0) 888514485

And

Professor Mfunso-Bengo (chairperson) College of Medicine Research and Ethics Committee Telephone number +265(0) 1 871 911

I will be provided with contact details and can contact the lead researcher if further information is desired.

Date of interview:
Participants signature
nterviewer's signature

ANNEXURE J(2): INFORMED CONSENT FORM FOR PHASE 2 (ENGLISH)

I willingly give consent to participate in an interview to be conducted to increase understanding of women and their knowledge related to preventative health behaviours. Melanie Yandakale Hami is a graduate nursing student pursuing a PhD in Literature with University of South Africa. I understand that I will be part of a research study focusing on "Intention to use cervical cancer screening services among women aged 42 and older in Malawi." I understand that the information obtained will be used to improve women's utilisation of health screening services.

I understand that I will be asked to respond to questions and my responses will be audio taped. I understand that the interview will last approximately one hour. I have been informed that my name or other identifying information will not appear on any forms or be used when results are presented.

The interview is entirely voluntary and that I am free to withdraw at any time. My decision whether or not to participate will not have any negative consequences on me.

Further information regarding this study can be obtained directly from: Melanie Yandakale Hami University of Malawi, Kamuzu College of Nursing. Blantyre campus, P. O. Box 415, Blantyre, Malawi. Telephone number +265(0) 888514485

And

Professor Mfunso-Bengo (chairperson) College of Medicine Research and Ethics Committee Telephone number +265(0) 1 871 911

I will be provided with contact details and can contact the lead researcher if further information is desired. Date of interview:..... Participants signature.....

Interviewer's signature.....

ANNEXURE K: SEMI-STRUCTURED IN NURSE/MIDWIVES (ENGLISH)	ITERVIEW GUIDE FOR	२
INTENTION TO USE CERVICAL CANCER SCR WOMEN AGED 42 AND OLDER	EENING SERVICES AMONG	
RESPONDENT'S NUMBER HEALTI	H CENTRE	•
INITIALS OF INTERVIEWER		
SECTION A: DEMOGRAPHIC DATA		
1.1 What was your age at previous birthday?		
1.2 What is your marital status? (Wait for response) Never married Married Divorced Widowed Co-habitation 1.3 What is your qualification? Registered nurse Enrolled nurse Registered nurse/midwife Enrolled nurse/midwife		

1.4 How long have you worked in a health institution providing cervical cancer

screening clinic?

- 1.5 Are you personally involved in the cervical cancer screening activities provided at this health center?
- 1.6 Have you ever been screened for cervical cancer?
- 1.7 If no, do you intend to be screened this year?

SECTION B: INTENTION TO USE CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 42 AND OLDER

- 2.1 What do you think women who come to this clinic perceive about cervical cancer?
- 2.2 What do women know about cervical cancer screening tests and early detection?
- 2.3 What is the women's sense of chances that they might get cervical cancer?
- 2.4 Do you think women feel that they could have cervical cancer?
- 2.5 What is the women's sense of cervical cancer fatalism?
- 2.6 What do women think are the benefits to cervical cancer screening?
- 2.7 What do women think are the barriers to cervical cancer screening?
- 2.8 What do women know about the etiology of cervical cancer?
- 2.9 What do women know about treatment for abnormal cervical screening results?
- 2.10 What or who influences women the most about cervical cancer screening?
- 2.11 How do you perceive women's self motivation/intention to be screened for cervical cancer?

ANNEXURE L(1): RESEARCH INFORMATION SHEET FOR POTENTIAL PARTICIPANTS: PHASE 2 (CHICHEWA)

Mukupephedwa kutenga nawo nawo mbali mukafukufuku wofuna kupeza za "Chilinganilo chogwiritsa ntchito chithandizo choyezetse za matenda a khansa yakhomo la chibelekero pakati pa amayi azaka makumi anayi ndi mphambu ziwiri kapena kupitirira." Kafukufuku uyu akupangidwa ndi Melanie Yandakale Hami. Melanie Yandakale Hami ndiwophunzira wa za unamwino amene akupitiliza maphunziro ake a Phd ndi University ya South Africa. Zotsatira za kafukufukuyu ziza gwiritsidwa ntchito kupititsa patsogolo mwayi wa amayi kuti aziyezetsa komanso kuti chisamaliro chimene chimaperekedwa kwa amayiwa chithe kuchepetsa imfa zobwera kuzera mu matenda a khansa ya chiberekero. Mufunsidwa mafunso okhuza mmene mukuwonera zinthu zosiyana siyana za khansa ya khomo lachibelekero. Kufunsidwa mafunsoku kutenga pafupi fupi ora limodzi (one hour) ya nthawi yanu. Mulembedwa kukhala mukafukufukuyu pamodzi ndi anamwino ena amene amagwira ntchito pa zipatala zazing'ono za Chilomoni, Ndirande and Bangwe.

Kufunsidwa mafunsoku ndi kodzipereka nokha ndipo mutha kusiya nthawi ina ili yonse. Kutenga nawo mbali, kusatenga mbali kapena kusiya sizidzakhudza chisamaliro changa cha kuchipatala. Choncho amene aza tenge nawo mbali mukafukufukuyu ali ndi ufulu kupanga chiganizo kuzipereka potenga mbali; kufunsa mafunso kuti alongosoleredwe bwino bwino: kukana kupereka maganizo awo pa mafunso ena kapena kusiya nthawi ina ili yonse popanda chiri chonse chobvuta.

Zomwe tizakambirana ziza sungidwa mwa chinsisi. Manambala ndi amene azalembedwe pa mapepala a kafukufuku mmalo mwa mayina. Makalata a chiloledzo amene musayine adzayikidwa muthumba losiyana ndi thumba lomwe mukhale chikalata china cha mayankho anu amafunso amene mupereke. Poonetsetsa kuti chinsisi chikusungidwa, mapepala onse ali ndi zimene ayankha amayi azasungidwa mukabati yotsekedwa ndi makiyi. Mulizi wa kafukufukuyu ndi omuyang'anila ndi amene zaakhala ndi mwayi ogwiritsa ntchito mapepala okhala ndi zomwe muyankhe. Zotsatira za kafukufukuyu sizidzakhala ndi chidzindikilo chiri chonse cha mayi wina aliyense.

