A SURVEY ON KNOWLEDGE, ATTITUDES AND SCREENING PRACTICES ON CERVICAL CANCER OF DAGORETTI WOMEN IN NAIROBI.

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156/8527/98

A Thesis Submitted In Partial Fulfilment Of The Requirements For The Degree Of Master Of Public Health And Epidemiology Of Kenyatta University

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<A> survey on knowledge, attitudes

NOVEMBER, 2001
DECLARATION

This thesis is my original work and has not been presented for a degree in any other University or any other award.

Signed [Signature] Date 23/1/2002

SUPERVISORS APPROVAL

We confirm that the work reported in this thesis was carried out by the candidate under our supervision.

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DEDICATION.

This thesis is dedicated to my husband Caleb and our children Joel, Joshua and Evelyn.

To my parents Mr. and Mrs. Mwakodi and my late brother David.
ACCREDITATIONS

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<td>CIS</td>
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<td>PATH</td>
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ABSTRACT

Cancer of the cervix is the commonest female malignancy accounting for 24% of all cancers in women in the world. Yet this disorder can be prevented by deploying both primary and secondary preventive measures such as genital hygiene practices, use of barrier methods like condoms, avoiding early sexual intercourse, postponing marriage to a later age, avoiding many sexual partners and having regular papsmear screening. It has been suggested, awareness of these primary and secondary factors coupled with positive attitude, largely influence the practice of preventive measures against cervical cancer.

This was a cross-sectional study designed to establish the level of knowledge, perceptions, beliefs, attitudes screening, and preventive practices of cervical cancer among women in Dagoretti Division, Nairobi. Four hundred and sixty two (462) respondents aged 20-59 were interviewed using structured questionnaire in addition to three Focus Group Discussions (FGDs). Sixty of the 462 and sixty respondents (13%) had knowledge on cervical cancer and only 7.4% sought screening services. Knowledge of cervical cancer among the respondents was statistically associated with age ($\chi^2=39.23; p=0.0003$), marital status ($\chi^2=13.16, p=0.01$), education ($\chi^2 = 39.43, p=0.00002$) and occupation of respondent ($\chi^2=20.14; p=0.002$). Respondents who had college and above exhibited more knowledge of cervical cancer than those with no education (OR 10.83, $p=0.001$).

Three hundred and eighty five (83.3%) of the respondents had positive attitude towards cervical cancer screening and pelvic examination. There was a statistical association
between marital status and attitude towards screening ($\chi^2=6.37$, $p=0.041$) and similarly between parity of respondent and attitude towards screening ($\chi^2=8.86$, $p=0.002$). There was a statistical association between education and screening practice ($\chi^2=29.87$, $p=0.00002$). The respondents who had secondary and college education practiced screening more compared to the rest (OR 11.35, $p=0.0002$). Occupation was also associated with screening practice ($\chi^2=11.77$; $p=0.0028$). The respondents who were employed practiced screening more than the self-employed and the unemployed. Knowledge of cervical cancer had an influence on practice of screening.

The results of this study showed that, there is inadequate knowledge on cervical cancer and screening and very few women practice screening. There is little communication between medical personnel and clients since most of them were not counseled on screening. The women had positive attitude even though they had inadequate information. There is need to raise awareness of knowledge and screening for cervical cancer among women. Further research needs to be undertaken to find out the prevalence of cervical cancer or cervical dysplasia among women residents of Dagoretti Division and in Kenya.
CHAPTER ONE: INTRODUCTION AND LITERATURE REVIEW

1.1 Introduction

Cancer is one of the diseases which is of importance in public health. Globally it is second to cardio vascular disease as being the most common cause of death. It affects every age group (Brunner and Suddarth, 1988). In Kenya, although the prevalence is not known an increasing number of people are affected.

1.2 Cancers

Cancers are abnormal growth that result from rapid unregulated growth of cells, which have lost the normal cellular control mechanisms. Cancer is the common term for all malignant tumours. It derives from Latin “crab” presumably because a cancer “adheres to any part that it seizes upon in an obstinate manner like the crab (Cotran et al., 1994). Cancers are neoplasm’s or tumours which are abnormal mass of tissue, the growth of which exceeds and is uncoordinated with that of the normal tissues and persist in the same excessive manner after caesation of the stimuli which evoked the change (Cotran et al., 1994). Neoplasm, tumours and cancers are terms that are used interchangeably. In this respect, cancers are neoplasm or tumours (Cotran et al., 1994; Anderson, 1980). Cancers can be malignant or benign neoplasm or tumours and malignant tumours are not necessarily evil nor are benign cancers completely innocent. Most tumours are benign; a few would be malignant, capable of spreading or metastasising (Cotran, Kumar and Robbin, 1994; Brunner and Suddarth, 1988; Anderson, 1980; Van Lanker, 1976). The actual cause of cancer is unknown but may include chemicals, viruses, parasites and biological agents. Cancer can occur on any part of the body (WHO, 1995). Globally cancer is one of the major causes of death (Armstrong et al., 1992). Cancers are
therefore a major public health problem, which needs to be addressed. Cervical cancer like any other cancer in the world is also a major public health problem among women.

1.3 Cervical Cancer

Cervical cancer is the term used for the cancer that affects the neck of the uterus in the female reproductive system. It is the commonest cancer world-wide. Similarly, in sub-Saharan Africa and in Kenya it is the commonest among the females (Rogo et al., 1990). Cancer of the cervix arises initially from the transformation zone of the cervix, where immature metaplasia appears at puberty and disappears at menopause (Collier and Timbury, 1990). This region is very sensitive to infection especially like the one caused by HPV (Collier and Timbury, 1990).

The initial stage of cervical cancer is pre-invasive and curable, a condition called dysplasia but progresses to carcinoma in-situ referred to as cervical intra epithelial neoplasia (CIN) and progresses slowly over a period of 10 years culminating into invasive stage (WHO, 1988; Collier and Timbury, 1990). This is one way of classifying cervical pre-cancers, that is dysplasia – carcinoma in-situ system with mild dysplasia on one end and severe dysplasia/carcinoma in-situ on the other. Another method is cervical intraepithelial neoplasia (CIN) classification, with mild dysplasia termed CIN grade 1, moderate dysplasia CIN grade 2, severe dysplasia and carcinoma in-situ lesions termed as CIN III (Cotran, Kumar and Robbin, 1994; Thomson and Cotton, 1985). Disease staging is by the International Federation of Gynaecology and Obstetrics (I.F.G.O) system based on the degree of involvement of the epithelium and invasiveness beyond the basement membrane as follows:
Stage 0: Intraepithelial Carcinoma or Carcinoma in-situ.

Stage I: Carcinoma confined to cervix.

Stage II: Carcinoma extending beyond the cervix and involving the vagina but not its lower 1/3. a) No obvious parametrial involvement  b) With obvious parametrial involvement.

Stage III: Carcinoma extending to the pelvic wall a) vaginal involvement to lower 2/3 b) parametrial involvement to pelvic wall.

Stage IV: Carcinoma extending beyond the true pelvis a) spread to adjacent organs b) distant metastasis (Tindal, 1987).

1.4 Epidemiology of cervical cancer

Cancers are a public health problem of major dimension in developed countries while these are emerging problems in developing countries (Saracci, 1991). This makes the field an active area for research. Cancer of the cervix also known as cervical cancer is the most common female malignancy in the world and accounts for about 24% of all cancers in women. About 500,000 cases of cervical cancer occur every year worldwide with 200,000 to 300,000 dying of the disease (Peto, 1986). Majority of these (80%) are in developing countries (Parkin et al., 1984). Cervical cancer is reported to be a major health problem in Tanzania although its magnitude is not known. A review of gynaecological admissions in Muhimbili Medical Centre revealed that 32% of the admissions were due to cervical cancer (Ngwalle et al., 2001). In Ocean Road Cancer Institute, Tanzania, where all patients with invasive cancers are referred for radiotherapy and chemotherapy, reports showed that between 1992-1994 of all in-patients with cancer 45% were due to cancer of the cervix (Ngwalle et al. 2001).
ii. Sexually transmitted infections (STI)

Sexually transmitted infections are a risk factor to cervical cancer. The most important sexually transmitted infection is caused by Human Papilloma Virus HPV (Armstrong et. al., 1992).

iii. Early age at first sexual intercourse, marriage and birth

Indicators of promiscuous sexual activity are age at first intercourse and multiple sexual partners. Multiple sexual partners have consistently been associated with cervical cancer. For cervical intraepithelial neoplasia and invasive cervical cancer, risk becomes higher with an increased number of sexual partners. Similarly, the lower the age at first intercourse, the higher the risk to cervical cancer. Further, the earlier the age at marriage the higher the risk to cervical cancer.

Marriage and first sexual intercourse before 18 years has been cited as a risk factor to cervical cancer (Armstrong et. al., 1992; Lancaster et. al., 1999; Price et.al., 1996; Devita et.al., 1993). In Kenya, it was reported that age at first intercourse is 16 years among women aged 40-49 and 17 years among those aged 25-29 (DHS 1998).

iv. Promiscuous sexual activity

Women with multiple sexual partners or monogamous women with promiscuous partners are at risk of getting STI and hence HPV making them susceptible to cervical cancer (Armstrong, 1992).
v. Use of contraceptives

The use of contraceptives has been cited among the risk factors for cervical cancer. There is an association between oral contraceptive use and cervical neoplasia; the risk being higher among women who have used the method for 5 or more years (Sherris, 1997; Brinton, 1991; WHO, 1985). Low use of barrier contraceptives indicates there is little prevention of sexually transmitted infections that result to chronic inflammation, dysplastic changes and cervical cancer (Varghese et al., 1999; Khanna and Van Look, 1998; Buga, 1998).

vi. Cigarette smoking

Cigarette smoking has been shown to increase the risk of cervical cancer. Smoking may act either directly or through immuno-suppression and promotion of effects of other Carcinogen (Miller, 1992; Phillips et al 1985).

vii. Malnutrition

Malnutrition is one of the risk factors to cervical cancer. It lowers the immunity and makes the person vulnerable to cervical cancer. Studies have shown there is a protective effect of Vitamins C, E and Beta-Carotene against cervical cancer, (Armstrong, 1992).

viii. Genital hygiene

A study in Kerala confirmed the importance of genital hygiene in the fight against infections that have a role in the development of cervical dysplasia and cancer. Lack of this sanitary practice may be because women may not afford sanitary pads and adequate facilities for washing after coitus (Varghese et al., 1999).
ix. Screening

Screening for cervical cancer is vital in early detection and treatment of precancerous conditions. Lack of screening is one of the risk factors for the development of cervical cancer (Hakama, 1991).

x. Heredity

Heredity has also been identified as a risk factor for cervical cancer. In a family where there is a history of cervical cancer, the probability of female members developing the disease is high (Cotran et al., 1994).

In Dagoretti, the target group consists of those with low income, the self-employed mainly hawkers, casual labourers and others who may often lack quality food and are therefore prone to malnutrition, live in areas with poor sanitation making it difficult to practice good genital hygiene which are risk factors to cervical cancer.

1.4.2 Human Papilloma Virus (HPV)

Human Papilloma Virus (HPV) is a double stranded Deoxyribonucleic Acid (DNA). It is the most important cause of cervical cancer and is transmitted during sexual intercourse among sexually active individuals (Collier and Timbury, 1990; Sherris, 1997). The peak incidence is in those aged 18-30 years. It is one of the sexually transmitted infections (STI). Studies carried out in the last 10 years have identified HPV as an etiological factor of cervical cancer and the evidence is consistent in several countries. There are about 65 serotypes of HPV (Devita, 1993) but the ones which cause changes on the cervix are type 16, 18, 31, 33, 35, 41, 45 and 52 (IARC, 1996-1997; Collier and Timbury, 1990; Ho et al, 1995). HPV causes low-grade pre-malignant lesions as well as severe cervical intraepithelial neoplasia that may become invasive. In Europe, HPV 16 is the commonest
type detected in cervical lesions and is found in 70% of CIN III in Germany (Collier and Timbury, 1990).

In pre-malignant lesions the viral DNA replicates independently of the cellular DNA but in most malignant cells it is integrated in one or several chromosomal sites. In Philippines and Thailand HPV was present in 90% of the cases of both squamous cancers and adenocarcinomas (IARC 1996-1997). However, most women are not aware of STI particularly the HPV as an etiological factor, neither are they aware of the risk factors in cervical cancer. Of all genital cancers, only cervical cancer can be reliably prevented by an effective, inexpensive screening technique that allows detection and treatment of precancerous conditions (Devita et al. 1993, Cotran, Kumar and Robbin, 1994).

1.4.3 Screening for cervical cancer

Screening is the identification of pre-clinical disease whose purpose is to initiate early treatment. This early medical intervention is inexpensive and usually successful. Early detection and intervention results in improved prognosis with consequent decline in the number of women developing fatal invasive cancer (WHO, 1988). Furthermore, the resources needed for treatment and follow up of those with early cervical cancer compared with those who are diagnosed clinically is tremendously reduced (Hakama, 1991). In fact, the practice in western populations’ range from annual smear from start of sexual activity to a smear every five years from ages 30 to 55. However, there are reports on cases of invasive cervical cancer with remarkably short sojourn times which is one reason for recommending yearly screening (Hakama, 1991). Areas that have well organised screening record a low cervical cancer incidence suggesting that screening is vital in reducing mortality.
The test involves scraping of the superficial cells from the external os and lower endocervix by means of a special wooden spatula. The spatula has to be accurately applied to the squamo-columnar epithelial junction throughout its whole circumference in a well-exposed cervix (Tindal, 1987). There are other screening methods for cervical cancer but Pap smear is the most effective and inexpensive screening technique (Devita et al., 1993).

One of the most important problem is that women with the highest risk are those less likely to present for screening (Mosbech, 1991). Barriers to screening include fear of vaginal exposure, expectation of pain, being asymptomatic and gender of practitioner (Wood et al., 1997; Fylan, 1998).

1.5 Cervical cancer awareness

Generally most women have no knowledge on cervical cancer and are unaware of the predisposing factors and methods of prevention (Ajayi and Adewole, 1998; Abwao et al., 1998). In Kenya, women seek medical advice when the disease is at an advanced stage. This can be partly explained by the unawareness of cervical cancer symptoms, yet cervical cancer is one of the tumours, which can be cured if detected early (Abwao et al., 1998; Ajayi and Adewole, 1998; Nyamu, 1989).

Secondly, the problem is compounded by the fact that screening facilities for cervical cancer are limited to urban areas. Moreover, such tests are too expensive for most Kenyan women and are located in very few health facilities which make it inaccessible by majority of them. Further, the attitude towards the screening tests among women in the country is negative (Machoki and Rogo, 1990). African women feel embarrassed and
shy away from pelvic examinations due to their social background and inadequate explanation about screening process by medical staff (Sherris, 1997). Although cervical cancer is one of the few preventable forms of cancer, little progress has been made towards its control. One of the reasons being lack of public awareness of cervical cancer (Buga, 1998; Morrows and Cozen, 1995; Cohen, 1996). Lack of public awareness of cervical cancer may increase morbidity and mortality (Buga, 1998; Morrows and Cozen, 1995; Cohen, 1996).

1.6 Statement of the problem

Pap smear is a simple, effective and inexpensive test with minimum risks (Hakama, 1991). The test helps in reducing the morbidity and mortality from invasive cervical cancer.

In the effort to prevent and control a disease, it would be insufficient to look at the etiological factors concerning the disease and the treatment without first evaluating the community awareness and attitudes regarding the particular disease since it has an impact on their utilisation of any control or preventive approaches.

