FACTORS AFFECTING UPTAKE OF CANCER SCREENING BETWEEN MEN AND WOMEN AGED 18- 49 YEARS IN NAKURU NORTH-SUB COUNTY, KENYA

ROSE KURIA

A Dissertation presented to the department of development studies in the faculty of social sciences in partial fulfillment for the award of a master degree in development studies of St. Paul's university

September, 2017.

ST. PAUL'S UNIVERSITY

FACTORS AFFECTING UPTAKE OF CANCER SCREENING BETWEEN MEN AND WOMEN AGED 18- 49YEARS IN NAKURU NORTH-SUB COUNTY, KENYA

By

SR. ROSE WANJIRU KURIA

A Dissertation presented to the department of development studies in the faculty of social sciences in partial fulfillment for the award of a master degree in development studies of St. Paul's university

September, 2017

ST. PAUL'S UNIVERSITY

DECLARATION

This Dissertation report is my original work and has not been presented anywhere for any award of degree or certificate to the best of my knowledge.

Sign …… Date……

NAME: Rose Wanjiru Kuria

This Dissertation has been submitted for the examination with our approval as the University Student's Supervisors.

Sign……. Date……

Dr Paul Gesimba

Sign……. Date……

Dr.VirigniaWangui

ST PAUL'S UNIVERSITY

TABLE OF CONTENTS

DECLARATION ii
TABLE OF CONTENTS iii
LIST OF TABLES vi
LIST OF FIGURES vii
ACRONYMS viii
ACKNOWLEDGEMENT ix
DEDICATION x
ABSTRACT xi
CHAPTER ONE: INTRODUCTION 1
1.1: Background of the Study 1
1.1.1: Health and Sustainable Development 1
1.1.2: The Burden of Cancer 3
1.2: Problem Statement 5
1.3: Purpose of the Study 6
1.4: Objectives of the study 6
1.4.1: General Objective 6
1.4.2: Specific Objectives 6
1.5: Research Questions 6
1.6 Scope of the Study 7
1.7: Justification of the Study 7
1.8: Assumptions of the Study 7
CHAPTER TWO: LITERATURE REVIEW 8
2.1: Introduction 8
2.2: Theoretical Framework 8
2.2.1 Health Belief Model 8
2.2.2 Diffusion of Innovation Theory (DIT) 11
2.3: Empirical Literature Review 12
2.3.1: Individual awareness and cancer screening 12
2.3.2: Social economic factors and cancer Screening 15
2.3.3: Social cultural factors and uptake of cancer screening 16

ST. PAUL'S UNIVERSITY

2.3.4: Access of health facility and uptake of cancer screening 17
2.4: Conceptual Framework 19
2.5: Research Gap 22
CHAPTER THREE: RESEARCH METHODOLOGY 23
3.1: Introduction 23
3.2: Research Design 23
3.3: Target Population 23
3.4: Sample Design and Sampling Procedures 23
3.4.1: Sampling Design 23
3.4.2: Sampling Procedure 25
3.5 Data Collection Instruments and Method 26
3.5.1: Validity 26
3.5.2: Reliability 26
3.6: Data Analysis and Presentation 27
3.7: Research Ethics 27
CHAPTER FOUR 28
ANALYSIS, INTERPRETATION AND PRESENTATION 28
4.1: Introduction 28
4.1.1: Response Rate 28
4.2: Background Information 28
4.3: Individual awareness and the uptake of cancer screening 32
4.4: Social economic factors and the uptake of cancer screening 41
4.5: Access to health facility and the uptake of cancer screening 47
CHAPTER FIVE 54
SUMMARY, CONCLUSION AND RECOMMENDATIONS 54
5.1: Introduction 54
5.2: Summary of major findings 54
5.2.1: Effects Individual awareness on the uptake of cancer screening 55
5.2.2: Social economic factors influencing the uptake of cancer screening 58
5.2.3: Effect of Access to health facility on the uptake of cancer screening 60
5.3: Conclusion 62
5.3.1: Effects of Individual awareness on the uptake of cancer screening 62

ST. PAUL'S UNIVERSITY

5.3.2: Social economic factors influencing the uptake of cancer screening 64
5.3.3: Access to health facility and the uptake of cancer screening 66
5.4: Recommendations 67
5.5: Areas of Further Studies..... 68
REFERENCES 69
APPENDICES i
APPENDIX I: INFORMED CONSENT FORM i
APPENDIX II: QUESTIONNAIRE iv
APPENDIX III: KEY INFORMANT INTERVIEW GUIDE x
APPENDIX IV: RESEARCH PERMIT xii
APPENDIX IV: AUTHORIZATION LETTER xiii

ST. PAUL'S UNIVERSITY

LIST OF TABLES

Table 3.1: Sampling Frame.....25

Table 4.2 Response Rate.....28

Table 4.3 Age Distribution of the respondents.....29

Table 4.4 Highest level of education.....30

Table 4.5 Source of information about cancer.....34

Table 4.6 Participation in cancer sensitization forums.....38

Table 4.7 Occupation of the respondents.....41

Table 4.8 Monthly income.....42

Table 4.9 Rating the cost of cancer screening.....45

Table 4.10 Access time.....49

Table 4.11 Outreach programs.....52

ST. PAUL'S UNIVERSITY

LIST OF FIGURES

Figure 2.1 Health Belief Model 9

Figure 2.2 DIT Model 12

Figure 2.3 Factors affecting uptake of cancer screening among men and women 21

Figure 4.4 Gender distribution of the respondents 30

Figure 4.5 Undertaking cancer screening test 31

Figure 4.6 Frequency of cancer screening 32

Figure 4.7 Different the types of cancers 33

Figure 4.8 Early detection of cancer 36

Figure 4.9 Awareness of training programs on cancer 37

Figure 4.10 Cancer screening services 39

Figure 4.11 Risk of developing cancer 40

Figure 4.12 Transport Cost 43

Figure 4.13 Health care insurance cover 44

Figure 4.14 Clash of economic activities with clinic appointment 46

Figure 4.15 Awareness of facilities offering cancer screening 47

Figure 4.16 Distance to the nearest health facility 48

Figure 4.17 Healthcare providers' competence 51

ST. PAUL'S UNIVERSITY

ACRONYMS

GoK	-Government of Kenya
HBM	-Health Belief Model
KEMRI	-Kenya Medical Research Institute
KII	-Key Informants' Interviews
MDGs	-Millennium Development Goals
MoH	-Ministry of Health
NCD	-Non-Communicable Diseases
SDGs	-Sustainable Development Goals
SNSN	-Sustainable Development Solutions Network
TB	-Tuberculosis
WHO	-World Health Organization

ST. PAUL'S UNIVERSITY

ACKNOWLEDGEMENT

First, is glory and praise to God almighty for granting me good health, knowledge and wisdom throughout my studies. Secondly, sincere gratitude to my Religious superiors, in particular Rev.Mother Cecilia Njeri for giving me time out to study and for paying my school fees.

Am greatly indebted to my supervisors, Dr. Paul Gesimba and Dr. VirginiaWangui for their support, constructive criticism, motivation, immense knowledge, dedication and wise professional guidance.

Special thanks to my family members for their moral support, and to my community members for their patience and prayers throughout my study period. Sincere gratitude to my colleagues for their team spirit and effective networking.

Lastly and not least to all the staff at St Paul's University Nakuru campus, thank you all for making life bearable at all corners of the campus. May God bless you all with good health and peace.

ST. PAUL'S UNIVERSITY

DEDICATION

This research is dedicated to my late mother, EdithWanjeri Kuria, who died of throat cancer diagnosed in its last stages. Rest in eternal peace Dear Mum.

ST. PAUL'S UNIVERSITY

ABSTRACT

The paper intended to investigate factors affecting uptake of cancer screening in Nakuru North Sub-County. The specific factors that were being investigated included; individual awareness, socio-economic factors, and access to health facility. The study employed cross-sectional research design. The Health Belief Model (HBM) was the basis of this study. The model assumes that individuals fear diseases and that the health exercises of people are impelled by the level of pre-perceived hazard (fear) and the ordinary fear diminish action, the length of that possible diminishment surpasses physical and mental limits to making a move (net points of interest) to support interest in profitable health exercises. It was also pinned on the Diffusion of Innovation Theory which requires that the prescribed health behavior (uptake of cancer screening) as a new ides should be characterized by relative advantage, compatibility, complexity Triability and Observability. The target population of the study was the144, 266 men and women aged 18-49 years in Nakuru North Sub-County. The sample size was 384 men and women aged 18- 49 years. A mixture of probability and non-probability sampling techniques were used including stratified random sampling, systematic random sampling and purposive sampling procedures. Key informants including healthcare providers, ministry of health officials and local leadership were also sought using purposive sampling procedures. This study utilized questionnaires and key informant interview guide for data collection. The study also used secondary data from Nakuru Sub-County statistics office on cancer screening data for the last five years (2011-2015). Qualitative data from key informants' interviews (KIIs) was analyzed using content analysis. Quantitative data was evaluated using descriptive statistics Graphical presentations, charts and tables were used to present the data analysed. The study observed various research ethics including anonymity, confidentiality, and privacy, consenting and seeking permission from the relevant authorities to conduct the research. From the findings, it was established that individual awareness, access to health facility and socio-economic factors had a positive significant relationship with uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-county. The most significant factor influencing uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub-County is socio-economic factors, followed by individual awareness and access to health facility respectively. The study recommends that the government in partnership with its health programs partners to consider conducting regular national-wide cancer sensitization campaigns. The government to consider subsidizing the cost of cancer screening, in order to encourage and motivate its uptake. The access to health facility should be scaled up by the management of health facilities and the government using a hybrid approach.

