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FACULTY OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH AND FAMILY MEDICINE**

**CLIENT KNOWLEDGE, ATTITUDES AND PRACTICES TO
CERVICAL SCREENING IN MITCHELL'S PLAIN, CAPE TOWN,
SOUTH AFRICA**

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Degree of

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by

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Abstract

Background

Cervical cancer is a common cause of death among women in developing countries, including South Africa. In 2000, the South African National Department of Health introduced the national cervical cancer screening policy, which states that every woman is entitled to three free Papanicolaou (Pap) smears in her lifetime, at 10-year intervals starting at the age of 30 years. A number of studies have indicated that the uptake of cervical cancer screening is dependent on the targeted population's knowledge, attitudes and practices (KAP) related to health-seeking behaviours. The aim of the study is to determine the baseline KAP to Pap smears and cervical cancer of women aged 25 years and older in Mitchell's Plain, Western Cape Province.

Methods

A cross-sectional survey was undertaken among clients attending primary health care facilities in the Mitchell's Plain district, Cape Town, Western Cape Province. The study population consisted of women aged 25 years and older who presented at the public health care facilities in Mitchell's Plain between 1 April and 31 July 2002 and who consented to participate in the study. The data were analysed using the STATA version 8 statistical package.

Results

A total of 445 women were interviewed, most of whom were above the age of 30 years (72%), married (68%) and unemployed (68%). Ninety-five per cent said they had heard of a Pap smear; however, when asked what part of the body was examined during a Pap smear, only 4% correctly answered. Only 13% of the women knew that a Pap smear was a test for cancer of the cervix, although 52% recognised it as a test for cancer. Of the women interviewed, 73% had heard of cancer of the cervix. A total of 78% of women had had a Pap smear. The results indicated no significant association between ever hearing of a pap smear and the following predictors: age, educational level, marital status, pregnancy and the use of contraception. Women who were significantly more likely to have had a Pap smear included: older women, those who were in a relationship, owned a radio, were employed, had ever been pregnant or had heard of a Pap smear before. Main sources of information regarding Pap smears were reported to be posters (17%) and the radio (16%).

Conclusions

The data suggest that although a very high proportion of the women (95%) had heard of Pap smears, a smaller proportion (78%) had actually had a Pap smear. This study showed that there were missed opportunities that the health workers could possibly have utilised to encourage women in the targeted age group to have a Pap smear while at the health facilities for

reasons other than reproductive health. Women who had not been afforded the opportunity to have a Pap smear by the health provider reported a great interest in having a Pap smear, showing willingness to improve their health if afforded the opportunity.

In order to reduce the high morbidity and mortality from cervical cancer in South Africa, very large numbers of women in the target age group need to be recruited to the screening programme. To be able to achieve an increase in the cervical cancer screening uptake, huge efforts have to be made to actively recruit women who are within reach of the health services, particularly any women who present at the health facilities.

List of abbreviations

ACCP	Alliance for Cervical Cancer Prevention
ANC	Antenatal clinic
CHIP	Cervical Health Implementation Programme
CIN	Cervical intraepithelial neoplasia
DVI	Direct visual inspection
HIV	Human immuno-deficiency virus
HPV	Human papillomavirus
HSIL	High-grade squamous intra-epithelial lesions
IEC	Information, education and communication
KAP	Knowledge, attitudes and practices
LSIL	Low-grade squamous intra-epithelial lesions
NDOH	National Department of Health
Pap smear	Papanicolaou smear
PATH	Program for Appropriate Technology in Health
SIL	Squamous intra-epithelial lesion
UCT	University of Cape Town
WHO	World Health Organisation

Chapter 1

Introduction

1.1 Background

Cervical cancer is a malignant disease of the mouth of the womb, and a common cause of death from cancer among women, particularly in developing countries (Sankaranarayanan, Budukh, and Rajkumar, 2001; World Health Organisation [WHO], 2004; Denny, 1999). In South Africa, even though cervical cancer is a preventable disease it is a leading cause of death due to cancer in women (Mqoqi, Kellet, Sitas, and Jula, 2004). The majority of women who develop cervical cancer present when the disease is already at an advanced stage (Denny, 2000).

During the apartheid regime in South Africa (prior to 1994) there was no structured cervical cancer screening programme in the public health sector. In the year 2000, the South African National Department of Health (NDOH) introduced the national cervical cancer screening policy, which states that every woman is entitled to three free Papanicolaou (Pap) smears in her lifetime, at 10-year intervals starting at the age of 30 years (National Department of Health [NDOH], 2000). However, studies have shown that the presence of a screening policy does not necessarily translate into action and uptake of the screening programme (Wellensieck, Moodley, Moodley, and Nkwanayana, 2002). A successful cervical screening programme is dependant on a variety of factors, including the knowledge, attitudes and

practices (KAP) of the women in the community. It is therefore important to establish women's KAP with regard to cervical cancer and more specifically with regard to Pap smears so that appropriate interventions can be developed that encourage greater uptake of Pap smears.

In South Africa, the Cervical Health Implementation Programme (CHIP) was set up as a pilot project to develop and test interventions that would improve current cervical screening in the public health services (Cervical Health Implementation Project [CHIP], 2004). This baseline KAP study, was carried out in Mitchell's Plain, a suburb in Cape Town, Western Cape Province and is a sub-study of the CHIP.

1.2 Rationale of the study

Cervical cancer is the second largest cause of cancer deaths in women worldwide, second to breast cancer. In developing countries and in South Africa it is the leading cause of female cancer mortality.

In South Africa, a national screening policy has been developed and is currently being implemented. A number of studies have indicated that the uptake of public health interventions such as cervical cancer screening is highly dependent on the targeted population's knowledge, attitudes and practices (KAP) related to health-seeking behaviours (Baillie, 1994; Wellensieck et al. 2002). It is therefore essential to determine baseline information on KAP before implementation of the cervical screening

programme, so that the effect of information, education and communication interventions (IEC) can be measured and evaluated after implementation of the study. The baseline information would be useful for the development of appropriate IEC intervention programmes. This sub-study was carried out to assist the researchers to understand the specific needs of this target population before the launch of the Cervical Health Implementation Programme (CHIP).

Chapter 2

Literature Review

This literature review focuses on: the epidemiology of cervical cancer, prevention of cervical cancer and the KAP regarding cervical cancer screening.

2.1 Epidemiology

2.1.1 Global epidemiology of cervical cancer

Cervical cancer continues to be an important women's health problem, particularly in developing countries, and is the second leading cause of death among women worldwide (Parkin, Bray, Ferlay, and Pisani, 2005). More than 80% of the women who die from this disease are in developing countries, where cervical cancer is responsible for about 15% of all cancers in women, and where only about 5% have access to cancer care facilities (Denny 2005; Parkin 2001). Statistics show that globally about 500 000 new cases of cervical cancer are being diagnosed annually (WHO, 2004), and the majority of these cases (370 000) are in developing countries (Parkin, 2001). This indicates that the burden of cervical cancer is four times greater in developing countries than in developed countries. It is suggested that the reason for this disparity in morbidity and mortality is differential access to regular cervical screening programmes (Denny, 2005). Sub-Saharan Africa is among the regions that experience the highest incidence rates of cervical cancer in the world along with the Caribbean, Latin America south-central and south-east

Asia (Parkin, 2005). The age-standardised incidence rate of cervical cancer in Southern Africa is 38.2 per 100 000 women. This is very high when compared with developed countries in which the age-standardised incidence rates are generally less than 14.5 per 100 000 (Parkin, 2005).

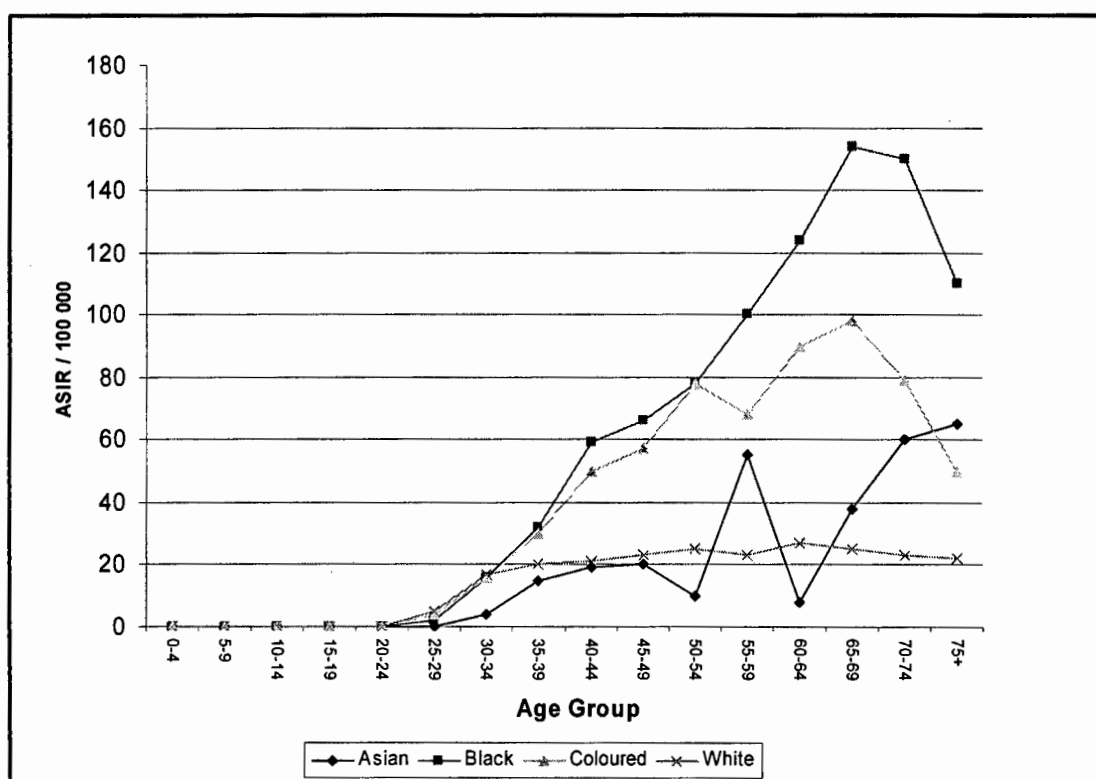
2.1.2 Epidemiology of cervical cancer in South Africa

