THE PSYCHOLOGICAL SEQUELAE OF ABNORMAL PAP SMEAR RESULT AND COLPOSCOPY IN WOMEN ATTENDING A CERVICAL CANCER SCREENING CLINIC AT TIGONI DISTRICT HOSPITAL, KENYA

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF CLINICAL PSYCHOLOGY OF THE UNIVERSITY OF NAIROBI

BY

GAKUYA LUCY GATHONI
B.A COUNSELLING PSYCHOLOGY (UON)
DEPARTMENT OF PSYCHIATRY SCHOOL OF MEDICINE
UNIVERSITY OF NAIROBI, KENYA

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DECLARATION

I declare that this dissertation is my original work and has not been presented to any other College or University for academic credit.

Signed…………………………………………………………………………...

Date………………………………………………………………………………

GAKUYA. LUCY GATHONI

____REG. H56/8577/2003

SUPERVISOR'S CERTIFICATE OF APPROVAL

This dissertation has been submitted for examination with our approval as University Supervisors

1. Dr. Major (Rtd) Dammas M. Kathuku____

Signature ________________________ Date_______________

MBChB (Makerere), MMed. Psych (Nrb), FS- (USAF-SAM)

Senior Lecturer, Department of Psychiatry,

University of Nairobi

2. Dr. John M.Mburu____

Signature________________________ Date ______________

MBChB (Nrb), MMed Psych (Nrb)

Lecturer, Department of Psychiatry,

University of Nairobi

3. Dr. Lucy Muchiri ____

Signature Date________________

MBChB (Nrb) MMed Human pathology (Nrb)

Senior Lecturer, Department of Pathology,

University of Nairobi

DEDICATION

I wish to dedicate this dissertation to my beloved parents: the late Dan Gakuya, and Elena Wanjiru; to my daughter Helen Wanjiru with whom I spent little time as I engaged my time in writing this dissertation. I greatly appreciate her patience. I am also grateful to my brothers and sisters for the encouragement and psychological support they offered me. May you all be blessed abundantly.

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I am also indebted to the staff atTigoni District Hospital. Your permission to allow me use the facilities and access clients in this research will forever be appreciated. Last and importantly not least I am grateful to all lecturers at the Department of Psychiatry who made this dissertation possible.

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ABBREVIATIONS

CDC	Central Disease Control
CDDQ	Cervical Dysphasia Distress Questionnaires
ICC	Introversion Cervical Cancer
KNH	Kenyatta National Hospital
PAP	Papanicolaou
PEAP-Q	Psychological sequelae of abnormal Pap smear- Questionnaire
STI	Sexually Transmitted Infections
SPSS	Statistical Package for social science
HPV	Human Papilloma virus
UON	University of Nairobi
WHO	World Health Organization
VLIR	Vlaamse Interuniversity Raad-Flemish

ABSTRACT

Background

The researcher in this study was involved in a cervical cancer screening project at Tigoni Distict Hospital. During ongoing screening, it was noted that women did not follow up their abnormal results despite much effort by staff at the hospital to do follow ups. From this, the researcher decided to find out why women were not following up on the abnormal results and further treatment. Such a study has not been done elsewhere in Kenya and more so in this geographical area.

Objective

The main objective of this research was to determine psychological sequelae of abnormal Pap smear and subsequent colposcopy examination of women who were undergoing cervical cancer screening. The researcher included the description of social-demographic profile, characteristics of women with abnormal Pap smear and subsequent colposcopy examination.

Study Design

This was a cross-sectional descriptive study.

Setting

The setting of this study was at Tigoni District Hospital

Methodology

The researcher used systematic random sampling selection of 143 respondents aged 18 years and above. These were women who had received abnormal Pap smear results and were undergoing subsequent colposcopy examination and consented to participate in the study. The questionnaires developed by the researcher were administered in a private room where respondents were identified by serial number (01-143) for confidentiality.

Results

The social demographic variables for women who received abnormal Pap smear results and subsequent colposcopy examination showed the following: a mean age of 38.43; regarding religion, 69 (48.3%) were Catholic, 42 (29.4%) were Protestants while 74 (51.7%) comprised other religions. In education, 69 (48.3%) had below primary school level of education, 60 (42%) had some high school education while 14 (9.7%) passed secondary school education. According to the study, 112 (78.3%) desired to talk about colposcopy with service providers. A large

number i.e. 106 (74.1%) had no previous Pap smear test done. The tests were for 118 (82.5%) who followed up colposcopy examination after the first visit. 98 (68.5%) were between the ages of 25-45 years and 21 (20. %) were above age 46. On the number of births, 102 (71.2%) had less than three births with 38 (27%) had over 7 births.

Conclusion

This was the first study of its kind among women who had received abnormal Pap smear results and were to undergo subsequent colposcopy examination in Kenya and in this geographical region. The study established high levels of psychological distress in the three domains of cervical dysplasia distress. It was found that women had little knowledge and understanding on Pap smear and subsequent colposcopy examination. The level of psychological distress (65%) was similar to that found in similar studies in the literature review. The researcher recommends strong involvement of psychosocial intervention in management of women undergoing Pap smear tests and colposcopic examination in future. The service providers involved in Pap smear screening and colposcopic procedures need to be aware of the accompanying distress. They should institute appropriate pre - screening counseling to allay the distress that may follow. Women who receive abnormal Pap smear results need a follow up by professional counselors /psychologists until they are able to cope with the results. Much time is needed to educate women about the abnormal smear result and colposcopic procedure.

CHAPTER ONE

1.0 Introduction

Efforts to reduce the health impact of cervical cancer have been initiated in many countries all over the world. Most attempts in developing countries however have not been successful due to limited necessary health intervention and inability to provide Papanicolaou (Pap) smear services to all women (Central for Diseases Control 1993). Studies have shown that cervical cancer is the most common gynecological cancer and one of the leading causes of death among women worldwide (CDC 1993). In Kenya, invasive cervical carcinoma is the commonest female malignancy (Devusys et al 2003). Population-based cytology screening and early treatment has been shown to reduce morbidity and mortality associated with cervical cancer. Awareness about cervical cancer and its screening are some of the factors related to the success of such a program (Gath et al. 1995).

However, there is little attention paid to the psychological sequelae of these investigations and their results. The service providers are often unaware that there could be psychological effects associated with abnormal Pap smear and its treatment. The psychological sequelae of Pap smear and subsequent colposcopy can result from the actual screening and receiving the results that indicate abnormal findings. Indeed, studies have shown that distress increases after screening and receiving the results that indicate abnormal findings. When women receive abnormal Pap smear results and are referred for further treatment, such may deter women from follow up treatment and the delay could lead to mortality associated with cervical cancer (Marteau et al. 2001). The global data for 1990s indicate that an estimated 466,000 new cases of cervical cancer occur annually among women worldwide and that nearly 80% of cases are in developing countries where screening programs are not well established or are minimally effective (Pakin et al. 2000).

In Sub-Saharan Africa, the prevalence of cervical cancer is 40 per 100,000 women and it is the leading cancer among this group. The causes of this high prevalence is that women do not have regular Pap smears for various reasons such as lack of information of prevention of cervical cancer screening, availability, and accessibility of treatment services (Devusys at al. 2003). Psychosocial awareness about cervical cancer and its screening are some of the factors related to the success of such a program of prevention of cervical cancer (Marteau et al. (2001).