Sipakumbekezereka kuti otenga mbali mukafukufukuyu kuti azakumana ndi zobvuta ziri zonse zokhuzana ndi kafukufukuyu. Ngati simuza sangalatsidwa kufunsidwa mafunso ena, mutha osayankha kapena kusiya kutenga mbali mukafukufukuyu nthawi ili yonse. Mutha osapeza phindu liri lonse kwainu potenga nawo mbali mukafukufukuyu. Komabe, tikuyembekezera kuti zotsatira zakafukufukuvu zizathandiza kuti ogwira ntchito nchipatala athe ku mvetsa zokhuza amayi pakutenga nawo mbali pa chithandizo chovezetsa khansa ya khomo la chibelekero ndipo potelo kupitisanso nsogolo chisamaliro chimene chimaperekedwa. Kugwiritsira ntchito zotsatira zakafukufukuyu kuzathandiza kusintha mmene amayi amaonera matenda a khansa yakhomo lachiberekero. Ziza thandizanso kupeza mafunso ena ofuna kuvankhidwa okhuza khansa vachibelekero ndi chisamaliro chake, komanso malamulo okhuza kayendetsedwe ka kuyezetsa khansa ya khomo lachiberekero.

Ngati mungakhale ndimafunso, zowonjezera kapena madandaulo okhuzana ndi kafukufukuyu mutha kuwapeza a Melanie Yandakale Hami ku University of Malawi, Kamuzu College of Nursing, Blantyre campus, P. O. Box 415, Blantyre. Telefoni

nambala ndi 0888 514 485 kapena a tcheyamani, a Professor mfuso-Bengo ku University of Malawi, College of Medicine Research and Ethics Committee. Private Bag 360. Chichiri, Blantyre 3. Telefoni nambala ndi 01 871 911.

ANNEXURE M: SEMI-STRUCTURED INTERVIEW GUIDE FOR NURSE/MIDWIVES (CHICHEWA)

(NDONDOMEKO YOFUNSA MAFUNSO YA ANAMWINO/AZAMBA)

INTENTION TO USE CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 42 AND OLDER

RESPONDENT'S NUMBER......HEALTH CENTRE...... INITIALS OF INTERVIWER......INTERRATER RELIABILITY......

GAWO A: DEMOGRAPHIC DATA

1.1 Munakwanitsa zaka zingati pa tsiku lobadwa lapitalo?

1.2 Kodi ndinu okwatiwa? (Dikirani yankho)

Sindinakwatiwepo	
Okwatiwa	
Banja linatha	
Woferedwa	
Kulowana	

1.3 Kodi ndi maphunziro akulu ati amene munapita okhuzana ndi unamwino/uzamba? (Dikirani yankho)

Registered nurse	
Enrolled nurse	
Registered nurse/midwife	
Enrolled nurse/.midwife	

1.4 Mwagwira ntchito zaka zingati pa chipatala chomwe chimaye za khansa ya khomo la chiberekelo?

1.5 Mumatengapo pali yanji pa kuyeza amayi za khansa yakhomo la chiberekelo?

1.6 Muna yezetsapo za khansa ya khomo la chiberekelo?

1.7 Ngati simunayezetsepo, muli ndi chilingaliro chokayezetsa chaka chino?

SECTION B: INTENTION TO USE CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 42 AND OLDER

- 1. Kodi mukuganiza azimayi amene a mabwera pachipatala pano amayiwona bwanji nkhani ya khansa yak homo la chiberekero?
- 2. Kodi azimayi amaziwapo chani za kuyezetsa za khansa ya khomo lachiberekero, mitundu yakayezedwe ndi kupezeka mwa nsanga kwa khansa yi?
- 3. Azimayi amachiona bwanji chiopsezo cha khansa yak homo lachiberekelo?
- 4. Mmene mukuwonera, kodi azimayi amawona ngati akhoza kukhala ndi khansa yakhomo la chiberekero?
- 5. Mumene mukuwonera kodi azimayi amaganiza kuti phindu loyezetsa zakhansa yakhomo lachiberekero ndi chani?
- 6. Nanga azimayi amawona ngati zowatchinga kukayezetsa za khansa yakhomo lachiberekero ndi ziti?
- 7. Kodi azimayi akuziwapo chani za zomwe zimayambitsa khansa yakhomo lachiberekero.
- 8. Azimayi amaziwapo chani za chithandizo cha zotsatira zosakhalabwino za khansa yakhomo la chiberekero?
- 9. Ndizithu zanji kapenanso ndindani amene azimayi amawona ngati anga wa kope pa nkhani yoyezetsa za khansa yakhomo la chiberekero?
- 10. Nanga ndi malo ati omwe azimayi angawakonde kuti akagawaneko uthenga okhudzana ndi khansa yankhomo la chibelekero?
- 11. Mukuwona bwanji za chikhumbo khumbo cha azimayi a zaka makumi a nayi ndi mphambu ziwiri kapena kupitirira pa nkhani ya kuyezetsa za khansa yakhomo lachiberekero.

ANNEXURE M: SEMI-STRUCTURED INTERVIEW GUIDE FOR NURSE/MIDWIVES (CHICHEWA)

(NDONDOMEKO YOFUNSA MAFUNSO YA ANAMWINO/AZAMBA)

INTENTION TO USE CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 42 AND OLDER

RESPONDENT'S NUMBER......HEALTH CENTRE...... INITIALS OF INTERVIWER......INTERRATER RELIABILITY......

GAWO A: DEMOGRAPHIC DATA

1.1 Munakwanitsa zaka zingati pa tsiku lobadwa lapitalo?

1.2 Kodi ndinu okwatiwa? (Dikirani yankho)

Sindinakwatiwepo	
Okwatiwa	
Banja linatha	
Woferedwa	
Kulowana	

1.3 Kodi ndi maphunziro akulu ati amene munapita okhuzana ndi unamwino/uzamba? (Dikirani yankho)

Registered nurse	
Enrolled nurse	
Registered nurse/midwife	
Enrolled nurse/.midwife	