Cervical cancer rates in South Africa are among the highest in the world. The age standardised incidence rate in South Africa is 29.7 per 100 000 (Mqoqi et al. 2004). Cervical cancer was reported to be the second leading cause of cancer deaths among women in South Africa in 1999, second only to breast cancer. The total number of cases of cervical cancer in 1999 was 5203, making it responsible for 33% of all cancers reported in black women (Mqoqi et al. 2004).

There is great disparity in morbidity from cervical cancer among women of the various population groups in South Africa. In 1999, the lifetime risk of all women in South Africa developing cervical cancer was 1 in 30 (Mqoqi et al. 2004). However, this disease affects more black women than any other race group in South Africa, and it has been reported to be the leading cause of cancer among black women in South Africa since inception of the National Cancer Registry in 1986 (Mqoqi et al. 2004). Black women then had a lifetime risk of 1 in 25 of developing cervical cancer and an age-standardised incidence rate 35 per 100,000, which peaked at 152.5 per 100 000 in black women between 65-69 years of age(Mqoqi et al. 2004). During 1998 and

1999, 84% of the total number of cervical cancer cases in South Africa was reported among black females. The second most affected group was women in the so-called 'coloured' population group. Figure 1 (adapted from Mqoqi, 2004) shows the age specific cervical cancer rates per 100 000 women for 1999, from the different ethnic groups among South African women.

Figure 1: Age specific incidence rates for cervix cancer by population group, 1999



Source: Adapted from Mqoqi et al. 2004

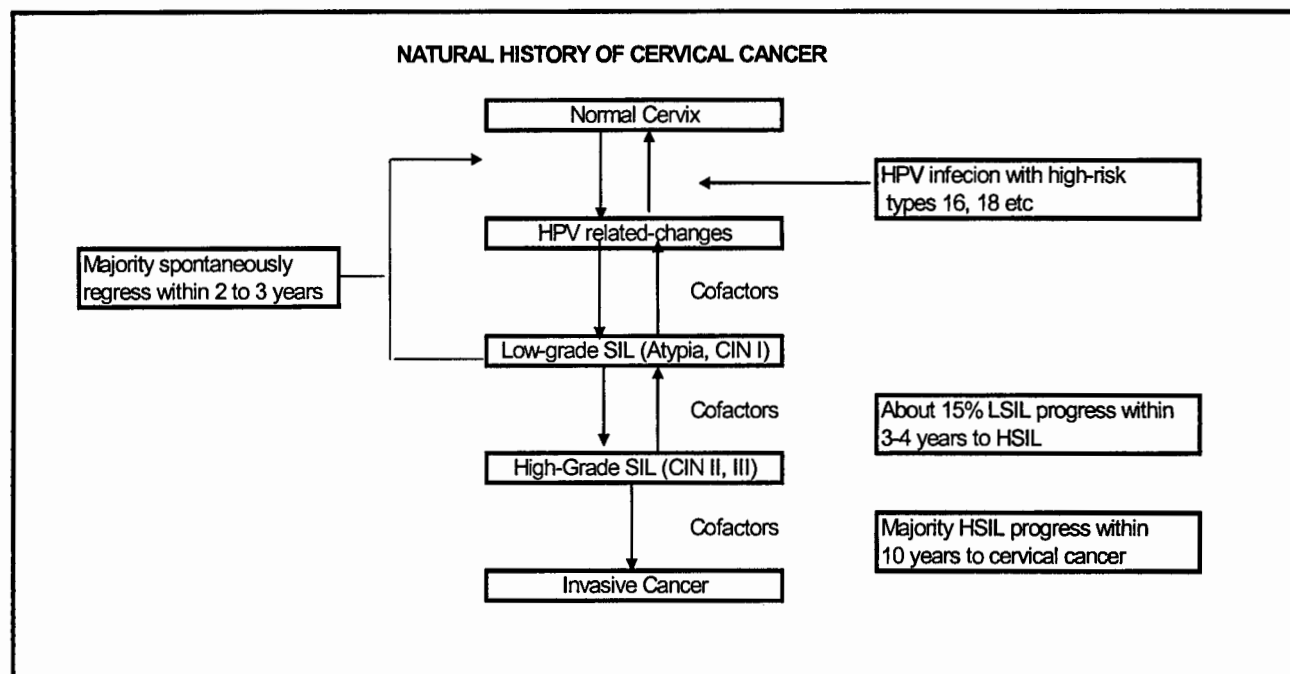
Most women with cervical cancer are in the older age groups; only a few young women suffer from this disease (Mqoqi et al. 2004). Cervical cancer is common among the poor due to their general lack of access to health care services (Denny, 2005). In addition, the cure rate for cervical cancer is low in

developing countries because women tend to present late, when invasive cervical cancer is already present (Denny, 2005). Most of these historically disadvantaged black women are dependent on public health services, which are not always user-friendly and are overcrowded. Also, the service rendered by health providers in the public health services does not always encourage women to seek preventative health care (Fonn et al. 2002).

2.1.3 The aetiology and natural history of cervical cancer

An understanding of the natural history of cervical cancer is important in developing appropriate interventions. Figure 2 is a schematic diagram of the natural history of cervical cancer.

Figure 2: The natural history of cervical cancer



Source: PATH/1997

Human papillomavirus (HPV) is a common sexually transmitted infection, and has been identified as the causative agent of cervical cancer (Walboomers, 1999). Currently more than one hundred different types of HPV have been identified. The commonest oncogenic HPV sub-types responsible for 80% of cervical cancer are HPV16 and HPV18 (Koutsky et al. 2002).

HPV infection is an extremely common sexually transmitted infection among women of reproductive age, and in the majority of cases it is asymptomatic, transient and clinically insignificant (Denny, 2005). Once infected with HPV, the virus may remain stable, lead to dysplastic lesions, or become undetectable. However, less than 5% of women infected with HPV develop invasive cervical cancer (Program for Appropriate Technology in Health [PATH], 2000). Although infection with high-risk HPV is a necessary cause for invasive cervical cancer, it is not a sufficient cause; co-factors such as high parity, cigarette smoking, a history of sexually transmitted infections with *Chlamydia trachomatis* and herpes simplex virus II and long-term use of oral contraceptives may influence progression to invasive cancer (Denny, 2005).

Few women with HPV infection may go on to develop low-grade squamous intra-epithelial lesions (LSIL). The majority of these LSIL regress within 2 to 3 years without any treatment (Walboomers, 1999). However, about 15% of those women with LSIL progress to high-grade squamous intra-epithelial lesions (HSIL) within 3 to 4 years. The majority of women with HSIL develop invasive cervical cancer within about 10 years (PATH, 2000).

The natural history of cervical cancer highlights the slow progression of the disease, from precancerous lesions to invasive cancer. From the natural history, it can be seen that the long latent period of cervical cancer of 10 - 20 years would allow women in South Africa in their thirties, forties and fifties who are at high risk for precancerous lesions to be screened relatively infrequently and still benefit from a significant impact in terms of reduction in the incidence of and mortality from cervical cancer (PATH, 2000).

2.2 Prevention

2.2.1 Prevention of cervical cancer

Primary prevention

This strategy includes promotion of behaviour change to prevent the transmission of HPV (Denny, 1999). Prevention of transmission could be achieved through safer sex practices, for example abstinence from sexual intercourse, mutual monogamous relationships in people with no prior HPV infection, and the use of condoms (Denny, 2005). However, human sexual behaviour is difficult to control therefore control of the infection rate of HPV poses enormous challenges for the health sector. Prevention of HPV transmission through condoms is made difficult by the fact that HPV exists throughout the anogenital area, and hence condoms do not offer full protection against infection via sexual contact (PATH, 2000).

The causal link between HPV and cervical cancer has led the way for research into HPV vaccines as a means of primary prevention of cervical

cancer (Walboomers, 1999). Currently two prophylactic vaccines namely Gardasil and Cervarix are available in the United States of America and other developed countries. These two vaccines have been developed by the pharmaceutical companies Merck and GlaxoSmithKline, respectively (World Health Organisation [WHO], 2006).