A study of cervical cancer in an African set- up of women with abnormal Pap smear concluded that: cervical cancer is preventable by psychosocial interventions like advocacy, education, identification of abnormal Pap smear results, proper follow up, early treatment and modification of risk factors. Unfortunately in the African set up cervical cancer prevention measures such as Pap smear testing, treatment of pre-malignant lesions and counseling are not widely available due to limited use of screening and other logistical reasons. Thus, most patients with cervical cancer present with advanced and bulky tumors (Rogo et.al 1990).

Study findings of knowledge and attitudes of women with abnormal Pap smear indicated that women had little information pertaining to abnormalities of vaginal bleeding or discharge. The majority of women had never gone for any routine gynecological check up and did not find it necessary. The few on regular check up were screened during family planning clinics and Pap smear was totally unknown to most of them. (Machoki et.al 1988).

Studies suggested that to improve compliance among women with abnormal Pap smear results there has to be knowledge and education about Pap smear screening and appropriate treatment of cervical cancer. This can reduce mortality rate (Machoki et al. 1988). Other studies have indicated that adverse psychological effects are also caused by colposcopy examination or its anticipation (Beresford et al.1986). Another study found that women's main concerns were whether colposcopy would be painful; if the virus was curable and what might happen during the course of treatment (Doherty et al.1991). Although numerous studies have addressed factors that influence uptake of Pap smear, little attention has been paid to the psychological distress of these investigations and their results.

1.1 Statement of the Problem

Psychological distress here refers to accumulative stress after receiving an abnormal Pap test result and subsequent treatment. This study is on psychological sequelae of abnormal Pap smear and consequent colposcopy procedure of women attending cervical cancer screening clinic at Tigoni District Hospital. The psychological distress included colposcopy procedure-associated distress; general health distress, and sexual reproductive consequences concerns. No study has been done in Kenya to find out the psychological distress of abnormal Pap smear results and subsequent colposcopy and examination in Kenyan women.

1. 2 Justifications

Psychological distress is high in women who receive a report of abnormal Pap smear (Eileen et.al. 2004). This could be a reason why such women fail to undergo further follow-up McCaffery et.al (2003). Although numerous studies have addressed factors that influence uptake of Pap smear screening, there is little attention paid to the psychological distress investigations and their results cause. A few studies have been conducted in various parts of the world and less in a developing country like Kenya. The major elements of reducing psychological distress after receiving an abnormal Pap smear result is through behavioral cognitive counseling and follow up of the client for a period of time (Richardson et.al. 1996). Previously, much work has been undertaken by various behavioral researchers who observed the distress associated with various grades of abnormal Pap smear and subsequent colposcopy examination. Other studies on emotional impact of abnormal cytology looked at the initial reaction of cervical smear result and subsequent feelings. The studies found that clients worry about colposcopy procedure, lack of knowledge about the procedure and that they were not satisfied by the information they were given by the service provider (Stewart et al.1994). Other concerns were on sexual consequence after colposcopy and general health concerns. The levels of distress were found to be high (65%) in women with abnormal Pap smear and undergoing colposcopy procedure (Eileen et.al.2004). The global data for 1990s indicate that an estimated 466,000 new cases of cervical cancer occur annually among women worldwide and that nearly 80% of the cases are in developing countries where screening programs are not well established or are minimally effective (Parkin et al. 2000). Psychological awareness about cervical cancer and its screening are some of the factors related to the success program of prevention of cervical cancer (Gichangi et al. 2002).

There is need to do further studies on psychological sequelae of abnormal Pap smear and subsequent colposcopy in women attending cervical cancer screening. It is not known whether the psychological distress observed among women with abnormal Pap smear and subsequent colposcopy in the literature review would be similar to those in the African set up and more so to the Kenyan women.

1. 3 Research Question

1.3.1 What are the psychological sequelae of abnormal Pap smear results?

1.3.2 What are the levels of distress in colposcopy examination?

1.4 Objectives of the Study

1. 4.1 Objective

To identify psychological sequelae of abnormal Pap smear results and subsequent colposcopy procedures in women attending cervical cancer screening clinic at Tigoni District Hospital in Kenya.

1.5 Specific Objectives

- To describe the socio-demographic variables of women with the abnormal Pap smear and colposcopy examination
- To identify psychological sequelae of abnormal Pap smear results and subsequent colposcopy
- To determine the level of distress due to colposcopy examinations, medical procedure, general health, and sexual and reproductive concerns
- To determine the effects of counseling before cervical cancer screening
- To make recommendations for future psychological management of women undergoing Pap smear tests and colposcopy examination

CHAPTER TWO: LITERATURE REVIEW

2.1 History of Pap smear and Colposcopy

Papanicolaou was a medical doctor who earned a PhD degree in zoology. In 1913 he worked as a physiologist in Cornell and studied vaginal smears of guinea pigs to determine the existence of a menstrual cycle. His work of cytology started in 1928 after gaining experience with normal cytology of the human cervix. During his study he noticed abnormal cytological changes including some advanced cancer cells (malignancy). He discovered cancer cells in a smear of the uterine cervix and it became one of the most thrilling experiences of his scientific career (Carmichael et.al. 2000).

In 1929 Papanicolaou published a paper about the results of his work entitled "New Cancer diagnosis." The paper did not specify clearly on how useful the new diagnostic method would be used in the treatment of malignancy. He mentioned that there are valuables to determining cancer in the early stages of its growth when it can be more easily fought and treated. These findings created a hope that cervical cancer cells are easily detectable and curable at an early stage (Carmichael et al.2000).

In 1939 cancer detection by use of vaginal smear began at New York Hospital where all women patients were required to take a routine vaginal Pap smear. A gynecological pathologist collaborated with Papanicolau to work and validate the diagnostic potential of the vaginal smear. In 1943 it became clear about prevention of cervical cancer screening whence they published their findings and conclusions in their famous monograph entitled; "Diagnosis of Uterine Cancer by the vaginal smear." The diagnostic procedure was named after the founder hence Pap test. By 1962 millions of women had received the Pap test and deaths from cancer of the uterus had been greatly reduced because of the test. The work of cervical cancer continued and an abnormal Pap smear was confirmed by further examination called colposcopy which could show the extent of cervical abnormal cells in the cervix (Carmichael et.al. 2000).

Colposcopy is a test in which the doctor uses an instrument called a colposcope to observe the cervix under magnification. It looks like a pair of binoculars mounted on a pedestal with a light attached to it. The instrument magnifies the vaginal wall and cervix area and the clinician looks through the lenses into the vagina where a speculum is placed. Magnifications help to see abnormal areas clearly and biopsies can be done precisely. The biopsies taken are looked at in

the laboratory under the microscope to identify the magnitude of cells. In addition, curettage is carried from the cervical canal to make sure there are no abnormal cells past where the clinician can see. Colposcopy and biopsy are indicated when abnormal cells are seen on a Pap smear.

2.2 Understanding of Abnormal Pap smear Results

Screening cervical cancer is beneficial for the diagnosis of cervical cancer but it may cause implication for psychological well being of women who participate in it (McCaffery et.al. 2004). The sexually transmitted infection by human papilloma virus (HPV) which causes abnormal Pap smear may cause additional anxiety and distress. At present women have very little understanding of HPV and its association with cervical cancer; therefore, any information given as part of HPV testing is likely to change their understanding of cervical cancer, which may in turn impact on their psychological responses (Duncan el at.). A study on emotional and psychological impact of diagnosis of sexually transmitted infections (STI) showed that it can cause extremely negative emotions and cause distress. The study suggested that abnormal Pap smear just as with STI is associated with some negative psychological outcome among women in sexual reproductive concerns (Gath et al. 1995).