1.4 Mwagwira ntchito zaka zingati pa chipatala chomwe chimaye za khansa ya khomo la chiberekelo?

1.5 Mumatengapo pali yanji pa kuyeza amayi za khansa yakhomo la chiberekelo?

1.6 Muna yezetsapo za khansa ya khomo la chiberekelo?

1.7 Ngati simunayezetsepo, muli ndi chilingaliro chokayezetsa chaka chino?

SECTION B: INTENTION TO USE CERVICAL CANCER SCREENING SERVICES AMONG WOMEN AGED 42 AND OLDER

- 1. Kodi mukuganiza azimayi amene a mabwera pachipatala pano amayiwona bwanji nkhani ya khansa yak homo la chiberekero?
- 2. Kodi azimayi amaziwapo chani za kuyezetsa za khansa ya khomo lachiberekero, mitundu yakayezedwe ndi kupezeka mwa nsanga kwa khansa yi?
- 3. Azimayi amachiona bwanji chiopsezo cha khansa yak homo lachiberekelo?
- 4. Mmene mukuwonera, kodi azimayi amawona ngati akhoza kukhala ndi khansa yakhomo la chiberekero?
- 5. Mumene mukuwonera kodi azimayi amaganiza kuti phindu loyezetsa zakhansa yakhomo lachiberekero ndi chani?
- 6. Nanga azimayi amawona ngati zowatchinga kukayezetsa za khansa yakhomo lachiberekero ndi ziti?
- 7. Kodi azimayi akuziwapo chani za zomwe zimayambitsa khansa yakhomo lachiberekero.
- 8. Azimayi amaziwapo chani za chithandizo cha zotsatira zosakhalabwino za khansa yakhomo la chiberekero?
- 9. Ndizithu zanji kapenanso ndindani amene azimayi amawona ngati anga wa kope pa nkhani yoyezetsa za khansa yakhomo la chiberekero?
- 10. Nanga ndi malo ati omwe azimayi angawakonde kuti akagawaneko uthenga okhudzana ndi khansa yankhomo la chibelekero?
- 11. Mukuwona bwanji za chikhumbo khumbo cha azimayi a zaka makumi a nayi ndi mphambu ziwiri kapena kupitirira pa nkhani ya kuyezetsa za khansa yakhomo lachiberekero.
ANNEXURE N: LETTER OF SUPPORT FROM THE DISTRICT HEALTH OFFICER-BLANTYRE

	Kamuzu College of Nursing
	P. O. Box 415,
	Blantyre.
18 th October 2010	
The District Health Officer	District Health Office
Private Bag 66	Blanchie Dime
Blantyre	2010 -10- 19
Dear Sir	Private Bag 66
REDMISSION TO CONDUCT RESEAT	BCH STUDY AT CHILDMONI NDIRANDE AND
PANGWE HEALTH CENTRES	KCH STUDT ALCOHNONI, ROMANDE AND
DATIONE TRANSFERENCE	
I write to seek a tentative permission to u	se Chilomoni, Ndirande and Bangwe Health centres as
study sites should my proposal be approv	ved by the Malawi College of Medicine Research and
Ethics Committee.	
Lam a lecturer at Kamuzu College of N	Sursing Currently I am pursuing my PhD in Nursing
Philosophy with the University of South	h Africa. As a requirement for the fulfillment of the
programme I am supposed to conduc	a research study. My research topic is "Factors
influencing cervical cancer screening ar	nong women aged 42 and older". The study will be
conducted in two phases. Phase 1, will	involve women who are 42 years and older attending
clinics at the three health centres. Data	will be collected using a structure interview schedule.
Phase 2 will involve in-depth interviews	with nurse/midwives providing health care services at
the three research sites. Prior to the main	study I also intend to conduct a Pilot study with women
aged 42 and older at Queen Elizabeth Cer	ıtral Hospital.
My proposal is currently being reviews	ed by the Malawi College of Medicine Research and
Ethics Committee The committee requir	es a tentative indication from your office that I will be
allowed to use the health centres should t	he proposal be approved. Following approval I will also
	mission to conduct the study in the mentioned health

It is anticipated that data collection for Phase 1 and 2 will take approximately one month and two weeks respectively.

Looking forward to your favorable response.

rauth 1

centres.

Your faithfully Melanie Y Hami (Mrs)



ANNEXURE O(1): LETTER OF APPROVAL FOR MALAWI COLLEGE OF MEDICINE RESEARCH ETHICS COMMITTEE

UNIVE	RSITY OF MALAŴI		
K.M Maleta, MBBS PhD		College of Medicine Private Bag 360	
Our Ref.:		Chichiri Blantyre 3 Malaud	
Your Ref.: P.09/10/979		Telephone: 01 877 245 01 877 291	
		Email: <u>comrec@medcol.mw</u>	
21st December 2010			
Mrs. M. Hami			
Kamuzu College of Nursing			
Chichiri Blanturo 2			
Dear Mrs. Hami			
RE: P.09/10/979 – Factors influencing ce older	rvical cancer screening amo	ong women aged 42 and	
I write to inform you that COMREC reviewe expedited review. The following points have	d your proposal mentioned ab	ove which you resubmitted for	
Sample size has been elected	e been dealt with:		
 References have been numbered. 			
 Data tools have been refined. Submission of COMREC Checklist 			
 Point 7 has been addressed properl 	y.		
I am pleased to inform you that your protoc	col was approved after consid	dering that you addressed all	
the queries raised in the initial review.			
	Approved by		
	College of Medicine		
	2 1 DEC 2010		
	Research and SIREC)		
	are Ethics Commi	ttee	

As you proceed with the implementation of your study we would like you to adhere the amended protocol ICH GCP requirements and the College of Medicine Research requirements as indicated on the attached page. Yours Sincerely, Mputso Prof. J.M Mfutso-Bengo CHAIRMAN - COMREC JMMB/ck

ANNEXURE P: LETTER OF APPROVAL TO CONDUCT A PILOT STUDY AT

QECH

Telephone: (265) 01 874 333 / 677 333 Facsimile: (265) 01 876928 Email: <u>gueenshosp@globemw.net</u>

All communications should be addressed to: The Hospital Director



In reply please quote No.

QUEEN ELIZABETH CENTRAL HOSPITAL P.O. BOX 95 BLANTYRE MALAWI

Ref No. QE/10

13th January, 2011

Melanie Y. Hami (Mrs) Kamuzu College of Nursing P.O. Box 415 BLANTYRE

Dear Madam

PERMISSION TO CONDUCT PILOT STUDY AT QUEEN ELIZABETH CENTRAL HOSPITAL

This is to inform you that management has no objection for you to conduct a pilot study on "Factors influencing cervical cancer screening among women aged 42 and older" at Queen Elizabeth Central Hospital.

All the best in your studies.

Yours faithfully,

T.N. Soko CHIEF NURSING OFFICER For: HOSPITAL DIRECTOR



ANNEXURE R: APPROVAL LETTER TO CONDUCT THE STUDY AT CHILOMONI HEALTH CENTER

Kamuzu College of Nursing P. O. Box 415, Blancyre Blantyre with Health Office

7th January 2011

The District Health Officer Private Bag 66 Blantyre

Dear Sir

PERMISSION TO CONDUCT RESEARCH STUDY AT CHILOMONI, NDIRANDE AND BANGWE HEALTH CENTRES

I write to seek permission to use Chilomoni, Ndirande and Bangwe Health centres as study sites.