In Kenya, the government is more concerned about sexually transmitted infections /HIV/AIDS scourge rather than Cervical cancer which is associated with the human papilloma virus. Therefore efforts to prevent and control STI /HIV/AIDS will have a positive effect in the control of HPV and consequently cervical cancer.

The communities need to be made aware of the existence of screening facility and be educated about the prevention, control and detection of early symptoms of cancer of the
cervix. However, in order to effectively disseminate this knowledge, the evaluation of
the existing knowledge about cervical cancer among women is important.

Despite the knowledge that exists concerning cervical cancer a large proportion of
women suffers from the disease as evidenced in the text. The reasons as to why affliction
with cervical tumours among women remains high warrants need for research.

Morbidity and mortality associated with cervical cancer in Kenya as in other developing
countries is high. In Dagoretti division of Nairobi 27% of women who were screened for
cervical cancer had sexually transmitted infection and 10% had positive pap smears
(IHVC, 1996). Due to logistical problems the screening services for cervical cancer in
Dagoretti Division were stopped with effect from January 1997 and now, there are no
facilities to provide screening tests to the women in this community. This study is
intended to reveal the need for screening inspite of the prevailing high risk factors in the
area for cervical cancer. The percentage of woman with positive smears since 1997 is
unknown suggesting further a need to carry out a study to determine the knowledge level,
the attitude and screening practice for cervical cancer among Dagoretti women.

Dagoretti division, Nairobi was selected for the study because AMREF, an agency in this
study has an ongoing primary health care programme and is also involved with health
promotion among the women in this area. The outcome of this study will help in
devising educational packages to empower women with knowledge, moderate women
attitude on cervical cancer screening. In this case, it is cheaper and easier to incorporate
other parameters to be assessed in this study without further cost to the investigator and
also enhance the practice of cervical screening among women in Kenya in general.
1.7. **Hypothesis.**

Women without knowledge and positive attitude on cervical cancer will not practice screening.

1.8 **Study Objectives**

1.8.1 **General Objective**

To determine the knowledge, attitudes and screening practices of women on cervical Cancer.

1.8.2 **Specific Objectives:**

1. To establish the knowledge level of cervical cancer among women.

2. To determine perceptions beliefs and attitude towards cervical cancer among women.

3. To investigate the screening and preventive practices of cervical cancer among women.

**Operational definitions**

For the purpose of the study the terms knowledge, attitudes and practice were defined as follows:

**Knowledge**

Knowledge was defined as having information of cervical cancer. The information included causes of the disease, symptoms, treatment and prevention.
Attitude

Attitude was defined as a way of feeling, thinking, behaving and individual opinion. The areas looked at were the respondent opinion about cervical cancer, pelvic examinations, screening and family planning.

Practice

Practice was defined as what the respondents did regularly. The practices considered were screening, attending MCH/FP clinic, genital hygiene and use of family planning.
CHAPTER TWO: MATERIALS AND METHODS

2.1 Study design
This was a descriptive cross sectional study. The purpose of the study was to assess the level of awareness, attitude and preventive practices regarding cervical cancer. Qualitative and quantitative methods of data collection were used. The study instruments comprised of a structured questionnaire for the interviews and a question guide for the focus group discussions (FGD). A total of 462 women were interviewed while three focus groups were conducted in each location. The groups were chosen from the homes that were not visited during the interviews with the help of the community health workers. Each focus group had ten (10) participants. Two of the groups comprised of women aged 20-35 while one of the groups comprised of women aged 40-60. This was to allow free discussion among the young women without the presence of their mothers-in-law. Likewise the older women were allowed to discuss matters related to reproductive health in the absence of the younger women and daughters-in-law. The study took place between September 1999 and March 2000.

2.2 Study Population
The study was carried out on women aged between 20-59 years in three locations of Dagoretti division of Nairobi City. The three locations were Waithaka, Uthiru / Ruthimiti and Mutuini

2.2.1 Inclusion Criteria
All consenting women aged between 20 and 59.

2.2.2 Exclusion Criteria
All women below 20 years and above 60 years.
2.3 Study Area.

The study was conducted in Dagoretti division, a peri-urban area in Nairobi City. The choice of a peri-urban area was ideal because the three locations in Dagoretti division represent both the middle class group and the low socio-economic group. Moreover, Dagoretti community health services programme concentrates on the three locations.

2.3.1 Description of the study area.

2.3.1.1 Topography.

Nairobi is the capital city of Kenya and is the largest city in east and Central Africa. It is situated on the edge of Athi river plains at an attitude of about 1,700 meters above sea level. It covers total land area of 684 km$^2$ which represents 0.1% of Kenya’s total land. Dagoretti Division is one of the eight divisions of Nairobi. It is 19.5 km from Nairobi town and is bordered to the south by Kibera Division, Parklands Division to the North East and central province to the west (Appendix V). Dagoretti comprises of five locations Kawangware, Riruta, Waithaka, Uthiru/Ruthimiti and Mutuini but the study concentrated on three locations where the primary health care project concentrates (Appendix V).

2.3.1.2 Climate:

(a) Rainfall:

Nairobi has a fluctuating rainfall pattern, with the month of March marking the beginning of long rains and the month of November marking the beginning of short rains. It receives an average mean annual rainfall of 855 mm. The annual maximum rainfall is 1526 mm while the annual minimum rainfall is 487 mm.
(b) Temperature:

In Nairobi, apart from the months of March and November, which experience rains, the other months are fairly warm with temperatures averaging 25°C.

2.3.1.3 Demographic characteristics.

Dagoretti has an area of 32 km² half of it being peri-urban inhabited by indigenous people. Its population was estimated at 144,779 in 1999 based on an annual growth rate of 4.8% per annum. The area with high density of population is Kawangware location and the area with low density is Mutuini location. Mutuini, Waithaka and Ruthimiti locations are estimated to have a population of about 72,000 people as per 1989 census.

(b) Housing conditions.

Most of the houses in Dagoretti are constructed of corrugated iron roofs and walls, others are made of corrugated iron roof and a few are permanent houses. The non-indigenous people rent some of the houses.

2.3.1.4 Infrastructure and services.

(a) Water:

Most of the households have piped water. Households without tap water buy from nearby taps. There are a few rivers but blood and other particles from the ten slaughterhouses pollute its waters, which makes the water unfit for human use.

(b) Sanitation

Pit latrines are used. There are no sewages except in Kawangware.
(c) Roads

There is a main road from Nairobi City centre which is tarmac while the rest are temporary roads and footpaths.

(d) Education

There are seven secondary schools and twenty-one primary schools. Other facilities include private nursery schools and special school for disabled children such as Mutuini School for the mentally handicapped and Dagoretti children’s centre.

(e) Economic activities and sources of income

Most of the people in Dagoretti are small-scale traders, some are employed in the 10 slaughterhouses, few have regular employment, some are casual labourers and others are peasant farmers.

(f) Health facilities

There are two city council health centres, Waithaka and Riruta; Kabiro health centre is owned by the community, Chandaria Health centre is run by AMREF and the community. The rest of the health facility like maternity homes and clinics are privately owned. Most of the health facilities are within a walking distance.

2.4 Sampling techniques and determination of sample size

2.4.1 Sampling

Multistage sampling was used and included the three locations. Nine clusters were chosen randomly from each sub location represented in the three study locations. This was done using random numbers. From these clusters, households were systematically selected. The first household to be interviewed was decided by tossing a pen and following the direction of the tip of the pen. The first household in the direction of the tip
of the pen was interviewed. After that the researcher moved to second nearest household. Any household with a woman who did not satisfy the criteria for selection was skipped and the researcher moved to the second nearest household. Where there was more than one woman in a household they were all interviewed. A household was defined as a person or persons staying together in the same house or under the same roof.

2.4.2 Study Sample Size

The study sample size was calculated according to Fisher et al (1998) because the population exceeded 10,000. In this case the sample size was derived from the formula below:

\[ N = \frac{(Z^2 \times P \times q)}{D^2} \]

- \( N \) = Sample size
- \( D \) = degree of accuracy desired (.05).
- \( P \) = The proportion of the target population estimated to have knowledge on cervical cancer. Prevalence of cervical cancer is that division is unknown.
- According to Fisher et al (1998) where prevalence is unknown 50% is used.
- \( 50\% = 0.5, q=1.0 - p, 2 = \) the standard normal deviate (1.96) which corresponds to the 95\% confidence level.

Hence \( N = \frac{(1.96)^2 \times (0.5) \times (0.5)}{(0.05)^2} \)

The minimum sample size was therefore 385. In view of the sensitive nature of the study, refusal to participate and dropouts were anticipated therefore giving a minimum sample size of 424. This was worked out using a non-response rate of 10\%. In total 462 women were interviewed to the end.
questionnaires used were 473 out of which 11 were spoilt since the respondents were not interviewed up to the end.

2.5 Logistics

2.5.1 Preparation of the Study

The investigator carried out a pilot study at Kangemi, a peri-urban area in Nairobi. Twenty women aged between 20-59 years were systematically selected starting from the chief’s camp. Every fifth house was visited and the women interviewed. The questionnaire was pre-tested and modified and completed after the interview.

2.5.2 Field Organisation

The fieldwork was carried out in two stages namely:

1. Interviewing the individual respondents using a structured questionnaire (Appendix II)

2. Conducting focus group discussion using a guideline (Appendix III).

2.5.3 Data collection techniques and procedures.

Data was collected in two ways; FGDS and structured questionnaire (Appendix II and III). The main data collection tool was a pre-tested structured questionnaire, which was prepared in English and verbally translated to Kiswahili whenever it was necessary. Some words like uterus were translated in Kikuyu “Nyungu ya Mwana” Gonorrhoea “Githununu,” syphilis “gatego” whenever the need arose. A discussion guide (Appendix 111) was used to facilitate the discussion. Three sessions were held; one comprising women between 40-60 years and two comprising of women between 20-35 years to encourage free discussion as the subject touches a lot on reproductive health and to get accurate information and the general opinion of the community. Each FGD had ten
participants. The Waithaka group discussion was held outside a church in a quiet open place, while the Utbiru\ Ruthimiti group held the discussion outside the assistant chiefs office and the Mutuini group held the discussion in a quiet room at Chandaria Health Centre. The investigator conducted the discussion, which were taped in a recorder as the discussion went on. There was an assistant who took down the main points incase the tape recorder failed in any way. The entire fieldwork took 6½ months from September 1999 – March 2000.

2.5.4 Data Collected

1. Socio-economic and demographic characteristics; age, religion marital status, number of children, occupation, level of education, age at delivery of first child, social habits like smoking and drinking.

2. Age at menarche

3. Knowledge on cervical cancer including symptoms, prevention, treatment, sexually transmitted infections, family planning and screening.

4. Attitude towards cervical cancer on screening and pelvic examinations, family planning and sexually transmitted infections.

5. Practice including screening / Pap smear, genital hygiene and MCH/FP clinic attendance.

Assessment of knowledge

Assessment of overall knowledge was done considering the number of questions the respondent was able to answer in a specific area. A score was given for each correct answer. In the area of reproductive health, respondents who were able to answer above 6 questions were considered to have knowledge, while the respondents who answered
below 6 questions had no knowledge. Knowledge of cervical cancer was assessed in a similar way. The respondents who answered above 7 questions had knowledge, while those who answered below 7 questions had no knowledge.

Assessment of Attitude

Attitude was also assessed using scores. What the respondent approved was considered to be a positive attitude or response and earned a score of one. What they disapproved as a negative response and earned a score of zero. The women who had a score of 7 –12 had a positive attitude while those who had an overall score of 0 – 6 had a negative attitude.

Assessment of practice

Respondent's practices were assessed considering practices like Family planning, genital hygiene, MCH/FP clinic attendance, pelvic examinations and prevention of STI. A score was allocated for each practice. A respondent who scored 4 –6 points had high practice, 1-3 points had low practice while a score of 0 had no practice.

2.6 Data management and analysis.

All open-ended questions were coded before data entry. The data from the questionnaires was checked and cleaned, then entered with a computer using Statistical Packages for the Social Science (SPSS) for windows (version 8.0) data entry programme. SPSS computer package not only gives accurate information but also allows coding and recording of variables to suit the study. The qualitative data from focus group discussion was transcribed, coded and translated. It was used to explain the quantitative data collected using the questionnaire. Similarities and disparities were described. Descriptive statistical analysis was used to describe the sample, cross tabulations to assess
associations between variables and chi-square to determine significant association. Logistic regression was done to control confounding factors and to determine probability.

2.7 Ethical considerations

Prior to the study, permission was obtained from the Kenyatta University and from the Government Administration including the chief and sub-chiefs of Dagoretti division and locations. The purpose of the study was explained to all participating women who were recruited voluntarily. For the purpose of confidentiality, no names of respondents featured on the questionnaires.
CHAPTER THREE: RESULTS

3.1 Respondents Socio-economic and demographic characteristics

A sample of 462 respondents were recruited and interviewed from three locations of Dagoretti Division namely Uthiru-Ruthimiti (165), Waithaka (155) and Mutuini (142). The characteristics of the respondents outlined in Appendix ii part IA from the three locations were almost similar, that is age, level of education, occupation, religion and marital status.

Out of this sample, 341(73.8%) respondents were married. Most women 298 (64.5%) were married by the age of nineteen and 110 (23.8%) were married at the age of 20-24. The age range for all respondents was 20-59 with a mean of 28.6 ± 7.7 (Table 1). In terms of religion, Protestants were the most comprising of 329 respondents (71.2%) while 118 (25.5%), 11 (2.4%), 2 (0.4%) and 2 (0.4%) respondents were Catholics, Muslims, Atheists and traditionalists respectively. Most of the respondents 344 (74.4%) were Kikuyu, Kamba 39 (8.5%), Luhy a 20 (4.3%), Luo 18 (3.9%), Kisii 12 (2.6%), Meru 11 (2.4%) and others 18 (3.9%). It was also found that most respondents 216 (46.8%) had attended secondary school with 179 (38.7%) completing primary school, 54 (11.7%) attended college and the rest 13 (2.8%) had not attended school. However, most women 276 (59.4%) were unemployed while 130 (28.4%) were self employed in small-scale businesses and only 56 (12.2%) of them had a regular employment (Table 1). It was observed that only 54 respondents had college education and only 56 were employed despite most of them having gone to school. In addition, it was noted that most respondents who had completed secondary school were married immediately and were housewives.
Table 1: Respondent Socio-economic and demographic characteristics

<table>
<thead>
<tr>
<th>Respondent Characteristics</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Interval</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>309</td>
<td>67</td>
</tr>
<tr>
<td>30-39</td>
<td>107</td>
<td>23.1</td>
</tr>
<tr>
<td>40-49</td>
<td>33</td>
<td>7.1</td>
</tr>
<tr>
<td>50-59</td>
<td>13</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>341</td>
<td>73.8</td>
</tr>
<tr>
<td>Single</td>
<td>104</td>
<td>22.6</td>
</tr>
<tr>
<td>Widowed</td>
<td>13</td>
<td>2.8</td>
</tr>
<tr>
<td>Separated / Divorced</td>
<td>4</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protestants</td>
<td>330</td>
<td>71.4</td>
</tr>
<tr>
<td>Catholics</td>
<td>118</td>
<td>25.6</td>
</tr>
<tr>
<td>Muslims</td>
<td>10</td>
<td>2.2</td>
</tr>
<tr>
<td>Traditionalists</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Atheists</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>13</td>
<td>2.8</td>
</tr>
<tr>
<td>Primary School</td>
<td>179</td>
<td>38.7</td>
</tr>
<tr>
<td>Secondary School</td>
<td>216</td>
<td>46.8</td>
</tr>
<tr>
<td>College</td>
<td>54</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>276</td>
<td>59.4</td>
</tr>
<tr>
<td>Employed</td>
<td>56</td>
<td>12.2</td>
</tr>
<tr>
<td>Small Scale Business</td>
<td>130</td>
<td>28.4</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kikuyu</td>
<td>344</td>
<td>74.4</td>
</tr>
<tr>
<td>Kamba</td>
<td>39</td>
<td>8.5</td>
</tr>
<tr>
<td>Luhya</td>
<td>20</td>
<td>4.3</td>
</tr>
<tr>
<td>Luo</td>
<td>18</td>
<td>3.9</td>
</tr>
<tr>
<td>Others ( Meru, Kisii)</td>
<td>41</td>
<td>8.9</td>
</tr>
</tbody>
</table>

N = 462
Further, Protestants who had no education were 9 (1.94%), Catholics 3 (0.6 %), and other religions 1 (0.2 %). In terms of education, Protestants who had completed primary school were the most comprising of 124 (26.8%) while 48 (10.38 %), and 8 (1.73 %) respondents were Catholics and other religions. The Protestants who had primary education were 124 (26.8 %), secondary education 157 (33.98 %) and college education 40 (8.65 %). On the other hand, the Catholics who had attained primary education were 48 (10.38 %), secondary education 54 (11.68 %) and college education 13 (2.8%). In other religions, those with primary education were 8 (1.73 %), secondary education 4 (0.9%) and college education 1 (0.2 %).