ST. PAUL'S UNIVERSITY

CHAPTER ONE:

INTRODUCTION

1.1: Background of the Study

This section has two sub-sections; that is, the link between health and development and a critical look at the burden of cancer in the economies of the world.

1.1.1: Health and Sustainable Development

By encouraging decent wellbeing at all stages of human life, the profits of development reach out to all generations (WHO, 2015). Investments in essential primary health services can advance wellbeing over every single social gathering and decrease health imbalances inside and between nations. Enhancing performance of health frameworks by improving money related and human resources, fitting utilization of innovation, group strengthening and great administration will propel this plan (Ichaminya, 2015). The potential for giving huge scale work as forefront health laborers, especially to women and young people, ought to be used to reinforce the economy and enhance health administrations (Sule, 2011).

As indicated by the Lyimo (2012) by organizing supportable improvement, societies settled to work on four areas: financial improvement like the annihilation of extraordinary destitution, social consideration, and maintainability, credible and reliable administration of public funds. Health is naturally essential as a human right, but at the same time is basic to accomplishing these four columns of development.

National goals for financial development can't be accomplished without a solid and beneficial populace. While medical advantages from monetary development, its esteem as a basic impetus for advancement prompted to health-related objectives being halfway situated in the MDGs. infant and maternal mortality turned into a measure of a country's general advancement, alongside destitution destruction, the strengthening of women, and natural maintainability. In the meantime, it was recognized that battling the spread of HIV/AIDS and lessening the weight of TB and intestinal sickness was basic to human advance, as these illnesses excessively affect the improvement capability of many nations (Cox, 2010).

ST. PAUL'S UNIVERSITY

Additional proofs of the significance of health to maintainable advancement are the developing number of reports, (for example, the WHO Commission on Macro-economics and Health underlining the requirement for more prominent interests in health through financing. These reports have highlighted the multiplier impacts of interest in health and the 'cost of disregard from preventable death and incapacity, stressing the need to address not simply ailments but rather the more extensive measurements is determinants of health. As the world gets ready to detail and embrace Sustainable Development Goals (SDGs), the health objective proposed by the SDSN (Achieve Health and health At All Ages) must be perceive as crucial to worldwide improvement. Indeed, even as monetary improvement is sought after with force by world that desires to switch the financial downturn of the previous five years, it must be plainly perceived that financial and social advance cannot be secure or maintainable if adequate speculations are not made to ensure and advance the health status surprisingly over the world (WHO, 2015).

According to Mwai (2014) poor populace health, existing and other illnesses, medicate resistance, and powerless general health readiness and reaction frameworks likewise posture dangers to Kenya's financial, exchange, and political interests. The fortifying of general health frameworks and limits will moderate and deal with these dangers, both locally and all inclusive, and ought to be a key need for health ventures. Ailment dangers that cross outskirts and influence entire populaces incorporate preventable irresistible sicknesses, for example, measles, tuberculosis (TB), intestinal sickness, HIV, human and creature to-human flu viruses, and expanding drug-safe strains of jungle fever and TB (GOK, 2010). Components, for example, fast urbanization and populace development inside and crosswise over nation outskirts are expanding in our district. These expansions the danger of illness flare-ups, as do normal calamities, yet our area is not all around arranged to deal with these health risks. A late World Health Organization (WHO) appraisal of Ebola readiness in the district demonstrated that most low-wage and center wage nations don't have the ability to react sufficiently to illness episodes (WHO, 2015).

The Ministry of Health in 2010 watched that regardless of the way that non-communicable illnesses, for example, cardiovascular sicknesses, cancer, diabetes and ceaseless respiratory infections are on the expansion, the health frameworks in the

ST. PAUL'S UNIVERSITY

nation have customarily focused on the counteractive action and control of transmittable illnesses. Therefore, health and advancement plans have not sufficiently put resources into the aversion and control of these ailments. The quiet pestilence of non-communicable illnesses now forces a 'twofold weight of sickness' to the nation which unless it is tended, it will over whelm the nation sooner rather than later. This predisposition in the framework has brought about shortcoming in projects that ought to address non-transferable infections and their risk figures in the nation (GOK, 2010).

1.1.2: The Burden of Cancer

Cancer is a main source of death around the world. As indicated by the World Health Organization, the infection represented 7.9 million deaths (around 13% of all deaths around the world) in 2009. More than 70% of all cancer deaths happen in third and 2nd world nations i.e. low and middle-income nations. The general spread of Cancer on the planet is anticipated to keep rising, especially in creating nations. It is anticipated that an expected 15.5 million individuals will be analyzed, and 12 million will die of cancer by the year 2030. The yearly mortality credited to fundamental sorts of cancer incorporates: lung disease (1.3 million deaths); breast Cancer (803 000 deaths); colorectal cancer (639 000 deaths); liver Cancer (610 000 deaths); breast disease (519,000 deaths); cervical cancer (450,000); and oesophageal cancer (380,000). The most successive sorts of cancer among men influence the lung, stomach, liver, colorectal, throat and prostate. Among women the most widely recognized territories influenced are breast, lung, stomach, colorectal and cervix (WHO, 2010).

The yearly frequency of cancer all around is evaluated to be 10 million. Of these 4.7 million are in 1st world (developed nations) while about 5.3 million are in the 2nd and 3rdworld (developing nations). In created nations, Cancer is the second most major reason for death after cardiovascular conditions and epidemiological confirmation focuses to the rise of a comparable pattern in creating nations. The chief components adding to this anticipated increment in cancer are the expanding extent of elderly individuals on the planet (in whom Cancer occurs more much of the time than in the youthful), a general decrease in deaths from transmittable diseases, the decrease in a few nations in mortality from cardiovascular ailments, and the rising rate of specific

ST PAUL'S UNIVERSITY

types of cancer, eminently lung disease coming about because of tobacco utilize. Around 20 million individuals are bursting at the seams with cancer at present, and by 2020 this number is anticipated to increment to more than 30 million (WHO, 2010).

Murray (2006) presents that the underlying analysis of Cancer is seen as an existence debilitating occasion, with more than 33% of patients, encountering clinical uneasiness and misery. Cancer is likewise upsetting the family significantly, influencing both the family's day by day working and monetary circumstance. The financial stun incorporates both the loss of salary and the costs connected with medicinal services costs.

The main diseases in women are breast, throat and cervical Cancer. In men, throat and prostate cancer and Kaposi sarcoma are the most well-known diseases. In light of 2002 information from the Nairobi Cancer Registry, of the considerable number of diseases enrolled stomach Cancer represented 23.3%, cervical cancer for 20% and prostate cancer for 9.4%. In 2006, around 2,354 women were determined to have cervical Cancer and 65% of these died on of the sickness (GOK, 2010).

As indicated by Muchiri (2015) the quantity of deaths brought about by disease as a share of aggregate deaths has been expanding after some time, aside from the year 2011, in which there was a noteworthy drop with Cancer deaths representing 6.31% of all deaths. In 2012, one in 14 deaths was brought about by disease. It is that year when death rate from cancer was least, bringing on 29 deaths for each 100,000. The rate rose to right around 31 for each 100,000 the next year and came to 33 deaths for each 100,000 Kenyans in 2014.

Sen (2007) revealed that the many lives lost and incapacitated from lung, colon and breast cancer represent the biggest monetary expenses on a worldwide scale. In middle-income nations, tumors of the mouth and throat, cervix and breast have the most-huge effect. The effect is additionally significant among people and families particularly in low and medium wage nations where loss of wage because of ailment or demise can rapidly undermine family accounts. Actually, Mwai (2010) in his review on the monetary impacts of Non-Communicable Diseases (NCDs) in Kenya found that NCDs have a much greater toll on family unit pay than the general illnesses. While general sicknesses decrease family unit salary by 13.63 for each

ST. PAUL'S UNIVERSITY

penny, NCDs diminish wage by 28.64 percent. What's more, family units with NCDs are 51.35 for every penny more prone to acquire disastrous uses contrasted with families harassed by transmittable infections. The chances of impoverishment are 48.97 for each penny higher among NCD families contrasted with family units that experience the ill effects of general ailments. Focused on aversion and treatment systems pointed these and other preventable types of tumors could spare lives, as well as enhance monetary advancement prospects in numerous countries. Writing has ordered malignancy screening as both an essential and auxiliary aversion system (Wardle, Robb, Vernon, & Waller, 2015). Notwithstanding, the take-up of tumor screening administrations has stayed low among the people. This review goes for exploring the components influencing the take-up of malignancy screening administrations in Nakuru-North Sub-area.