I am a lecturer at Kamuzu College of Nursing. Currently I am pursuing my PhD in Nursing Philosophy with the University of South Africa. As a requirement for the fulfillment of the programme, I am supposed to conduct a research study. My research topic is "Factors influencing cervical cancer screening among women aged 42 and older". The study will be conducted in two phases. Phase 1, will involve women who are 42 years and older attending clinics at the three health centres. Data will be collected using a structure interview schedule. Phase 2 will involve in-depth interviews with nurse/midwives providing health care services at the three research sites.

It is anticipate the data collection for Phase 1 and 2 will take approximately two months.

Attached is the approval letter from College of Medicine Research and Ethics Committee.

Looking forward to your favorable response.

Yours faithfully Melanie Y Hami (Mrs)



ANNEXURE S: APPROVAL FROM IN-CHARGE BANGWE HEALTH CENTRE

Kamuzu College of Nursing P. O. Box 415, Blantyre.

12rd January 2011

The In-Charges Bangwe Health Centre Private Bag 66 Blantyre

Dear Sir

PERMISSION TO CONDUCT RESEARCH STUDY AT BANGWE HEALTH CENTRE

I write to seek permission to use Bangwe Health centre as a study sites. I am a lecturer at Kamuzu College of Nursing. Currently I am pursuing my PhD in Nursing Philosophy with the University of South Africa. As a requirement for the fulfillment of the programme, I am supposed to conduct a research study. My research topic is "Factors influencing cervical cancer screening among women aged 42 and older".

The study will be conducted in two phases. Phase 1, will involve women who are 42 years and older attending clinics at Chilomoni, Ndirande and Bangwe health centres. Data will be collected using a structure interview schedule. Phase 2 will involve in-depth interviews with nurse/midwives providing health care services at the three research sites.

It is anticipate the data collection for phase 1 and 2 will take approximately three months.

Looking forward to your favorable response.

Your faithfully Melanie Y Hami (Mrs.)



ANNEXURE T: APPROVAL FROM THE MANATER-IN-CHARGE OF NDIRANDE HEALTH CENTRE



ANNEXURE U: STUDY PERIOD

TASK		TIME	RAME								
PERFORMED											
Developing research proposal and instruments	31 st Aug 2009										
Receive permission from COMREC, for pre-testing the instrument and data collection		15 th Nov 2010									
Pre-testing the structured interview guide			Mid Jan 2011								
Data collection Phase 1				Mid Mar 2011							
Data collection Phase 2					Early May 2011						
Analysis of data for Phase 1						End June 2011					
Interpretation of Phase 1 results							End Aug 2011				
Interpreting results for Phase 2									End Oct 2011		
Discussion and recommendations										Dec 2011	
Submission of research report											Feb 2012

ANNEXURE V: STUDY BUDGET

BUDGET ITEM	COST PER UNIT	TOTAL COST	INSTITUTIONAL
			CONTRIBUTION
8 reams of bond paper	Mk 1 050	Mk 8 400	0
5 reams of ruled paper	Mk 950	Mk 4 755	0
3 months Internet	Mk 16,000/ month	Mk 48 000	0
literature search			
5 printer cartilages	Mk 25 000	Mk 125 000	0
10 pencils	Mk 25	Mk 250	0
5 pens	Mk 30	Mk 150	0
1 digital data recorder	Mk 22 500.00	Mk 22 500.00	0
4 air ticket to South Africa	Mk 97,000.00	MK 388,000	0
Car hire for data	Mk 45/Km	Mk 13 500	0
collection (300 Km)			
Photocopying 400	Mk 10/page*12 page each	Mk 48 000	0
structured interview	Mk 120		
guides			
Photocopying 20 semi-	Mk 10/page*4 pages each	Mk 600	0
structure interview guides	Mk 40		
3 2 GB Kingston flash	Mk 5 000	Mk 15 000	0
discs	4005 0 50		
Photocopying 5 research	1805 pages @ 52	MK 2 300	0
Pinding	Cents/page		
Binding	(Rand 200x Mk23)	IVIK 4 600	
Subsistence allowance	Mk 3 000/person/day	Mk 225 000	0
for 3 research assistants			
for 25 days.			
Bags for carrying	Mk 2,500	Mk 15 000	0
questionnaire 2 for each			
data collector			
Subsistence allowance	Mk 1 500/day	Mk 37 500	0
for 1 driver for 25 days			
Accommodation(Mk 8	MK 18 400	Mk 239 000	0
800/night), transport (IVIK			
8 000/day) and meals (IVIK			
(13 days)			
Consultation for data		MK240.000	0
analysis-statistician			U U
Consultation from experts		Mk 21 000	0
(translation of research			
instrument, ethical			
review)			
Ehical review by College	US 100	Mk 15,900	
of Medicine Research			
and Ehics Committee			-
Final editing fee	Mk 60 000	Mk 60 000	0
Laptop computer	МК 192 000	Mk 192 000	0
Sub total		Mk 1 769 555.00	0
15% contingency		MK 265 433.25	0
Grand total		MK 2 054 653.25	U

JUSTIFICATION FOR THE BUDGET Stationery

Reams of bond paper, ruled paper, printer cartilages, pencils and pens will be used for development of proposal and thesis. The unit costs have been obtained from stationary suppliers for Kamuzu college of Nursing through the purchasing officer. The researcher plans to interview 225 women using a structured interview schedule with 20 pages each. Photocopying charges at Kamuzu College of Nursing is at Mk10 per page.

Twenty extra instruments have been added to cater for any errors encountered during data collection.

Equipment

Tape recorder, audio tapes and car hire charges will be used for data collection. Sixteen 90 minutes tapes will be used for audio tapping nine nurses/midwives' semistructured interviews. It is anticipated that one audio tape will be used for each nurse/midwife and there will be an extra one in case of problems.

In order to cut costs and for flexibility the secretarial work required to prepare the proposal and thesis will be done by the researcher. This will include preparation of graphs, pie charts and tables for data preparation. Therefore, the researcher will require one laptop computer for this process. This will also aid in storage of information.