Among the married respondents, 6 (1.3 %) had never gone to school, 130 (28.1%) had completed primary education, 165 (35.7 %) had attained secondary education and 26 (5.6%) had college education. The single respondents who had never gone to school were 2 (0.4%), those with primary education were 36 (7.8%), secondary education 40 (8.6 %) and college education 26 (5.6 %). The respondents who were separated and divorced and had never gone to school were 5 (1.1%), those with primary education were 11 (2.4 %), secondary school education 6 (1.3 %), and college education were 2 (0.4 %), 1 (0.2 %) was self-employed and 10 (2.16 %) unemployed.

The respondents who had primary education and were employed were 19 (4.1%), self-employed 46 (9.95 %) and the unemployed 116 (25.1 %). The employed respondents with secondary education were 15 (3.2 %), the self-employed with secondary education were 68 (14.7 %) and the unemployed with secondary education were 135 (29.2 %). The employed respondents with college education were 20 (4.3%), the self-employed 17 (3.7 %) and the unemployed 16 (3.46 %).
It was also observed that the respondents who were 20 – 29 years and married were 216 (46.75 %), 30 – 39 years and married were 91 (19.7 %), 40 – 49 years and married were 26 (5.6 %) and 50 – 59 years and married were 3 (0.64 %). Moreover respondents who were single were 20 – 29 were 90 (19.5 %), those who were 30 – 39 years were 10 (2.16 %), 40 – 49 years were 4 (0.86%) and 50 – 59 years were none. In addition the respondents who were separated and divorced and aged 20 – 29 years were 2 (0.4%), those aged 30 – 39 were 5 (1.1 %), those aged 40 – 49 were 5 (1.1 %), while those aged 50 – 59 were 10 (2.16 %).

Two hundred and three (59.2 %) of the respondents husbands were employed in various occupations like farmers, clerks, drivers and in the slaughter houses. One hundred and thirteen (32.9 %) were running their own small businesses, 22 (6.6%) were peasant farmers while 1 (0.2 %) had an unknown occupation. In addition, 193 (56.3 %) of respondents husbands had attended secondary school, 91 (26.5%) had completed primary school, 53 (15.5 %) had attended college, and the rest 6 (1.7%) had no schooling.

Among the women interviewed 57 (12.4 %) consumed alcohol and 405 (87.6 %) were non-users while 13 (2.8 %) of the respondent were cigarette smokers and the rest 449 (97.2 %) being non-smokers.

3.2 Risk factors associated with cervical cancer

Risk factors for contraction of cervical cancer were also assessed as outlined in appendix ii part 1 B. In this respect, the youngest respondent was married at the age of fourteen years and the oldest at thirty-four years with a mean age 20.8 ± 3.0. It was observed that 1 (0.2 %) got married at the age of 14, 93 (20.1%) at 15-19 years, 204 (44.2%) at 20-24
years, 38 (8.2%) at 25-29 years, 5 (1.1%) at 30-34 years. The single respondents were 104 (22.5%) while the rest 17 (3.7%) were separated, divorced or widowed (Table 2).

The youngest age at delivery recorded was 13 years with a mean of 20.4 ± 3.2. One hundred and forty nine (32.4%) had a baby by the age of 19, the majority 203 (43.9%) had first delivery at ages 20-24 years, 29 (6.3%) at 25-29 years, 6 (1.3%) at above 30 years while 75 (16.2%) had no child (Table 2). It was also observed that most respondents 318 (68.8%) had first sexual intercourse at ages 10-19, 110 (23.8%) at ages 20-24, 7 (1.5%) at ages 25-29, 1 (0.2%) at ages 30-34 and the rest 26 (5.6%) had never had sexual intercourse.

The findings further showed that the number of children per respondent ranged from 1-9 and a mean of 2.3 ± SD 1.6 with over half 255 (55.2%) of the respondents having only 1-2 children and 75 (16.2%) having none (Table 2). On sexuality, the respondents who had sexual partners in the last one year were 423 (91.6%) and 39 (8.4%) had none. Most women with one sexual partner were married, those with two partners were 25 (5.4%), three partners 9 (1.9%), four partners 1 (0.2%) and those with five partners and above were 4 (0.9%). It was also found that 39 (8.4%) women had more than one partner most of whom were either single, separated, divorced or widowed.

Based on what was found, 71 women (15.4%) were at risk of cervical cancer due to early marriage, 149 (32.4%) were at risk due to early delivery of first child, 318 (68.8%) due to early involvement in sex, 43 (9.3%) due to parity and 39 (8.4%) due to multiple sexual partners.
Table 2: Risk factors associated with cervical cancer

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age at first sexual Intercourse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 - 14</td>
<td>29</td>
<td>6.3</td>
</tr>
<tr>
<td>15 - 19</td>
<td>289</td>
<td>62.5</td>
</tr>
<tr>
<td>20 - 24</td>
<td>110</td>
<td>23.8</td>
</tr>
<tr>
<td>25 - 29</td>
<td>7</td>
<td>1.5</td>
</tr>
<tr>
<td>30 - 34</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Never had sex</td>
<td>26</td>
<td>5.6</td>
</tr>
<tr>
<td><strong>Age at marriage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 - 14</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>15 - 19</td>
<td>93</td>
<td>20.1</td>
</tr>
<tr>
<td>20 - 24</td>
<td>204</td>
<td>44.2</td>
</tr>
<tr>
<td>25 - 29</td>
<td>38</td>
<td>8.2</td>
</tr>
<tr>
<td>30 - 34</td>
<td>5</td>
<td>1.1</td>
</tr>
<tr>
<td>Single</td>
<td>104</td>
<td>22.5</td>
</tr>
<tr>
<td>Separated /Divorced</td>
<td>17</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>Age at first birth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 - 14</td>
<td>4</td>
<td>0.8</td>
</tr>
<tr>
<td>15 - 19</td>
<td>145</td>
<td>31.4</td>
</tr>
<tr>
<td>20 - 24</td>
<td>203</td>
<td>43.9</td>
</tr>
<tr>
<td>25 - 29</td>
<td>29</td>
<td>6.3</td>
</tr>
<tr>
<td>Above 30</td>
<td>6</td>
<td>1.3</td>
</tr>
<tr>
<td>Never had a child</td>
<td>75</td>
<td>16.2</td>
</tr>
<tr>
<td><strong>Parity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One child</td>
<td>146</td>
<td>31.6</td>
</tr>
<tr>
<td>Two children</td>
<td>109</td>
<td>23.6</td>
</tr>
<tr>
<td>Three children</td>
<td>61</td>
<td>13.2</td>
</tr>
<tr>
<td>Four children</td>
<td>28</td>
<td>6.0</td>
</tr>
<tr>
<td>Five children &amp; above</td>
<td>43</td>
<td>9.3</td>
</tr>
<tr>
<td>No child</td>
<td>75</td>
<td>16.2</td>
</tr>
<tr>
<td><strong>Number of partners</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One partner</td>
<td>423</td>
<td>91.6</td>
</tr>
<tr>
<td>Two partners</td>
<td>25</td>
<td>5.4</td>
</tr>
<tr>
<td>Three partners</td>
<td>9</td>
<td>1.9</td>
</tr>
<tr>
<td>Four partners</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Five partners &amp; above</td>
<td>4</td>
<td>0.9</td>
</tr>
</tbody>
</table>

N = 462
3.3.0: Respondents knowledge on reproductive health.

Knowledge of reproductive health was assessed as outlined in Appendix 11 part 2A. Out of 462 respondents, 310 (67.1 %) had knowledge on reproductive health and 152 (32.9 %) had no knowledge (Figure 1).

Similarly, in the Focus Group Discussions (FGD) (Appendix III), most participants demonstrated knowledge of reproductive health. Questions on reproductive health were based on menstruation, sexually transmitted infections and family planning.

The respondents were asked about their menstrual history and patterns. Two hundred and thirty (50.1 %) started their periods between 15 – 16 years. The mean age at menstruation was 14.9 ± 1.7. The respondents with the lowest age to start menstruation were 2 (0.4 %) at 9 years and the highest age to start menstruation were 3 (0.7 %) at 20 years. It was also found that 404 (87.4 %) respondents had regular periods, and 58 (12.6 %) had irregular periods while 444 (96.1 %) were in child bearing age and 18 (3.9 %) had reached menopause. Among the respondents who had reached menopause, 8 (1.7 %) had been in menopause for 1-4 years, 5 (1.1 %) for 5 - 9 years, 3 (0.6 %) for 10-14 years and 2 (0.4 %) for 15 - 20 years.
Figure 1: Knowledge of Cervical Cancer And Reproductive Health

N = 462

Key

Had Knowledge
Had No Knowledge

Level of Knowledge

Cervical Cancer
Reproductive Health

13% 32.90%
87% 67.10%

Figure 1: Knowledge of Cervical Cancer And Reproductive Health
In order to find out their knowledge on menstrual cycle respondents were asked about the number of times normal periods should come, irregular periods and menopause. Majority of respondents 448 (97%) were aware that normal periods should come once in a month, 355 (76.8%) reported that it was not normal to have irregular periods while 107 (23.2%) thought it was normal. In terms of causes of irregular periods, most respondents 239 (69.3%) did not know the cause of irregular periods. Thirty (8.7%) associated them with use of family planning methods, 21 (6.1%) with change of climate, 13 (3.8%) with STI, 18 (5.2%) with sickness, 32 (6.9%) gave other reasons like diet, while 109 (23.6%) were not certain of the correct answer.

Three hundred and seventy respondents (80.1%) knew the meaning of menopause but most of them 362 (78.3%) were not aware that it is not normal for a woman to have post-menopausal bleeding. In addition, on the cause of post-menopausal bleeding, 391 (84.6%) did not know the cause, 31 (7.3%) cited cancer of the uterus, 34 (14%) cited bacterial infection, 1 (0.2%) mentioned STI and other causes like shock 5 (1.1%). The majority 433 (93.7%) reported they would go to hospital if they developed post-menopausal bleeding, 21 (4.5%) did not know the action to take, 7 (1.5%) would not take any action, while 1 (0.2%) would ask relatives for advice. The respondents aged 20 – 29 with knowledge of reproductive health were 207 (44.8%) while those in the same age bracket and had no knowledge were 103 (22.3%). The women who were 30 – 39 years and had knowledge of reproductive health were 78 (16.9%) while those who were 30-39 years and had no knowledge were 28 (6.1%). In addition, the respondents aged 40 – 49 and had knowledge of reproductive health were 24 (5.2%) while those in the same age interval and had no knowledge were 9 (1.9%). In the age group 50 – 59 years 2 (0.4
% had knowledge while 11 (2.4%) did not. There was a statistically significant difference between age and knowledge on reproductive health ($\chi^2 = 30.62; p = 0.00007$) (Table 3).

The respondents who had never gone to school and had reproductive health knowledge were 5 (1.1%) while those who had never gone to school and had no knowledge were 8 (1.7%). Respondents who had attended primary school and demonstrated knowledge of reproductive health were 115 (25%) while those with primary education and had no knowledge were 64 (13.8%). On the other hand respondents with secondary education and had knowledge of reproductive health were 155 (33.5%) and those who had attended secondary school and had no knowledge were 61 (13.2%). 37 (8.0%) had attended college and had reproductive health knowledge while 17 (3.7%) did not. There was no significant difference between educational level and knowledge on reproductive health ($\chi^2 = 10.12; p = 0.071$) (Table 3).

With regard to marital status, the married respondents who had knowledge on reproductive health were 236 (51.5%) while the married respondents who had no knowledge were 94 (20.3%). The singles who had knowledge of reproductive health were 61 (13.2%) while those who were single and had no knowledge 43 (9.3%). The respondents who had separated and divorced and had knowledge of reproductive health were 13 (2.8%) while those who had no knowledge were also 13 (2.8%). There was a statistical between marital status and knowledge on reproductive health. ($\chi^2 = 9.74; p = 0.007$) (Table 3). The married respondents had more knowledge.
In addition, it was noted that the women who had one child and had knowledge of reproductive health were 106 (23.0 %) and those with one child and had no knowledge of reproductive health were 40 (8.6 %). Moreover, the respondents who had two children and had reproductive health knowledge were 82 (17.7 %) while those with a similar number of children and had no knowledge were 27 (5.8 %). On the other hand, respondents who had three children and displayed knowledge of reproductive health were 42 (9.1 %) while those with the same number of children and had no knowledge were 19 (4.1 %). It was further observed that respondents who had four children and had knowledge of reproductive health were 22 (4.7 %) while those with the same number of children and had no knowledge of the same were 6 (1.3 %). Among the women interviewed, those who had five children and above and had knowledge of reproductive health were 20 (4.3 %) while those who had a similar number of children and had no knowledge were 23 (4.9 %). There was a statistical association between the number of children the respondent had and the respondents knowledge on reproductive health ($\chi^2=14.27; p=0.006$) (Table3).
Table 3: Relationship between knowledge on reproductive health, age, marital status, education and parity

<table>
<thead>
<tr>
<th>Respondent Characteristics</th>
<th>Knowledge On Reproductive Health</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Interval</td>
<td>% Respondents with knowledge</td>
<td>% Respondents without knowledge</td>
</tr>
<tr>
<td>20-29 years</td>
<td>207 (44.8)</td>
<td>103 (22.3)</td>
</tr>
<tr>
<td>30-39 years</td>
<td>78 (16.9)</td>
<td>28 (6.1)</td>
</tr>
<tr>
<td>40-49 years</td>
<td>24 (5.2)</td>
<td>9 (1.9)</td>
</tr>
<tr>
<td>50-59 years</td>
<td>2 (0.4)</td>
<td>11 (2.4)</td>
</tr>
<tr>
<td>Educational level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>5 (1.1)</td>
<td>8 (1.7)</td>
</tr>
<tr>
<td>Primary Education</td>
<td>115 (25)</td>
<td>64 (13.8)</td>
</tr>
<tr>
<td>College Education</td>
<td>37 (8.0)</td>
<td>17 (3.7)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>236 (51.5)</td>
<td>94 (20.3)</td>
</tr>
<tr>
<td>Single</td>
<td>61 (13.2)</td>
<td>43 (9.3)</td>
</tr>
<tr>
<td>Separated &amp; Div.</td>
<td>13 (2.8)</td>
<td>13 (2.8)</td>
</tr>
<tr>
<td>Parity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Child</td>
<td>106 (23.0)</td>
<td>40 (8.6)</td>
</tr>
<tr>
<td>Two children</td>
<td>82 (17.7)</td>
<td>27 (5.8)</td>
</tr>
<tr>
<td>Three Children</td>
<td>42 (9.1)</td>
<td>19 (4.1)</td>
</tr>
<tr>
<td>Four Children</td>
<td>22 (4.7)</td>
<td>6 (1.3)</td>
</tr>
<tr>
<td>&gt;Five Children</td>
<td>20 (4.3)</td>
<td>23 (4.9)</td>
</tr>
</tbody>
</table>

The symbol * indicates statistical significance. N = 462

3.3.1: Respondent knowledge on family planning

Knowledge on family planning was assessed as outlined in Appendix ii part 2A. Of 462 respondents, 453 (98.05 %) had heard about family planning methods while 9 (1.9 %) had never heard of the methods (Table 4). The family planning methods they had heard of included pills 432 (93.5 %), injection 5 (1.1 %), Norplant 1 (0.2 %). Twenty-four of the respondents interviewed (5.2 %) did not know any of the family planning methods. Among the women studied 360 (78 %) thought family planning methods do prevent sexually transmitted infections, 50 (10.8 %) said they did not, while 52 (11.2 %) did not
know whether they do prevent or not. The majority 359 (77.7 %) mentioned the condom as a family planning method that can prevent STI, 2 (0.4 %) cited pills, 1 (0.2 %) cited intrauterine device (IUD), 2 (0.4 %) mentioned natural methods and 98 (21.2%) were not sure of the answer (Table 4).