A study conducted on how women perceive information about HPV in cervical cancer screening described poor understanding of the virus among partners, family and friends which enhanced anxiety around disclosure. Women explained that talking and explaining something poorly understood, particularly to a partner was extremely difficult. Women opinion indicated that service providers had limited time to explain or to pass information (Maissi et al. 2004).

2.3 Distress of Coping with Abnormal Pap smear Results

In the study that examined how women coped with the information on their results, the report was that they felt; helpless or vulnerable, found the procedure uncomfortable, undignified, their body invaded with no control over it and concern that cancer could be present. A large number expressed concern about their fertility and others were worried about sexual transmission of the virus to their spouse. There were worries about social stigma of having cervical cancer and that other women may think that they were promiscuous. The mean score of somatic features of depression were found in some women (Howells et el.1999).

Further, psychological findings from other studies (Bennett et al.1995) showed that high levels of abnormal Pap smear distress are characterized by feelings of shock, panic or horror. The first week after receiving the result, they expressed feelings of fear, worry, depression, poor concentration and sleep disturbance. Further explanation stated that they were afraid of cancer and hospital admission for further investigation (Bennett et al.1995). Another study indicated that anxiety was experienced immediately when the women were informed of an abnormal smear result. This persisted until the appointment for colposcopy examination. Those women who were given appointment four weeks before colposcopy experienced situational anxiety, tension, impaired concentration and somatic features of depression (Lauver et al. 2000).

Investigation of the psychological effects of abnormal cytology compared with controls found that there was existence of impaired mood, reduced daily activity, sleep disturbance and sexual interest in women with abnormal Pap smears compared with controls. Women expressed feelings of stress and hopelessness in provision of cervical neoplasia (Dohety et al.1991). The study however stated that these effects were much more pronounced in the women who subsequently did not comply with their appointment for colposcopy. Another study concluded that reducing psychological stress may reduce the rate of non-attendance for colposcopy (Lauver et al.2002).

2.4 Psychological Impact of Human Papilloma Virus and Referral for Colposcopy Examination

Gott et al. (1995) assessment of psychological distress of abnormal Pap smear results and subsequent colposcopy procedure revealed that woman's general responses were distress of anxiety and being upset. Women described feelings of shock after receiving an abnormal Pap smear a diagnosis of an infection of which they were little aware of or understood. This caused severe anxieties of risk of cancer; further investigation and treatment. There are other concerns found to be common such as provoking intrusive thoughts and somatic responses (Doherty et al. 1991). The study on the emotional impact on women with abnormal Pap smear, referred for colposcopy showed that all women complained of fear of cancer, with 68% fearing loss of reproductive ability or sexual function. Others (65%) experienced fear of medical procedures distress (Campion et al. 1998).

McCaffery (2002) measured distress associated with colposcopy by use of General Health Questionnaire immediately before colposcopy examination. It showed significantly increased psychiatric morbidity with social dysfunction, anxiety and somatic symptoms. The HIV positive

women had increased social dysfunction and depression compared to those undergoing colposcopy for abnormal cytology (Richardson et.al 1996).

The scale of trait anxiety inventory indicated that women with abnormal Pap smear and colposcopy had high scores for anxiety. The scores were equal or higher compared with those found with women before surgery (Speilberger et al. 1983). Specific anxiety measurements on distress of 0-7 point Likerts scale showed that there is much concern about the procedure carried out in colposcopy as the same as the outcome (Posner et al.1998). This is captured in the objective number two.

Further study by (Bennetts et al. 1995) in the measurement of psychological distress for abnormal Pap smear results found that majority of women raised a lot of concern about the cause of the abnormality, whether treatment would be possible and fear of cancer developing in their body. A significant number were worried that their condition would become worse while waiting for the appointments for colposcopy examination. There were great concerns that women may pass on the disease to their spouse and whether their sex life would be affected. This study found other distress were related to medical procedures being undignified, felt their body invaded, concern about their fertility and social stigma of being considered by others as promiscuous 4%.

2.5 Development of Information and Counseling Services for Women with an Abnormal Smear Result

A study on development of an information and counseling service for women with abnormal Pap smear results found that there was much use of counseling before colposcopy (Goodkin et al 1986). Women were given information before, after colposcopy and after two months. The counseling consisted of an opportunity to discuss concerns related to the Pap smear and colposcopy; training in relaxation, and cognitive coping strategies. Results of the study showed high levels of distress in all measures before colposcopy, both groups showed reduced anxiety, less negative cognition, less distress about the smear result and less distress about the procedure after two months (McCaffery et al.2002). There was no difference between the intervention and the control group at any stage. Subjectively however, both groups of women found counseling helpful; relaxation was the most useful, followed by information on colposcopy and the smear result. Before colposcopy, there was worsening of psychological health. In this study it is in objective three. The following up the groups immediately after colposcopy and after two month

showed less anxiety, improved psychological health and mood. Majority of women reported that they would recommend counseling to a friend (Richardson et al 1996). Evaluation of cognitive-behavioral counseling showed that the distress associated with an abnormal smear result adjusts over time; decreases immediately afterward, and gradually decreases subsequently in six months (Gott et al 2004).

Regarding the benefit of information of leaflets before colposcopy, it was found that giving information through leaflets to reduce anxiety before consultation saw the women perceive their problem as less serious. A repeat of assessment after the consultation found that there was no significant effect when given a leaflet. That means there is less benefit of information leaflets to the women before colposcopy (McCaffey et al 2003).

A study on prevention of cervical cancer found that the determinant of anxiety is the interval between knowledge of the abnormal smear and the colposcopy. Women expressed high levels of anxiety in an interval of three weeks. The findings emphasized that anxiety was not related to the severity of the abnormal smear. All women expressed concern that they should have as short a waiting time as possible (Summers et al.1993).

A study on how women perceive information about HPV in cervical cancer screening, described poor understanding of the virus among partners, family and friends which enhanced anxiety around disclosure. Women explained that talking and explaining something poorly understood, particularly to a partner was extremely difficult. Women opinion indicated that providers had limited time to explain or to pass information (Wolfe et al 1992).

2.6 Psychosexual Trauma of Abnormal Pap smear and Colposcopy

A study on psychosexual consequences of colposcopy procedure in women with abnormal Pap smear compared with the controls group showed that before colposcopy procedure, there was no difference in sexual behavior or attitude between the two groups. However, the abnormal Pap smear group had decreased spontaneous sexual interest, decreased frequency of intercourse, decreased sexual arousal and decreased frequency of orgasms compared to the control group. They also had increased negative feelings towards intercourse and their sexual partners. This was probably due to anxiety that sexual intercourse may be harmful; may cause effect on the women’s self concept, body image following diagnosis and treatment of human papilloma virus (Campion et al 1998).

Speilberger et al. (1983) conducted an investigation for attitudes in regard to discussing sexual health issues with other people which found that women described anxiety about disclosure of their abnormal Pap smear to their partner, family and friends. In some women, the stresses of disclosure appeared to be the most difficult aspect of managing the abnormal Pap smear. Women described the disclosure feeling as highly anxious about informing their partner with descriptions of bursting into tears, feeling intensely guilty and worried that they may have infected their partner with the virus. Further explanation is the underlying concern about the disclosure which was characterized by embarrassment and shame about promiscuity associated with sexually transmitted infection (STI). Women feared that in disclosure to others, they may cause more distress if they were sexually rejected by their partners. To manage the anxiety many women chose not to tell their partner about their abnormal Pap smear (Gott et al. 2004).