Travel

The researcher will travel to South Africa three times during the period of the study. The first trip the researcher attended a one week research seminar organized by the Department of Health Sciences at the University of South Africa. This is a requirement by UNISA to equip students with knowledge on the research process. The researcher also took advantage of this visit to discuss the research proposal with the supervisor. The researcher stayed in South Africa two weeks. Therefore the cost for first trip included: air ticket, lodging, meals, research seminar attendance fee and taxi hire. The second trip to South Africa, the researcher, will be defending the thesis development and finalisation. The third trip will be for graduation. The researcher plans to spend 3 days in South Africa for second and third trip. The cost for second and third trip will be similar catering for, air ticket, lodging, meals and taxis. A 15% contingency has been added on all the costs to allow for inflation.

The researcher also plans to hire a car from Kamuzu College of Nursing for data collection at the three health centres. Data will be collected for 20 days. The car will be used for transport to and from data collection site and for supervision of research assistants. It is estimated that 50 km will be covered per day at a rate of Mk 45/Km.

Consultation costs

Professional services will be required for interpretation of research instrument from English to Chichewa, data analysis and final editing of the final document. Interpretation of research instrument was done by department of community services Johns Hopkins project, in Malawi. This is a reputable organization which conducts research studies in local Malawian languages. The researcher will also require professional assistance with data analysis. Therefore, a statistician from Johns Hopkins will also be consulted for this activity. The statistician charges per hour and it is anticipated that 10 hours will be required to complete the whole process. For final editing of the thesis, it is a requirement that it should be done by a professional from UNISA before submission to examiners. The cost is 3 000 South African Rands which is Mk 66 000 at a National Bank exchange rate of Mk 22 to a rand (The Daily Times Malawi News paper for Tuesday 30/08/10:6).

ANNEXURE W: NATIONAL BANK OF MALAWI FOREIGN EXCHANGE RATES



Friday September 23 2011

ANNEXURE X(1): PAMPHLET ON CERVICAL CANCER AND SCREENING IN

ENGLISH



Your probably wondering what is a CERVIX? Well for those of you who don't already know the Cervix is the lower, narrow portion of the uterus where it joins with the top end of the vagina. Therefore cervical cancer is the cancer of the cervix. What causes cervical cancer? Almost all cervical cancers are linked to Human Papilloma Virus (HPV)-a common group of over 100 viruses of which a few lead to cancer. The most common are number 16 and 18.	What are the risk factors for cervical cancer? Mostly women between ages of 35 and 55 Early sexual activity (starting during teenage years) High parity Multiple sexual partners for the woman or her partner Exposure to sexually transmitted infections (STIs) Genetically-mother or sister has had cervical cancer Abnormal cervical test findings before Immune suppression e.g HIV/AIDS Smocking	What are your chances of getting it? It is the second most common cancer in women worldwide but the most common cancer among women in Sub- Sahara Africa, Malawi inclusive. On the other hand it is the most preventable. In Malawi about 80.0% of women with cervical cancer only seek care during the inoperable stage. Is it curable? If detected early and treated promptly, almost all cervical cancers are curable.
and 18.	SINCKING	

ANNEXURE X(2): PAMPHLET ON CERVICAL CANCER AND SCREENING IN CHICHEWA

Ndinga ziteteze bwanji kumatendawa?

Kayezetsení powuníkídwa khomo Lachíberekero (VIA)

Ndiyenera kuyeze ngati?

Muyenera kuyezetsa zakazisanu ziri zones kapene kutsatira malangizoa chipatala. Mutha kusiya kuyezetsa: muka kwanitsa zaka makumiasanundi awiri kapena kupitilira koma mukhale kuti zotsatila zoyezetsa za khansa yak homola chiberekero muzaka khumi zapítazo panalipe bruto lilonse: kapenaso mutha kusiya kuyezetsa ngatimwapangidwa opareshoni yo chotsedwa chiberekero pamodzindikhomola chiberekeropa zifukwa zina kupatula cha khansa kapena zizindikirozakhansa.

Kodi VIA amayeza bwanji?

A zachipatala amaunika khomo la chiberekero kupyorera ku njira ya a bambo. Pakhomola chiberekero pamapakidwa mankhwala, ndipo manchwalawa asiyidwa kuti agwire ntchito kwa mphindi imodzi. Khomolachiberekero limaunikidwandi nyali kuti awone ngati palikusintha maonekedwepaphindi

inodziyo.

Kodi ku yezaku ndiko pweteka? Amayi ambiri amati kuyezaku sikophweteka ngakhale nthawi zina ena atha kusowa nazo ntendere pang'ono koma izi zimatha pasanathe nthawi yayitali.

Nanga ndikapezeka ndi zotsatira zoonetsa zizindikilo za khansa?

Zízíndíkíroza khansa zíkapezeka zísana falíkíre kuzíwalozína, makhwala atha kuperekedwa ndípo amachízíka.

Kodi ubwino woyezetsa za khansa yak homo la chiberekelo ndi chain?

Munthu amadziwa za thanzi la khomo la chiberekero chake. Mumalandira uphungu kuti mupitilize kukhala ndi moyo

wathanzi.

A zachipatala amapereka chithandizo malinga ndi zotsatila za zoyezetsa.

Ndingaka yezetse kuti za khansa yak homo la chiberekelo?

Apezene ena aliwonse ogwira ntchito ya chipata pa chipatala chilli kufupi ndi dela lanu. . .Ndiye izi ndizoyenera inu!

Muli ndi zaka pakati pa 42

ndi 70?

Welengani za Khansa ya Khomo la Chiberekero

Samalarirani Khomo La Chiberekero Chanu Samarirani Moyo Wanu

Kodi khomo la chiberekero ndichani?

Ichí ndí chíwalo chomwe chíllí kumusí kwa chíwalo momwe mumakhala mwana asana bandwe muthupí la mayí.

Kodi *khansa ya nkhomo la chiberekelo* ndi chani?

Iyi ndi nthenda yomwe imabwera pamene nyama yak homo la chiberekero imamera mopitirira muyeso wake ndi kuononga khomo la chiberekerocho.

Kodi chimayambitsa *khansa ya khomo la chíberekelo* ndi chani?

Nthawi zambiri ka vayirasi kotchedwa HPV ndikamene kamayambitha khansa yak homo la chiberekero. Tima vayirasiti tilipo tamitundu yopitirira sana limozi, koma ndintundu wochepa womwe umatha kuyambitsa khansa. Gulu la ma vayilasi lomwe limayambitsa khansa ndi nambala 16 and 18.

Kodi ndizinthu zanji zingamuyike mayi pa chiopyezo cha khansa ta khomo la chiberekelo?