According to the findings the pill was the most familiar family planning method and most women mentioned the condom as a family planning method which prevents sexually transmitted infections.

Table 4: Respondents knowledge on Family Planning

<table>
<thead>
<tr>
<th>Responses on family planning knowledge</th>
<th>Respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hear of family planning methods</td>
<td>453</td>
<td>98.1</td>
</tr>
<tr>
<td>Never hear of family planning methods</td>
<td>9</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>FP Methods Mentioned by Respondents</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pills</td>
<td>432</td>
<td>93.5</td>
</tr>
<tr>
<td>Injections</td>
<td>5</td>
<td>1.1</td>
</tr>
<tr>
<td>Norplant</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Not sure</td>
<td>24</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Family Methods Which Prevent STI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condoms</td>
<td>359</td>
<td>77.9</td>
</tr>
<tr>
<td>Pills</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>Intrauterine Devise (IUD)</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Natural methods</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Not sure</td>
<td>98</td>
<td>21.2</td>
</tr>
</tbody>
</table>

N = 462

3.3.2 Knowledge on Sexually transmitted infections (STI)

Respondents knowledge on STI was measured according to appendix ii part 2 A.

Four hundred and twenty six of them (92.2 %) reported it was not normal to have a discharge, 18 (3.9 %) were of the opinion that it was normal while 18 (3.9%) were not aware whether it was normal or not. Further, three hundred and sixty two (78.4 %) had never had an abnormal vaginal discharge, 98 (21.2 %) had suffered from STI while 2
(0.4%) were not aware whether they had ever suffered from STI or not. Out of the respondents who suffered from STI 86 (18.6%) went to hospital, 4 (0.9%) saw a traditional healer, 1 (0.2%) took self-medication and 7 (1.5%) took no action. The one who did not go to hospital was waiting for other symptoms to surface 1 (0.2%), others 4 (0.9%) thought it was normal and 1 (0.2%) had no money to go to hospital. It was observed that most respondents 339 (73.4%) attributed causes of abnormal discharges to STI, 8 (1.7%) to cancer of uterus/cervix, 6 (1.3%) to abortions/miscarriage and 109 (23.6%) did not know the cause. Similarly, most participants in the focus group discussions were of the opinion that abnormal vaginal discharges were caused by STIs like gonorrhoea. Most of the women studied (81.2%) had never contracted STI, 69 (15.0%) had contracted once, 13 (2.8%) twice, 3 (0.6%) thrice, while 2 (0.4%) four times and above.

In addition, one hundred and twenty seven (27.5%) respondents were of the opinion that there was no relationship between STI and cervical cancer, 237 (51.3%) were not aware whether there was a relationship or not and 99 (21.4%) thought there was a relationship. Out of those who said there is a relationship 3 (0.6%) could not explain the relationship. Also, 62 (13.4%) thought there is a relationship because STI and cervical cancer affect the reproductive organs, 9 (1.9%) thought STI can cause cancer of the uterus, 11 (2.4%) thought STI causes damage to the reproductive organs and which may eventually cause cancer. Moreover, 2 (0.4%) explained that the two are related since both STI and cervical cancer are transmitted sexually. Further, 3 (0.6%) thought they are related because they are similar, 11 (2.4%) explained that the more the number of sexual partners the greater the risk of STI and cervical cancer, 2 (0.4%) thought that if STI is not treated it will lead to cervical cancer.
The respondents who were 20 - 29 years and did not contract STI were 252 (54.5%), while those who were in the same age and contracted STI once were 46 (10.0%), twice 8 (1.7%), thrice 1 (0.2%), four times and above 2 (0.4%) respectively. Moreover, women who were 30 - 39 years and did not contract STI were 87 (19%) while the women who were in the same age and contracted STI once were 17 (3.7%), twice 2 (0.4%) and thrice 1 (0.2%). Respondents who were in the age group of 40 - 49 and did not contract STI were 26 (5.6%) while respondents in the same age and contracted STI once were 4 (0.9%), twice 2 (0.4%), thrice 1 (0.2%), while none contracted STI four times and above. Respondents who were aged 50 - 59 and had not contracted STI were 10 (2.2%), once 2 (0.4%) and twice 1 (0.2%). There was no association between the number of times a respondent contacted STI and age ($\chi^2 = 36.71; p = 0.12$)(Table 5).

On level of education, respondents who had no education and did not contract STI were 10 (2.2%) while the rest 2 (0.4) and 1 (0.2%) contracted the condition twice and thrice respectively. The respondents who had attended primary school and did not contract STI were 142 (31.0%). Respondents with the same level of education who had contracted STI once were 32 (6.9%) and twice 4 (0.8%). Further, respondents who had attained secondary education and had not contracted STI were 178 (38.5%) while those with the same level of education and contracted STI once were 27 (5.8%), twice 8 (1.7%) and thrice 3 (0.6%). The women who had college education and had not contracted STI were 46 (9.9%) while 8 (1.7%) had contracted STI only once. There was no significant difference between education and the number of times the respondent contracted STI ($\chi^2 = 23.7; p = 0.28$)(Table 5). Among the married women 282 (61%) did not contract STI while 47 (10.2%) contracted STI once, 8 (1.7%) twice, 2 (0.4%) thrice and 2 (0.4%) four
while 47 (10.2%) contracted STI once, 8 (1.7%) twice, 2 (0.4%) thrice and 2 (0.4%) four times and above. Among single women 84 (18.2%) of the respondents did not contract STI while 16 (3.5%) contracted STI once, 3 (0.6%) twice and 1 (0.2%) thrice. Among the separated and the divorced women, 11 (2.4%) did not contract STI while 4 (0.9%) contracted STI once and 2 (0.4%) twice. There was no statistical association between marital status and the number of times the respondent contracted STI ($\chi^2=4.14$ p=0.12) (Table5).

**Table 5: Relationship between number of times respondent contracted STI, age, education and marital status**

<table>
<thead>
<tr>
<th>Age interval</th>
<th>Number of times respondent contracted STI</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>Once</td>
</tr>
<tr>
<td>20 - 29</td>
<td>252 (54.5)</td>
<td>46 (10)</td>
</tr>
<tr>
<td>30 -39</td>
<td>87 (19)</td>
<td>17 (3.7)</td>
</tr>
<tr>
<td>40 - 49</td>
<td>26 (5.6)</td>
<td>4 (0.9)</td>
</tr>
<tr>
<td>50 - 59</td>
<td>10 (2.2)</td>
<td>2 (0.4)</td>
</tr>
<tr>
<td>Educational level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No .Educ.</td>
<td>10 (2.2)</td>
<td>2 (0.4)</td>
</tr>
<tr>
<td>Primary</td>
<td>142 (31)</td>
<td>32 (6.9)</td>
</tr>
<tr>
<td>Secondary</td>
<td>178 (38.5)</td>
<td>27 (5.8)</td>
</tr>
<tr>
<td>College</td>
<td>46 (9.9)</td>
<td>8 (1.7)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>282 (61)</td>
<td>47 (10.2)</td>
</tr>
<tr>
<td>Single</td>
<td>84 (18.2)</td>
<td>16 (3.5)</td>
</tr>
<tr>
<td>Sep&amp;Div.</td>
<td>11 (2.4)</td>
<td>4 (0.9)</td>
</tr>
</tbody>
</table>
3.3.3: Respondent knowledge of cervical cancer

Respondents knowledge on cervical cancer was assessed according to Appendix ii part 2 B. The results showed that few women 60 (13 %) had knowledge on cervical cancer while 402 (87 %) had no knowledge (Figure 1). Questions on cervical cancer focused on symptoms, prevention treatment and screening. From the 462 women sampled, 315 (69.3 %) had not come across a woman who suffered or died of cervical cancer and 378 (81.8 %) women did not consider cervical cancer a problem in their community. At the same time 370 (80.9 %) knew the meaning of menopause.

On specific knowledge on cervical cancer, it was observed that the majority of respondents 351 (76 %) generally had no knowledge of the symptoms. Respondents were asked to name the symptoms of cervical cancer. Seventy four (16 %) mentioned severe vaginal bleeding, 86 (18.6 %) abdominal pains, 41(8.9%) weight loss and13 (2.8 %) vaginal discharge (Figure 2). Only 31 (6.7%) mentioned postmenopausal bleeding as a symptom of cervical cancer while 441 (95.4 %) were not informed that it is abnormal to have vaginal bleeding after sexual intercourse (Figure 2). The majority cited abdominal pains and severe vaginal bleeding as symptoms. In the FGD too, vaginal bleeding was the symptom that was cited by most participants.
Figure 2: Symptoms of cervical cancer

- **Post Menopausal Bleeding**: 93.30%
- **Post Coital Bleeding**: 95.40%
- **Severe Vaginal Bleeding**: 84%
- **Abdominal Pains**: 81.40%
- **Weight Loss**: 91.10%
- **Vaginal Discharge**: 97.20%

Key:
- □ Knowledge
- ■ No-Knowledge

N = 462
In relation to cure, most respondents 320 (69.3%) were not aware that cervical cancer is curable. Further, when asked the stage at which cervical cancer is curable 137 (29.65%) mentioned early stage, 22 (4.8%) did not know the stage at which it is curable, 5 (1.1%) thought it was curable any time treatment was commenced and 5 (1.1%) thought it was curable at the late stage. In terms of treatment, 315 (68.2%) respondents were not aware of treatment used, 97 (21%) knew a method of treatment and 1 (0.2%) did not know of any method of treatment used. Seven (1.5%) cited radiotherapy as the only method of treatment, 5 (1.1%) mentioned chemotherapy/drugs only, 35 (7.5%) mentioned surgery only, 23 (5%) radiotherapy and surgery, while 28 (6.1%) mentioned a combination of surgery, drugs and radiotherapy as methods of treatment. 175 (37.8%) reported that the methods of treatment are effective. In terms of whether a woman should go for screening, most respondents were of the view that women should go for screening although they were not clear about screening (Figure 3).

Over half 244 (53%) of the respondents reported that it was possible for a healthy looking woman to have cervical cancer. Also, on prevention, 343 (74.2%) did not know that cervical cancer can be prevented. Only 119 (25.8%) knew the preventive measures (Figure 3). 2 (0.4%) respondents would prevent cervical cancer using diet, 47 (10.2%) by avoiding many sexual partners, 2 (0.4%) by refraining from sex, 49 (10.6%) through regular screening 13 (2.8%), through use of condoms, 40 (8.65%) through genital hygiene and 21 (4.5%) were not aware of preventive measures. It was also noted that, the majority of the participants in the FGD were not aware how cervical cancer could be prevented.
Figure 3: Knowledge of symptoms, prevention and treatment of cervical cancer
Most respondents 102 (22.1 %) mentioned Kenyatta National hospital as one of the hospitals where treatment is offered, government health centre 6 (1.3 %), government hospital 11 (2.4 %) and 19 (4.1 %) Provincial hospital. Other hospitals mentioned were Kikuyu hospital and Agakhan hospital. One respondent mentioned Afya Centre as a place where treatment for cervical cancer is offered.

In addition, most respondents 152 (32.9 %) thought cervical cancer can affect anybody, 58 (12.5%) were of the opinion that a woman may be having it but may not be aware, while 14 (3.0 %) could not explain how a healthy looking person could have cervical cancer. Further, when the women studied were asked how cervical cancer affects the individual, the family and community the majority 303 (65.6 %) did not know. However, 77 (16.7 %) mentioned weight loss, pain and weakness to the affected person, 32 (6.9 %) felt that the individual is stigmatised, 20 (8.6 %) mentioned death, infertility, mental disorders, stress and financial constraints to the family and the rest 20 (8.6 %) respondents cited embarrassment, inheritance, isolation, loss and social problems.

Causes of post coital bleeding was not known by most respondents 239 (51.7 %), 94 (20.3 %) mentioned STI, 20 (4.3 %) cervical/uterine cancer while 2 (0.4 %) mentioned monthly periods as a cause.

It was observed that among the respondents aged 20 - 29 years and had knowledge of cervical cancer were 38 (8.2 %) while those in the same age bracket and had no knowledge were 274 (59.3 %). The respondents who were in the age group of 30-39 and had knowledge of cervical cancer were 17 (3.7 %) and those with a similar age and had no knowledge were 90 (19.5 %). Moreover, the respondents who were 40 – 49 years and had knowledge of cervical cancer were 6 (1.3 %) while those who had no knowledge
were 27 (5.8 %). In addition, women who were aged of 50 - 59 and had knowledge of cervical cancer were none while women in the same age and had no knowledge were 10 (2.2 %). There was a statistically significant difference between the age of the respondent and cervical cancer knowledge ($\chi^2 = 39.23; p = 0.0003$). The younger the respondents the higher the knowledge they displayed.

Further, among the married respondents 47 (10.2 %) had knowledge of Cervical cancer and 285 (61.7 %) had no knowledge. The single respondents who had knowledge of cervical cancer were 10 (2.2 %) while those who had no knowledge were 94 (20.3 %). Among the respondents who were separated and divorced, it was observed that 3 (0.6 %) illustrated knowledge of cervical cancer while 23 (5.0 %) had no knowledge. There was a statistically significant difference between marital status and cervical cancer knowledge ($\chi^2 =13.16; p = 0.010$). The married respondents had more knowledge.