1.2: Problem Statement

According to WHO (2015), the cancer burden is higher than the burden of HIV, TB and Malaria combined. The situation is even worse as seventy percent of the disease burden is in developing countries. Therefore, cancer screening is a critical strategy in mitigation and coping with cancer burden. In Kenya, cancer is rated as the third highest cause of morbidity and responsible for 7% of deaths. The country witnesses 39,000 new cancer cases annually and 60% of cancer patients are young and productive population aged below 70 years. Therefore, Kenya is diverting its budget from economic development to cancer care (MOH, 2015). Therefore, understanding the issues distressing the uptake of cancer screening among the Kenyan public would enable the government make significant gains in its anti-cancer initiatives.

Studies on cancer screening remains non-conclusive in Kenya and especially in Nakuru County hence a knowledge gap exists. The existing local studies on cancer screening mainly focused on one type of cancer and one gender. For instance, Muchiri (2015)focused on breast cancer while Kibicho (2015),Ichamiya (2015), Gachogo (2012) and Were *et al*. (2011) focused on cervical cancer.The highlighted studies never covered more than one type of cancer or Nakuru Sub-County. Informed by this knowledge gap, this study therefore, sought to investigate factors affecting uptake

ST PAUL'S UNIVERSITY

cancer screening among men and women aged 18- 49 years in Nakuru North-Sub County, Kenya.

1.3: Purpose of the Study

The purpose of the study was to determine factors affecting the uptake of cancer screening between men and women aged 18- 49 years in Nakuru North Sub-county, Kenya.

1.4: Objectives of the study

1.4.1: General Objective

To investigate factors affecting the uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub-county, Kenya.

1.4.2: Specific Objectives

i. To analyze the effects of individual awareness on the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-County.
ii. To determine the effects of social economic factors on the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-County.
iii. To assess the effects of the access to health facility on the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-County.

1.5: Research Questions

i. What is the effect of individual awareness on the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-County?
ii. What is the effect of social economic factors on the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-County?
iii. What is the effect of the access to health facility on the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-County?

ST. PAUL'S UNIVERSITY

1.6 Scope of the Study

The researcher pursued to investigate the factors prompting the take-up of cancer screening services in Kenya, however because of time and budgetary constraints, the study covered Nakuru North Sub-County. The study likewise focused on individuals from population aged between 18 to 49 years as this was a high-risk population and had a more prominent probability of profiting from malignancy screening services.

1.7: Justification of the Study

The study results may provide useful insights to the government and its associates in formulating cancer related policies to promote early cancer screening and facilitate cancer care. The NGOs and private sector players who may be planning to implement cancer screening programmes. Finally, this study contributes to the body of knowledge with regard to factors influencing the uptake of cancer screening.

1.8: Assumptions of the Study

This study assumed that the study would achieve its objective and that the identified factors significantly influenced uptake of cancer screening. The study additionally assumed that the men and women would be willing to participate in the study. It was further assumed that the respondents were knowledgeable on the study topic of inquiry.

ST. PAUL'S UNIVERSITY

CHAPTER TWO:

LITERATURE REVIEW

2.1: Introduction

The section presents reviewed literature related to the relationship between individual awareness, socio-economic factors and access to health facility and cancer screening uptake. The conceptual framework and research gap are presented later in the chapter.

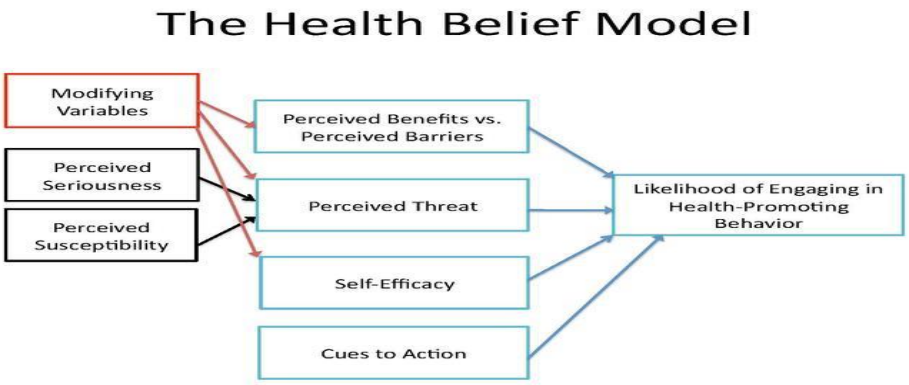
2.2: Theoretical Framework

2.2.1 Health Belief Model

The Health Belief Model (HBM) which is the basis of this study was initially presented by a gathering of therapists in the 1950's to clarify why individuals would or would not utilize accessible preventive administrations. The Health Belief Model is a mental model that endeavors to clarify and foresee health practices by concentrating on the states of mind and beliefs of people. The model was created as a component of an exertion by social analysts in the United States Public Health Service to clarify the absence of open investment in health screening and avoidance programs. In this study the model has been utilized to clarify variables influencing cancer screening administrations take-up. In this model, the scientists accepted that individuals dreaded diseases and that the health activities of individuals were inspired by the level of dread and the normal dread diminishment of activities, the length of that conceivable decrease exceeded reasonable and mental hindrances to making a move (net advantages) (Irwin, 2004).

ST. PAUL'S UNIVERSITY

Figure 2.1 Health Belief Model



Source: Irwin (2004)

The model assumes that individuals fear diseases and that the health exercises of people are impelled by the level of pre-perceived hazard (fear) and the ordinary fear diminish action, the length of that possible diminishment surpasses physical and mental limits to making a move (net points of interest) to support interest in profitable health exercises.

Assumed severity of ailment suggests that individual appraisal of the earnestness of a restorative issue and its probable results (Janz& Marshall, 2004). The health belief model recommends that persons who see a given therapeutic issue as real will most likely participate in practices to keep off the threat of ill health from happening (or lessening its earnestness).Realialities of ill health incorporates values about the disorder itself (e.g., whether it is life-weakening or may achieve failure or torment) and furthermore more broad impacts of the ailment on working in work and social parts (Irwin, 2004).

Becker (2007) portrays considered powerlessness to be the subjective assessment of risk of working up a medicinal issue. The health belief show predicts that individuals who see that they are vulnerable to a particular therapeutic issue will participate in practices to lessen their peril of working up the restorative issue. Individuals with low observed shortcoming may deny that they are at risk for getting a particular infection. Others may perceive the probability that they could develop the sickness, yet believe it is fantastical. Individuals who believe they are at by and large safe of working up an

ST. PAUL'S UNIVERSITY

illness will most likely partake in undesirable, or dangerous, rehearses. Individuals who see a high risk that they will be really affected by a particular restorative issue will presumably participate in practices to lessen their peril of working up the condition (Stretcher, 2007).

The health belief model visualizes that advanced hazard prompts to greater chance of commitment in health practices. Health related practices are influenced by the clear favorable circumstances. The perception of verifiable benefits implies that,aperson's evaluation of suitability of complying with the advocated health behavior to diminish threat of the disease (Donald, 2010). In case an individual trust that a particular action will decrease vulnerability to a therapeutic issue or lessening its world, then he or she is presumably going to participate in that lead paying little regard to target truths with respect to the suitability of the movement (Bulaporn& Clark, 2007).

Measurement variables consolidate age, sex, race, ethnicity, and guideline, among others. Psychosocial components consolidate character, social class, and partner and reference hoard weight, among others. Essential elements join finding out about a given illness and before contact with the contamination, among various segments. The health belief show recommends that conforming variables impact health related practices by suggestion by affecting saw genuineness, feebleness, preferences, and preventions (Donald, 2010).

The health belief demonstrates places that a flag, or trigger, is basic for inciting engagement in health propelling practices. Signs to action can be inside or external (Karen, 2008). Physiological signs (e.g., torment, appearances) are an instance of internal signs to movement. External signs fuse events or information from close others, the media, or social protection providers propelling engagement in health-related practices. Instances of signs to health behavior change fuse an upgrade postcard from a dental professional, the infection of a side kick or relative, and thing health forewarning marks. Theconstrain of signs anticipated that would incite action changes between individuals by observed shortcoming, reality, preferences, and obstructions (Rimer, 2008).

The Health Belief Model does not mull over different components, for example, natural or monetary variables, that may impact health practices (Karen,

ST. PAUL'S UNIVERSITY

2008).Secondly, the model does not fuse the impact of social standards and associate impacts on individuals' choices with respect to their health practices (Rimer, 2008). In spite of this confinement, this study embraced this model since it well clarifies certain health conduct; it has likewise guided the look for "why" these practices happen and to distinguish focuses for conceivable change. Utilizing this system, change procedures can be planned, for example, creating messages that are probably going to influence women to settle on solid choices. Utilizing the HBM, messages that are reasonable to health training for cancer screening and other positive conduct change can be developed (Irwin, 2004).