2.7 Summary

From the literature review there is evidence to suggest that women with abnormal Pap smear and subsequent colposcopy examination experience significant psychological impact. Indeed, psychological distress of abnormal Pap smear and colposcopy procedure is a problem to women. The women express high levels of distress in the following areas; colposcopy procedure embarrassment and that the procedure is undignified; and having shame of body exposure. In general there are health concerns, and reproductive and sexual consequences. Women were distressed about their health because they feared developing cervical cancer. There were major concerns about sexual and reproductive consequences of infertility and sexual rejection by their spouse. Many women experience somatic features characterized with feelings of depression, sleep disturbance, irritability, crying episodes, anger outbursts, and having difficulties with partners. There were concerns also that they would pass infection to their partners. Women were concerned that they could be subjected to stigma associated with promiscuity and sexually transmitted diseases. Knowledge and understanding of women about the abnormal Pap smear results and subsequent colposcopy examination was additionally rated poor among them.

CHAPTER THREE: METHODOLOGY

This was a cross-sectional descriptive study.3.1 Study Site

The study was carried at Tigoni District Hospital situated in Tigoni location of Limuru division, Kiambu District, Central Province, Kenya. Tigoni is located approximately 35 km northwest of the capital city, Nairobi. Kiambu District has a total area of 1458 sq km and is divided into five administrative divisions: Kiambaa, Limuru, Githunguri, Kikuyu and Lari. The catchment areas have a total population of 744,010 people. It has 22 locations and 90 sub-locations.

Tigoni District Hospital is in Tigoni location and serves all locations in the five divisions. The population that was considered for the study purposes is mainly involved in agricultural activities as the main source of income ; light industries and to a lesser extent tourism.

Tigoni District Hospital was an ideal site since it is a health care institution that has regularly collaborated with the University of Nairobi in other research activities. At the time of conducting this study there was a reproductive health project where cervical cancer screening was going on among women. The availability of colposcopy and further treatment was unusual at this level of healthcare facility. This researcher, being one of the team of researchers found the need to incorporate the mental health component. The findings indicate that 4.5% of women had abnormal Pap smear results in this clinic and this provided the opportunity to find suitable subjects from this special sample which would be hard to obtain in most other hospitals. There was an added advantage of proximity to the University of Nairobi.

3.2 Study subjects

The study population was a sample of women enrolled for a study of cervical cancer screening at Tigoni District Hospital. They must have received abnormal Pap smear results and undergone subsequent colposcopy treatment at the clinic from the year 2004 to 2007 and aged 25-60 years. Women who fulfilled the required criteria and willing to consent were recruited to participate in the study. All women with abnormal Pap smear were contacted by the researcher through telephone, letters and traced by the person assigned to follow and bring them to the clinic for colposcopy procedure and psychological assessment.

3.3 Sample Size

The study required 143 respondents who were selected from the colposcopy records starting from the first with abnormal Pap smear and who had undergone colposcopy examination.

The following sample size calculations formulas were used:

$N = z^2 * p * (1-p)/e^2$

N = Sample size

p = Estimated proportion of patients who have abnormal Pap smear and colposcopy Examination experienced psychological impact (0.1).

e = Margin of error = 0.05

Z = Value for normal distribution at 95% confidence = 1.96

$N = 1.96^2 * 0.1 * (1-0.9)/0.05^2$

N = 143

3. 4 Procedures

Every consecutive woman listed in the colposcopy records starting from the first with abnormal Pap smear and having undergone colposcopy examination was included in the sample. They were contacted by telephone, mail and traced by a person assigned to the catchment areas until the pre-determined sample size was achieved. The interview was conducted by the researcher for 20-30 minutes.

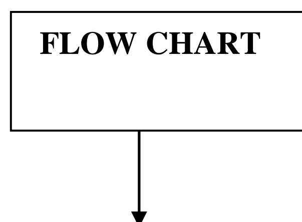
The procedure consisted of an investigator designed socio-demographic questionnaire interview followed by researcher administered Cervical Dysplasia Distress Questionnaire (CDDQ). These consisted of semi-structured, structured and open ended questions. They are related to psychological distress of colposcopy procedure, general health concern, and reproductive and sexual consequence concern. Others were feelings expressed by women after they received abnormal Pap smear results and colposcopy examination.

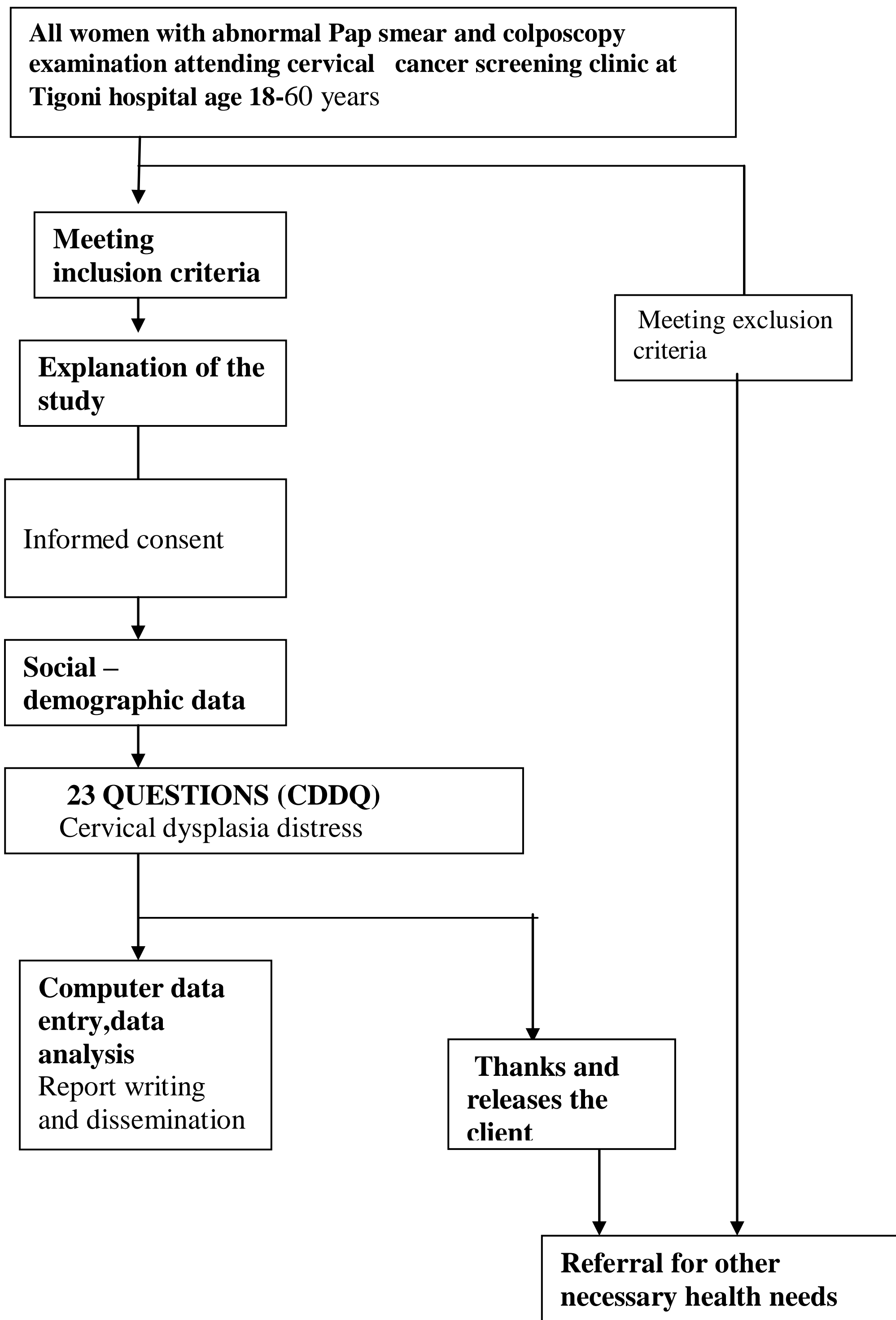
3.5 Inclusion Criteria

- Women who attended cervical cancer screening clinic at Tigoni District Hospital for the past two years.
- Women with abnormal Pap smear results, and had undergone colposcopy examination.
- Women who consented to participate in the study.
- Aged 25 years and above