The new vaccines appear to be highly effective (Koutsky et al. 2002). As with any new product, there are many questions about how best to market and deliver the vaccines to ensure optimal population coverage. There are still many logistical questions that need answers, for example, adult consent for the minors who are to be vaccinated, and the response of the vaccine in those who are HIV-infected and in pregnant women. A key question is whether the new vaccines will be affordable in the developing countries that carry 80% of the burden of this disease (WHO, 2006).

It is acknowledged that even after introduction of an HPV vaccine, with an expected 70% prevention of cervical cancer, secondary prevention through screening will still need to be available for women already infected with high-risk HPV types and those that may be infected with virus types not yet covered by the vaccines (WHO, 2006).

Secondary prevention

“Secondary prevention can be defined as the measures available to individuals and populations for the early detection and prompt and effective intervention to correct departures from good health” (Last, 1988 p.104).

Secondary prevention of cervical cancer involves the use of screening methods. The objective of cervical cancer screening is to detect precancerous cells at an early stage to afford women the opportunity to have early diagnosis and treatment and thus prevent cervical cancer. The long latent period of cervical cancer makes it an ideal disease to benefit from a well structured screening programme.

This secondary level of prevention has been the mainstay of the success achieved in reducing morbidity and mortality from cervical cancer in developed countries (Sankaranarayanan et al. 2005). Cervical screening is frequently done by means of the Pap smear test. The Pap smear is a simple test where cells are scraped from the cervix and tested in a cytology laboratory for the presence of abnormal cells. It is a safe, affordable, acceptable and an available test in South Africa. Worldwide, the Pap smear is the most widely used method in cervical cancer screening (WHO 2004). The reduction in cervical cancer has been noticeable in developed countries, where functioning screening programmes have been responsible for a reduction in the incidence of and mortality from cervical cancer (Parkin, 2001).

The Pap smear test was developed over 60 years ago by George Nicholas Papanicolaou, and since then the test has remained unchanged even though there are concerns about its accuracy (Baldwin, Laskey, and Coleman, 2003). The Pap smear has a specificity estimated to be about 91% to 96% (Sankaranarayanan et al. 2005), but it may be as low as 86% (Baldwin et al. 2003). This means that the majority of 'normal' Pap smears are correctly

identified as normal. The sensitivity of a single Pap test is reported to have a wide variation of 30% to 87% (Baldwin et al. 2003) or 44% to 78% (Sankaranarayanan et al. 2005). This means that the Pap test is moderately sensitive and that true-positives are only identified correctly some of the time, and that some patients with cervical cancer may be missed.

Effective Pap smear screening programmes require a reliable infrastructure that includes well trained and updated staff to collect the specimens; sufficient and reliable equipment; safe storage and transportation of specimens; a fully functional laboratory; efficient communication systems; timely reporting on results; and effective follow-up and referral systems (Denny 2005). All or part of these requirements for cytological screening may pose a challenge for developing countries therefore alternative methods of screening needs to be investigated (Sankaranarayanan et al. 2005). Only two of these alternatives, the direct visual inspection (DVI) and the HPV DNA will be discussed.

Direct visual inspection (DVI) of the cervix, is a non-cytology-based screening method. It involves inserting a speculum into the vagina, and swabbing the cervix with 3 - 5% acetic acid solution, then visually examining the cervix at least one minute after the application, with the naked eye using a bright light (Sankaranarayanan et al. 2005). The result of the test is classified as positive when there are dense, opaque and well defined aceto-white lesions on the cervix. It is a simple, easy to learn and cheap method of screening. It can be performed by trained health professionals such as nurses. A great advantage of this method of screening for both the patient and the provider is that the

results are immediately available. The ranges of the sensitivity (67%-79%) and specificity (49% to 86%) from these studies were similar to that reported for cytology and HPV testing (Sankaranarayanan et al. 2005).

One of the challenges of using this method is training of the health providers in the subtle characteristics of cell abnormalities thus making it difficult to standardise quality control (Denny, 2005). Also, it is difficult to observe abnormalities among post-menopausal women because of natural changes in the cervix. Studies have indicated that DVI has a vital role when screening for high-grade lesions however, it's low specificity means that it is not a good test for effective screening (Denny, 2000). There is also a high rate of false-positive diagnosis when DVI is compared to Pap smears, resulting in immediate over-diagnosis of healthy women.

The positive link of HPV with cervical cancer warrants the testing for oncogenic HPV which can be done as alternative non-cytology based screening method (Denny 2006). This can be done using one of two methods: polymerase chain reaction (PCR) or hybrid capture (HC2). Both methods identify HPV DNA. Although the sensitivity of both tests is similar, PCR has the advantage of being able to detect small amounts of HPV DNA and specific HPV types(Denny 2006).

When compared with cervical cytology, HPV DNA testing is an objective test, is less labour-intensive and it has a rapid turnaround time. It has high sensitivity (80% - 90%) for detecting high-grade squamous lesions among

older women (age 30 years and older). Advantages of this test include the ability to detect very small amounts of HPV DNA accurately and production of consistent results. Some of the disadvantages of using this test are the high costs in resource-poor settings, special laboratory requirements and the possible high false-positive rate for cervical disease (Sankaranarayanan et al. 2005).

2.2.2 Cervical cancer screening in developed countries

In developed countries where well organised cervical screening programmes have been implemented, there has been success in reducing the incidence of and mortality from cervical cancer (Parkin, 2001; PATH, 2004; Sankaranarayanan et al. 2001). According to Laara (1987) the introduction of organised cervical screening services during 1965-1982 in the Nordic countries brought about huge reductions in cervical cancer. This is evident by the trends in the cumulative mortality rates of cervical cancer during this time period in: Iceland (80%), Finland (50%), Sweden (34%) and Denmark (25%). However, Norway, only showed a very small reduction of 10% in the cumulative mortality rates for the same period due to only 5% population coverage by the organised screening programme as compared to Iceland that had nationwide screening programmes for women in a wide target age range (Laara, Day and Hakama, 1987). Studies have demonstrated that the success of cervical screening programmes depend mainly on coverage of women in the target age groups who are at highest risk for cervical cancer, as well as the effectiveness of the cytology screening services (Denny, 2000).

2.2.3 Cervical cancer screening in developing countries

Cervical cancer screening in many developing countries is mainly opportunistic, sporadic or even non-existent (Denny, 2000). It is mainly carried out in urban areas among the users of primary care facilities and antenatal clinics (Parkin et al. 2005). Only about 5% of women in developing countries have been screened (PATH, 2004), compared to about 50% of women in developed countries (Parkin et al. 2005). Although there have been many efforts to establish screening programmes in developing countries, success has been minimal, and many have failed (Denny, 2000). A national screening programme in Mexico failed to reduce morbidity and mortality from cervical cancer because the programme was aimed at younger women who were repeatedly screened instead of screening the older women (Lazcano-Ponce, Moss, de Ruiz, Castro, and Avila, 1999). Implementing cervical screening programmes using the traditional Pap smear method with all its infrastructural requirements poses tremendous challenges for resource-poor developing countries (Denny, 2000).

2.2.4 History of cervical screening in South Africa

In the past, several South African attempts at introducing cervical screening programmes proved to be unsuccessful. There were various forms of cervical screening taking place in different parts of the country, mainly in urban areas (Fonn et al. 1993). Historically, in the public health sector Pap smears were performed opportunistically mainly at family planning, antenatal and post-natal clinics in South Africa (Fonn et al. 1993). In the 1970s, the Department of

Health requested that Pap smears be done only if the cervix looked abnormal (Fonn et al. 1993). During 1980, 'Project Screen Soweto' was conducted at Baragwanath Hospital in Soweto (a black township close to Johannesburg) in response to the increase in cervical cancer cases in Soweto (236 cases in 1980 compared to 150 cases in 1970) and the poor quality of the then opportunistic screening programme (Leiman, 1987). This project failed dismally due to the fact that at the primary health care facilities, Pap smears were not considered a priority. Despite the implementation of this project, there was a decrease in the number of Pap smears done during the period of the project in Soweto. Another reason for the failure of the project was that it was launched before implementing a public health intervention of information, education and communication with the targeted women in those communities. This resulted in women being ignorant about the readiness of the services to do mass Pap smears (Leiman, 1987).

Before 1994, the majority of women who were screened were in the 20-29-year age group, even though the highest proportion of women with pre-cancerous lesions were in the 30-39-year age group and women over the age of 50 years had the highest rate of invasive cervical cancer (Baillie, 1994). In 1994 the Western Cape Province introduced a policy of three free Pap smears in a women's lifetime. Although this policy of organised screening attempted to address the problem of opportunistic screening that was happening before 1994, the implementation was not very successful. Some of the possible reasons were that there was little emphasis on community education and the women screened were mainly younger women.