Amayi omwe alipachiopsyezo ndi a zaka pakati pa makumi asanu ndi phambu zisanu ndi a zaka makumi mazana a sanu ndimphambu zisanu (35 ndi 55).

Kuyamba kugonana pansinkhu waung'ono (pamene ali ndi zaka kuyambira khumi ndi phambu zitatu mpaka zaka khumi ndimphambu zisanu ndi zinayi).

Mayi amene achembeza kopitirila kanayi.

Amene ali ndi ogonana nawo ambiri. Akhoza kukhala kuti abambo kapene amayi kuti ndiamene ali ndiogonana nawo ambiriwa.

Zaku ntundu (mwina mayi kape chemwali anu anali ndi khansa yak homo la chiberekero).

Ngatí munapezekapo ndí zízíndíkíro za khansa ya chíberekero nthawí yína. Ngatí mulí ndí chítetezo choperewera muthupí mwachítsanzo ngatí mulí ndí kachílombo ka HIV kapena

chímpyíríkítí chamatenda a edzí. Kusuta fodya. = Mwayi oti munthu nkukhala ndi khansa = yak homo la chiberekelo ndiwaukulu | bwanji?

Khansayi ndi yachiwiri pandanda wa makhansa amene amapezeka ndi a zimayi muziko lonse lapansi koma ndiye khansa yomwe ili pa nambala wani kumwera kwa Africa. Koma iyi ndi khansa yomwe ikhoza kutetezedwa mosabvuta. Ku Mala kuno amayi asanu ndi atatu pa amayi khumi ali onse a pita kuchipatara kuti akalandire chithandizo chamatendawa atafika poti ngakhale opareshoni siyinga thandize.

Ndiyoti ikhoza kuchizidwa?

Ikapezeka ndípo makhwala akalandírídwa sínafike kuzíwalo zína, nthendayí íma chírítsika.

ANNEXURE Z(1): GUIDELINES FOR TEACHING NURSE/MIDWIVES ABOUT CERVICAL CANCER AND CERVICAL SCREENING

- 1. Review anatomy and physiology of the cervix
- 2. Review cervical cancer etiology, causes and prevention
- 3. Cervical cancer prevention policies and guidelines
- 4. Review individual counselling and group education
- 5. Performing VIA and cryotherapy
 - Instruments and supplies
 - Client assessment
 - Group and individual counselling before VIA
 - The VIA procedure
 - Client assessment and getting ready
 - o Via test
 - o After the VIA test
 - Counselling after the VIA procedure
 - Provision of Cryotherapy services
 - Who is eligible
 - Who can perform cryotherapy
 - Where cryotherapy services can be provided
 - Counselling prior to cryotherapy
 - Performing cryotherapy procedure
 - Follow-up after cryotherapy
 - Referral
- 6. Review infection prevention practices
- 7. Review handling, maintenance, cleaning and storage of equipment
- 8. Review data collection and recording
- 9. Review reporting requirements

Method of assessment

- Screen and provide cryotherapy to 20 women
- Check off using checklist BELOW

CHECKLIST FOR CERVICAL CANCER SCREENING PROCEDURE (VIA), (To be completed by Supervisor)

NURSE/MIDWIFE'S NAME	Date Observed
----------------------	---------------

0 = Not done	1 = not satisfactory	2 = Satisfactory	3 = Excellent

Excellent: Performs the step or task according to the standard procedure or guidelines **Satisfactory**: Performs the step or task relatively well but there is room for improvement **Unsatisfactory**: Unable to perform the step or task according to the standard procedure or guidelines

Not Observed: Step, task or skill not performed by participant during evaluation by trainer

CHECKLIST FOR HISTORY, AND VIA PROCEDURE				
STEP/TASK	SCORE	COMMENTS		
CREATING A CONDUCIVE ENVIRONMENT				
1. Clean the examination room and all surfaces				
2. Prepare all necessary equipment (high level disinfected or sterile				
speculum, cotton swabs in clean container, a bottle of diluted acetic acid				
and adequate light source)				
3. Ensure privacy (visual and audio).				
4. Offer the woman a seat.				
COMMUNICATION				
1. Greet the woman respectfully and with kindness				
2. Introduce yourself and supervisor.				
3. Explain to the woman (and her support person) what is going to be				
done and encourage her to ask questions.				
4. Get her permission before you begin.				
5. Invite and respond to questions.				
6. Provide continual emotional support and assurance				
SKILL/ACTIVITY PERFORMED SATISFACTORILY				
7. Ask the woman a brief health history on the following:				
Parity				
Last menstrual period (if pregnant give gestational age in				
weeks)				
Age at first sexual intercourse				
Use of contraceptive method				
Number of sexual partners				
Any history of STIs (including HIV)				
Smocking				
Previous positive VIA				
Mother or sister with cervical cancer				
Use of steroids				
Record in Health Passport				

Clie	nt assessment and getting ready		
8.	Explain each step of the procedure		
9. A	rrange the instruments and supplies on a sterile tray or trolley		
10.	Ask he woman if she needs to empty her bladder.		
11.	Assist the woman into a lithotomy postion		
12.	Wash hands thoroughly with soap and dry with clean dry cloth.		
13.	Palpate abdomen and wash hands again.		
14.	Check the woman's conjunctiva, tongue, nail beds and palms for		
pallo	Dr.		
15.	Double glove		
16.	Arrange the instruments and supplies on the sterile tray		
17.	Inspect the external genitalia and check urethral opening for		
	discharge		
18.	Palpate the Skene's and Bartholin's gland.		
19.	Tell the woman that the speculum is about to be inserted and she		
may	feel some		
	Pressure.		
20.	Gently insert the lubricated speculum fully or until resistance is felt		
and	slowly open the blades to reveal the cervix.		
21.	Wash and dry hands thoroughly.		
22.	Adjust the speculum so that the entire cervix can be seen (using a		
	spatula gently push the cervix down or up into view if not well		
	positioned).		
23.	When cervix can be seen clearly, fix the blades of the speculum in		
	the open position so that it remains in place.		
24.	Assistant should help move the light source so that you can see the		
	cervix clearly		
25.	Assess the cervix for evidence of infection		
26.	Using the sponge forceps and a clean cotton ball, remove any		
	discharge, blood or mucus from the cervix		
27.	Identify the columnar junction and area around it		
28.	Soak three clean cotton balls in dilute acetic acid solution and use		
	them to apply the solution to the cervix		
29.	Wait 1 minute for the acetonwhite reaction to appear-observe with		
	light source during this minute.		
30.	Inspect the semi columnar junction, if it bleeds easily and for		
	raised thickened white plaques or acetowhite epithelium.		
32.	Reapply acetic acid or swab the cervix with clean cotton ball to		
	remove any mucus, blood or debris that develops for clear		
	assessment.		
33.	When the visual inspection is completed, use a fresh cotton ball to		
	remove any remaining acetic acid from the cervix and vagina.		
34.	Gently remove speculum and place it in 0.5% chlorine solution for		
	10 minutes for decontamination.		
35.	Perform a bimanual examination and retrovaginal examination (if		
	indicated)	ļ	
Afte	r the VIA test	ļ	
36.	Wipe light source with 0.5% chlorine solution		
37.	Immerse both gloved hands in 0.5% chlorine solution:		