3.6 Exclusion Criteria

- Women who had abnormal Pap smear, refused colposcopy examinations
- Women who were not willing to consent to participate in the study,
- Those with prior confirmed or suspected psychiatric disorders before Pap smear test
- Aged < 25 years




All women with abnormal Pap smear and colposcopy examination attending cervical cancer screening clinic at Tigoni hospital age 18-60 years
Meeting inclusion criteria
Meeting exclusion criteria
Explanation of the study
Informed consent
Social – demographic data
23 QUESTIONS (CDDQ)
Cervical dysplasia distress
Computer data entry,data analysis
Report writing and dissemination
Thanks and releases the client
Referral for other necessary health needs

3.8 Definition of a Case

Any woman aged 25 years and above, with abnormal Pap smear and undergoing colposcopy examination. The client must have been attending an ongoing cervical cancer-screening clinic at Tigoni hospital irrespective of duration within two years.

3.9 Data Collection

The information was collected by use of standardized questionnaires that were read in the English language and could be understood by clients who could not understand English, had questions were read and explained to them in a language they could understand. Upon consenting, study subjects were interviewed and then filled out the questionnaires.

The structured questions interview consisted of open questions relating to psychological distress like medical procedures, feelings of tension, discomfort and embarrassment; sexual, reproductive consequences distress and health consequences distress; feelings of abnormal Pap smear results, and history of abnormal Pap smear and colposcopy.

3.10 Study Instruments

The 23 question Cervical Dysplasia Distress Questionnaire (CDDQ) developed by Eileen Shinn (2004) (12) was used. This is a reliable instrument for measuring multiple domain of distress unique to women who test positive on a cervical cancer-screening test. CDDQ is based on Peaps-Q psychosocial effects of abnormal Pap smear instrument which measures the distress experienced by women following-up investigation after an abnormal Pap smear result. The questionnaire has Alpha range from 0.76 to 0.90 and demonstrated good concurrent validity with other psychometrically validated measures of distress designed by Eileen Shinn (2004) (32). In summary, the instruments cover the following themes:

They were in four domains divided into two sets of factor analysis;

1st factor analysis:

- Medical distress
- General health distress

2nd factor analysis:

- Sexual concern
- Reproductive concern.

3.11 Data Analysis

Data was entered into a microcomputer using the Statistical Package for Social Science (SPSS) for windows version 12.5. Data was cleaned, validated and analyzed. The results were presented in forms of tables, charts and in descriptive forms.

3.12 Ethical Considerations

Permission to carry out the research was obtained from the Department of Psychiatry, University of Nairobi (UON); the ethical committee at Kenyatta National Hospital (KNH) and from the Ministry of Science and Technology.

All the respondents were informed about the purpose of the research and informed consent was obtained. Confidentiality was assured to all women confirmed to be in need of long-term psychological support and referred to the appropriate management centre.

CHAPTER FOUR: RESULTS

4.0 INTRODUCTION

This study set to include 143 women who had participated in a study of an ongoing cervical cancer screening at Tigoni District Hospital from 2004 to 2007. All the respondents had received abnormal Pap smear results and had undergone colposcopic examination. A total of 143 women (100%) responded to the social demographic questionnaire; history of abnormal Pap smear, colposcopic examination and cervical dysplasia distress questionnaire scale with twenty three items which had three domains: colposcopic distress, general health distress and sexual reproductive concern.

4.1 Table 1: The Patient's Social Demographics Characters

1.Age in years	Range	37
	Mean	**38.43**
	Standard deviation	8.27
	Mode	35
	Median	37.00
2. Marital Status.	Never married	**46.1**
	Married	**98 (68.5%)**
3. No. of Children	0-<=6	**102 (71.2%)**
	6-<=12	**41(28.7)**
4. Religion.	Catholic	**69 (48.3%)**
	Protestants	42 (29.4%)
	Others	**32 (22.4%)**
5. Education.	Primary school and below	**69 (48.3%)**
	Secondary school education	60 (42.0%)
	High school and above	**14 (20.1%)**

This section gives a description of respondents by providing background information of the category of participants who were recruited into the psychological distress of abnormal Pap smear and colposcopy examination study. This was by age, marital status, number of births, religious and education background. The subjects were aged between 25-60 years with an average range, Mean, standard deviation and median clearly stated on Table 1.

Most of the subjects were married women with a small proportion without explanation. Majority of the women had less than three births of children while the rest had ten to twelve births. In religion the largest number was Catholic while the others were from other denominations. Under

education level, the highest number had below primary school education; some of the subjects had some high school education while a small percentage had post-secondary school education. (Results summarized in Table 1).

4. 2 Table 2: History of Abnormal Pap smear and Colposcopy Examination

History of abnormal pap smear And colposcopy		N %
1.Modes of inviting the respondents	Mail	8 (5.6%)
	Call by service performer	53 (37%)
	Other	**82 (57.4%)**
2. Patients satisfaction on information given prior to Colposcopy	Not at all	47 (32.9%)
	A little	**94 (46.9%)**
	Quite a lot	**27 (18.9%)**
3. Patients desire to talk through concerns with Colposcopy provider.	Yes	**112 (78.3%)**
	No	31 (21.7%)
4. Factors that made patients willing to talk about Colposcopy with provider.	To know if its curable	62 (43.3%)
	Needed more information.	**66 (46.2%)**
	Client Concerned about birth.	15 (10.5%)
5. First visit for Colposcopy or follow-up visit.	First visit	**118 (82.5%)**
	Follow up	25 (17.5%)
6. Plans to have children	Yes	48 (33.7%)
	No	95 (66.4%)
7. Patients awareness of the Term dysplasia Pre-cancerous	Yes	37 (25.9%)
	No	**106 (74.1%)**
8. How many times did you get pap smear before being referred for abnormal pap smear	Once	**106 (74.1%)**
	Twice and above	40 (12.6%)

The models of invitation to follow up the clinic were several. Invitation by other means was rated the highest followed by service provider. The mails which were sent to the respondents reached a few of them. The respondents reported on the satisfaction of information given prior to colposcopy. The majority had little information regarding colposcopy while a few had gained a lot of information. A large number of respondents had a desire to talk about colposcopy to service providers. A small number were satisfied. 118 respondents had their first Pap smear in their lifetime. Many respondents had no desire to have more children after the colposcopy examination. The highest numbers of the respondents were not aware of the term dysplasia or

pre-cancerous. Almost all the respondents had had only one Pap smear which made them to be referred for colposcopy. Result summary table 5

4.3 Table 3: Symptoms Related to Psychological Distress of Pap smear Result

Symptoms	**N**	**%**
Feelings of Anxiety		
Shock	100	**70**
Shaking	13	9
Nervousness	15	**10**
Palpitation	6	4
Sweating	8	6
Fear	80	56
Crying	12	8.3
Depressed feelings		
Lack of concentration	68	48
Lack of appetite	36	25
Lack of sleep	75	52
Intrusive thoughts	93	**65**
Anger outburst	22	**15**
Somatic Complains		
Headaches	84	**59**
Stomach pain	7	5
Weight loss	18	12
Not worried	2	**1**

The results came out vividly that those admitted in the study had various symptoms after the examination. The most serious and obvious result to most respondents as far as psychological distress is concerned was anxiety. This is quite natural for any client who has not been psychologically prepared. Most of the respondents who went into shock were also identified with lack of concentration in their daily activities and consequently much of what they did was due dismally. Summary in Table 3 above.