It was also observed that the 13 (2.8 %) women who had never attended school had no knowledge of cervical cancer. Further, the respondents who had completed primary education and had knowledge of cervical cancer were only 13 (2.8 %) while 166 (35.9 %) had no knowledge. Moreover, the women who had attended secondary school and demonstrated knowledge of cervical cancer were 30 (6.5 %) while those with secondary education and demonstrated no knowledge were186 (40.2 %). The respondents with collage education and had knowledge of cervical cancer were 17 (3.7 %) and those who had no knowledge were 37 (8.0 %). There was a statistically significant difference between education and cervical cancer knowledge ($\chi^2 =39.43; p = 0.002$). The respondents who had secondary education and above had more knowledge compared to the rest.
Among the respondents doing their own small-scale businesses 15 (3.2%) had knowledge of cervical cancer while 115 (25%) had no knowledge. On the other hand, respondents who had regular employment and had knowledge of cervical cancer were 10 (2.1%) while the rest 46 (10%) had no knowledge. Among the unemployed respondents, 31 (6.7%) had knowledge of cervical cancer and 245 (53.0%) had no knowledge. There was an association between the respondents occupation and cervical cancer knowledge ($\chi^2 = 20.14; p=0.002$).

In addition, among the respondents with children 50 (10.8%) had knowledge of cervical cancer while 340 (73.6%) had no knowledge. While 13.4% of those without children had knowledge. There was a significant difference between those with children and knowledge on cervical cancer ($\chi^2 = 7.59; p = 0.022$).

In conclusion, the majority of the respondents had no knowledge of cervical cancer that is symptoms, treatment and prevention. The respondents who had secondary education and above had more knowledge compared to the rest. The younger respondents displayed more knowledge of cervical cancer than the older respondents did. Also, the married respondents had more knowledge than the single respondents did.

3.3.4: Respondents knowledge of cervical cancer screening.

Respondents knowledge of cervical screening was assessed as outlined in appendix ii part 2 B. Out of 462 respondents studied, 304 (65.8%) had no knowledge of cervical screening or Papsmear while 158 (34.2%) had knowledge. Three hundred and twenty two (70.0%) respondents knew of a pelvic examination, while 139 (30.0%) had no knowledge of the examination.

Also, most respondents got information about screening from Health Facilities 91 (19.7%) and from friends 52 (11.3%) (Figure 4). The rest of the respondents, 5 (1.1%),
5 (1.1 %), 5 (1.1 %), 4 (0.9 %), and 1 (0.2 %) from relatives, seminar / training / school, print media, radio or television respectively (Figure 4).

When asked whether they think a woman should go for screening/ Pap smear, 377 (81.6 %) respondents thought they should, 13 (2.8 %) thought it was not necessary, while 72 (15.6 %) were not sure of the answer. Among the respondents who thought that a woman should go for screening, 330 (71.4 %) thought a woman should go for screening yearly, 37 (8.0 %) every two years, 5 (1.1 %) every three years, 1 (0.2 %) after every four years, while 89 (19.3 %) were not sure. Moreover, 327 (70.8 %) of the respondents knew nobody who had gone for screening, 119 (25.7 %) knew somebody who had gone for screening, while 16 (3.5 %) had no idea. Of those who knew a woman who had gone for Pap smear, 13 (2.8 %) reported that screening was done on request, 16 (3.5 %) for vaginal discharge, 12 (2.6 %) for irregular bleeding, 60 (13 %) for regular check up, 7 (1.5 %) for family planning, 4 (0.9 %) did not know why it was done, 1 (0.9 %) for pregnancy, 1 (0.2 %) on doctors request and 1 (0.2 %) had cervical cancer and 1 (0.2 %) for abdominal pains. Further, 222 (48 %) respondents thought they were at risk of getting cervical cancer, while 173 (37.4 %) were not aware of the risk.
Figure 4. Respondent's sources of information

Key

- No Information
- Health Facilities
- Friends
- Relatives, print media, radio

N = 462
Respondents gave reasons for their answers. Seventy eight (17%) were not aware of the risk since they had never gone for screening. One hundred and eighty (39%) were of the opinion that cancer can affect anybody. Forty one (9%) thought they are not at risk because they protect themselves. In addition, 1 (0.2%) respondent said she was not at risk since her uterus had been removed for what the doctor explained to be early cancer and 13 (2.8%) thought they were not at risk because they always went for check-ups. Also, 1 (0.2%) thought she is at risk because of using pills, 1 (0.2%) thought she was at risk because she had suffered from sexually transmitted infections, 1 (0.2%) thought she could be at risk because she had heard that every woman is at risk.

3.4: Attitude towards Cervical cancer

Respondents’ attitude was assessed as outlined in Appendix ii part 3. Of 462 respondents studied, 385 (83%) had positive attitude and 77 (17%) had negative attitude.

Respondents were asked their approval concerning screening and pelvic examination. Also, if their religion prohibits the use of family planning, their beliefs about using pills as a family planning method and their opinion on what they would do if they had a vaginal discharge.

The variables were further scored. Every positive response (that is what the respondents approved) was given a score of one while a negative response (what the respondent did not approve) was given a score of 0. Those who had an overall score of 7-12 were considered to have a positive attitude while respondents who had an overall score of 0-6 were considered to have a negative attitude toward reproductive health and specifically cervical cancer (Figure 5).
Figure 5: Summary of Respondents Attitude Towards Cervical Cancer
The majority of the respondents had a positive attitude towards screening, pelvic examination, vaginal discharge and family planning. Three hundred eighty three (83%) recommended screening, 2 (0.43%) planned to go for screening, 69 (15.2%) would not recommend screening and 3 (0.64%) did not know whether to recommend screening or not. Three hundred sixty nine (80%) approved screening for healthy women, 15 (3.2%) felt it was not useful, 82 (17.7%) did not know whether it was useful or not. Seventeen (4.8%) could not support their answer on why they approved Pap smear, 337 (72.9%) felt that screening was for check up and 3 (0.64%) felt it was useful if a woman had abdominal problems. When respondents were asked whether they approve a pelvic examination.

Three hundred and seventy five (81.2%) approved it, nine did not approve it, while 52 (11.3%) did not know whether to approve or not. Three hundred and seventy four (81%) would recommend a pelvic examination to a friend, 66 (14.3%) would not, while 15 (3.2%) were not certain whether to recommend the examination or not. When the respondents were asked to support their answers on why they would recommend or fail to recommend a pelvic examination, ninety (19.5%) could not support their answers, 200 (43.3%) felt a pelvic examination would help in detecting disease early. Twenty-eight (6.1%) would recommend it for a routine check up, 12 (2.6%) would recommend it for those going for family planning methods, 54 (12%) would approve it since they felt it would assist in detecting a problem during delivery. Moreover, 13 (2.8%) would recommend it if a woman had a problem in the reproductive organs and 50 (10.8%) approved it so that they could know their reproductive health status. Only one stated that she would recommend a pelvic examination if the doctor thought it was necessary while one would recommend it if affordable. When asked whether the benefits of a pelvic
examination outweigh the difficulties, 383 (82.9\%) thought they did, 8 (1.73 \%) said no, and 36 (7.7\%) did not have an answer.

The study established that those in the age interval of 20 – 29 years who approved a pelvic examination, screening and family planning were 275 (59.5 \%) while those who did not approve were 34 (7.4 \%). At the same time, women aged 30 - 39 years with a positive attitude were 100 (21.6 \%) while those with a negative attitude were 7 (1.65 \%). In the 40-49 age stratum 30 (6.5 \%) had positive attitude were and those with a negative attitude were 3 (0.65 \%). Women aged 50 – 59 years who had a positive attitude were 10 (2.2 \%) while those with a negative attitude were 3 (0.65 \%). There was no significant difference between attitude and age ($\chi^2 =13$, $p =0.41$).

Assessment based on religion indicated that there were 299 (65 \%) Protestants who had a positive attitude and 31 (6.7 \%) who had a negative attitude. Catholics who had a positive attitude were 104 (22.5 \%) and those with a negative attitude were 14 (3.0 \%). Respondents from other religions like the Muslims and had a positive attitude were 12 (2.6 \%) while 1 (0.2 \%) had a negative attitude. There was no significant difference between attitude and religion ($\chi^2 = 5.47$, $p = 0.41$). Married respondents who had a positive attitude were 315 (68.2 \%) while 26 (5.6 \%) had a negative attitude. On the other hand 87 (18.8 \%) single respondents had a positive attitude while 17 (3.7 \%) had a negative attitude. The separated and divorced respondents who had a positive attitude were 14 (3.0 \%) and 3 (0.6 \%) had a negative attitude. There was a statistically significant difference between attitude and marital status ($\chi^2 =6.37$, $p =0.041$).

In addition, the respondents who had no education and had a positive attitude were 11 (2.4 \%) and those a negative attitude were 2 (0.4 \%). The respondents who had attended
primary school and had a positive attitude were 156 (33.7%) and those with primary school education and had a negative attitude were 23 (5.0%). Those, respondents with secondary education who had a positive attitude were 197 (42.6%) and those with a negative attitude were 19 (4.1%). The respondents with college education and had a positive attitude were 50 (10.8%) while those with college education and had a negative attitude were 4 (0.9%) (91.6%). There was no significant difference between attitude and level of education ($\chi^2 = 5.11, p = 0.40$).

It was noted that the unemployed women who had a positive attitude were 249 (54%) while the unemployed who had a negative attitude were 27 (5.8%). On the other hand, the women who had small-scale businesses and had a positive attitude were 122 (26.4%) while those with a negative were 8 (2.16%). The employed women with a positive attitude were 53 (11.5%) and the employed with a negative attitude were 3 (0.6%). There was no significant difference between attitude and occupation of respondent ($\chi^2 = 4.88, p = 0.18$). The respondents who had children and had a positive attitude were 358 (77.5%) while those with children and had a negative attitude were 32 (7.0%). The respondents who had no children and had a positive attitude were 58 (12.5%) while those respondents who had no children and had a negative attitude were 14 (3.0%). There was significant difference between attitude and whether respondent had children ($\chi^2 = 8.86, p = 0.002$).

In brief, most of the respondents (83%) had a positive attitude towards cervical cancer which was demonstrated by their approval of use of family planning methods, recommending screening and pelvic examination and willingness to seek medical advise for vaginal discharges.

Respondent reaction towards a neighbour or a relative with a discharge was varied. 449 (97.19%) would ask her to go to hospital, 4 (0.9%) would ask them to maintain hygiene,
and 5 (1.08%) did not know what to tell them. Four hundred and thirty (93.1%) respondents reported that if they had a discharge or irregular bleeding they would discuss with their partners, 15 (3.2%) would not discuss it and 4 (0.9) did not know whether to discuss with their partners or not. In order to assess their religious beliefs and convictions on family planning methods the respondents were asked whether their religion prohibited the use of family planning. Three hundred and seventy (80.1%) reported that their religion did not prohibit the use of family planning methods, while 85 (18.4%) said their religion did. The reasons given were; it was against Gods word to use Family planning methods 61(13.2%), it was immoral 15(3.2%) while the rest said the methods have bad effects, it was like killing a baby and it is young people who should use them.

They were subjected to questions about attitude towards condoms and whether they think condoms can prevent STI. Interesting enough 369 (80.4%) felt condoms prevent STIs, 30 (6.5%) felt they do not, while 60 (13.0%) were unsure of the answer to give. When their attitude regarding pills was listed, 113 (24.5%) were of the opinion that pills could cause cancer if used for along time, 35 (7.6%) thought pills do not cause cancer and 328(71%) were non-committal. Out of those respondents who said pills cause cancer, 186 (40.3%) could not explain why they think so. Fifty (10.8%) respondents reported that pills accumulated in the body until eventually they form a growth or a swelling. Most participants in the FGD also mentioned the sentiment that the pills accumulate in the body. Forty three respondents (9.3%) had heard rumours that pills cause cancer if used for a long time, 3 (0.6%) reported that they knew of real cases where women developed cancer due to use of pills.

One respondent reported to have been advised by a doctor not to use pills for a long time as they can cause cancer thought pills cause barrenness in women. Respondents were
asked whether they think condoms reduce sexual pleasure, 368 (80.0%) felt they do, 44 (9.5%) said they do not while 28 (6.1%) were unsure. Lastly the women studied were asked whether they would go to hospital if they had a problem in the private parts and 457 (99%) gave an affirmative response.

3.5.0: Respondent preventive practices

Respondents’ practices were also assessed as outlined in Appendix ii Part 4. The practices included MCH/FP clinic attendance, use of family planning methods, genital hygiene, prevention of STI and pelvic examination. A score was allocated for each practice. Respondents who had a score of 4-6 had high practice, a score of 1-3 was considered to have low practice and a score of 0 had no practice. Out of 462 respondents 124 (26.8%) had high practice, 335 (72.5%) had low practice and the rest had no practice.

It was observed that 394 (85.3%) respondents attended MCH/FP clinic and 278 (60.2%) were using family planning methods. Further, 438 (95%) respondents used sanitary pads. Three hundred and sixtyfour (79%) respondents reported to have been cleaning themselves inside the vagina whenever they had a bath. In addition, 225 (48.7%) cleaned themselves after sexual intercourse. Only 2 of respondents reported to have been using condoms to prevent STIs. Two hundred and ninety five (64%) reported to have had a pelvic examination (Figure 6).
Figure 6: Respondents type of Practices

<table>
<thead>
<tr>
<th>Practice</th>
<th>% Respondent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attends Family Planning</td>
<td>95</td>
</tr>
<tr>
<td>Uses Family Planning Methods</td>
<td>79</td>
</tr>
<tr>
<td>Uses Sanitary Pads</td>
<td>60.2</td>
</tr>
<tr>
<td>Cleans Inside Vagina</td>
<td>48.7</td>
</tr>
<tr>
<td>Cleans After Coitus</td>
<td>64</td>
</tr>
<tr>
<td>Prevents STI by Condoms</td>
<td>8.8</td>
</tr>
<tr>
<td>Had a Pelvic Examination</td>
<td>0</td>
</tr>
</tbody>
</table>

N = 462
3.5.1: Respondent pelvic examination practice

The respondent’s pelvic examination practices were assessed as outlined in Appendix ii part 4. On pelvic examination as a practice 295 (63.85%) respondents had had a pelvic examination while 134 (29.0%) had never had the examination. The reasons given for never having had a pelvic examination were that it was unnecessary 8 (1.73%) and 101 (21.86%) had never been asked by anybody to be examined. Also, 7 (1.5%) delivered at home, 6 (1.3%) had never delivered and 1(0.2%) was scared of the examination. When asked whether the benefits of a pelvic examination outweigh the difficulties, 383 (82.9%) said yes, 8 (1.73 %) said no, while 36 (7.7%) did not have an answer.

When asked what made a pelvic examination difficult, 212 (46%) thought it exposes private parts, 56 (12%) said it is embarrassing, 87 (19%) said if the use of the examination is not explained, it was painful and uncomfortable 37 (8%) while 70 (15%) had no reasons (Figure 7). Most of the respondents were of the opinion that exposure of private parts is what made the examination difficult.
Figure 7: Respondents reasons on what makes a pelvic examination difficult

Key

- No Reason
- Exposes private parts
- Embarrassing
- If its use are not explained
- The examination is painful

N = 462
3.5.2 Attendance of maternal-child health and Family planning clinics

Respondent practices in attending MCH/FP clinics and FP practices were measured according to appendix ii part 4. In regard to practices of attending MCH/FP services, those who did not attend the services gave reasons for non-attendance. Forty-four (9.52%) reported that they were newly married and had no child and 8 (1.73%) reported that they did not attend MCH/FP clinic because they are not married. In addition, 11 (2.38%) said they did not require family planning services, 1 (0.2%) was of the opinion that the methods have side effects and 6 (11.3%) gave no reasons.