	Remove gloves by turning them inside out.				
	 If disposing of gloves, place in lead proof container or plastic 				
	bag.				
	• If reusing surgical gloves, submerge in 0.5% chlorine solution				
	for 10 minutes to decontaminate.				
38.	Ask the woman to move towards the head of the bed and help her				
	sit up. Ask her the dress up.				
39.	Wash hands thouroghly with water and soap and dry them				
	thouroghly				
40.	Record the VIA test results and other findings.				
41.	Discuss the results of the VIA test and pelvic assessment				
42.	VIA negative – tell her when to return for repeat VIA testing				
	VIA positive - tell the client the recommended follow-up steps				
43.	Advise woman on date of next visit				
	TOTAL SCORE				
	PERCENTAGE				
	SCORE				

FIRST ASSESSOR'S COMMENTS:	
SIGNATURE:	DATE:
SECOND ASSESSOR'S COMMENTS:	
SIGNATURE: DATE	· · · · · · · · · · · · · · · · · · ·
NURSE/MIDWIFE'S COMMENTS:	
NURSE/MIDWIFE'S SIGNATURE:	DATE:

ANNEXURE Z(2): <u>GUIDELINES FOR TEACHING PRE SERVICE STUDENTS ABOUT</u> <u>CERVICAL CANCER AND SCREENING AT PRIMARY LEVEL</u>

CONTENT

The following areas should be covered:

- 1. Anatomy and physiology of the cervix
- 2. Cervical cancer etiology, causes and prevention
- 3. Cervical cancer prevention policies and guidelines
- 4. Individual counselling and group education
- 5. Performing VIA and cryotherapy
 - Instruments and supplies
 - Client assessment
 - Group and individual counselling before VIA
 - The VIA procedure
 - Client assessment and getting ready
 - o Via test
 - o After the VIA test
 - Counselling after the VIA procedure
 - Provision of Cryotherapy services
 - Who is eligible
 - Who can perform cryotherapy
 - o Where cryotherapy services can be provided
 - Counselling prior to cryotherapy
 - Performing cryotherapy procedure
 - Follow-up after cryotherapy
 - Referral
- 6. Review infection prevention practices
- 7. Handling, maintenance, cleaning and storage of equipment
- 8. Data collection and recording
- 9. Reporting requirements

Method of assessment

- Contribute towards clinical placement for gynaecology grade
- Screen and provide cryotherapy to 20 women
- Oral and practical assessment using the checklis.t below

CHECKLIST FOR CERVICAL CANCER SCREENING PROCEDURE (VIA), (To be completed by Supervisor)

STUDENT'S NAME	Date Observed

0 = Not done 1 = not satisfactory 2 = Satisfactory 3 = Excellent

Excellent: Performs the step or task according to the standard procedure or guidelines **Satisfactory:** Performs the step or task relatively well but there is room for improvement **Unsatisfactory:** Unable to perform the step or task according to the standard procedure or guidelines

Not Observed: Step, task or skill not performed by participant during evaluation by trainer

STEP/TASKSCORECOMMENTSCREATING A CONDUCIVE ENVIRONMENT1. Clean the examination room and all surfaces2. Prepare all necessary equipment (high level disinfected or sterile speculum, cotton swabs in clean container, a bottle of diluted acetic acid and adequate light source)3. Ensure privacy (visual and audio).	CHECKLIST FOR HISTORY, AND VIA PROCEDURE			
CREATING A CONDUCIVE ENVIRONMENT 1. Clean the examination room and all surfaces 2. Prepare all necessary equipment (high level disinfected or sterile speculum, cotton swabs in clean container, a bottle of diluted acetic acid and adequate light source) 3. Ensure privacy (visual and audio).	STEP/TASK	SCORE	COMMENTS	
1. Clean the examination room and all surfaces 2. Prepare all necessary equipment (high level disinfected or sterile speculum, cotton swabs in clean container, a bottle of diluted acetic acid and adequate light source) 3. Ensure privacy (visual and audio).	CREATING A CONDUCIVE ENVIRONMENT			
 2. Prepare all necessary equipment (high level disinfected or sterile speculum, cotton swabs in clean container, a bottle of diluted acetic acid and adequate light source) 3. Ensure privacy (visual and audio). 	1. Clean the examination room and all surfaces			
speculum, cotton swabs in clean container, a bottle of diluted acetic acid and adequate light source) 3. Ensure privacy (visual and audio).	2. Prepare all necessary equipment (high level disinfected or sterile			
and adequate light source) 3. Ensure privacy (visual and audio).	speculum, cotton swabs in clean container, a bottle of diluted acetic acid			
3. Ensure privacy (visual and audio).	and adequate light source)			
	3. Ensure privacy (visual and audio).			
4. Offer the woman a seat.	4. Offer the woman a seat.			
COMMUNICATION	COMMUNICATION			
1. Greet the woman respectfully and with kindness	1. Greet the woman respectfully and with kindness			
2. Introduce yourself and supervisor.	2. Introduce yourself and supervisor.			
3. Explain to the woman (and her support person) what is going to be	3. Explain to the woman (and her support person) what is going to be			
done and encourage her to ask questions.	done and encourage her to ask questions.			
4. Get her permission before you begin.	4. Get her permission before you begin.			
5. Invite and respond to questions.	5. Invite and respond to questions.			
6. Provide continual emotional support and assurance	6. Provide continual emotional support and assurance			
SKILL/ACTIVITY PERFORMED SATISFACTORILY	SKILL/ACTIVITY PERFORMED SATISFACTORILY			
7 Ack the woman a brief health history on the following:	7 Ack the women a brief health history on the following:			
Ask the woman a bher health history on the following.	7. Ask the worldan a bhei fleatth flistory of the following.			
Failty Lost monstruel period (if prognant give gestational ago in	• Failty			
Last mensuual penou (il pregnant give gestational age in	• Last mensuuai penou (ii pregnant give gestational age in wooks)			
Age at first sexual intercourse	Age at first sexual intercourse			
Age at first sexual intercourse	• Age at hist sexual intercourse			
Number of sexual partners	Number of sexual partners			
• Number of sexual partners	• Number of sexual partners			
Smocking	• Any history of STIS (including Hiv)			
Brovious positivo VIA	Brovious positivo VIA			
Methor or gister with convicel concer	 Previous positive via Methor or gister with conviced concert 			
Use of steroids	Use of steroids			
Record in Health Passport	Record in Health Passport			
THE VIA PROCEDURE				