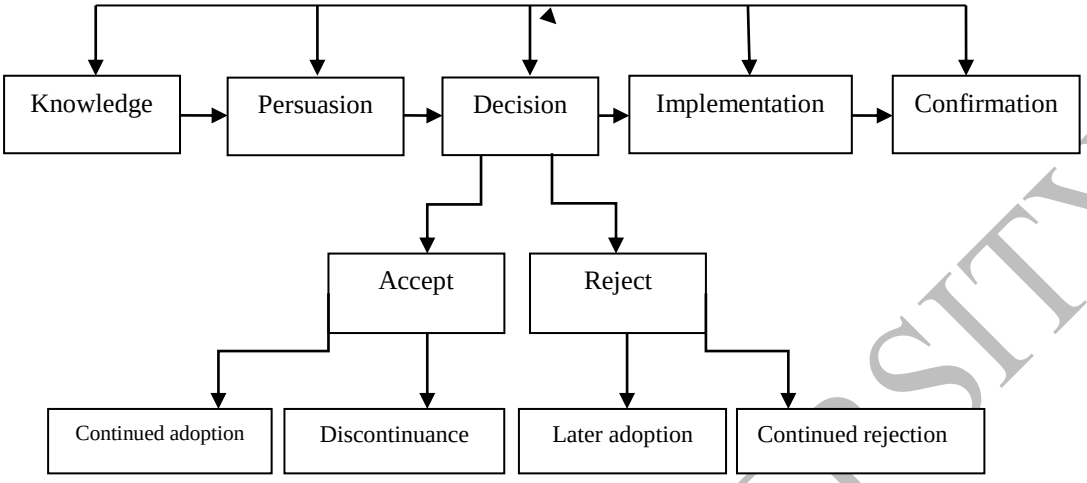
2.2.2 Diffusion of Innovation Theory (DIT)

Rogers (2003) posits that the Diffusion of Innovation Model explains the process by which an innovation takes before it is accepted and adopted. The theory proposes five basic characteristics: (1) *Relative advantage* is the trait that shows that the new idea is better than the idea it precedes.(2) *Compatibility*, how consistent the innovation is with the values, experience and need of adoption (3) *Complexity*, which is the degree to which an innovation can be effected; (4) *Triability* is the extent to which the new idea can be pilot-tested within a limited basis; (5) *Observability*, is the possibility of the innovation bringing out results readily.

As already mentioned, diffusion of an innovation happens through a five-stage process: learning, influence, choice, usage and affirmation. The phase of Knowledge infers that an individual is initially presented to advancement but since he needs data about the development, the individual has not been roused to look for more data on it. The second step, that includes influence, guarantees that the individual is occupied with the development and effectively looks for data or insight about the advancement. On this premise, the individual can settle on a choice on whether to embrace or reject the development, individual utilizing the development to a differing degree relying upon circumstances. Affirmation is the last stride, in which the individual concludes his/her choice to keep utilizing the development and may utilize it to its fullest potential (Rogers, 2003).

ST PAUL'S UNIVERSITY

Figure 2.2 DIT Model



Source: (Rogers, 2003)

The opinion leaders have not been largely involved in cancer screening campaigns. These includes; politicians, church and community leaders and educationists and NGOs given their managerial role in their respective entities and places.

2.3: Empirical Literature Review

2.3.1: Individual awareness and cancer screening

Knowledge on signs and symptoms, diagnosis, treatment and prognosis of cancer is of paramount importance in order to push to bring issues to light of cancer and lessen the infection's burden. Many studies have taken a gander at how information and mindfulness on disease impacts the appreciation of cancer screening among women. A study that assessed mammary glands awareness among women recently analyzed breast malady at University healing center in South Africa, uncovered diminished breast cancer mindfulness and thus low rates of personal and medical examinations of the mammary gland tumors and lessened mammographic screening rates. The target of the study was to survey the level of breast cancer mindfulness among women were recently analyzed with breast illness at University Hospital in Bloemfontein, South Africa. Reports of initiated campaigns on uptake of cancer screenings impacts held on April to June 2006 were obtained from Cancer Association of South Africa. Information was likewise acquired by method for questioner managed organized polls, The outcome demonstrated the examination and screening practices of women

ST. PAUL'S UNIVERSITY

recently analyzed with breast illness at the University Hospital were for the most part very low. This might be credited to a general absence of attention to the rising frequency of breast cancer in the Free State among both people in general and human services experts. (Matatiel&Heever, 2008).

An elucidating study led mutually at one open part and one private clinic of Nawabshah, Pakistan to survey elements in charge recently presentation of breast cancer uncovered that most instances of breast cancer displayed in cutting edge arrange likely because of poor financial status, absence of education and carelessness by patients or their relatives and general professionals. Inspecting procedure was advantageous examining for the time of 5 years amid which every one of the patients of breast cancer displayed in the two doctor's facilities was contemplated. (Altaf, Abdul, Abdulghaffar&Ali, 2011).

Ahuja and Chakrabarti (2010) decided the level of information with respect to breast cancer and to expand mindfulness about breast cancer screening done among a gathering of women in a tertiary care in Mumbai India. The points was to decide the level of information with respect to breast cancer and to gauge breast self-examination (BSE) execution in a gathering of 80 women matured 40 years or more. They led a traverse a time of two months initiating on August first 2009 and closure on 30th September 2009. 80 women were met by method for an organized poll. This study uncovered that the respondents needed information of fundamental issues identified with breast disease and that routine of Breast Self-Examination was insufficient. It additionally uncovered that specialists were not pending in giving data to the overall population with respect to breast health. Spreading mindfulness among the overall population is the need of great importance and ought to be pushed by method for compelling instructive projects.

Sule (2011) in his review to explore breast malignancy mindfulness and breast examination hones among ladies in a Niger delta healing facility among the patient populace going by the general out-patient bureau of Central Hospital Warri demonstrated that the act of self- breast examination was fundamentally connected with past breast grievances, a past breast technique, past clinical breast examination and having a relative or colleague with breast cancer. The review utilized questioner

ST. PAUL'S UNIVERSITY

directed survey intended to evaluate the familiarity with breast malignancy and breast examination practices of the ladies going by the outpatient bureau of the doctor's facility.

In Kenya, a review led to survey Knowledge and practice about cervical cancer and Pap spread testing among cervical breast and non-tumor patients utilizing an organized poll to acquire data at Kenyatta National Hospital. It uncovered that fifty-one percent of the respondents knew about cervical breast while 32% thought about Pap spread testing. There were no huge contrasts in information between cervical tumor and non-disease patients and in both cases the level of learning was observed to be low.

A review by Lyimo and Beran(2012) done in Moshi Tanzania taking a gander and no more vital components identified with the take-up of screening among 354 ladies matured in the vicinity of 18 and 69 uncovered that, the greater part (59.6%) of the members had a low level of learning of cervical tumor and its avoidance. In this review, just 80 (22.3%) ladies announced having been screened. The review likewise demonstrated that those with the most elevated amount of information about cervical malignancy and its aversion would probably be screened than those with low or medium level of learning (Lyimo, Beran, 2012).

In another review in Ghana by Abotchie and Shokar among understudies on information and wellbeing convictions on cervical breast there were crevices in learning about hazard elements and screening interims. Human Papilloma-virus is the most imperative hazard consider for creating cervical disease as indicated by the American tumor society yet just 7.9% of the members in this review thought about HPV (Abotchie, 2009).

In Kuwait, a review whose goal was to evaluate the information, state of mind and work on with respect to cervical disease screening discovered that of the 300 wedded arbitrarily chosen ladies, just 23.6% had sufficient demeanor and practice towards the test individually. The Kuwait concentrates likewise uncovered that the principle explanation behind not having a Pap test was on account of it had not been recommended by the specialist. This demonstrates ladies have restricted learning on the significance of the screening test (Mona & Farida, 2009).

ST. PAUL'S UNIVERSITY

In Bangladesh, a subjective review on group impression of cervical breast and cervical disease screening among 220 men, ladies and kids discovered that consciousness of cervical tumor was broad among the group yet information on its causes was lacking (Ansink, 2008).

In Kenya, a review done at the Kenyatta National Hospital (KNH) found that about half (51%) of the individuals thought about cervical tumor and only 32% contemplated Pap spread testing. There were no colossal complexities in learning between cervical illness and non-disease patients. In this review, only 22% of the extensive number of individuals had ever been screened (Gichangi, 2003).

2.3.2: Social economic factors and cancer Screening

Studies have shown that breast tumor screening take-up might be affected by socio - economic and social factors that incorporate; income status (Bouchardy*et al*., 2006) and financial hardship (Alice *et al.,* 2008). What's more, a few reviews have found that the conflict of financial exercises with center arrangement times can prompt to low take-up of cervical disease screening. Neediness is additionally one of the elements related with low take-up since the cost of screening has been observed to be high. For example, a review in Camden London among ethnic Somali ladies found that the conflict of center arrangement time with market days and youngster mind needs were related with low take-up of screening (Abdulahi*et al.*, 2009).

The initiative to undertake cervical disease screening is considered to be highly influenced by money related factors. Subjective reviews driven in India, South Africa and Uganda observed that most ladies who were advanced in age, had low purchasing power were unlikely to uptake cervical cancer screening due to financial handicap (ACCP, 2004; Bradly*et al*., 2004; Kaku*et al*., 2008; Satija, 2009; WHO, 2010). In a subjective review done in Uganda, Mutyaba*et al.* (2007) certify that being financially empowered motivates the uptake of cervical cancer screening uptake among women and information seeking on the same. While Satija (2009) and Kaku*et al.* (2008), observed that strained budgetary position, intrudes with sticking to treatment regimes and continuity of cervical tumors management. This worsens the prognosis position and increases morality rates. Kagumire (2010) found that a good number of women

ST. PAUL'S UNIVERSITY

could not afford the travel cost to health facilities or to the central referral cancer screening centre in Uganda.