4.4 Table 4: Prevalence of distress

CDDQ COLPOSCOPY EXAMINATION DISTRESS	TYPES OF DISTRESS								
	Colposcopy Distress assessment			General health distress assessment			Sexual reproductive assessment		
	Score	N	%	Score	n	%	Score	N	**%**
Distress present	≥ 10	119	**83.2**	≥ 7	84	**58.7**	≥ 11	**73**	**51**
No distress	≤ 10	24	16.8	≤ 7	59	41.3	≤11	70	49
Total		143	100		143	100		143	100

From the study, the following levels of distress were identified. The distresses were found in all three domains. The level of Colposcopy Distress was rated as the highest among others. This is summarized in Table 4. Above

4.5 Table 5Social Demographic Vs CDDQ

Variable	Category	Colposcopic procedure distress						General Health Concern						Sexual Reproductive Concern.					
		Not Distress		Distressed		Total		Not Distressed		Distressed		Total		Not Distressed		Distressed		Total.	
		N	%	N	%	N	%	n	%	n	%	n	%	n	%	n	%	n	%
1. Age. Group years	25-45	17	11.9	98	**68.6**^{x}	115	80.5	44	30.8	71	**50**^{x}	115	81	52	36.4	63	44.1	115	80.5
	46-65	7	4.9	21	14.7	28	19.6	15	10.5	13	9.1	28	19.6	18	12.6	10	7.0	28	19.6
	Total.	24	16.8	119	83.2	143	100	59	41.3	84	58.7	143	100	70	49	73	51.0	143	100
2. Marital Status.	Never married	5	3.5	30	21.0	35	24.5	15	10.5	20	14.0	35	24.5	15	10.5	20	14.0	35	24.5
	Ever Married	19	13.3	89	**62.2**^{x}	108	75.5	44	30.8	64	44.7	108	75.5	55	38.5	53	37.1	108	75.5
	Total.	24	16.8	119	83.2	143	100	59	41.3	84	58.7	143	100	70	49	73	51	143	100
3. No. of births Declared by subjects	0-<=6	20	14.1	116	**81**^{x}	136	95.1	55	39.3	81	**56.7**^{x}	136	95.1	64	44.8	71	49.7	136	95.1
	7-<=12	4	2.8	3	2.1	7	4.9	4	2.8	3	2.1	7	4.9	6	4.2	1	0.7	7	4.9
	Total	24	16.9	119	83.1	143	100	59	42.1	84	58.8	143	100	70	49	72	50.4	143	100

*1.x^2= 17.935, df= 3, p=0.000.There is statistical significant difference in distress within age vs. colposcopy in various age groups.

* 7.x^2 = 15.2, df= 3, p= 0.002. There is statistical significant difference in General Health distress within various age groups.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS, LIMITATIONS, RECOMMENDATIONS

Summary of findings

The main objective of this study was to quantify the amount of psychological distress that women suffered following screening at a cervical cancer screening clinic. Cervical Dysplasia Distress Questionnaire assessed the distress that consists of three domains: colposcopic procedure, general health concern and sexual reproductive concern. There were other variables expressed by women after receiving abnormal Pap smear results.

The study found that majority of the women had never had a Pap smear test before because of lack of proper information, accessibility; availability of Pap smear and as a result this was their first time. The distress increased from the time the women were introduced to the screening program and worsened during colposcopy examination when they were mounted on the colposcopyThey felt that they had no control of their bodies and were ashamed and embarrassed. This concurs with findings (Bennetts et al. 1995). The anticipation of cervical screening itself increases distress. It concedes on adverse psychological sequelae (Machoki et.al 1988).

5.1 Feelings Expressed After Receiving Abnormal Pap Smear Results

This study found that women experienced various feelings after receiving abnormal Pap smear results. The feelings cause a lot of distress and deter women from following up on treatment. Similar findings showed levels of distress due to fear of body manipulation during the procedures (Goodkin et al. 1986). The reported feelings were shock, lack of concentration, fear of cancer, anger outburst, somatic features and intrusive thought. These were in agreement with the report of Boag et al. (1999) (5). These symptoms may presume to occur because the knowledge about human papilloma virus in this region was unknown and any information given to them would increase their psychological distress. A similar study showed a Pap smear was totally unknown to most of the women (Rogo et al.1990).

5.2 Age vs. Colposcopic Procedure

High scores of distress were found in young women who were in the age bracket of 25-45 years. However, the levels of distress seemed to decline in the three domains of distress related to colposcopic examination, general health and sexual reproductive concerns with age. These findings concur with those of (Gott et al 2004) which reported high level of distress in young women who were below 33 years compared to women above the median 33years $p<0.01$. This

study found that women were concerned whether colposcopy would be painful, what might happen during the course of treatment and if the illness was curable. Though the study found that majority of women had low education levels such that even after being informed about the abnormal Pap smear and colposcopy, majority could not understand nor differentiate the difference between abnormal Pap smear and cervical cancer. A similar study by (Anhang et al.2004) indicated poor understanding of the nature of the diagnosis, limited knowledge and fear of the consequences such as possibility of cervical cancer.

The Psychological distress scores in the three domains of CDDQ analyses in relation to the age of the respondents showed that majority (41.3%) of women were between 25-35years. Out of these women 59 (37.1%) had high distress of above 10 points according to the rating scale on the colposcopic domain of the CDDQ instrument. This study found that these women were concerned that their bodies might be manipulated and may not be able to have children or may lose sexual interest which may lead to marriage break down. A similar analysis for older women above 46 years who comprised 28(19.6%) of the respondents showed some levels of distress below 10 points. In general the study showed significant statistical difference, p=0.000, in all age groups in CDDQ scale. The level of high distress was contributed by the fear of the outcome of the treatment and what would happen during the procedure.

5.3 Age vs. General Health Distress

The study found that distress experienced by women was because cancer develops gradually and may finally cause death. Some respondents experienced social dysfunctions, anger out- burst and lack of sleep. This increased distress in women who know about the consequences of an abnormal Pap smear result and who were also worried about the course of the abnormality and whether treatment would cure the illness. This concurs with Bennett et.al. (1995) study which showed that women were worried about the course of abnormality whether treatment would cure them and fear of possible presence of cancer. Women in this study who had lost their relatives and friends through cervical cancer were more distressed and reported weight loss of 2-5kg from the time they received abnormal Pap smear results until the date of treatment. Other reasons found in the study were that late diagnosis of cancer can cause death. The subjects felt that the waiting period for colposcopy procedure should be as short as possible because it increases distress. This study agreed with (Posner et al. 1998). In general, the study showed significant statistical difference, p=0.002, in all age groups vs. general health scale.