V=vt=List of research project topics and materials

Clie	nt assessment and getting ready	
8.	Explain each step of the procedure	
9. A	range the instruments and supplies on a sterile tray or trolley	
10.	Ask he woman if she needs to empty her bladder.	
11.	Assist the woman into a lithotomy postion	
12.	Wash hands thoroughly with soap and dry with clean dry cloth.	
13.	Palpate abdomen and wash hands again.	
14.	Check the woman's conjunctiva, tongue, nail beds and palms for	
pallo	r.	
15.	Double glove	
16.	Arrange the instruments and supplies on the sterile tray	
17.	Inspect the external genitalia and check urethral opening for	
	discharge	
18.	Palpate the Skene's and Bartholin's gland.	
19.	Tell the woman that the speculum is about to be inserted and she	
may	feel some pressure.	
20.	Gently insert the lubricated speculum fully or until resistance is felt	
and	slowly open the bladesto reveal the cervix.	
21.	Wash and dry hands thoroughly.	
22.	Adjust the speculum so that the entire cervix can be seen (using a	
	spatula gently push the cervix down or up into view if not well	
	positioned).	
23.	When cervix can be seen clearly, fix the blades of the speculum in	
	the open position so that it remains in place.	
24.	Assistant should help move the light source so that you can see the	
	cervix clearly	
25.	Assess the cervix for evidence of infection	
26.	Using the sponge forceps and a clean cotton ball, remove any	
	discharge, blood or mucus from the cervix	
27.	Identify the columnar junction and area around it	
28.	Soak three clean cotton balls in dilute acetic acid solution and use	
	them to apply the solution to the cervix	
29.	Wait 1 minute for the acetonwhite reaction to appear-observe with	
	light source during this minute.	
30.	Inspect the semi columnar junction, if it bleeds easily and for raised	
	thickened white plaques or acetowhite epithelium.	
32.	Reapply acetic acid or swab the cervix with clean cotton ball to	
	remove any mucus, blood or debris that develops for clear	
	assessment.	
33.	When the visual inspection is completed, use a fresh cotton ball to	
	remove any remaining acetic acid from the cervix and vagina.	
34.	Gently remove speculum and place it in 0.5% chlorine solution for	
	10 minutes for decontamination.	
35.	Perform a bimanual examination and retrovaginal examination (if	
	indicated)	
Afte	r the VIA test	
36.	Wipe light source with 0.5% chlorine solution	
37.	Immerse both gloved hands in 0.5% chlorine solution:	_
	Remove gloves by turning them inside out.	
		_

	• If disposing of gloves, place in lead proof container or plastic		
	bag.		
	• If reusing surgical gloves, submerge in 0.5% chlorine solution		
	for 10 minutes to decontaminate.		
38.	Ask the woman to move towards the head of the bed and help her		
	sit up. Ask her the dress up.		
39.	Wash hands thouroghly with water and soap and dry them		
	thouroghly		
40.	Record the VIA test results and other findings.		
41.	1. Discuss the results of the VIA test and pelvic assessment		
42.	VIA negative – tell her when to return for repeat VIA testing		
	VIA positive - tell the client the recommended follow-up steps		
43.	Advise woman on date of next visit		
	TOTAL SCORE		
	PERCENTAGE		
	SCORE		

FIRST ASSESSOR'S COMMENTS:	
SIGNATURE:	DATE:
SIGNATURE: STUDENT'S COMMENTS:	DATE:
STUDENT'S SIGNATURE:	DATE:

ANNEXURE D(1):

Research information sheet for potential respondents: phase 1(English)

You are being asked to participate in a study that will try to identify intentions to use cervical cancer screening services among women, aged 42 and older in Malawi. This study is being conducted by Melanie Yandakale Hami, a student pursuing a D Litt et Phil degree in health studies at the University of South Africa. The information obtained will be used to improve women's utilisation of cervical cancer screening services. You will be asked questions about your perceptions in relation to different aspects of cervical cancer. The interview will take approximately 30-45 minutes of your time. You will be recruited into the study along with three hundred eighty other women, aged 42 and older, attending clinics for different problems at Chilomoni. Ndirande and Bangwe health centres.

The interview is entirely voluntary and you are free to withdraw at any time. Your participation, refusal to participate or withdrawal from participation, will not affect your healthcare in any way whatsoever. Therefore, prospective participants have the right to decide voluntarily to participate in a study; ask questions for clarification; refuse to give information or to withdraw from the study at any stage without incurring any negative consequences.

All the information collected is confidential. Numbers instead of names will appear on the completed questionnaires. The signed consent form will be placed in a separate bag from the one containing completed interview schedules. To further enhance privacy and confidentiality, all completed interview schedules will be kept under lock and key. Only the researcher, statistician and research supervisors will have access to the locker. The research report will not contain any information that could identify any particular individual.

There are no anticipated risks attached to participating in this study. If you are unhappy with some of the questions you are allowed not to respond to them. You may not receive a direct benefit if you agree to participate. However, it is anticipated that the information obtained from this research would improve health providers' understanding of issues affecting women's utilisation of cervical cancer screening services and therefore improve interventions. Implementation of recommendations based on the results could improve women's utilisation of cervical cancer screening services. It could also help to identify gaps that need to be addressed in the cervical cancer screening and management services and the policies governing these services.

If you have further questions, comments or complaints relating to the research, you are welcome to contact Ms Melanie Yandakale Hami at the University of Malawi, Kamuzu College of Nursing, Blantyre campus. PO Box 415. Blantyre. Telephone number +265 (0) 888 514 485 or the Chairperson, Professor Mfuso-Bengo at the University of Malawi, College of Medicine Research and Ethics Committee. Private Bag 360. Chichiri, Blantyre 3. Telephone number +265(0) 1 871 911.

Thank you for considering the request to be interviewed.

Yours sincerely

Ms MY Hami