2.3.3: Social cultural factors and uptake of cancer screening

Findings in UK and South Asia demonstrate that social belief and recognitions impact take-up of cancer screening (Nicky, 2005; Cox, 2010). These studies uncovered that dark minority ethnic gatherings in United Kingdom and South Asian women deem cervical cancer as being created by indiscrimination; in this manner, it is viewed as a forbidden, or an only discipline from supernatural being. As an after effect of these view points, a major extent of women modest far from screening since they would prefer not to be connected with such an infection, to the point that is viewed as a revile from God. Numerous different studies have additionally reported shame when seen looking for tend to cervical cancer, disgrace, and brought down self-regard when one gets a negative outcome (International Agency for Research on Cancer, 2005; Kitchener *et al*., 2006; Cann, 2008).

Also, a UK based review reported that women had dread of getting strange screening comes about due to tension connected with such outcomes (Nakalevu, 2009). The women guaranteed that irregular outcomes would have serious impact on everyday working prompting to discouraged disposition, diminished charisma and sentiment less appealing, discolored, polluted or sullied and filthy emotions. Likewise, in this study, it was uncovered that Pakistani Muslims were not happy with taking care of a specialist from the same social foundation they would just come for a spread test if the specialist was not of the same social foundation because of a paranoid fear of being discovered.

Studies on that investigated culture demonstrate that social sexual orientation parts and practices of women may likewise influence the take-up of cancer screening (Katahoire*et al.,* 2008; Markovic*et al.,* 2005; Cox, 2010). For instance, a fact-finding study that was directed in Uganda uncovered that cervical disease being a disorder influencing women' sexual and conceptive health was probably going to be covered peacefully since these are matters that are socially seen to be secretive and can't be transparently talked about out in the open (Katahoire*et al.,* 2008). Along these lines,

ST. PAUL'S UNIVERSITY

women discovered trouble in getting to data notwithstanding when they encountered cervical cancer like side effects.

Singh and Badaya (2012) asserted that the study respondents saw cervical cancer ailment as a traditional‖ malady. On depicting side effects like unnecessary vaginal draining many clarified it as an ordinary wonder of monthly cycle with some draining intemperate and some less. On inquisitive for late answering to the healing center a few members contended that disease in females is a customary marvel which each lady needs to confront. In this manner, elderly women in group saw cancer screening by more youthful women as an approach to dispose of self-pharmaceuticals to go to specialist which was a misuse of cash and time.

2.3.4: Access of health facility and uptake of cancer screening

In Kenya, cancer screening happens, however just in isolated health facilities, with a very few populace appreciating the initiative and adapting it as a preventive measure as opposed to an undeniable national-level program. This clarifies why screening scope remains irrelevant. Moreover, there is absence of extra analytic and treatment alternatives at the optional levels of care. Moreover, the connection amongst screening and cancer management has be insignificant (NCCPP, 2006). The primary difficulties to expanding access to cancer screening administrations incorporate deficient gear and supplies; absence of treatment offices when there is pre- cancer or disease conclusion; lacking observing and assessment, particularly information accumulation and administration. The HPV antibody that could be utilized as a part of essential counteractive action of cervical cancer is additionally not gave as a major aspect of the national immunization and vaccination program (Morema*et al.,* 2014).

As indicated by Nyaberi (2007) the take-up of cancer screening is a component of, accessibility of established health faculty in all areas of the nation to ensure that cancer screening and treatment administrations, supportive supervision and facilitation to include, refresher courses and updates and on job training and appraisal are undertaken regularly, to empower them to keep up or improve their aptitudes. It likewise incorporates, retaining experienced staff to guarantee efficient accessibility. They had to reinforce persistent backing in universal settings to manufacture a worldwide grassroots development that depicts exact impression of cancer; keep

ST. PAUL'S UNIVERSITY

shame from hindering individuals in their cancer control endeavors; individuals influenced by cancer get the support, administrations, and data they require, all of which will help in diminishing the worldwide disease load (Ngau, 2014). A call/review framework in view of individual solicitations is thought to be a key component of a sorted-out program in Europe. Wellsprings of such records shift amongst nations and incorporate populace registries, health administration registers, general specialists' (GPs) medicinal documents, appointive registers and others.

Typically, women who are listed as never ever had a cytological test inside the selected bracket are included. This coordinated' approach helps avoid rescreening women already exhausted by the exercises (Coleman *et al.,* 2003). It needs complete enlistment of cytological evaluation, including pioneering tests, at the populace level. In some Italian projects, all women are welcomed autonomously of their screening history (Ronco*et al.,* 2008). This line of study might be utilized if cytology enrollment is fragmented or in the event that it is would have liked to alter the unconstrained recurrence of screening. In Finland, the sorted-out program welcomes all women; until the 1990s, all smears from the composed program were broke down in research centers keep running by the Cancer Society of Finland (Nieminen*et al.,* 2002).

PATH (2004) completed in western Kenya, contends that cancer counteractive action ought to be coordinated into existing MCH/FP administrations, Comprehensive care centers, and routine gynecology administrations. This is on the grounds that cancer counteractive action administrations utilize staff and different assets, for example, materials, space, gear, supplies, and reporting frameworks, like those in these administration territories. The outcome will be a savvier, more effective to oversee, more advantageous and adequate administration for customers. Be that as it may, to build the odds of achieving the 70% scope, composed mass screening exercises ought to likewise be attempted.

A solitary visit and treat (SVA) approach is suggested. Where SVA is unrealistic because of inaccessibility of provisions, hardware or prepared work force, or in situations where other diagnosis methods e.g. cytology are utilized, the suggested benefit model will be a screen-re-assess/analyze - and-treat approach for pre-carcinogenic sores (now and then alluded to as; see, see, and treat). This includes

ST. PAUL'S UNIVERSITY

screening routinely at the essential level took after by referral of screen-positive customers to the auxiliary level where uncommonly prepared suppliers can recheck or monitor and evaluate the procedure and may be seek a second option where necessary(NCCP,2012).

National Reproductive Health approach (2006) suggests that, the administration ought to benefit cervical cancer screening administrations at the essential medicinal services level where the dominant part (80%) live. This essential social insurance ought to include: locale doctor's facilities, health focuses, dispensaries and religious offices. Were (2011) contends that the administration ought to fortify referral framework for cervical cancer program (linkages); enhance office and group health data framework; enhance/reinforce correspondence framework between the diverse levels; and build up a referral catalog to empower access to take-up of screening cervical disease.

Conceptive Tract Cancer Program (2010) composed model to give women an integrated service during one visit to the clinic to minimize the quantity of visits, that is make the health facility a one stop shop where all their health concerns are addressed. As indicated by Buziba*et al* (2011) cervical cancer screening ought to be coordinated into other RH outreach exercises e.g. amid coordinated RH/FP camps, and battles amid the cancer mindfulness month with a specific end goal to achieve more women particularly in difficult to achieve ranges. Openness is a variable that ought to be researched to decide how it influences the take-up of cancer screening in Nakuru Sub-County. The different studies inspected demonstrates that openness influences the take-up of screening and in Kenya screening is done in few chose destinations in disconnected tasks as opposed to undeniable national level program. With this sort of data on openness inside the nation it is important to examine access as a marker and how it influences the take-up of cancer screening in Nakuru Sub-County.