Unfortunately, even after the introduction of this policy, there was a drastic reduction in the number of cervical smears performed, especially among the women over 30 years who are at high risk for cervical cancer (Denny, 2000). Included in the reasons for the failure of the various cervical screening programmes in South Africa was the low coverage of women particularly in the older age group. This is depicted in studies conducted in Khayelitsha (Pick and Cooper, 1997), where only 45% of the women had had a Pap smear and in a multi-centre study in 9 provinces in the country in 1998 (Fonn, 2002), where only 20% of the women had had a Pap smear. This raises questions about the KAP of the targeted community and the readiness of the health services to implement the screening policy. The introduction of a national cervical screening policy by the South African government in 2000, has shown its commitment to reduce the morbidity and mortality from cervical cancer, even if means that screening will take place once every 10 years. The aim is to reach a 70% coverage over 10 years if all the women in the target age group is screened at least once (NDOH, 2000)

In summary, Pap smear screening in South Africa was characterised by frequent screening of younger women who are at lower risk compared to older women. These older women at high risk were opportunistically screened at public health facilities. There was also differential access to screening services by different racial groups, by people of different socio-economic status and by geographical location (urban versus rural). The result was that the highest risk women were mostly not screened. The new policy is an attempt to address the problem of women dying from a preventable disease.

2.3 KAP studies

The understanding of women's perceptions and their behaviours towards cervical cancer prevention is an important component of a successful screening programme which could contribute to the increase coverage of screening (Agurto, Bishop, Sanchez, Betancourt, and Robles, 2004). KAP studies are based on people's knowledge, attitudes and practices which have a bearing on their health behaviour (Katzenellenbogen, Joubert, and Abdool Karim, 1997). The purpose of a KAP study is to measure the psychological and personal variables in order to better understand the extent of the subjects' knowledge, and the reasons why they act the way they do. KAP studies may provide important baseline information for the planning of health promotion programmes (Katzenellenbogen et al. 1997).

One needs to consider the various aspects of a KAP study and the benefit gained from its application. 'Knowledge' refers to the understanding of a study population of a given topic, in this case their understanding of cervical screening and Pap smears, and the extent of their knowledge around these concepts. 'Attitudes' describes people's feelings and opinions towards cervical screening and Pap smears. This includes the characteristics of those who go for Pap smears, and what motivates them to be interested in their health in comparison to those who do not have Pap smears. 'Practices' are people's actions regarding cervical screening and Pap smears: for example, whether they go for Pap smears, when they do so and where they go. The practices of

the community are usually based on the knowledge and attitudes that they have about a particular disease (Katzenellenbogen et al. 1997).

2.3.1 Knowledge

Internationally, Fylan (1998) highlighted a number of factors that reduce women's participation in cervical screening. These include: poor awareness of the indications for and benefits of the cervical smear test, the lack of knowledge of cervical cancer and its risk factors. In Mexico, a study was conducted between 1996 and 1999 to determine the main factors associated with increase utilisation of the cervical screening programme. It was found that those women who were aware of the purpose of the Pap smear were three times more likely to participate in the programme (Lazcano-Ponce et al. 2002). Other factors that was also associated with greater uptake of Pap smears included: having a good Pap smear experience, knowledge of the reason for a Pap smear and a high level of education of the head of the house(Lazcano-Ponce et al. 2002)..

Many studies done at primary health care facilities in South Africa have also shown a lack of knowledge of cervical cancer prevention (Baillie, Pick, and Cooper, 1996; Heysteck , De Jonge, Meyer, and Lindeque, 1995; Leiman, 1987; Emdon, Gerard, and Jones, 1984), and there are not enough public health interventions to address this problem. Out of 89 obstetric in-patients at a public hospital in Johannesburg, only 4 (4.5%) had heard about cervical cancer (Emdon et al. 1984). Heysteck et al. (1995) conducted a study in

Mamelodi, a township east of Pretoria, where cervical screening was usually offered at antenatal clinics. Only 2% of the 1095 women interviewed had any knowledge of cervical cancer and early detection methods. In a community survey carried out among 165 women between the ages of 15 and 65 years, in Khayelitsha, a district in Cape Town (Bailie, 1994), only 35.4% said they had heard of Pap smears. Women reported that they mainly received their information from the local maternity obstetric unit.

A number of African countries have carried out KAP studies of cervical cancer screening. A study in Nigeria by Ajayi and Adewole (1998) determined women's knowledge about cervical cancer, and described the sources of information on cervical cancer and the general attitude to cervical cancer. In order to quantify the knowledge about cervical cancer, questions related to cancer of the cervix were grouped into those that described what cervical cancer is, the clinical presentation, and the causes of cervical cancer. The correct answers in each of the groups were summed up to determine the subject's knowledge. It was found that although 90% had heard of cancer in general, only a minority (15%) of the participants had heard of cervical cancer. The major sources of information on cancer in general were reported to be the media (38%) and peers (36%). These findings are similar to reports from other developing countries. For example, at the Kenyatta Hospital in Kenya, women's knowledge of Pap smear testing and cervical cancer was very low, (32% and 51% respectively) and only 22% of those who had some knowledge, had had a Pap smear test (Gichangi, 2003).

Several studies have found that women reported a need for cervical screening information, and that access to such information resulted in increased rates of attendance at primary health screening facilities (Campbell, MacDonald & McKieran, 1996; McAvoy & Raza, 1991). The main source of information for women from low socio-economic backgrounds tends to be other women (Wood et al. 1997). Media interventions, including a photo-comic book and radio drama, were used in a study conducted in Cape Town to increase uptake of cervical cancer screening (Risi et al. 2004). The results for the photo-comic book did not show an increase in uptake of cervical cancer screening, while the radio drama resulted in limited uptake of cervical screening (Risi et al. 2004).

2.3.2 Attitudes

Few studies have been done that assess women's attitudes towards cervical screening. There are numerous reasons why women do not attend cervical screening services. Some of these include: low literacy rates, reluctance to go for screening when asymptomatic and fear of death (Lartey, Joubert, and Cronje 2003). Women's role in society also plays a role in preventing them from seeking health care for themselves due to them not being able to free themselves from household chores, attendance to family problems (Lazcano-Ponce et al. 1999) and having to depend on the husband's approval (Basu et al. 2006).

Women also consider the test unnecessary, they do not consider themselves to be at risk of cervical cancer, they suffer from embarrassment due to their bodies having to be exposed to the health care provider and there is an expectation of pain when undergoing the test which results in fear (Fylan, 1998; Abrahams, Wood, and Jewkes, 1997; Wood, Jewkes, and Abrahams, 1997). Other reasons given were that a male provider was not acceptable as well as appointments for Pap smears being available only during working hours (Fylan, 1998). Many women believed that the Pap smear cleaned the womb of infections and cancer, and that it was a 'dirty womb' that gave rise to the gynaecological symptoms for which women then presented for a Pap smear (Abrahams et al. 1997; Wood et al. 1997).

Few studies have examined women's satisfaction with the cervical cancer screening service that they receive. It has been suggested that patient satisfaction is a predictor of compliance, and therefore it is necessary to establish ways in which women can experience satisfaction with cervical screening programmes (Fylan, 1998). According to Fylan (1998), it has been shown in medical treatment studies that patient satisfaction can be increased by decreasing waiting time at the clinic, having a short time lag between referral and appointments as well as the patient's confidence in the clinician's ability. It has been shown that barriers to effective screening programmes exist both at the community as well as in the health service level (Abrahams, 1997; Sankaranarayanan, 2001). A study in South Africa has suggested that the legacy of racial and geographic inequity in education and literacy levels,

literacy levels, health infrastructure and access to health services are barriers to cervical screening (Moodley, 2006).

2.3.3 Practices

Internationally, many studies have found that women who have Pap smears are better educated (Fylan, 1998; Nene et al. 2006; Lazcano-Ponce et al. 1997), live in urban areas with better socio-economic circumstances (Fylan, 1998; Lazcano-Ponce et al. 1997), are married, younger (Nene et al. 2007), on contraceptives (Fylan, 1998; Nene et al. 2007) and have knowledge of Pap smears (Lazcano-Ponce et al. 1997) than those women who do not have Pap smears.

African countries experiences with cervical cancer screening have however not been very successful. In South Africa, about 62% of the women interviewed in a study done in Khayelitsha indicated that they had never had a Pap smear (Bailie, 1994). In a survey carried out in the Western Cape (London, 1993), the majority of coloured women working at a canning factory (21% to 44%) had never had a Pap smear, while among a smaller group of unemployed women in the neighbouring community, 63% had never had a Pap smear. A history of contraception utilization was shown to have had a positive effect on having a Pap smear (London, 1993). In Ghana, Pap smear use even among the well educated was low. Only 8.5% of the 39% who had sufficient knowledge about Pap smears had actually gone for one (Adanu, 2002).

A study carried out in India showed that those who did not attend cervical screening services had lower literacy rates than those who did (Basu, 2006). The Indian women were reluctant to go for screening due to various reasons such as: the fact that they did not have any symptoms, they were afraid of dying if they were to be diagnosed with cancer or that the cancer would spread if they were to have a biopsy. Social and logistical reasons given for not attending cervical screening were: household chores, attendance to family problems and lack of husband's approval (Basu, 2006). Another study in India (Nene, 2007) showed that when comparing those women who did not test, those that did test were younger (30-39 years), better educated, and had used contraception before in their lifetime. More of the women who underwent screening were married, while fewer had ever been pregnant. Those who were more likely to comply with treatment were married, had had fewer pregnancies and a better level of education (Nene, 2007).