5.4 Age Vs Sexual Reproductive Responses

The subjects of this study were distressed that sexual intercourse may be harmful to their body. They also felt that they may transmit the virus to their partners. A study by (Campion et.al.1998) had similar findings. The current study found high distress in younger women below 45 years although their sexual arousal and frequency of orgasms were not enquired. However, diminished possibility for further procreation in pre-menopausal, married women was evident

5.5 Marital Status Vs Colposcopic Procedures

Across the three domains of CDDQ, high levels of distressed subjects that was found in the ever-married group in the colposcopic domain had the highest level of distress. This study showed that most of the respondents who at some point were married scored high in colposcopic procedure distress. These findings differed from those of (Eileen's et al. (2004) study, which found women who were never married experienced more discomfort with colposcopic procedure than those who were ever married. Again, it is evident that colposcopic procedure is definitely a major source of distress compared to the rest but this is not to imply that they are not stressful. The diversity in cultural beliefs and expectations may account for this disagreement in results and as noted earlier married women in this study have roles that could adversely be affected by the abnormal findings.

5.6 Marital Status vs. Health Distress

This study found that those women who were at one time married expressed concern about the cause of the abnormality and whether colposcopic treatment could be cured. These findings concurred with those of (Eileen's et al. 2004). This study found that women were worried about how they could have contracted the virus and if their spouse would re-infect them after the treatment during sexual activity.

5.7 Marital Status Vs Sexual Reproductive Distress

In this study subjects who were once married showed sexual concern because of the social stigma of having abnormal cells, which is associated with sexually transmitted disease, fear that other women might think they were promiscuous. A study of (Gott et al.2004) found worries about social stigma and concern of promiscuity. There is little knowledge about Human papilloma virus in this region and there could be negative perception towards it in relation to sexual activity. Elieen

el al (2004) showed that women aged below 33 years were more distressed by sexual reproductive health concern. The current findings showed that women expressed fear that they might be sexually rejected by their spouse due to something they did not clearly understand. Majority of the women in this study decided not to disclose the results to their spouses in the belief that the secrecy would assist in the modes of coping distress.

5.8 Parity vs. Colposcopic Procedures

This study found that respondents who had given birth between 0-3 times had the highest level of distress with colposcopic procedure compared to higher parity groups. A similar study by (Elieen et.al.2004) showed that young women with less children expressed high levels of distress. There was statistically significant difference in distress of p=0.002. The study indicated those women were still young, childbearing age and were distressed by the way their body was manipulated during colposcopic procedures. This could be because these respondents were worried that they may not be able to reproduce further yet they desired to.

5.9 Valiance of Abnormal Pap smear And Colposcopy

Although in this study the rates for cervical cancer screening among health women was high, failure to present for follow up evaluation after abnormal Pap smear results was found to be a serious problem. This concurs with findings of cervical cancer screening among healthy women with poor follow up after abnormal Pap smear results (Stewart et al.1994).

5.10 Level of Education

Level of education in this study did not appear to play a role in psychological distress. Majority of women's level of education were below secondary school and therefore, it was difficult to relate education with the level of distress. The women with post secondary school education who participated in the study were very few. The current study did not concur with (Eileen et al.2004) study. The level of education in women in this geographical area was found to be very low with majority of women having below secondary education of 129 (90%).

5 .11 Conclusion

The general objective of this study was to determine the psychological sequelae of abnormal Pap smear result and colposcopic procedure among women who were going for a cervical cancer screening study at Tigoni District Hospital. The study established high levels of psychological

distress. This is the first study of its kind among women who receive abnormal Pap smear result and colposcopic procedure in Kenya. It can therefore be, concluded that there is a high level of psychological distress among women who received abnormal Pap smear result and colposcopy procedure at Tigoni District Hospital. The distress level was similar to that found in studies cited in the literature review.

A number of factors that included colposcopy procedures, health concerns, sexual reproductive concerns and other concerns related to abnormal Pap smear were associated with distress that may lead into psychological sequelae. This distress could be one of the problems, which make women not follow up the abnormal Pap smear result and its treatment. Hence there is need to involve other professionals such as psychologists in the programs of cervical cancer screening to deal with psychological distress in women who receive abnormal Pap smear and undergo colposcopic procedures. There is also a need to develop other approaches to sensitize the clients and the community on the prevention of cervical cancers.

5.12 Limitations

- Low level of education among the target population led to increased time of reading and explaining the questionnaires in a language they could understand.
- Low turnout for colposcopic follow-up caused the need to trace women from their homes and escort them to the hospital for assessment.
- Lack of knowledge and understanding of abnormal Pap smear result made women not respond to telephone calls, and explaining through the phone the importance of colposcopic follow up made the exercise very expensive.
- Strong religious beliefs held by some women deterred them from making follow-up for colposcopic examination as they claimed they had been spiritually prayed for by their pastors and got cured.

5.13 Recommendations

The researcher recommends strong involvement of psychosocial interventions in management of women undergoing Pap smear tests and colposcopic examination in future. The service providers involved in the Pap smear screening and colposcopic procedures need to be aware of the accompanying distress. They should institute appropriate pre - screening counseling to allay the distress that may follow. Women who receive abnormal smear results need a follow up by

professional counselors /psychologists until they are able to cope with the results. Much time is needed to educate women about the abnormal smear result and colposcopic procedure.

- Appropriate referrals for professional mental health interventions should be made where necessary.
- The period between abnormal result and colposcopyexamination should be shortened.
- A woman's body should be taken care not exposed during procedure to reduce embarrassment and shame.
- Pap smear, colposcopy procedures and expectations need explanation prior to their commencement.

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APPENDICE

Appendix I

Demographic Peaqs-q Questionnaire

Please answer the questions below.

1. How old are you?
2. Tribe___________________________

Marital Status: Single Married Divorced Others_________

3. Number of children?
4. State your religion; catholic, protestant Muslim Others_______
5. Highest Level of Education; High school College Post-graduate others___

6. Have you had previously abnormal pap smears and colposcopy? Yes/No
7. Have you previously been diagnosed or treated for depression? Yes/No

If yes explain_____________

8. Have you previously been diagnosed or treated for an anxiety disorder? Yes/NO

If yes explain_____________________

9. How were you notified of your abnormal pap smear? (Check one).

Telephone conversation with provider who performed pap smear_________

Telephone conversation with provider other than performer of pap smear______

Notified by mail___________________________

Can't remember___________________________

Others_________________________________

10. What types of information given to you prior to your colposcopy **procedure (circle one) Verbal Handout Videotape classes**

11. Were you satisfied with the patient information given to you prior to your colposcopy **visit? (Circle one)**

Not at all A little A fair bit Quite a lot Very much

12. Do you desire to talk through your concerns with your colposcopic provider? Yes/No

If yes explain _______________________

13. Is this your first colposcopic visit or a follow-up visit? First Visit Follow-up visit

14. Do you plan to have future children? Yes/No

15. Were you aware of the terms dysphasia or precancerous before your last pap smear?
________Yes/No____________________

16 .How often did you get Pap smear before you were referred for an abnormal Pap smear? _________

17. How did you feel after receiving abnormal Pap smear result?

Explain…………………………………………………

18. Do you suffer from chronic disease? Yes/No

If yes explain………………………………………….

19. Which drug do you take………………………

APPENDIX II

Cervical Dysplasia Distress

Complete this questionnaire with the referral or screening patients who have had an Abnormal Pap smear in the past year.