2.4: Conceptual Framework

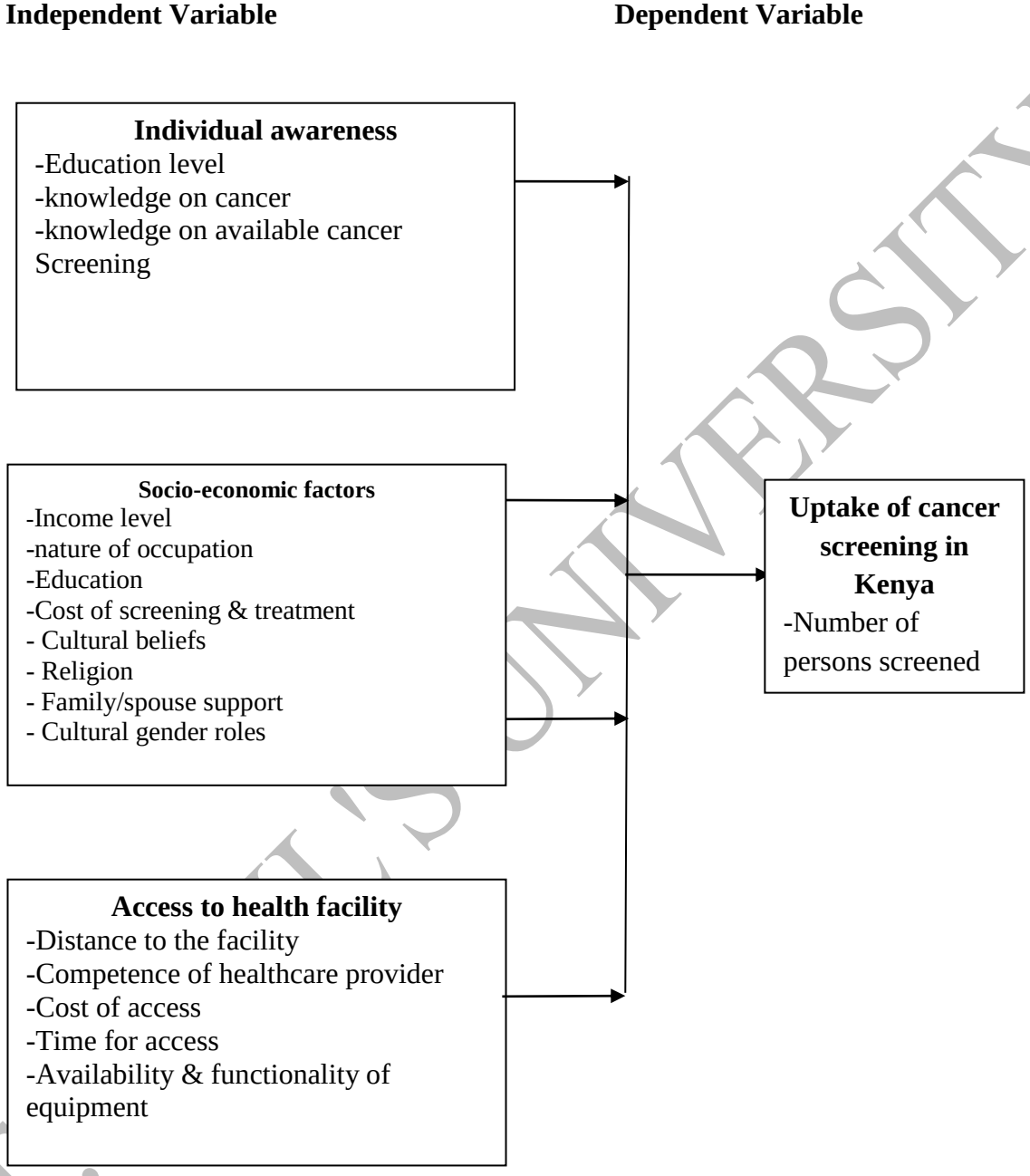
Figure 2.2 shows a conceptual framework is the diagrammatic representation of the study variables including; individual awareness, social economic status, and access to health facility and uptake of cancer screening. The study is underpinned on the Health Belief Model (HBM) which proposes that individuals fear diseases and that the health

ST. PAUL'S UNIVERSITY

seeking behavior of people are impelled by the level of pre-perceived hazard (fear) and the ordinary fear diminish action, the length of that possible diminishment surpasses physical and mental limits to making a move (net points of interest) to support interest in profitable health exercises. The independent variables including; individual awareness, social economic status and access to health facility constitute the reasons behind individuals fearing cancer and seeking to undergo cancer screening to reduce the fear.

ST. PAUL'S UNIVERSITY

Figure 2.3 Factors affecting uptake of cancer screening between men and women



Source: Author (2017)

ST. PAUL'S UNIVERSITY

2.5: Research Gap

The nations where the studies were undertaken are developed and enjoy over 50% cancer screening uptake. Cuthbertso*net al.*, (2009); Abdulahi*et al*., (2009) and Ansink, *et al*., (2008). Whereas uptake in Kenya is still below 5%. In addition, the provision of healthcare in the developed nations where most of the studies reviewed focused on are more efficient and cancer screening is institutionalized. However, cancer screening in Kenya is yet to be fully institutionalized. In Kenya, cancer ranks third in causing death after malaria and cardiovascular ailments. The local studies reviewed include; Were, *et al.,* (2012); Muchiri (2015); Gachogo (2012), Ichamiya (2015) and Kibicho (2015).None of the local studies covered more than onetype of cancers, hence the current study helped to bridge the existing knowledge gap.

.

ST. PAUL'S UNIVERSITY

CHAPTER THREE:

RESEARCH METHODOLOGY

3.1: Introduction

In this section, the procedure that was applied is demonstrated in the different subsections.

3.2: Research Design

The study employed cross-sectional research design. Orodho (2004) defines cross-sectional research design as data collection through questionnaire administration to a given sample. The design was appropriate for this study as it describe the state of affairs as they are without manipulation of variables (Kothari, 2004).The quantitative approach enabled the researcher to collect readily analyzable data while qualitative data was good in gaining in-depth data given that the respondents explained their answers

3.3: Target Population

The target population of the study was men and women aged 18- 49 years in Nakuru North Sub-County. The unit of analysis was factors affecting uptake of cancer screening while the unit of observation was men and women aged 18- 49 years. The age bracket of 18-49 was appropriate given its high vulnerability to cancer as well as being the reproduction age. According to KNBS (2009) the population of men and women aged 18- 49 years in the study area is 144,266 which formed the target population of the study. The study also had key informants who included community /opinion leaders, healthcare providers and Ministry of Health officials from the study area.

3.4: Sample Design and Sampling Procedures

3.4.1: Sampling Design

Nakuru North Sub-County is predominantly an urban area of Nakuru County, hence the population being largely homogenous. The Nakuru North Sub-County is further

ST. PAUL'S UNIVERSITY

subdivided into five wards that will be the basis of the sample selection for representativeness of respondents across the five wards. These five wards include; Bahati, Dundori, Kabatini, Kiamaina and Lanet/Umoja. From the target population of 144,266 men and women aged 18-49 years, the researcher used Krejcie, Robert and Morgan sample size determination formula (As indicated in the appendix 1).

$$s = x^2 NP (1-P) \div d^2 (N-1) + X^2 P (P-1)$$

This was translated as follows;

$$s = 1.96^2 * 144,266 * 0.5 (1-0.5) \div d^2 (144,266 -1) + 1.96^2 * 0.5 (0.5-1)$$

$$s= 384$$

Where s = required sample size.

x^2= the table value of chi-square for 1 degree of freedom at the desired confidence level

N = the population size.

P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (0.05).

Based on the sampling formulae used, the study sample size was 384 men and women aged 18-49 years from the study area. From the sample size of 384 respondents, the respondents were selected from each of the four wards making up Nakuru Sub-County were proportionate to the target population of each ward as indicated in Table 3.1 below.

ST PAUL'S UNIVERSITY

Table 3.1: Sampling Frame

Wards	Population (2009 national census)	Sample size
Bahati	30,965	82
Dundori	24,316	65
Kabatini	29,629	79
Kiamaina	31,345	83
Lanet/Umoja	28,011	85
Total	**144,266**	**384**

Source: Author, 2017

3.4.2: Sampling Procedure

The researcher used both probability and non-probability sampling procedures to obtain study units. The probability sampling procedures that were applied were stratified random sampling and systematic random sampling while the non-probability sampling procedure was purposive sampling procedure. Stratified random sampling was used in the selection of the men and women aged 18 to 49 years while purposive sampling procedure was used in selecting the key informants.

To sample men and women aged 18-49 years, Nakuru Sub-County was stratified/subdivided into the five wards which were: Bahati, Dundori, Kabatini, Kiamaina and Lanet/Umoja (County Statistics, 2015). Each of the five wards was further subdivided into their respective villages. The villages were sampled randomly from a sampling frame of the wards that was prepared in consultation with county authorities. There were approximately 10 households per given village in each of the wards. In each of the selected village, a systematic random sampling procedure was applied to select households to be included in the study, using the K^{th} number.

$$K^{th}\text{Household} = \left[\frac{\text{Sample size per wards}}{\text{Number of Villages}}\right] \Big/ \text{Number of Households per village}$$

$$K^{th}\text{Household} = \left[\frac{82}{2}\right] / 10 = 4^{th}\text{Household}$$

In each 4^{th} Household selected, men and women aged 18 to 49 years were selected randomly with equal gender consideration and only one respondent was sampled from

ST. PAUL'S UNIVERSITY

each of the 4th household. Once the researcher finished the administration of the questionnaire, the next respondent from the next 4th house hold had to be of the opposite gender if the 4th house reached did not have a respondent that qualify for this research then the researcher moved to the immediate next household. This ensured that out of the 384 respondents, half were from either gender. This thumb rule ensured that cancer specific for each gender was researched on which was the aim of this study. In addition, key informants were being purposively selected given that they are information rich individuals in the subject matter.

3.5 Data Collection Instruments and Method

A self-administered semi-structured questionnaires and key informant interview guide was applied for collection of data. The reason for choosing survey questionnaire as the data collection instruments was primarily because they are practical and applicable as well as cost effective when dealing with a large sample as was the case in this study (Denscombe, 2008). In addition, data was obtained from the key informants using key informants interview guide. The research assistants were trained on study objectives before being deployed for data collection. The researcher supervised the data collection process to ensure quality data was collected. The secondary data was also relied on to validate primary data collected.

3.5.1: Validity

The research instrument was availed to the lecturers and peers who established its content and construct validity to ensure that the items were adequately representative of the subject area being studied. Validity reflects the extent to which the research tools are assured of their accuracy, soundness and effectiveness with which an instrument measure what it is intended to measure (Kothari, 2004).

3.5.2: Reliability

A pilot study was done among 38 respondents (10% of the sample) from Molo a neighboring Sub-County that was not included in the main study. Cranach's Alpha Coefficient was used to ascertain the tools' reliability where coefficient of 0.70 was achieved which was acceptable (Nsubuga, 2006).