Three hundred and eight (66.7%) reported that nothing discourages them at the MCH/FP clinics, while 91 (19.7%) reported that they were discouraged whenever they went for the services. Thirty nine (8.4%) were discouraged by the way the health personnel communicated to clients and the way health personnel do their procedures, 14 (3.03%) were discouraged by the way the medical staff regarded clients and 28 (6.06%) did not like being examined by a male health worker. In terms of the reception they got at the MCH/FP clinic, 388 (84%) reported that the reception was positive, 57 (12.3%) received a negative reception.

The respondents were probed to explain what they meant by positive and negative receptive reception. Three hundred and thirty six (71.4%) reported that a positive reception was when they were well received and the health workers were friendly. The rest 61 (13.2%) reported that a negative reception was when the health workers were rude, scolded or spoke harshly to them. Generally, 391 (84.6%) respondents appreciated the services while 8 (1.7%) did not appreciate the services. What the respondents appreciated most was immunisation and the way the health personnel did their
procedures. Moreover, 50 (10.8%) appreciated the way health personnel communicated to them, 29 (6.3%) appreciated the accorded health education. On the other hand 38 (8.2%) respondents appreciated the reception, 5 (1.1%) appreciated family planning services, 6 (1.3%) appreciated the weighing while the rest appreciated everything.

Responses regarding whether MCH/FP services were expensive for women, 391 (84.6%) respondents thought the services were not expensive while 19 (4.1%) said they were and the rest did not have an answer. The respondents who found services expensive gave the reason that they had no source of income 14 (3.03%), while rest said they were the only bread winners or found it expensive because they had to pay for both the services and transport.

Two hundred and seventy eight (60.2%) reported to have been using a family planning method and 184 (39.8%) were not on any method. The FP methods used by respondents were Pills 117 (25.3 %), injection 71 (15.4%), Norplant 10 (2.16 %), IUD 22 (4.76%), tubaligation 9 (1.9%), natural methods 9 (1.9%), condoms 37 (8.0%), lactation 1(0.2%) and traditional 2 (0.4%) (Figure 8).

One respondent who was 48 years old had used an IUD (lippes loop) for 18 years and was four years post menopause loop) and she was not aware that she should have had it removed after reaching menopause.
Figure: 8 Family Planning Methods Used By The Respondents
3.5.3: Respondent genital hygiene practice

To assess the respondent’s practices on genital hygiene a number of questions were asked some of which were quite sensitive. Majority 438 (94.8%) used pads during their monthly periods. The type of pads used by majority were commercial pads 357 (77.3%), pieces of old clothes 16 (3.5%), cotton wool 61(13.2%), toilet tissues 5 (1.1%) and internal tampons 23 (5%). The reasons given for using pads was that it was convenient, the few who used pieces of clothes and toilet tissues felt they were cheap and those who used cotton wool chose it because it was comfortable.

The respondents were probed to find out the methods they use to clean inside the vagina. Eight (1.73%) douched with normal saline, 38(8.22%) douched with antiseptic like dettol, 219 (47.4%) used soap and water only, 65 (14.5%) used a piece of cloth /towel, 13 (2.8%) used cotton wool swabs, 83 (18%) used no methods while 21(4.5%) used two fingers to clean inside. The normal practice is to ensure thorough cleaning of the vagina using any of the mentioned methods during a normal bath and after sexual intercourse. Asked whether they spoil clothes following sexual intercourse, 264 (57%) agreed that they do, 168 (36.36%) denied while 1 (0.2%) was uncertain. On what they could do to avoid spoiling their clothes following sexual intercourse, 83 (29.9%) reported they use a wet cloth to wipe themselves, 54 (11.7%) go for a bath, 23 (5%) put on an inner wear, while 16 (3.46%) did nothing about it, 90 (19.5%) put a towel on the bedding, 2 (0.4%) use a pad or cotton wool immediately to protect their clothes, while 2 (0.4%) of the respondent husbands used condoms. On availability of water, 382 (82.7%) respondents reported that water was available, while 80 (17.3%) said it was not.
3.5.4: Respondent screening practices

Respondents screening practices were also assessed as outlined in Appendix ii part 4. Out of the four hundred and sixty two respondents interviewed, only 34 (7.4%) had gone for screening (Pap smear) in the last five years, while 9.3% had ever gone for screening (Figure 9).

The study found that only 38 (8.2%) respondents had been counselled for screening while 424 (91.8%) respondents had never had any counselling for Pap smear (Figure 9). The results suggest that counselling had an impact on screening practice because those who were counselled about screening seemed to have gone for a pap smear. There was a difference of 0.8% between the respondents who were counselled and those who went for screening. Majority of the respondents who were counselled on cervical cancer screening went for the test.
Figure: 9 Practices of Screening and Respondents Counseled
Furthermore, only 38 (8.2%) had been referred to a health facility where screening is done and the rest 394 respondents had never been referred for Pap smear. In addition, 18 (3.8%) who had been referred for screening found it expensive while 20 (4.3%) respondents did not find it expensive. In the FGD, two groups did not know what a Pap smear was and therefore could not comment on the expenses involved. In terms of the number of times they had gone for screening it was noted that 20 (4.3%) respondents had gone for screening once, 10 (2.16%) respondents had gone twice, 8 (1.7%) respondents thrice and the rest 5 (1.1%) had gone for four times and above (Figure 10). There were 419 (90.7%) who had never gone for screening in their lifetime. The reason given by respondents was lack of awareness on the existence of such services.
Figure: 10 Number of Times Respondents Were Screened.
It was also observed that the respondents who were 20 – 29 years and had gone for screening were 18 (5.8%) while 292 (94.2%) had not. Further, respondents who were 30 – 39 years and had gone for screening were 13 (12.3%) while 93 (87.7%) had not. Moreover, respondents who were 40 – 49 and had gone for screening were 3 (9%) while those who had not were 30 (91%). All the 13 (100%) respondents who were 50 – 59 years had not gone for screening. There was no association between respondent age and screening practices ($\chi^2 = 8.97; p = 0.25$).

The married respondents who had gone for screening were 23 (6.9%) and those who had not gone for screening were 309 (93.1%). The single respondents who had gone for screening represented about 2% while those who had not gone for screening accounted for 97 (93.3%). Among the respondents who were separated and divorced 4 had gone for screening while 22 had not.

Regarding education, the 13 (100%) respondents who had not attended school ever went for screening. The respondents who had attended primary school and had gone for screening were 5 (2.8%) and those with the same level of education and had not gone for a Papsmear were 174 (97.2%). Those respondents who had secondary education and had gone for screening were 17 (7.9%) while 199 (92.1%) respondents in the same level of education had not gone for screening. On the other hand, respondents who had College education and had gone for screening were 14 (26%) while respondents with College education and had not gone for screening were 40 (74%). There was a statistically significant difference between education and screening practices ($\chi^2 = 29.87; p = 0.00002$). Those respondents who had secondary education and above practised screening compared to those respondents who had a lower level of education.
In addition, respondents who were doing their own small-scale businesses and had gone for screening were 11 (8.3%) while 121 (91.7%) had not. Further, respondents who were employed and had gone for screening were 10 (17.5%) while 47 (82.4%) of the employed respondents had not gone for screening. The unemployed respondents who had gone for screening were 13 (4.8%) while 260 (95.2%) respondents had not gone for screening. There was a statistically significant difference between occupation and screening ($\chi^2 = 11.77; p = 0.0028$). Those respondents who were employed practised screening more than the respondents who were unemployed and those who were doing their own small-scale businesses did.

3.5.5: Relationship between respondent practice, age, religion, marital status, education and occupation.

It was noted that respondents who were 20 – 29 years and had high practices regarding attending MCH/FP clinic, practised Family planning, genital hygiene and pelvic examination were 85 (18.4%) while 224 (48.5%) in the same age group had low practices. Furthermore, respondents who were 30 – 39 years and had high practice were 44 (9.5%) while those in the same age group with low practice were 63 (13.6%). Respondents who were 40 – 49 years and had high practice were 13 (2.8%) while those in the same age range and had low practices were 20 (4.3%). In addition, respondents who were 50 – 59 years and had high practices were 3 (0.6%) while those in the same age interval and had low practices were 10 (2.2%).

Regarding religion, respondents who were Protestants and had high practices were 104 (22.9%) while those with low practices were 226 (48.9%). The Catholics with high practices were 28 (6.0%) while those with low practices were 90 (19.5). Respondents in
other religions and who had high practices were 7 (1.5%) while the rest had low practices. The married respondents with high practices were 106 (22.9%) while those with low practices were 226 (48.9%). The single respondents with high practices were 24 (5.2%) while those with low practices were 80 (17.3%). The separated and divorced respondents who had high practices were 10 (2.2%) while those in the same stratum with low practices were 16 (3.5%). In addition, the respondents who had never gone to school and had high practices were 2 (0.4%) while those in the same category and had low practices were 11 (2.4%).

Furthermore, respondents with primary education and had high practices were 53 (11.5%) while those with primary education and had low practices were 126 (27.3%). The respondents who had secondary education and had high practices were 61 (13.2%) while those with secondary education and had low practices were 155 (33.5%). The respondents who had college education and had high practices were 23 (5.0%) while those with college education and had low practices were 31 (6.6%).

Regarding business, respondents who had their own small scale businesses and had high practices were 43 (9.3%) while those in the same category and had low practices were 90 (19.5%). The respondents who were employed and had high practices were 21 (4.5%) while those who had regular employment and had low practices were 35 (7.6%). The respondents who were unemployed and had high practices were 75 (16.2%) while those who were unemployed and had low practices were 198 (42.8%).
3.6 Multivariate Analysis (Logistic Regression)

Multiple Logistic regression was done to control for confounding and to determine the effect of each independent variable on the dependent. Possible predictors such as age, education and occupation were used. Three models were used. The first model regressed those with knowledge of cervical cancer and those without and also those with knowledge of reproductive health and those without. The variables that were retained were education, age and number of sexual partners. Results showed that the respondents with college education and above have knowledge of cervical cancer ten times higher compared to those with no education (OR 10.83; p = 0.001) (Table 6 Model 1). Similarly, the respondents who were 50 – 59 years had knowledge of reproductive health 8 percent less compared to women who were 20 - 29 years and above (OR 0.08; p= 0.02) (Table 6 Model 1). Women with one sexual partner have knowledge of reproductive health 80 percent less compared to those who had three sexual partners and above (OR 0.210; p = 0.006)(Table 6 Model 1).

The second Model regressed the respondents who had a positive attitude and those with a negative attitude. The only variable that was retained was respondents who have children. The model indicates that those respondents with children have a positive attitude three times higher compared to those without children (OR 3.20; p= 0.003)(Table 7 Model 2).
Table 6 Model 1: Respondents knowledge of cervical cancer and reproductive health

<table>
<thead>
<tr>
<th>variable</th>
<th>Odds Ratio</th>
<th>Significance</th>
<th>95% C.I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College &amp; above</td>
<td>10.83</td>
<td>0.001*</td>
<td>0.30 – 0.50</td>
</tr>
<tr>
<td>Secondary</td>
<td>9.39</td>
<td>0.0002*</td>
<td>3.97-22.25</td>
</tr>
<tr>
<td>Primary</td>
<td>4.05</td>
<td>0.55</td>
<td>1.96-8.37</td>
</tr>
<tr>
<td>None</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 - 59</td>
<td>0.08</td>
<td>0.023*</td>
<td>0.094 –0.7154</td>
</tr>
<tr>
<td>40 – 49</td>
<td>0.07</td>
<td>0.017 *</td>
<td>0.0078 –0.6317</td>
</tr>
<tr>
<td>30 – 39</td>
<td>0.69</td>
<td>0.023 *</td>
<td>0.0683 –0.6508</td>
</tr>
<tr>
<td>20 - 29</td>
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<td></td>
</tr>
<tr>
<td>No. of Sexual Partners</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.21</td>
<td>0.006*</td>
<td>0.683 – 0.6508</td>
</tr>
<tr>
<td>2</td>
<td>0.30</td>
<td>0.089</td>
<td>0.0751 – 1.2029</td>
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<td>&gt;3</td>
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Table 7 Logistic Regression Model 2: Attitude Towards Cervical Cancer

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio</th>
<th>Significance</th>
<th>95% C.I</th>
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<td>Have Children</td>
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<tr>
<td>Yes</td>
<td>3.20</td>
<td>0.003*</td>
<td>1.4804 – 6.9204</td>
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</table>

In the third model respondent’s practices were assessed. The model regressed those who practised screening, pelvic examinations, genital hygiene and FP and those who did not. The variables that were retained were those with children, number of sexual partners and education. The model indicates that the respondents who had children practised family planning ten times more compared to those without children (OR.10.33; p =0.0001)(Table 8 Model 3). In addition, respondents with one sexual partner practised family planning 60 percent less compared to those with three or more partners (OR 0.57; p =0.39)(Table 8 Model 3). The model also indicates that the respondents who have
children go for pelvic examination five times more compared to those who have no children (OR 5.69; p = 0.0002). The respondents with college education practised genital hygiene 12 times more compared to those who had no education e.g. cleaning inside the vagina compared to those who have never gone to school (OR 12.66; p = 0.006) (Table 8 Model 3). The model also indicates that respondents with college education go for screening 11 times more compared to those with no education (OR 11.35; p=0.0002).

Table 8 Model 3: Respondent practices of FP, pelvic examination, genital hygiene and screening

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio</th>
<th>Significance</th>
<th>95% C.I</th>
</tr>
</thead>
<tbody>
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<tr>
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<td>10.33</td>
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<td>4.623 – 23.09</td>
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<tr>
<td>No</td>
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<tr>
<td>No. of Sexual partners</td>
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<tr>
<td>1</td>
<td>0.57</td>
<td>0.3972</td>
<td>1561 – 2.089</td>
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<tr>
<td>2</td>
<td>0.11</td>
<td>0.0142*</td>
<td>0.021 – 0.653</td>
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<tr>
<td>&gt;3</td>
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<tr>
<td>Had Pelvic examination</td>
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<tr>
<td>Yes</td>
<td>5.69</td>
<td>0.0001*</td>
<td>2.858 – 11.355</td>
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<tr>
<td>No</td>
<td>1.00</td>
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</tr>
<tr>
<td>Cleans Inside Vagina</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>College</td>
<td>12.66</td>
<td>0.006*</td>
<td>2.05 -78.48</td>
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<tr>
<td>Secondary</td>
<td>4.40</td>
<td>0.013*</td>
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<tr>
<td>Screening</td>
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<tr>
<td>College</td>
<td>11.35</td>
<td>0.0002*</td>
<td>3.94 -32.73</td>
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<td>5.34</td>
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<tr>
<td>Primary</td>
<td>1.86</td>
<td>0.56</td>
<td>0.23 -15.14</td>
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CHAPTER FOUR: DISCUSSION

The objective of this study was to assess the level of knowledge, attitude and the screening practices of women residing in Dagoretti division. It was carried out between September 1999 and March 2000.

Respondent Socio-economic and Demographic Characteristics

The level of knowledge on cervical cancer, attitude and practice is important in regard to prevention and control of cervical cancer. In this study 462 women were interviewed of whom 67% were aged 20-29. The proportion of women who were 20-29 years was high because most have moved into the area in search for jobs. Age was investigated as an influencing variable towards level of awareness, attitude and practices. Majority of respondents were married immediately after completing standard seven and form four, with above 50% marrying by the age of nineteen. It was observed that a large number of respondents attended primary and secondary school, which reflects on the general national trend in as far as education is concerned. Though this study expected that since most of the respondents were young, the majority who completed secondary education would proceed on to college education, this was to the contrary.