COPOSCOPIC PROCEDURE During the exam you just had…..	Not at all	Somewhat	Moderately so	Very much
1. Did you find the exams uncomfortable?				
2. Did you find the exams emotionally				

upsetting?				
3. Did the exams make you nervous				
4. Did the exams hurt?				
5. Did you feel tense?				
6. Were you nervous				
7. Were you embarrassed having your private parts touched by the doctor or nurse				
8. Were you uncomfortable being partly undressed				
Distress items for the sexual and reproductive consequences				
Since you found out you had an abnormal pap smear… health consequences	Not at all	Somewhat	Moderately so	Very much
9. How worried are you that cancer will appear in your body				
10. Have you been worried that you may have cancer?				
11. Have you been worried about test result?				
12. How worried are you that you might die from cervical cancer?				
13. How worried are you that you may die?				
14. Have you been worried that your problem may turn into cancer? Sexual and reproductive consequences				
15. Have you been worried that you could give the problem to a sexual partner?				
16. Have you been worried whether a sexual partner will think they can catch the problem from you				
17. Have you been worried whether you should continue having sex?				
18. Have you been worried that this problem might affect how attractively you				

are to a sexual partner?				
19. Have you been worried whether having sex will make the problem worse?				
20. Have you been worried whether others think you have had more sexual partners than you should?				
21. How worried are you that you would lose your chance o have a baby?				
22. Have you been worried about sex being more painful now?				
23. Have you been worried that this problem might affect how much you enjoy sex?				

APPENDIX III

SUMMARY NOTES ON THE PSYCHOLOGICAL SEQUALAE OF ABNORMAL PAP SMEAR AND COLPOSCOPIC EXAMINATION

This is the research instrument for measuring psychological impact of women with abnormal Pap smear and colposcopic examination. Reference on it has been mentioned in the justification and methodology sections of the proposal. The details about its administration follow below.

Response Model and Timing

Respondents are asked to circle the number, which corresponds to the single most appropriate response for each question. The measures require approximately 20-30 minutes.

The item used to measure the psychological distress for abnormal Pap smear and colposcopic .has 23 questions divided into three domain; medical procedure embarrassment, sexual reproduction and health concern.

To arrive at the single summary score, CDDQ grouped into three domains. The following derives the three domain summary score

Colposcopic procedures six items scores point 10

Sexual and reproductive consequences fourteen items scores point 11

Health consequences six items, scores 7 point

The response options are numbered 1to 4, the respondent answer

Not at all

Somewhat

Moderately so

much very much

The question below specifies the items included in the calculation of the Cervical dysplasia distress questionnaire items with an * responses four dropped because of their distribution being highly skewed (skewed>3.0) Making them inappropriate for factor analysis.

A careful and objective assessment of these separate domains can provide useful

Information in the development of targeted intervention programs to increase adherence to follow-up procedure after abnormal Pap smear result. By providing a measure which

Presents specific types of distress both about follow-up procedures and about

Consequences related to abnormal pap, the CDDQ could be used in future research to

Provide further investigation into how specific domains of distress may influence non

Adherence to follow-up after abnormal pap smear result.

APPENDIX IVFOUR

DOMAINS QUESTIONNAIRE

Please complete the questionnaire by circling the number that best describes your feelings

Based on the scale below

1- Not at all

2- Somewhat

3 – Moderately so

4 – Very much so

Medical procedures items

Tension and discomfort

Did you find the exams uncomfortable?	1	2	3	4
Did you find the exams emotionally upsetting?	1	2	3	4
Did exam make you nervous?	1	2	3	4
Did exam hurt?	1	2	3	4
Did you feel tense?	1	2	3	4
Were you nervous?	1	2	3	4
Did you feel you had control over the Things that were done to you during the exam? *	1	2	3	4
Was your body relaxed? *	1	2	3	4
Did you feel you were in a helpless or vulnerable Condition?*	1	2	3	4

Embarrassment

Were you uncomfortable being partly undressed?	1	2	3	4
Were you embarrassed having your private parts touched by the doctor or nurse?	1	2	3	4

Sexual and reproductive consequences

How worried are you that you would lose your chance to have a baby?	1	2	3	4
Have you been worried that you could transmit the problem to a sexual partner?	1	2	3	4

Have you been worried whether you should continue having sex?	1	2	3	4
Have you been worried that this problem might affect how attractive you are to your sexual partner?	1	2	3	4
Have you been worried whether having sex will make the problem worse?	1	2	3	4
Have you been worried whether others think you have had more sexual partners than you should?	1	2	3	4
Have you been worried about sex being more painful now?	1	2	3	4
Have you been worried that this problem might affect how much you enjoy sex?	1	2	3	4

Health consequences

How worried are you that cancer will appear in your?	1	2	3	4
Have you worried about the test results?	1	2	3	4
Have you worried that you may have cancer?	1	2	3	4
How worried are you that you might die?	1	2	3	4
Have you been worried that your problem may turn into cancer?	1	2	3	4
How worried are you that you might die from cervical cancer?	1	2	3	4
Do you feel your health keeps getting worse?*	1	2	3	4

APPENDIX V
CLIENT CONSENT EXPLANATION

Title: Psychological Sequelae of Abnormal Pap smear And Colposcopic Examination
Psychological sequelae of women with abnormal Pap smear result and colposcopic examination.

Institution:

Department of Psychiatry, School of Medicine, College of Health Sciences, University of Nairobi

Researcher: Lucy Gakuya

Supervisors: Dr. D. Kathuku, Dr. J.M. Mburu, Dr. Lucy Muchiri.

Permission is requested from you for enrolment in a medical research study. You should Understand the following general principles, which apply to all in medical research, Whether normal or patient volunteers:

Your agreement to enroll is entirely voluntary

(1) You may withdraw from the study at any time
(2) Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled
(3) After you read the explanation, please feel free to ask any questions that will allow you to understand clearly the nature of the study.

Introduction: In this study, we are assessing the psychological impact of abnormal Pap smear result and colposcopic examination attending the cervical cancer clinic.

Purpose of the study:

The aim of the study was to establish the psychological impact of abnormal pap smear result and colposcopic examination for women who have been undergoing cervical cancer screening at an on going cervical cancer screening at Tigoni District hospital Kiambu. The study intends to provide information that will be useful for a psychological framework in the management of psychological distress of abnormal Pap smear, colposcopic examination and to contribute academic value to the growing knowledge of cervical cancer screening distress and concern.

Process: You will be asked questions about your age, education and other personal question.

Please answer them as honestly as possible. If there are any questions that you are uncomfortable with, you may decline to answer. You may be asked questions about your Pap smear result and the follow up process and any other procedure that may be recommended such as colposcopic and biopsy.

Confidential: In the process of the study, all the information you will provide will be kept confidential and your privacy as a respondent will be respected. Identification will be by numbers hence no names will be used in any document on this study or in its future publications.

Benefits: women identified as suffering from psychological distress will receive counseling and be referred to an appropriate specialist if appropriate. Indirect benefits will be to others such as yourself who will get an opportunity to get more information related to abnormal Pap smear result and colposcopic examination.

APPENDIX VI
CLIENT CONSENT FORM

Title: Psychological Sequelae of Abnormal Pap smear and Colposcopic Examination

I, the undersigned do hereby volunteer to participate in the study title, "PSYCHOLOGICAL IMPACT OF WOMEN WITH ABNORMAL PAP SMEAR AND COLPOSCOPIC EXAMINATION AT TIGONI SUB-DISTRICT HOSPITAL KIAMBU KENYA".

The implications of my participation, nature and purpose of the study have been fully explained to me by Lucy Gakuya (Researcher). I understand that all the information gathered will be used for purpose of this study only and will be handled with the Confidentiality required. I have been given an opportunity to ask questions concerning the study and I have received complete and satisfactory answers. I understand that I may at anytime during the course of this study revoke my consent and withdraw from the study without any penalty, loss of benefit or victimization.

Signature:---

Study No: --

Researcher's Name: --

Signature: --

Date: --