ST. PAUL'S UNIVERSITY

3.6: Data Analysis and Presentation

Data collected using the questionnaires was coded and classified into different components to facilitate a better and efficient analysis. Qualitative data from key informants was analyzed using content analysis (Nsubuga, 2006) Quantitative data was analyzed using descriptive statistics such as frequencies, percentages. Graphical presentations, charts and tables produced using Ms-Excel for presenting data analysed. Data analysis is the process of making sense out of the data collected (Oso, 2009). Given that the study findings will be disaggregated on gender, cross tabulation will be used in the data analysis where responses from the male and female respondents will be compared.

3.7: Research Ethics

The study participants had to give their consent and their participation was voluntary in the entire process even when some withdrew before the interview was over they were not penalized. All data collected was kept private and confidential. Confidentiality was assured by making the respondents not to indicate their names but instead the researcher used codes to identify the questionnaires. Anonymity was also observed. The researcher sought permission from the relevant authorities to conduct the research.

ST. PAUL'S UNIVERSITY

CHAPTER FOUR

ANALYSIS, INTERPRETATION AND PRESENTATION

4.1: Introduction

The study sought to investigate factors affecting the uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub-County, Kenya. The study's three specific objectives included; to analyze the effects of individual awareness on the uptake of cancer screening; to determine the effects of social economic factors influencing the uptake of cancer screening and; to assess the effects of the access to health facility on the uptake of cancer screening.

4.1.1: Response Rate

The study sample size was 384men and women aged 18-49 years to whom questionnaire were administered to as indicated on Table 4.2 below.

Table 4.2 Response Rate

Response Rate	
Questionnaire administered	384
Questionnaire returned	300
Response rate (%)	**78.1%**

Source: Field Data (2017)

As indicated in Table 4.2 above, out of 384 men and women aged 18-49 years to whom questionnaire were administered to, only 300 of them returned the questionnaires duly filled in contributing to a response rate of 78.1% which was adequate.

4.2: Background Information

Initially, the study sought background information of the men and women aged 18-49 years to ascertain their suitability in answering the study questions. The bio-data

ST. PAUL'S UNIVERSITY

sought included: gender, age, and the highest level of education and the results are presented in the subsequent sub-sections.

4.2.1 Age Distribution of the respondents

The study sought to establish the age of the study participants. The findings are as shown in Table 4.3 below.

Table of Age distribution of the respondents

Age	Frequency	Percent
18-25 years	87	29
26-35 years	138	46
36-45 years	66	22
46-49 years	6	3
Total	**300**	**100**

Source: Field Data (2017)

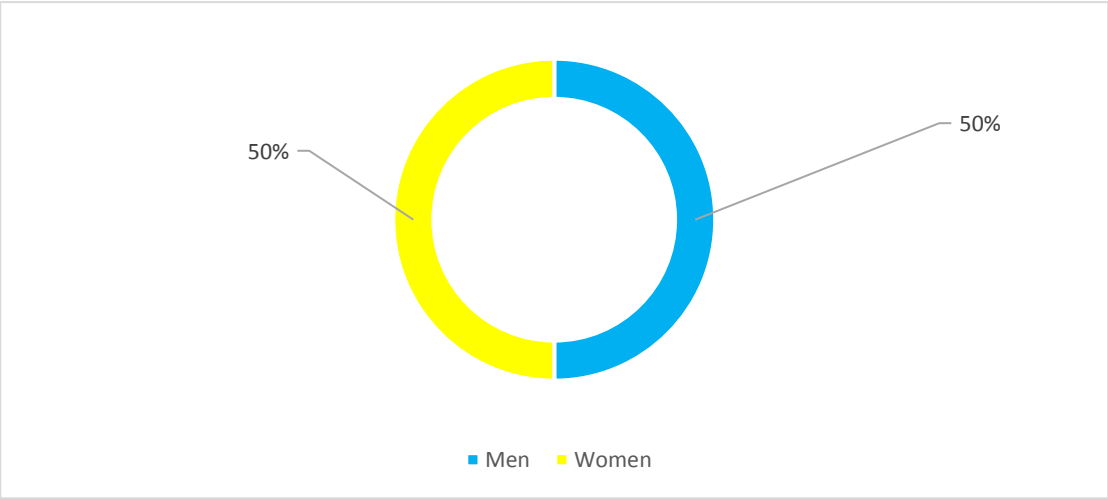
The study established that 46% of the respondents were aged between 26-35 years, 29% were aged between 18-25 years, and 22% were aged 36-45 years while 3% were aged 46-49 years. This depicts that the study participants were from the targeted age of 18-49 years and therefore the study achieved its purpose of involving this age group in the study. The age group of 18-49 years represented the population that if targeted with cancer screening would be very useful in mitigating cancer, since if detected early, cancer could be treated. The age group also represented those who are conversant with different information sources including from social platforms as they are technologically savvy compared to those of over 50 years and above. Hence their higher chance of appreciating the factors affecting the uptake of cancer screening.

4.2.2 Gender distribution of respondents

The study sought to establish the gender distribution of the respondents and the findings are as shown in Figure 4.4 below

ST. PAUL'S UNIVERSITY

Figure 4.4 Gender distribution of the respondents



Source: Field Data (2017)

From the findings, half of the population (50%) of the men and women aged 18-49 years were male while 50% were female. This implied that there is gender balance in the study targeting which gave a fair view about cancer screening given that cancer affects both gender and its mitigation requires participation of both gender.

4.2.3 Highest Level of Education

The study sought to establish the highest level of education for the respondents. The results are as tabulated in the Table 4.4 below.

Table 4.3 Highest level of education

Level of education	Freq	(%)
None	12	4
Primary	33	11
Secondary	96	32
Certificate	45	15
Diploma	66	22
bachelor's degree	39	13
Masters	9	3
Total	**300**	**100**

Source: Field Data (2017)

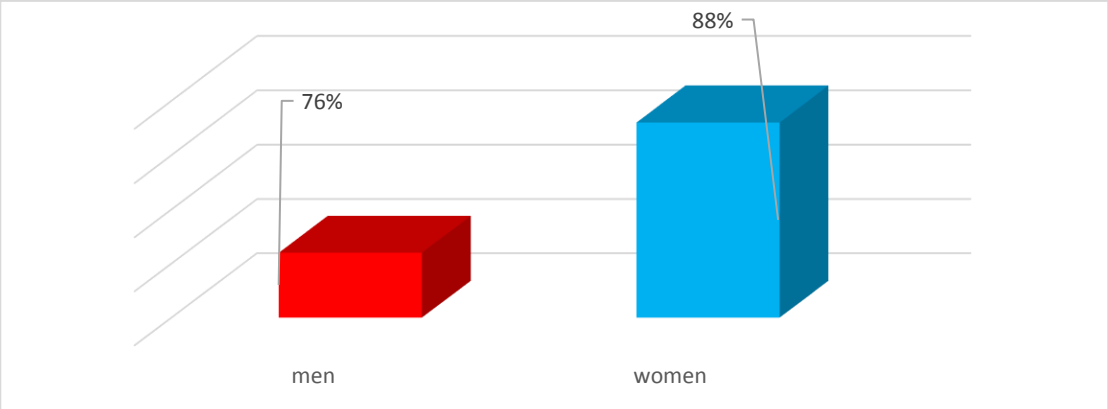
ST PAUL'S UNIVERSITY

From the findings, the distribution of men and women surveyed was as follows; 32% had secondary level of education, 22% were diploma holders, 15% were certificate holders while 11% had primary level of education. The lack of sound education was one of the main reasons for non-uptake of cancer screening services as it determined the economic wellbeing as well as the understanding of the importance of cancer screening.

4.2.4 Uptake of cancer screening

The study inquired on whether the respondents had ever had a cancer screening test

Figure 4.5 Undertaking cancer screening test



Source: Field Data (2017)

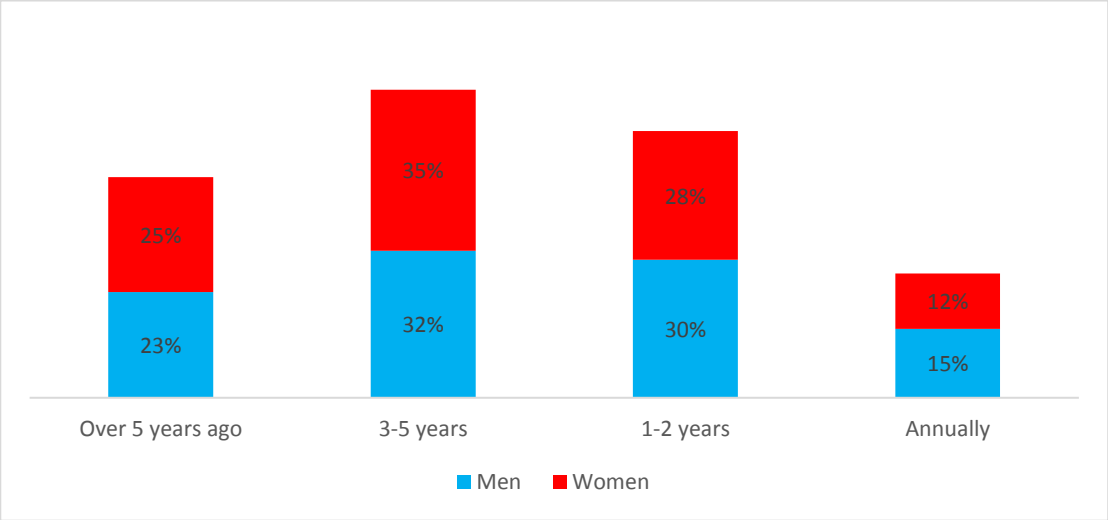
The majority men (76%) and women (88%) aged 18-49 years attested that they had never undergone cancer screening. Only 24% of men and 12% of women had undergone cancer screening; to allow them to be treated early in case they had cancer, to comply with government messages through media on the need to go for cancer screening and to fit in among their friends who also went for cancer screening. From the findings, it is evident that the uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub-county was very low given that only 23% of the sampled had ever sought cancer screening services.