Most respondents 59.4% were unemployed, very few had regular employment and a few had small-scale businesses. This reflects a low socio-economic status. Although over 50% of respondents' husbands were employed, this was predominantly in the slaughterhouses while the self-employed were small-scale traders, which placed them a low socio-economic category.
Risk Factors to Cervical Cancer

Many sexual partners and promiscuity are risk factors to cervical cancer Armstrong et al. (1992). The respondents who had multiple sexual partners in the past one-year and could be at risk of STI and hence cervical cancer were 8.4%. This finding is important considering the long-term impact this may eventually have on the community from the observation that a small minority uses condoms.

Studies have shown age at marriage is also a risk factor for cervical cancer and particularly marriage before 18 years (Armstrong et al., 1992; Lancaster et al., 1993). The mean age at marriage in this study was 20.8 and is similar to findings in a study done in India by Varghese et al., (1999). The women who married before 18 years were 15.4% while those who delivered the first child by the age of 19 were 32.2%. These percentages were quite high and could be partially explained by the fact that most of the respondents did not go to college and hence tended to marry early. The low socio-economic status could also have played a part in the failure for the women going for further studies.

Sexual intercourse before 18 years is a risk factor in cervical cancer (Armstrong et al., 1992; Lancaster et al., 1999; Price et al., 1996; Devita et al., 1993). More than half of the respondents (68.8%) in this study were involved in sexual intercourse between 10-19 years, which puts them at higher risk of cervical cancer. These results are similar to those of a study done among female adolescents where the mean age at first intercourse was 14.7 years Youri (1994). Some of the respondents could have indulged in sex at an early age due to peer pressure and adolescence. Early involvement in sex could also be associated to early marriage.
Those respondents who suffered from sexually transmitted infections once and more than once were 19%. Vaginal discharges especially repeated infections predispose to cervicitis and this could easily affect the pap class of the individual.

Of the women who were interviewed many mentioned use of condoms as one of the preventive measures against sexually transmitted infections which concur with the studies done by the Demographic Health Survey (1998). However, this study revealed that only (8.0%) used condoms for family planning and as a barrier against sexually transmitted infections including Human Papilloma Virus. This low use of condoms poses a risk of acquiring STI / HIV/ AIDS and consequently cervical cancer. The reasons given for low use of the condom was because most of the women felt it reduces sexual pleasure. In the Focus group discussion, a few of the participants were of the opinion that the condoms do not give 100% protection because they burst.

**Knowledge of Cervical Cancer**

The results show that very few (13%) had knowledge of cervical cancer despite the fact that most of the respondents attended MCH/FP clinics. This could be due to the fact that women were not being furnished with the appropriate information. The problem could also be compounded by the fact that either the clinic staff do not know or do not have time to provide such information on cervical cancer.

While the majority of the women knew that normal periods come once in a month they did not associate irregular bleeding with cervical cancer at all. However, most of the respondents despite not knowing the cause of irregular bleeding, would seek medical advice for that problem. There exists a stigma to the disease where women believed the
disease is infectious and could be passed from one person to another through contact. During the FGDs the same point was raised reflecting lack of knowledge on the disease. More than half the women did not know the cause of post-menopausal bleeding. Knowledge on symptoms of cervical cancer was also low (24.4%). Of those who knew, only abdominal pains and severe vaginal bleeding was mentioned. During FGD all participants in the three groups stated severe vaginal bleeding as a symptom of cervical cancer, while most of them mentioned abdominal pain as a symptom. This trend is similar to that in the questionnaire results. The participants in the FGDs however had different opinions concerning post coital bleeding where they believed that post coital bleeding was caused more by cancer of the uterus unlike that of the individual respondents who mostly associated post coital bleeding with sexually transmitted infections while over 50% did not know the cause. Moreover, the respondents were not aware whether cervical cancer was preventable.

In a study by Buga (1998) university students had an overall poor knowledge of cervical cancer. However, due to their level of education, were able to identify human Papilloma virus as the cause of cervical cancer and could identify the major risk factors. This knowledge is much higher compared to that found in this study. The few respondents who had knowledge of cervical cancer were those who had attained secondary and college education.

About 70% of the women reported they knew about pelvic examination but did not associate it with screening for cancer since they were not aware of the pap smear test. Multivariate analysis showed that respondents who had college education and above were
ten times more knowledgeable on cervical cancer compared to those who had never gone to school.

**Knowledge of Reproductive Health**

Most of the respondents knew about menstruation, STI and family planning, which are elements of reproductive health. Married women and those who had children seemed to have acquired this knowledge through MCH/FP clinics as well as through experience.

Ninety-eight percent of respondents had heard of family planning methods while (60.2%) of the women were on FP methods. The FP method most known to the women was the oral contraceptive (pill) which was mentioned by a large proportion of the respondents. The most popularly used family planning methods were the oral contraceptives and the injectables. This concurs with the Demographic Health Survey (1998) which reported the commonly used methods of family planning as the pills and injectables. The practice of FP use among respondents was expected to have been higher than what the study found. Use of contraceptives could have been affected by the negative rumours the respondents heard about pills accumulating in the body and causing growths. Similarly, they were of the opinion that injectable contraceptives cause loss of libido. It was also observed that, the respondents were not well informed of some FP methods such as Intrauterine Devise (IUD) and Norplant among others. A respondent who had used an Intrauterine Devise for 18 years without going for check-ups and stayed on with it for 4 years after menopause reflected this. This tends to suggest that had she had knowledge on the method she would not have overstayed with the device.
Ninety percent respondents were aware that it was not normal to have vaginal discharge which most attributed to STI. The majority of those who had suffered from STI went to hospital for treatment. Moreover, most of the women attributed causes of abnormal discharges to STI. The FGDs had the same views but did not associate vaginal discharges with cervical cancer.

**Respondent Attitudes**

A large proportion of the women had no idea about Pap smear and its relevance. However, in the course of the study where they were explained about it, upto 84.2% felt they would recommend it to friends apart from themselves. In fact over 80% felt it was useful and a necessity for women. Even if they looked healthy upto 94.4% of them opined that women required regular Papsmear check ups.

Pelvic examination is an important element of examination for cancer in women. Most women felt it was worth recommending to others despite their reservation on the procedure, which they felt, was embarrassing.

**Respondent Screening Practices**

In terms of preventive practices, 92.2% had not gone for Pap smear screening in the past five years while 90.9% had never had any screening. These findings are similar to the studies of Buga (1998), Machoki (1990) and Ngwalle et al., (2001) in South Africa, Kenya and Tanzania respectively. Furthermore, the respondents who went for screening are the ones who had attained secondary education and above. These findings are similar to those of Sanjose et al. (1996) done in Colombia and Spain where more of the women who were educated had gone for screening compared to those who were not.
In this study, none of the respondents who had never gone to school ever had a Pap smear. The multivariate analysis done indicated that respondents with college education went for screening 11 times more compared to those with no education (OR 11.35; p=0.0002). It was also observed that 91.2% of the respondents had never been counselled for screening /Pap smear which could partially explain why they had not gone for screening. These findings concur with those of a Tanzanian study where only 8% of the primary health care facilities indicated that they had provision for sensitising women on cervical cancer screening (Ngwalle et al., 2001). This finding is the same as that of the individual respondents who had poor knowledge on screening and therefore poor practices on prevention through screening. Very few members knew where and how often screening should be done, and therefore could not comment on the charges for pap smears.

Those respondents who had an idea on pap smear heard about it from friends (11.2%) while (20.6%) heard about it from health facilities like Government health centre / hospital, mission hospital /clinics, city council clinic or private clinics / hospital. Information on screening from a health facility should have had a higher percent since many women in the childbearing age attended MCH/FP clinics.

Over half of the respondents had had a pelvic examination though most did not know the reasons. Furthermore, there were a good number of respondents who were on family planning methods but had never had a pelvic examination done. The respondents attendance for MCH /FP services was good. In addition, majority of the women reported that discouraged them at the clinics and most of them were happy with the reception accorded to them by the staff. Generally a large number of the respondents thought
MCH/FP services were affordable and within reach. The same sentiments were expressed during the FGD by majority of the participants.

Good genital hygiene was adequate among majority of the respondents and tap water available in most of the households. These findings contrast those of a study by Varghese et al. (1999) in India where the respondents practice on genital hygiene were poor exposing them to a risk of CIN and cervical cancer.
CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Summary of findings

From this study the following conclusions were drawn:

There was low knowledge on cervical cancer including symptoms, treatment, prevention and also screening/Pap smear.

Among the women who had knowledge of cervical cancer, there was a fear that cervical cancer can be passed from one person to the other and there was a stigma associated with the disease due to pervaginal bleeding. Very few women used condoms as a barrier method for the prevention of STI including HPV and hence cervical cancer.

The respondents had a positive attitude towards cervical cancer and cervical screening although they did not have enough information.

There were very few women who regularly went for cervical screening although they attended other services like MCH/FP clinic and had good genital hygiene practices. There were clients who attended MCH/FP clinic and were started on family planning methods before undergoing a pelvic examination. Others had undergone a pelvic examination but were not explained why it was done. The respondents were of the opinion that the MCH/FP services were accessible and affordable to most of them.

Majority of the women were involved in sexual intercourse at an early age. Moreover, a good number of the respondents delivered before the age of 19 years. Also, there were a few women who had more than one sexual partner.
There was inadequate communication between clients and medical personnel, as most of the respondents were not counselled. Although most women attended the MCH/FP clinic, there was little education to the client pertaining to family planning methods. Water was available to most of the respondents.

5.2 Recommendations

There is need for health workers to make concerted efforts in raising community awareness through:

Education on predisposing factors to cervical cancer.

Preventive measures like avoiding many sexual partners, postponing sexual intercourse until a later age, using barrier methods like condoms and diaphragms, avoiding early marriage, postponing first births to the age of 20 years, and good genital hygiene. Knowledge about the disease will help in removing the stigma associated with the disease.

Educating the youth on postponing sexual intercourse and marriage until a later age preferably above 18 years.

The importance of screening/Papsmear needs to be emphasized for every woman in the childbearing age. Moreover, proper counselling on screening is necessary so that each client can be aware of the preventive measures of cervical cancer and motivated to take the Papsmear test. The clients with abnormal Papsmear require a follow up and further investigations to confirm the diagnosis and therefore early treatment.

The policy makers need ensure that the facilities for screening are available both in urban and rural areas.
Men should also be educated about the disease so that they can avoid many sexual partners to reduce infections with HPV. Educating men will also help them cooperate in providing their partners with the finances required for screening.

Clients need to be screened at primary health care centres. In order to carry out proper screening programmes, education and motivation is necessary to both population to be screened and the health workers. Training is required to make certain that the cervix particularly the Endo cervical canal is adequately sampled. Record keeping should be efficient and every possible means employed to ensure that the tracking of cases, treatment and follow up is complete.

It is important that every woman wishing to plan her family receives all the information required about FP methods including the advantages and disadvantages of each method. A pelvic examination should be done before clients are started on a method of choice and the procedure explained. Women using family planning methods should have frequent pelvic examinations and pap smears at least 1-2 yearly.

The policy makers need to device more methods of convincing the public about use of condoms and abstinence as a preventive measure against STI/ HIV, which will also help in the control of HPV infections and cervical cancer.

There is need to encourage education for women and to give them opportunities to further their education.

5.3 Areas for further study / Research

Further research is required to find out the prevalence of cervical cancer in Dagoretti and in Kenya as a whole.
REFERENCES


Calverton, Maryland, USA.


Infection as a risk factor for persistent cervical dysplasia. *Journal of the National 
Cancer Institution*, 87(18): 1365-1371.


uterine cervix: Results of Kangwane screening programmes and comparison between 
the results obtained from urban and other unscreened Rural communities. *East 


Program for Appropriate Technology in Health (PATH).


45. International Health Volunteers Clinic (IHVC) 1996 Medical Records, Dagoretti, Kenya.

46. Maps from Central Bureau of Statistics.


APPENDICES

APPENDIX 1: INFORMED CONSENT

A QUESTIONNAIRE TO ASSESS THE LEVEL OF KNOWLEDGE, ATTITUDES AND SCREENING PRACTICES ON CERVICAL CANCER OF DAGORETTI WOMEN IN NAIROBI

This questionnaire is aimed at finding out the level of knowledge attitudes and screening practices among Dagoretti women. The information is confidential and will be used for the study purposes only.

I have been explained the risks and possible benefits of participating in the study and I have accepted to be interviewed.

____________________  ______________________
Interviewee          Date

____________________  ______________________
Investigator         Date
Appendix II: Structured Questionnaire

Serial No. ........................................

Location. ........................................

Cluster No.......................................

Part 1 A: Respondents Socio-Economic And Demographic Characteristics

1. What is your age? ......................... years.

2. (a) What is your religion? ....................
   - ( ) Catholic
   - ( ) Protestant
   - ( ) Muslim
   - ( ) Traditional
   - ( ) None/Atheist
   - ( ) Others specify ..........................

   (b) What is your ethnic group? ..............

3. Marital status
   - ( ) Married
   - ( ) Single
   - ( ) Widowed
   - ( ) Separated
   - ( ) Divorced

5. Occupation of Husband if married/separated/divorced/widowed ............... 

   Level of education. (Tick as appropriate)

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Respondent</th>
<th>Husband</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College &amp; above</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part 1 B: Risk Factors Associated With Cervical Cancer

7 At what age did you get married? ......................... Years

8 Do you have children? (If no go to Q.12)
   ( ) Yes ( ) No

9 If yes, how many children do you have? ..................

10 How old is your first child? .........................

11 How old were you when you got your first baby? .............

12 Do you smoke?
   ( ) Yes ( ) No

13 Do you drink alcohol?
   ( ) Yes ( ) No

14 How old were you when you had the first intercourse?
   ( ) 10-14 years ( ) 15 – 19 years
   ( ) 20- 24 years ( ) 25 – 29 years
   ( ) 30 - 34 years ( ) 35 and above years ( ) I have never had
   sexual intercourse.

15 Have you ever had sexual partners in the last one-year?
   ( ) yes ( ) No

16 If yes, how many sex partners have you had?
   ( ) one ( ) two ( ) three
   ( ) four ( ) five and above

Part 2 A: Knowledge on Reproductive Health.

1 At what age did you have your first menstrual period? .............. Years.

2 What has been the pattern of your menstrual periods?
3. If post-menopausal, how many years post-menopausal? ................ years.

4. How many times should normal periods come in a month?
   ( ) Once   ( ) Twice
   ( ) Thrice   ( ) Others Specify .........................

5. Is it normal to have irregular monthly periods? ( ) Yes   ( ) No
   (b) If no what do you think is the cause of irregular periods? ..........................................
   (c) What would you do in case you have irregular monthly periods?
   ( ) Visit Government Hospital/Health Centre   ( ) Consult relative
   ( ) Visit a private hospital/clinic   ( ) Consult a friend
   ( ) Visit a Mission Hospital/Clinic   ( ) Does not know
   ( ) Consult herbalist/Traditional practitioner
   ( ) Others specify .................................