It has been shown that the attitudes of the health care providers for instance being willing to inform patients adequately about desired health care practices could positively influence women's cervical screening (Lazcano-Ponce et al. 2002). Health care providers who deal with clients in a professional and caring manner could encourage other health care seekers to attend health facilities, since the clients will report on their positive experiences to those women with whom they interact (Lazcano-Ponce et al. 2002). The improvement of quality of care may prove to be beneficial as a means to increase utilisation of screening services in areas where there is low coverage (Lazcano-Ponce et al. 2002).

Knowledge and attitudes of patients may affect clients' health practices. There are many the barriers for example lack of knowledge and negative attitudes to overcome before clients present for screening. It is therefore necessary to consider the factors that contribute to the client's decision to utilise the cervical cancer screening services.

A synthesis of the information on the knowledge of women about cervical cancer and Pap smears indicate that the level of education and socio-economic status are some of the key factors that affect uptake of cervical cancer screening programmes. In order to increase the uptake of cervical screening, cervical screening education strategies should be aimed at women who are less educated, who live in rural areas, are from low socio-economic backgrounds and those who have less contact with the reproductive health services, namely older women since they are at higher risk for cervical cancer. It is also important to ensure that women attending health services receive information about the importance of Pap smears which could lead to an increase in awareness followed by an increase in demand for Pap smears.

The literature has shown that cervical cancer is a common cancer globally, but predominantly in developing countries. South Africa has a cervical cancer rate that compares with other developing countries and therefore needs a well functioning screening service. It is a disease that lends itself to early screening and management that will significantly reduce the morbidity and mortality. The literature shows that this is influenced by the knowledge, attitudes and practices of women who are at risk.

Chapter 3

Aim, Objectives, Methods

3.1 Aim of the study

To determine the baseline knowledge, attitudes and practices (KAP) of women 25 years and older in Mitchell's Plain with regard to cervical cancer prevention.

3.2 Objectives

The objectives of the study were to:

1. determine women's knowledge about Pap smears and cervical cancer;
2. assess women's attitudes towards Pap smears and the National Cervical Cancer Screening Policy;
3. determine women's practices with regard to cervical screening; and
4. determine women's sources of information about Pap smears and cervical cancer .

3.3 Methods

3.3.1 Study design

A cross-sectional survey was undertaken, using an interviewer controlled questionnaire. This study was conducted among clients attending all the

primary health care facilities in the Mitchell's Plain district, Western Cape Province.

3.3.2 Study population and sampling

Mitchell's Plain was chosen as a study area since it had already had a good reproductive health infrastructure in place. The study population consisted of women aged 25 years and older living in Mitchell's Plain. Included in the study sample were consecutive women attending public health care facilities between 1 April and 31 July 2002. There were no refusals from the women who presented themselves to the interview room. After a general address by the interviewer in the waiting room for prospective clients to report to the said room.

The sample size was calculated using the statistical tables for calculation of sample size. The power associated with detecting the prevalence of KAP of cervical cancer screening and cervical cancer among a baseline adult population in the Mitchell's Plain community was calculated. This was done using the background prevalence of Pap smear knowledge (30%) in the adult population from a community-based survey done in Khayelitsha (Bailie, 1994). The expected knowledge among the Mitchell's Plain community was estimated to be approximately 50%, given that the women in Mitchell's Plain were more educated and were attending a health facility. Statistical calculations indicated that a sample size of 384 was required for the study to have a 95% confidence interval. In order to allow for potential refusals, 445 women were interviewed.

below the household subsistence level, i.e. the income required to cover basic expenses (e.g. rent, transport, food, clothing, fuel and cleansing materials).

This study was conducted at all nine public health care facilities (one facility was a community health centre (CHC) previously known as a day hospital, managed by the Provincial Health Department and the other eight were local authority clinics) in Mitchell's Plain. These health facilities were operational from Monday to Friday from 07h30 to 16h30, except for the CHC, which provided a 24-hour trauma service seven days a week. The CHC offered basic curative services for minor ailments and services for chronic medical conditions as well as attending to trauma cases and minor surgical procedures (day cases).

The local municipal clinics offered mainly preventative and promotive health services, e.g. child health and reproductive health as well as some curative services such as treatment for tuberculosis, sexually transmitted diseases and minor ailments.

3.3.4 Measurements

Data were collected by trained interviewers using structured a questionnaire. The interviews were conducted in three languages, namely English, Afrikaans and Xhosa. The four interviewers were all female nurses who had many years of nursing as well as interviewing experience. They were fluent in the languages of the interviews that they conducted. The interviewers were

assigned to communities with whom they and those that they were interviewing could easily identify. Each participant that volunteered to take part in the study was interviewed in their preferred language. The domains on the questionnaire were as follows (see Appendix I, the questionnaire):

1. Demographic and socio-economic factors
 - age
 - reason for attending the clinic
 - education and employment
 - marital status
 - reproductive history
2. Sources of health information
3. Knowledge of Pap smears and cervical cancer
4. Attitudes towards Pap smears and cervical cancer
5. Personal Pap smear history

3.3.5 Pilot study

The questionnaire was pre-tested on 20 women at a community health facility in another district that shared the same characteristics as the health facilities in Mitchell's Plain. This helped to highlight areas of inconsistent responses and ambiguous questions. The questionnaire was adjusted accordingly. Piloting also gave an idea of how long the interview was going to be which enabled the interviewers to inform the clients before the commencement of the interview.

3.3.6 Quality control procedures

There were four interviewers in the study. Before the onset of the study these interviewers were trained in the basic interviewing techniques as well as on the specific questionnaire. Ambiguities were explained and any queries were clarified. During the period of data collection there were periodic checks on the collected data and any queries were addressed.

3.3.7 Data handling, cleaning and analysis

After data collection there was double data entry into the Excel processing package. The data were then exported to the STATA statistical package (STATA Corporation, College Station, TX). Data cleaning was done using STATA version 8. Where there were any queries or inconsistencies in data entry these were addressed by comparing the original responses on the questionnaire to the entered responses. The data were analysed using STATA version 8.

First, univariate data analysis was done. Proportions were reported for the categorical variables. For the numerical variables that were not normally distributed, the median and range were reported. For those that were normally distributed, the mean and standard deviation were reported. Bivariate analysis was also carried out to determine associations between factors associated with hearing of Pap smears and having a Pap smear.

3.4 Ethics

Ethics approval was obtained from the University of Cape Town Research Ethics Committee. Approval to conduct the research was also obtained from the local health authority and the Provincial Government of the Western Cape. The area manager, clinic managers and clinic staff were all informed about the research.

3.5 Consent procedure

The interviewers obtained verbal informed consent from all participants.

Participants were informed of:

- 1) The purpose of the study
- 2) Voluntary participation
- 3) Duration of the interview
- 4) Confidentiality and anonymity
- 5) The right to withdraw or to refuse participation without penalties.

Appendix (II) indicates the information given to the participants before verbal consent was obtained.

Chapter 4

Results

A total of 445 women were interviewed at the nine primary health care sites in Mitchell's Plain. There were no refusals among those women who presented themselves to the private interview room. No record was kept of the total amount of patients or those accompanying patients that were informed en masse in the waiting area.

The demographic characteristics of the participants are outlined in Table 1. The majority of the women interviewed were above the age of 30 years (72%), married (68%) and unemployed (68%). Overall, most of the women were educated between grade four and grade eleven (69%), with only 3% of the women having had no schooling.

The main reason reported for the visit of the participants was because they were accompanying someone to the health facility (53%), or they were attending for a family planning consultation (20%). Only 2% of the participants were at the facility for the specific reason of having a Pap smear. Almost all of the women (97%) had been pregnant in their lifetime and about 50% had had between two and three pregnancies (Table 1). Most of those that were employed occupied jobs in the lower categories of work, such as shop assistants and domestic workers (32%).

Table 1: Socio-demographic characteristics of the participants (N = 445)

Characteristic	Categories	Number (%)
Age group (yrs)		
	≤30	123 (28%)
	31 - 40	156 (35%)
	41 - 50	94 (21%)
	>50	72 (16%)
Marital status		
	Married	302 (68%)
	Widowed	29 (7%)
	Divorced/separated	47 (11%)
	Single (never married)	67 (15%)
Number of pregnancies		
	0	14 (3%)
	1	47 (11%)
	2	111 (25%)
	3	108 (24%)
	4	81 (18%)
	5+	84 (19%)
Employment status		
	Employed	141 (32%)
	Unemployed	304 (68%)
Education		
	No schooling	13 (3%)
	Grade 1 - 3	9 (2%)
	Grade 4 - 11	308 (69%)
	Higher education*	115 (26%)

*Includes matric and tertiary education as well as those without matric but who had completed short courses.