6. Is it normal to have an abnormal vaginal discharge?
   ( ) Yes   ( ) No   ( ) I do not know

7. Have you ever had an abnormal vaginal discharge? (if no go to Q 10 )
   ( ) Yes   ( ) No   ( ) I do not know

8. If yes, what did you do upon noting that you had an abnormal vaginal discharge?
   ( ) I went to the hospital   ( ) Saw a traditional healer
   ( ) I treated myself by buying drugs from the shop   ( ) I do not know
   ( ) Others specify .................................

9. If you didn't go to the hospital what were the reasons?
   ..........................................................................................
10. What could be the cause of an abnormal vaginal discharge?

11. How many times have you contracted sexually transmitted infections in the past?
   ( ) None   ( ) Once   ( ) Twice
   ( ) Thrice   ( ) More than four times

12. Do you think contraceptives can prevent sexually transmitted diseases?
   ( ) Yes   ( ) No   ( ) I do not know
   (b) If yes, which method?
   ( ) Pills   ( ) Injections
   ( ) Norplant   ( ) Female sterilization
   ( ) Condom   ( ) Intrauterine device (IUD)
   ( ) Natural methods   ( ) Traditional Methods.

13. Have you ever heard of family planning methods?
   ( ) Yes   ( ) No

14. Which methods have you heard of?
   ( ) Pills   ( ) Injections
   ( ) Norplant   ( ) Condoms
   ( ) Intrauterine device (IUD)   ( ) Sterilisation
   ( ) Natural methods   ( ) Traditional methods

15. Do women ever stop completely to get their monthly periods at any age?
   ( ) Yes   ( ) No   ( ) I do not know
   (b) If yes, is it normal to have post-menopausal bleeding?
   ( ) Yes   ( ) No   ( ) I do not know.
   (c) If no, what could be the cause of post-menopausal bleeding?
   ( ) Cancer of the cervix   ( ) Cancer of the uterus
( ) Bacterial infection ( ) I do not know
( ) Others specify

16. What action would you take if you start bleeding after menopause?

17. What type of cancers affect women in your community in relation to reproductive system?

Part 2 B: Knowledge On Cervical Cancer

1. Have you heard or come across a woman suffering from or died of cervical cancer?
   ( ) Yes ( ) No ( ) I do not know

2. Do you consider cervical cancer a problem in your community?
   ( ) Yes ( ) No ( ) I do not know

3. Do you know the symptoms of cervical cancer?
   ( ) Yes ( ) No ( ) I do not know
   (b) If yes, what are the symptoms?

   ( ) Vaginal discharge ( ) Offensive vaginal discharge
   ( ) Severe backache ( ) Severe vaginal bleeding
   ( ) Post-coital bleeding ( ) Loss of weight

4. Do you think Cancer of the cervix is preventable? (If no go to Q 5).
   ( ) Yes ( ) No ( ) I do not know
   (b) If yes, how can it be prevented?

   ( ) Genital hygiene ( ) Using right diet
   ( ) Avoiding many sexual partners ( ) Refraining from sex
   ( ) Regular screening ( ) Use Of Condoms
5. (a) Is cancer of the cervix curable? (if no go Q 6)
   ( ) Yes    ( ) No    ( ) I do not know.
   (b) If yes at what stage is it curable?
       ( ) Early stage    ( ) Any time treatment is commenced
       ( ) Late stage    ( ) I do not know

6. Do you know of any method used in treating cancer of the cervix?
   ( ) Yes    ( ) No
   (b) If yes which methods do you know?
       ( ) Radiotherapy only    ( ) Chemotherapy/Drugs only
       ( ) Surgery only    ( ) Radiotherapy and surgery
       ( ) Surgery, drugs and Radiotherapy

7. Where can the methods be offered?
   ( ) Government Health Centre    ( ) Government District Hospital
   ( ) Provincial Hospital    ( ) Kenyatta National Hospital
   ( ) Others specify

8. Do you think the methods used are effective?
   ( ) Yes    ( ) No    ( ) I do not know

9. Where did you get this information from?
   ( ) Books and magazines    ( ) MCH/FP Clinic    ( ) Friends
   ( ) Radio/Television    ( ) Relatives    ( ) Others specify

10. Is it possible for a healthy-looking person to have cervical cancer?
    ( ) Yes    ( ) No    ( ) I do not know
    (b) If yes, how did you know?

11. How does cervical cancer affect the individual?
(b) How does it affect the family and the community?

12. Is it normal to have vaginal bleeding after sexual intercourse
   ( ) Yes   ( ) No   ( ) I do not know

13. What would you do if you had a vaginal bleeding after sexual intercourse
   ( ) See a doctor   ( ) Seek opinion from friends
   ( ) See a traditional practitioner/Herbalist   ( ) I do not know
   ( ) Seek opinion from relatives.   ( ) Others specify

14. What would you think is the cause of vaginal bleeding after sexual intercourse

15. Where did you get this information?
   ( ) Books/Magazines   ( ) Hospital   ( ) Radio/Television
   ( ) Relatives   ( ) Friends   ( ) Others specify

16. Do you know of a pelvic examination?
   ( ) Yes   ( ) No

17. Have you ever heard of cervical screening (pap smear)?
   ( ) Yes   ( ) No

18. Where did you hear about cervical screening?
   ( ) Government Health Centre/hospital   ( ) Friends
   ( ) Private Clinic/Hospital   ( ) Mission Clinic/Hospital
   ( ) Relatives   ( ) City council clinic
   ( ) Others specify

19. Do you think a woman should go for screening for cancer (Pap smear)?
   ( ) Yes   ( ) No   ( ) I do not know
20. How often should a woman go for screening?

( ) Yearly  ( ) Every two years  ( ) Every three years

( ) After four years  ( ) I do not know

21. Has anyone you know ever gone for screening? (If no go Q 22)

( ) Yes  ( ) No  ( ) I do not know

(b) Why was it done?

( ) On request  ( ) Vaginal discharge

( ) Irregular bleeding  ( ) I do not know

( ) Regular check-up  ( ) For family planning

22. Do you think you are at risk of getting cancer of the cervix?

( ) Others specify .................................................................

( ) Yes  ( ) No  ( ) I do not know

Support your answer .................................................................

23. In your opinion, do you think there is a relationship between Sexually Transmitted Infections (STI’s) and cervical cancer?

( ) Yes  ( ) No  ( ) I do not know.

b) If yes, explain the relationship..............................................

Part 3: Attitude towards cervical cancer.

1 If you have not had cervical screening for the last five years what are your reasons for not going for one?

( ) Do not know what screening is  ( ) Have never given it a thought

( ) Do not know where it is taken  ( ) Do not think it is important.

( ) Others specify .................................................................

2 Would you recommend screening to a friend?

( ) Yes  ( ) No
3. Do you think screening for cervical cancer is useful on well women?
   ( ) Yes   ( ) No   ( ) I do not know
   a) If yes, explain why? .................................................................

4. Do you consider a pelvic examination important?
   ( ) Yes   ( ) No   ( ) I do not know

5. Would you recommend pelvic examination to a friend?
   ( ) Yes   ( ) No   ( ) I do not know
   b) Support your answer ........................................................................

6. In your opinion, what would make a pelvic examination difficult to be done?
   ( ) It exposes private parts
   ( ) It is embarrassing to be examined by a male health worker
   ( ) If the health worker does not explain its use
   ( ) Others specify ..............................................................

7. Do the benefits of having a pelvic examination outweigh the difficulties?
   ( ) Yes   ( ) No   ( ) I do not know

8. How would you react if you heard your neighbour or a relative has a discharge?
   .....................................................................................................

9. If you had a discharge or irregular bleeding, would you discuss it with your parent/ partner?
   ( ) Yes   ( ) No   ( ) I do not know

10. Does your religion prohibit the use of family planning?
    ( ) Yes   ( ) No
    b) If yes, why?
       ( ) It is immoral to use Family Planning methods
( ) It is against God's word ( ) They have bad effects on the body
( ) Others specify ..............................................................

11. Do you think condoms can prevent sexually transmitted diseases?
( ) Yes ( ) No ( ) I do not know

12. Do you think pills can cause cancer if used for a long time?
( ) Yes ( ) No ( ) I do not know
Give reasons for your answer ...................................................

13. Do you think condoms reduce sexual pleasure?
( ) Yes ( ) No
b) If no why? .................................................................

14. Would you be willing to go to hospital if you had a problem in your private
parts? ( ) Yes ( ) No

Part 4: Practice

1. Have you ever gone for MCH/FP services?
( ) Yes ( ) No
(b) If no, why? .........................

2. Do you think it is expensive to attend MCH/FP clinic?
( ) Yes ( ) No
(b) If yes, explain your answer.................................

3. Do you get put off when you go to the clinic for ante-natal services or family planning services?
( ) Yes ( ) No

4. What puts you off most when you go for MCH/FP services?
( ) The way the health personnel communicate to clients
( ) The way health personnel do their procedures
5. What reception do you get at the health facility when you go for MCH/FP services?

( ) Positive  ( ) Negative

Explain your answer..............................................

6. Do you appreciate the MCH/FP services?

( ) Yes  ( ) No

7. What do you appreciate most when you visit the MCH/FP clinic?

( ) The way I am received  ( ) If examined by a female health worker

( ) The way the health personnel communicate to me  ( ) Their speed

( ) The way they do their procedures  ( ) Immunizations  ( ) Health Education

( ) Others specify.................................

8. Do you use any method of family planning?

( ) Yes  ( ) No

(b) If yes, which one? ......................

9. Have you had a pelvic examination?

( ) Yes  ( ) No

(b) If no, why? ..............................................

(c) If yes, why was it done?

( ) For family planning method  ( ) For routine gynaecological check-up.

( ) I had abdominal pain  ( ) I had a vaginal discharge

( ) I requested  ( ) I had abnormal vaginal bleeding

( ) others specify ..............................
10. Do you use pads during your monthly periods?
   ( ) Yes  ( ) No

b) What kind of pads do you use during your monthly periods? ................

11. Which of these methods do you use to clean inside the vagina? (Probe)
   ( ) douching with normal saline  ( ) Douching with antiseptic e.g. dettol
   ( ) using soap and water only  ( ) using a piece of cloth/towel
   ( ) using cotton swabs  ( ) no methods known

Others specify .................................

12. a) Do you spoil your clothes following sexual intercourse?
   ( ) Yes  ( ) No  ( ) I do not know

b) If yes, what do you think could be done to avoid spoiling your clothes?
   ( ) I use a wet clothe in wiping myself  ( ) I go for a bath
   ( ) I avoid sexual intercourse  ( ) I put on an inner wear

( ) Others specify .................................

14. Have you ever been counseled about screening/pap smear?
   ( ) Yes  ( ) No

15. Have you ever been referred to a health facility where screening services/pap smear can be done?
   ( ) Yes  ( ) No

b) If yes, did you find screening /pap smear expensive?
   ( ) Yes  ( ) No

Explain your answer .................................

16. Have you ever had a screening test within the past five years?
   ( ) Yes  ( ) No

17. How many times have you had screening test done on you?
18. Is water always available in your house?

( ) Yes ( ) No
APPENDIX III: GUIDE FOR FOCUS GROUP DISCUSSIONS

1. What would you do in case you have irregular monthly periods?
2. What could be the cause of post-menopausal bleeding?
3. Explain the symptoms of cervical cancer?
4. How can cancer of the cervix be prevented?
5. When is cancer of the cervix curable? explain your answer
6. Is it normal to have vaginal bleeding after sexual intercourse? Explain your answer
   a) Explain a method that can be used to test for cervical cancer. Where and how often it may be done.
   b) Do you think the test is affordable?
7. In your opinion do you think there is a relationship between sexually transmitted infection and cervical cancer? How?
8. Do you think contraceptives can prevent sexually transmitted diseases?
9. What could be the cause of abnormal vaginal discharge?
10. Do you think screening for cervical cancer is useful on healthy women?
11. From your experiences do illnesses in women that affect sexual life stigmatize the individual?
   a) In your opinion, is the cost for MCH/FP services affordable to the majority of the women in the community?
   b) Is the cost of travelling to the health facility affordable by most of the women?
12. If there is a family history of cervical cancer, what advice would you give to the female members of that particular family?
Appendix IV: Map position of Nairobi, Kenya
Appendix V: Map of Dagoretti Division in Nairobi
Appendix VI: Location of project area in Dagoretti Division

LEGEND
- Division Boundary
- Sub/Loc Boundary
- Location Boundary

Scale: 1 cm = 1 km

Source: Map Consultancy P.S. Box 7508, Nairobi.
The Permanent Secretary,
Office of the President,
P.O Box 30510,
NAIROBI.

Dear Sir,

RE: CLEARANCE TO DO RESEARCH.
Kenyatta University has started a M.Sc degree programme in Public Health and Epidemiology. The Department of Zoology in the Faculty of Science is administering the programme.
We will appreciate if you will give clearance to the following students to conduct research in their chosen areas of study:-

1. **Robert Kamugi Maina - Reg. No. 156/8526/98**
   - Title: Knowledge, perceptions and practice of family planning among married male factory workers in Thika, Kenya.

2. **Elizabeth Kurwa Ambani - Reg. No. 156/8527/98**
   - Title: Cervical Cancer in Kenya: Knowledge, attitudes and practices among Women in Dagoretti, Nairobi.
   - Duration: September 1999 to March 2000.

3. **Priscillah Njeri Kabue - Reg. No. 156/8528/98**
   - Title: Maternal awareness of reproductive health and communication in relation to adolescent pregnancy in Dagoretti, Nairobi.
   - Duration: September 1999 to March 2000.

Yours Faithfully,

J.M. MAITIMA
For: Dean, Faculty of Science.
KENYATTA UNIVERSITY
OFFICE OF THE DEAN, FACULTY OF SCIENCE

P.O BOX 43844,
NAIROBI, KENYA.

TEL. 810901-12

Our Ref...156/8527/98............

Your Ref...................

Date: 31/8/99...

TO WHOM IT MAY CONCERN.

ELIZABETH KURWA AMBANI

The above named person is a full time student in this University. She is registered in the Department of Zoology for a M.Sc. degree programme in public Health and Epidemiology.

She has informed us that she wishes to apply for support for her research Proposal entitled "Cervical Cancer in Kenya: knowledge, attitudes and practices among women in Dagoretti, Nairobi."

Her application has our strong support especially in view of the fact that the degree programme she is pursuing is virtually new in this institution and because her research work will not only be of benefit to Kenya, but to the developing world in general.

This Faculty approves her proposed research work. She will have all the support that she will require as regards preparation of her thesis.

J. M. MATIVA
For: Dean, Faculty of Science
12th October 1999

TO WHOM IT MAY CONCERN

RE: 1. PRISCILLA NJERI KABUE
    2. ELIZABETH KURWA AMBANI

This is to introduce and certify that the above named, who are MPH post-graduate students at Kenyatta University who are attached to AMREF for their fieldwork.

Their research work will be in Dagoreti Division based at AMREF /MHiV Health Centre. Findings from their research will be used to improve health services at the centre.

This is therefore to request you offer them support that they will require during their fieldwork.

Yours sincerely

DR. ELIJAB SERONY SOME, MBchB, MPH, PhD
Head, Strategic Planning & Monitoring Office

cc: Post-graduate Studies Coordinator
    Zoology Department
    Kenyatta University
    P.O. Box 43844
    Nairobi
TO WHOMEVER IT MAY CONCERN

Elizabeth K. Ambani is doing a research proposal on knowledge, attitude and practice towards cervical cancer of Kenyan peri-urban women in Dagoretti which is a catchment area for our institution.

Her results will help us to plan our primary health care activities for this women.

DR. J. A. MAENDE
MEDICAL SUPERINTENDENT