4.1 Knowledge regarding cervical cancer prevention

4.1.1 Knowledge of Pap smears

The participants were asked several questions regarding their knowledge of Pap smears. Knowledge of Pap smears in this community was found to be exceptionally high. The majority (95%) said that they had heard of Pap smears; however, when asked which part of the body was examined during a Pap smear, only 4% answered correctly. Table 2 outlines the extent of the women's knowledge regarding Pap smears. Only 13% of the women knew that a Pap smear was a test for cancer of the cervix, although 52% recognised it as being a test for cancer. Respondents were also asked what it meant if a Pap smear was abnormal, and one-third (31%) indicated that it could mean the presence of cancer. Over 80% of women indicated that women should still have Pap smears despite their decision not to have any more children.

4.1.2 Knowledge regarding Pap smear screening policy

Only 10% of participants knew that the NDOH policy states that women are entitled to the first free Pap smear at the age of 30 years and 28% knew that the duration between Pap smears is 10 years.

4.1.3 Knowledge regarding cervical cancer

Over 70% of the women interviewed had heard about cancer of the cervix (Table 2). Of those who had heard of cancer of the cervix, 44% knew of somebody who had cancer of the cervix. When asked at what age women are most likely to get cervical cancer, approximately one-third of the respondents did not know. The majority (77%) of the respondents knew that cancer of the cervix could be prevented.

Table 2: Participants' knowledge about cervical cancer prevention (N = 445)

Knowledge	Number (%)
Pap smear	
Heard of a Pap smear	424 (95%)
Knew which part of the body examined for Pap smear	17 (4%)
Knew what a Pap smear tested for	57 (13%)
Knew that women who stopped having sex should have Pap smears	325 (77%)
Knew that women who were no longer having children should have a Pap smear	347 (82%)
Policy	
Knew that NDOH policy calls for first Pap smear after age 30	42 (10%)
Knew that NDOH policy calls for Pap smear every 10 years	120 (28%)
Cervical cancer	
Ever heard of cancer of the cervix	324 (73%)
Knew that cervical cancer can be prevented (n = 324)	251 (77%)
Knew that cervical cancer can be cured	248 (76%)

4.2 Attitudes regarding cervical cancer prevention

Several questions assessed the women's attitudes towards Pap smears. They were asked about their attitudes towards the policy after being given policy information. A small proportion (15%) of women was of the opinion that Pap smears were painful. The national policy on Pap smears was not readily accepted, since only 27% of the women agreed with the 10-year interval between Pap smears after the national policy was explained to them. However, 43% agreed that women should have their first Pap smear from the age of 30 years and older. In terms of perception of risk, only 27% of the women either did not know or did not think that they could ever get cervical cancer.

4.3 Practices regarding Pap smears

Over 70% of the women had had a Pap smear, with more than 50% having had more than one Pap smear in their lifetime (on average two to five Pap smears). Of the women who had had Pap smears, 90% indicated that they were planning to have another Pap smear within the coming year (Table 3). Of the 96 (22%) of women who had never had a Pap smear in their life, 85 (89%) indicated that they would be interested in having one after the interviewer had explained the procedure to them. Only a small percentage (25%) of women had discussed Pap smears with a husband or partner, and even less had discussed it with a health worker (20%). The main people with whom the interviewees discussed Pap smears were with their family members (38%) and friends (36%).

Table 3: Practices of participants towards cervical cancer prevention (N = 445)

Practice	Number (%) giving affirmative response
Ever had a Pap smear	349 (78%)
Last Pap smear: >10 years (n = 349)	84 (24%)
Received results of last Pap smear	242 (69%)
Planned on having another Pap smear	313 (90%)
Interested in having a Pap smear (n = 96)	85 (89%)
Ever discussed Pap smears with your husband or partner (n = 424)	107 (25%)
Ever discussed Pap smears with a health worker	84 (20%)
Ever discussed Pap smears with a family member	163 (38%)
Ever discussed Pap smears with a friend	154 (36%)

4.4 Sources of information regarding Pap smears

The respondents were asked whether they had seen or heard about Pap smears or cancer of the cervix from various sources of information in the last six months. The main sources of information regarding Pap smears were reported to have been posters (17%) and the radio (16%). Only 4% of the respondents had received information during a personal discussion with a health worker (Table 4).

Table 4: Sources of information on Pap smears and cervical cancer (N = 445)

Source	Number (%)
Poster	76 (17%)
Leaflet/pamphlet	27 (6%)
A talk by health care workers	45 (10%)
A personal discussion with a health worker	19 (4%)
Organised talk in community	6 (1%)
A radio programme	70 (16%)
An article in the newspaper	27 (6%)

4.5 Factors associated with Pap smear knowledge and having a Pap smear

4.5.1 Hearing about a Pap smear

Employment and owning a radio showed only borderline associations with hearing about Pap smears. The results indicate that there was no significant association between age, educational level, marital status, pregnancy, use of contraception and ever hearing of a pap smear (Table 5).

4.5.2 Having a Pap smear

Older women, women who were in a relationship, who owned a radio, were employed, had ever been pregnant and who had heard of a Pap smear were significantly more likely to have had a Pap smear (Table 6).

Table 5: Factors associated with hearing about Pap smears

Characteristic	Proportion	P value
Age (yrs)		
≤ 30	111/123 (90%)	0.689
31-40	151/156 (97%)	
41-50	91/94 (97%)	
>50	71/72 (99%)	
Education		
No schooling	12/13 (92%)	0.500
Grade 1-3	8/9 (89%)	
Grade 4-11	292/308 (95%)	
Tertiary	112/115 (97%)	
Marital status		
Married	289/302 (96%)	0.863
Widowed	28/29 (97%)	
Divorced/separated	44/47 (94%)	
Single (never married)	63/67 (94%)	
Owning a radio		
Yes	349/363 (96%)	0.071
No	75/82 (91%)	
Employment		
Employed	138/141 (98%)	0.079
Unemployed	286/304 (94%)	
Pregnancy		
Ever been pregnant	411/431 (95%)	0.664
Never been pregnant	13/14 (93%)	
Use of contraception		
Ever	362/378 (96%)	0.251
Never	62/67 (93%)	

Table 6: Factors associated with having a Pap smear

Characteristic	Proportion	P value
Age (yrs)		
≤ 30	73/123 (59%)	0.689
31-40	128/156 (82%)	
41-50	86/94 (91%)	
>50	62/72 (86%)	
Education		
No schooling	9/13 (69%)	0.663
Grade 1-3	6/9 (67%)	
Grade 4-11	244/308 (79%)	
Tertiary	90/113 (80%)	
Marital status		
Married	242/302 (80%)	0.000
Widowed	25/29 (86%)	
Divorced/separated	43/47 (91%)	
Single (never married)	39/67 (58%)	
Owning a radio		
Yes	295/362 (81%)	0.003
No	54/81 (67%)	
Employment		
Employed	118/139 (85%)	0.033
Unemployed	231/304 (76%)	
Pregnancy		
Ever been pregnant	343/429 (80%)	0.001
Never been pregnant	6/14 (43%)	
Use of contraception		
Ever	302/376 (80%)	0.061
Never	47/67 (70%)	
Heard of Pap smears		
Yes	347/422 (82%)	0.000
No	2/21 (10%)	
Heard of cervical cancer		
Yes	254/322 (79%)	0.948
No	95/120 (79%)	
Perceived themselves as at risk of cervical cancer		
Yes	188/233 (81%)	0.436
No	31/36 (86%)	

Chapter 5

Discussion

Cervical cancer has been recognised as a public health priority in South African, and the NDOH has developed a national cervical screening policy.

The main aim of this study was to determine baseline KAP of women aged 25 years and older in Mitchell's Plain.

Most of the women in this study were over 30 years of age and had a secondary level of education. This study found that the women had a very high level of reported knowledge of Pap smears and cervical cancer. A large proportion of the women had had Pap smears, and those who had not had a Pap smear before were keen to undergo a screening Pap smear. Listening to the radio and reading posters were reported to be the major sources of information on Pap smears and cervical cancer. Those women who were older, in a relationship, had ever been pregnant and who had heard of Pap smears were more likely to have had a Pap smear.

5.1 Women's knowledge about Pap smears, cervical cancer and the national cervical screening policy

In this study, the percentage of women who had heard of Pap smears (95%) is three times higher than that found in a similar study in Khayelitsha, South Africa (Bailie, 1994). Differences in knowledge between these two studies, can be ascribed to the following: Bailie's study in Khayelitsha was conducted in 1994, before the commitment from (the new) national government to

national cervical screening. It is only during the post-apartheid years that cervical cancer has been regarded as a public health priority resulting in increased health promotion activities. Further, even though they are two adjacent districts, they comprise of two very different communities. Mitchell's Plain which is situated on the urban edge has a largely coloured population and Khayelitsha a peri-urban area with many of its people originally from the rural Eastern Cape.

The majority of the women knew that they still had to have a Pap smear even if they had stopped having children or were no longer sexually active. This is an important positive finding, since women who have passed their reproductive years are among those targeted for coverage of Pap smears.

Although 77% of the women had heard of cervical cancer, one third did not know at what age women are more likely to get cervical cancer.

In summary, although a high percentage of women had heard about Pap smears, knowledge about what a Pap smear is for and when it should be done, was very low. The majority of participants did not know about the NDOH's recommendation of when women should have their first pap smear as well as the recommended time interval between Pap smears. This indicates that there is not enough detailed communication with the public regarding health matters or policies that affect them.

5.2 Women's attitudes towards Pap smears and the South African National Cervical Screening Policy

The majority (74%) of the women did not consider the Pap smear to be a painful procedure; this finding is similar to that reported by Bailie (1994). However, in other studies both locally and abroad (Abrahams et al. 1997; Fylan, 1998), women were reported to be fearful or anxious about the Pap smear procedure, embarrassed to expose their private parts, and perceived the procedure to be painful. These different attitudes to the same procedure could possibly be due to varying experiences that different women from different backgrounds have encountered.

This finding presents an opportunity in that those women who are not fearful of Pap smears could be recruited to be peer educators. This could ultimately prove to be beneficial to improving screening coverage for cervical cancer.

Most of the women did not agree with the NDOH policy of commencing screening at the age of 30 years. This could be due to the fact that the respondents did not fully understand the reasons for the National Cervical Screening Policy. However, the women seemed to have strong positive feelings about having Pap smears often, as reflected in the large proportion of respondents who indicated that women should continue to have Pap smears irrespective of them having stopped having sex and/or stopped having children.

5.3 Women's practices with regard to cervical screening

The proportion of women who reported having had a Pap smear (78%) in Mitchell's Plain is considerably higher than found in other studies done in South Africa. For example, two studies conducted in Khayelitsha (Bradley et al. 2004) and (Bailie, 1994), 45% and 37% of the women respectively were reported to have had a Pap smear. Among the women who had had a Pap smear in this study, 80% of them had ever been pregnant. This association showed a statistical significance ($p= 0.001$), indicating that having attended an antenatal clinic or an obstetric unit had been instrumental in affording women the opportunity of having a Pap smear.

There was a statistical significance between being married, being in a relationship and having a Pap smear. These results are similar to women in India who were also more likely to have had a Pap smear if they were married (Nene, 2007). This could have been due to these women coming into contact with the health care facilities for sexual and reproductive health or mother and child health care facilities. Exposure to these health care services has been instrumental in affording women a Pap smear.

In this study contraception was not found to be significantly associated with having a Pap smear which is contrary to another study done in South Africa (London, 1993).

It is worrying to see that the health workers had not been discussing Pap smears with the clients as regularly as would have been expected. Certainly the health workers would be better placed to disseminate correct health information as compared to the general public (friends and family), who appear to be the major source of their information currently. In an effort to improve health relations with the general public the staff could be offered regular training updates on cervical cancer. This could lead to health care workers that are confident about the policy and procedures, which could result in better communication with clients, and in so doing have an impact on alleviating the burden of disease by positively influencing the practices of women.

Most of the women interviewed agreed to have another Pap smear, unfortunately, much sooner than the recommended 10 years. This clearly indicates that even though women have been briefed about the new national cervical cancer screening policy, continuous reinforcement of the current national policy by the health care providers for proper uptake of the policy. Health education of the public needs to be ongoing, in the mother tongue of the audience and to the relevant target group, namely the older women.

5.4 Women's sources of information

The majority of the women discussed Pap smears with a family member or a friend. Only 25% of the women had discussed Pap smears with their husbands or partners.

The low percentage of women that did discuss Pap smears with the health worker or the husband/partner indicates that these had not been consulted on matters that influenced personal health. There is potential for encouraging the involvement of partners or males in female reproductive health matters.

It is a fact that women talk to other women as has been reported in a study done in South Africa (Abrahams et al. 1997). This has implications for targeting health information sessions, which should mainly be held at those places where women meet and talk to one another. This includes places such as their place of employment (32% were employed); at clinics, places of worship, the shops, at school meetings eg. Parent - teacher meetings, where women are generally in the majority.

The results reported that 82% of the women had a radio, although only 16% reported that they had heard cervical cancer information on the radio. Radio programmes, and more especially the community radio stations that the women often listen to, should be approached to broadcast information regarding cervical cancer screening. It would also be advisable to encourage women or men to phone in to the radio station to ask questions, and for a health provider/researcher to be available to answer questions in plain and simple terms, and in the language that the listeners are familiar.

It was also indicated that women's peers are more trusted with information regarding women's health matters. The recruitment and training of peer educators within the community should have a positive effect, by educating

and encouraging other women to seek preventive health interventions that could impact on their quality of life, since cervical cancer is preventable if diagnosed early. It would be advisable to make use of older women to be the messengers when planning preventive health programmes so that the women in the community can identify with them.

5.5 Strengths and limitations of the study

The interviewers were all experienced professional nurses and trained interviewers which could be considered a strength of the study. Also, the relatively large sample size of 445 increased the power of the study.

There is a possibility of selection bias since the study was conducted only at the community health facilities, representing a very select group of women.

Although not specifically attending the health services for Pap smears, the mere fact that the respondents were in a health facility could mean that the population sample was biased, in favour of women who seek health care at the clinics. It is likely that women in the community who do not attend health facilities have poorer knowledge and are less likely to have had a Pap smear or to have heard of it. Selection bias is not just influenced by the study being done in the health setting, but also by the fact that the women were a self selected group because they volunteered to participate in the study. The generalisability of these results to the broader population of women could therefore be limited.

There was a significant association between women who had had Pap smears and women who had heard of Pap smears. Since this was a cross-

sectional study, it is not possible to establish a cause and effect relationship. It therefore remains unclear if hearing about a Pap smears lead to the women obtaining a Pap smear or vice versa.

Chapter 6

Conclusions and recommendations

6.1 Conclusion

The majority of women had heard of Pap smears and cervical cancer but there were gaps in terms of more detailed knowledge. However, very few women knew about the national recommendations for cervical screening for women in South Africa. There is a need to actively promote the National Policy on Cervical Screening by firstly recruiting women who present at the health facilities either seeking health care themselves or accompanying someone who is seeking health care. Most women in the Mitchell's Plain district had heard of Pap smears and cervical cancer. However, there is a discrepancy between those that had heard of Pap smears and the lesser amount that actually had a Pap smear which indicates that knowledge had not fully translated into action. According to the results, there were missed opportunities that the health worker could possibly have utilised to encourage women in the targeted age group to have a Pap smear while they were at the health facilities for reasons other than reproductive health. Women who had not been afforded the opportunity to have a Pap smear by the health provider reported a great interest in having a Pap smear, showing willingness to improve their health if afforded the opportunity. In order to reduce the high morbidity and mortality from cervical cancer in South Africa, very large numbers of women in the target age group need to be recruited to the screening programme. To be able to see an increase in the screening uptake,

huge efforts have to be made to actively recruit women who are within reach of the health services and those are the women who present at the health facilities on a daily basis as a start.

6.2 Recommendations

Based on the findings of this study, the following are recommended:

- Avoid missed opportunities for cervical screening of women in the target age group by active recruitment of clients presenting to the health facility, irrespective of the reason for their visit.
- Re-orientation of the role of the health provider to treat each consultation as an opportunity to share cervical screening information and to perform the Pap smear at that opportunity if the woman is in the target age group (if she qualifies according to the criteria of the National Cervical Screening Policy).
- Intensify the use of the media, especially the radio, as a means of communication of information about Pap smears and cervical cancer to households (this was a common source of information at their disposal, that was used).
- Broadcast health messages/talk shows on radio programmes on the commonest radio stations that people often listen to.

- Develop clear, concise messages in the appropriate language for the individual communities, e.g. posters and pamphlets, for distribution in places which are frequented by the people in the target group in the area.
- Invite the public to come for cervical screening by making use of the various forms of commonly used media, e.g. health talks and invitations to the women in the health facilities, advertise in the local community newspapers, television, loud hailer invitations in the community, broadcast the information over the local radio stations, advertising on taxis .
- Important gaps in knowledge that need to be addressed include: information on the NDOH screening policy, more detailed information on cervical cancer e.g. the risk factors for cervical cancer, preventive measures, the age at which most women get cervical cancer, and what a Pap smear tests for.
- Issues such as women's experiences of the Pap smear services, health worker attitudes, the process of issuing results, cultural norms towards Pap smears and clinic times are important issues which could be explored in further studies.

6.3 Recommendations for research

Future research should focus on the monitoring and evaluation of the effects of ongoing health promotion and prevention strategies in the community regarding women's health, more especially cervical cancer. Further studies are needed to better understand the disjunction between client knowledge and practice with regard to cervical screening.

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Appendices

Appendix 1: Questionnaire

CERVICAL HEALTH IMPLEMENTATION PROGRAMME

COMMUNITY CERVICAL CANCER KAP SURVEY

WOMEN'S SURVEY

Questionnaire number _____

Interviewer Number _____

District Name _____

Name of Clinic _____

Date of the Interview (DDMMYY) _____

Introductory remarks

Hello, my name is I work at the We are doing a health survey and would really appreciate it if I could ask you a few questions about your health. It will take about minutes. You will not lose your place in the queue. I am not going to write your name on the form, therefore anything you tell me will remain anonymous and be treated confidentially. Your answers will help us to improve services.

Thank you.

Instructions to the interviewer.

- Circle the appropriate number/s or fill in the appropriate response.
- Exclude any women under the age of 25.

Personal information

1. How old are you (age in years)? _____

2. What is the reason for attending this clinic/health centre today?

(After the client's response, prompt: anything else?)

Medical condition _____ Yes = 1 No = 2

Accompanied someone _____ Yes = 1 No = 2

Medicines _____ Yes = 1 No = 2

Family planning _____ Yes = 1 No = 2

Pap Smear _____ Yes = 1 No = 2

Other (Specify)

3a. What standard did you complete in school? _____

*Interviewer : Code the **GRADE**.*

3b. Specify any other institutions(technikon/ university/courses attended)

4. What is your marital status?

Interviewer: Code one of the following:

Married (including common law) = 1

Widowed = 2

Divorced/Separated = 3

Single (never married) = 4

5. Are you living with your husband or partner right now?

Yes = 1

No = 2

If **NO**, skip to question 7a.

6a. If **YES**, is your husband/ partner employed?

Yes = 1) _____

No = 2

Not applicable (no husband/partner) = 3

Don't know = 9

Interviewer: If response is **NO / NOT APPLICABLE** or **DON'T KNOW** then skip to question 7b.

6b. If **YES**, What is his job? _____

7a. Are you employed?

Yes = 1 No = 2 _____

Interviewer: If response is **NO**, then skip to question 8.

7b. If **YES**, What is your job? _____

*Interviewer: If response is **YES**, then skip to question 9.*

8. If **NO**, are you:

Interviewer: Code one of the following: _____

Unemployed – looking for work = 1

Unemployed - not looking for work = 2

Pensioner - receives a grant = 3

Housewife = 4

Full - time student = 5

9. Do you have a radio?

Yes = 1 No = 2 _____

*Interviewer: If response is **NO**, skip to question 11a.*

10. If **YES**, which radio stations do you listen to?

Radio Good Hope Yes = 1 No = 2.....

Radio 786 (Voice of the Cape) Yes = 1 No = 2.....

Cape talk (Am 567) Yes = 1 No = 2.....

SAFM Yes = 1 No = 2.....

KFM Yes = 1 No = 2.....

Umhlobo wenene(Radio Xhosa) Yes = 1 No = 2.....

P4 Yes = 1 No = 2.....

Other (specify)

.....

11a. Have you ever been pregnant?

Yes = 1 No = 2 _____

11b. If **YES**, how many pregnancies have you had? _____

12a. Have you **ever** used contraception/birth control?

Yes = 1 No = 2 _____

12b. Are you using contraception/birth control at the moment?

Yes = 1 No = 2 _____

Knowledge of Pap Smears and cancer of the cervix

13. Have you ever heard of a Pap smear?

Yes = 1 No = 2 Unsure = 9 _____

*Interviewer: If response is **NO** or **UNSURE** then skip to question 26.*

14. If **YES**, what part of the body is examined during a Pap smear ?

15. What do you think a Pap smear is testing for?

(After the client's response, ask anything else?).

Cancer Yes = 1 No = 2 _____

Cancer of the cervix Yes = 1 No = 2 _____

AIDS/HIV Yes = 1 No = 2 _____

Infection Yes = 1 No = 2 _____

Other

Specify _____

16. At what age does the Department of Health (DOH) say that a woman should have her first Pap smear? _____

17a. The DOH says that a woman should have her first Pap smear from the age of 30 years or older. Do you agree with this?

Yes = 1 No = 2 Don't know = 9 _____

*Interviewer: If response is **DON'T KNOW** then skip to question 18.*

17b. If **YES or NO**, why do you say that you agree/disagree?

18. How many years apart does the DOH say that a woman should have a Pap smear during her life time?

*Interviewer: **READ the LIST** and code one of the following:*

Once a year	= 1	<input type="checkbox"/>
Every 2-5 years	= 2	
Every 6-9 years	= 3	
Every 10 years	= 4	
With each pregnancy	= 5	
Don't know	= 9	

19a. The DOH says that a woman should have a Pap smear every 10 years.

Do you agree with this?

Yes = 1 No = 2 Don't know = 9 _____

*Interviewer: If response is **DON'T KNOW** then skip to question 20.*

25. Do you think Pap smears are painful?

Yes = 1 No = 2 Don't know = 9

26. Interviewer: Say to **ALL** the respondents:

“ A Pap smear is a test for cancer of the cervix(mouth of the womb)”.

Have you ever heard of cancer of the cervix (mouth of the womb)?

Yes = 1 No = 2 Don't know = 9

*Interviewer: If response is **NO or DON" T KNOW** then skip to question 33.*

27. If **YES**, do you know anyone who has had cancer of the cervix?

Yes = 1 No = 2

28. Who do you think could get cancer of the cervix?

.....

29. At what age are women **most** likely to get cancer of the cervix?

(Interviewer : **READ the LIST**)

Less than 20 years = 1

20 – 35 years = 2

Older than 35 years = 3

Don't know = 9

30. Do you think **you** could ever get cancer of the cervix?
Yes = 1 No = 2 Don't know = 9 _____

31. Do you think cancer of the cervix can be prevented?
Yes = 1 No = 2 Don't know = 9 _____

32. Do you think cancer of the cervix can be cured?
Yes = 1 No = 2 Don't know = 9 _____

33. *Interviewer: Ask ALL respondents the following question:*

In the last 6 months have you ever seen or heard about Pap smears or cancer of the cervix from the following: (*Interviewer : READ the LIST*).

A poster Yes = 1 No = 2

A leaflet/pamphlet Yes = 1 No = 2.....

A talk by health workers Yes = 1 No = 2.....

A personal discussion with a health worker Yes = 1 No = 2.....

An organized talk in the community Yes = 1 No = 2.....

A radio programme Yes = 1 No = 2.....

An article in the newspaper Yes = 1 No = 2.....

Other

Specify:.....

Pap Smear History

This section is for ALL respondents

34a. Have you ever had a Pap smear?

Yes = 1 No = 2 Don't know = 9

Interviewer: If response is YES, then skip to question 34c.

If response is DON'T KNOW, then skip to question 39a.

34b. If **NO**, is there any reason why you have not had a Pap smear?

.....

Interviewer: Now skip to question 39a.

34c. If **YES**, how many times have you had a Pap smear?

Interviewer: Code one of the following:

Once = 1

Two – Five times = 2

More than five times = 3

Don't know = 9

35. Have you ever had a Pap smear without it being part of family planning or pregnancy

care?

Yes = 1 No = 2 Don't know = 9

36. How many years ago was your last Pap smear?

Interviewer: Code one of the following:

Less than 1 year ago = 1

1-5 years = 2

6-10 years = 3

> 10 years ago = 4

Don't know = 9

37a. After the last Pap smear, did you get the results?

Yes = 1 No = 2 Don't know = 9

Interviewer: If response is **NO** or **DON'T KNOW**, then skip to question 38a.

37b. If **YES**, how did you get the results?

Interviewer: Code one of the following:

Client contacted the clinic = 1

Clinic contacted client = 2

Had made a follow-up appointment & attended = 3

Other..... = 4

Don't know / Can't remember = 9

38a. Are you planning to have another Pap smear ever?

Yes = 1 No = 2

Interviewer: If response is **NO**, then skip to question 38c.

38b. If **YES**, in how many years from now?years.

End the interview. Thank the client for her help and ask: "Do you have any questions?"

38c. If **NO**, give a reason for not wanting to have another Pap smear:

.....

End interview. Thank the client for her help and ask: "Do you have any questions?"

39a. FOR CLIENTS WHO NEVER HAD A PAP SMEAR.

Interviewer:

*This section is for those women who have never had a pap smear. (women who answered **NO** or **DON'T KNOW** to question 34a/34b).*

First, explain what a Pap smear is:

"A Pap smear is a simple test done on women to check if the mouth of the womb (cervix) is healthy. The client lies on a couch on her back with knees bent and feet apart. The nurse/doctor places an instrument into the vagina to see the mouth of the womb. The mouth of the womb is gently wiped, a sample is taken and sent to the laboratory for testing.

The results of this test will be sent to your clinic so you have to remember to go back for your results.

Do you think you would be interested in having this test?

Yes = 1

No = 2

Don't know = 9

39b. If NO, can you tell me why not?

.....

End interview. Thank the client for her help and ask: "Do you have any questions?"

Appendix 2: Verbal Informed Consent Document

Hello, my name is I work at the University of Cape Town. We are doing a health survey and would really appreciate it if I could ask you a few questions about your health. It will take about 30 minutes. You will not lose your place in the queue. The purpose of the health survey is to provide baseline information about the knowledge, attitudes and practices (KAP) of women 25 years and older in Mitchell's Plain for the Cervical Health Implementation Programme (CHIP).

Confidentiality

I am not going to write your name on the form; therefore anything you tell me will remain anonymous and be treated confidentially.

Right to withdraw

You have the right to refuse to answer any questions if you do not feel like. You also have the right to withdraw from the study at any time without any penalty. Withdrawal from the study will not affect any health care that you receive from this clinic now or in the future.

Who to contact

If you have any questions about this study please contact: Vanessa Daries at 021 406 6485.

This study has been approved by the University of Cape Town Research Ethics Committee.

Volunteer Declaration

Before agreeing to participate in this study, please indicate that you participate voluntarily. By agreeing to participate in this study you are not giving up any of your rights.