4.2.5 Frequency of cancer screening

The study sought to establish how frequent the respondents had had a cancer screening test.

ST. PAUL'S UNIVERSITY

Figure 4.6 Frequency of cancer screening



Source: Field Data (2017)

Figure 4.6 above shows that 32% of men and 35% of women had cancer screening 3-5 years ago, 30% of men and 28% of women had sought cancer screening 1-2 years ago, while 23% of men and 25% of women had been screened for cancer over 5 years ago. This was a minimal disparity in terms of the interval of seeking cancer screening among men and women, which largely lied between 3-5 years interval. The findings confirm that only a small proportion of the men and women aged 18-49 years in Nakuru North Sub-county complied with the WHO recommended cancer screening interval of 1-2 years. Therefore, cancer screening in Nakuru North Sub-County would only be minimally effective in mitigating and coping with different types of cancer given the lack of health seeking behavior of cancer screening among the majority of men and women in the Sub-County and their failure to comply with the recommended interval for cancer screening across the gender divide.

4.3: Individual awareness and the uptake of cancer screening

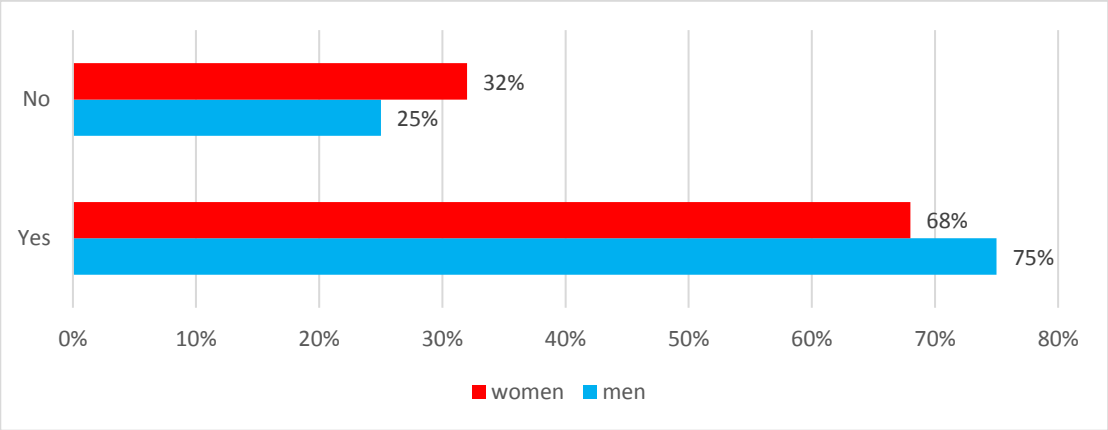
The first objective of the study was to analyze the effects of individual awareness on the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-County.

ST. PAUL'S UNIVERSITY

4.3.1 Different the types of cancers

The study inquired on whether the respondents had heard about the different the types of cancers.

Figure 4.7 Different the types of cancers



Source: Field Data (2017)

Figure 4.7 above shows that majority of the men (75%) and women (68%) indicated that they had heard of different types of cancers. However, 32% of women and 25% of the men indicated that they had not heard of the different types of cancers that affect humanity. This depicts that the high appreciation of different types of cancer among the both men and women which corresponds with high individual awareness on the need for uptake of cancer screening. However it's worthy noting that the individual awareness on the need for uptake of cancer screening was higher for men than women, pointing to higher access to information among men. However, the high level of awareness did not translate into their health seeking decisions with regard to uptake of cancer screening given the low uptake of cancer screening in the Sub-County which stands at stands at 7% for men and 15% for women. Implying that despite their lower level of awareness, women were more likely to comply with the call to regularly screen for cancer than their male counterparts. It further points to existence of barriers towards up-taking of cancer screening in the Sub-County. In addition, the awareness that existed among the men and women was likely to be incomprehensive given the differing nature of various forms of cancers affecting different genders and those that cut across, hence need for clarity in creating

ST. PAUL'S UNIVERSITY

awareness with respect to different types of cancers. The findings are in line with Altaf, Abdul, Abdulghaffar & Ali (2011) whose study revealed that despite high level of awareness on cancer among the study participants, their level of cancer seeking was low owing to poor economic status, illiteracy and negligence.

4.3.2 Source of information about cancer

The respondents were to indicate where they had heard about cancer.

Table 4.4 Source of information about cancer

	Men		Women	
Source of information about cancer	**F**	**%**	**F**	**%**
Social media (whatsup, Instagram, facebook)	53	35	45	30
Television	61	41	52	35
Internet	37	25	30	20
Newspaper	27	18	22	15
Radio	84	56	72	48
School/college	33	22	27	18
Seminars and Conferences	24	16	17	11
Local community Programs	18	12	15	10

Source: Field Data (2017)

The sources and channels of information that the male respondents had heard about the different types of cancers included; radio (56%), Television (41%), social media (Whatsup, Instagram, Facebook) (35%), internet (25%), school/college (22%), Newspaper (18%), seminars and conferences (16%) and through local community Programs (12%) respectively.

On the other hand, the sources and channels of information that the male respondents had heard about the different types of cancers included; radio (48%), Television (35%), social media (Whatsup, Instagram, Facebook) (30%), internet (20%), school/college (18%), Newspaper (15%), seminars and conferences (11%) and through local community Programs (10%) respectively. There is a clear differentiation between access to different sources of information between men and

ST. PAUL'S UNIVERSITY

women with men having a higher access. This was likely to be attributed to the fact that access to diverse information has cost implications where men had an advantage having generally a bigger financial muscle than women. Similarly, access to information especially internet based channels required a more technologically savvy use where men had an edge over women hence higher access, consequently better individual awareness.

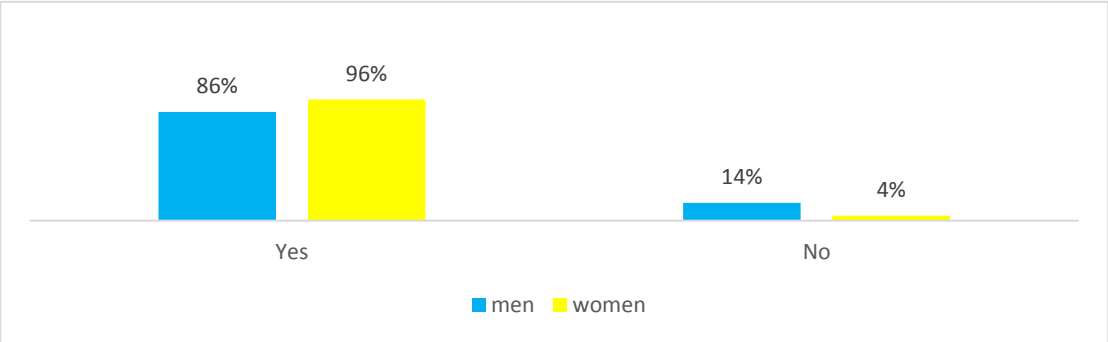
From the findings, it is further evident that cancer screening advocacy used different channels of communication and depending with the channel of communication, the men and women had access determined their level of individual awareness on the uptake of cancer screening. Each of the channels of communication had its merits and demerits in creating cancer screening awareness. The residents of Nakuru North Sub-County had access to various sources of information on cancer screening through diverse communication channels cutting across the key strategic communication approaches namely; print media, mass media, social media, interpersonal communication and community mobilization. However, access to information on cancer screening differed between the different channels of communication where most of the people accessed information on cancer screening. Through interpersonal channels such as through peer educator/community health workers, health provider and friend/relatives and schools compared to mass mediated channels. The exposure to messages on cancer screening through various channels would motivate an increased uptake of cancer screening. The findings are similar to Ahuja and Chakrabarti (2010) who indicated that women in Mumbai India had access to different channels of communication on cancer and cancer screening including; print media, mass media, social media, interpersonal communication and community mobilization. It was discovered that generally doctors were not keen in availing health information on breast cancer to the general public.

4.3.3 Early detection of cancer

The study inquired on whether the respondents were aware of the fact that cancers could be treated if detected early.

ST. PAUL'S UNIVERSITY

Figure 4.8 Early detection of cancer



Source: Field Data (2017)

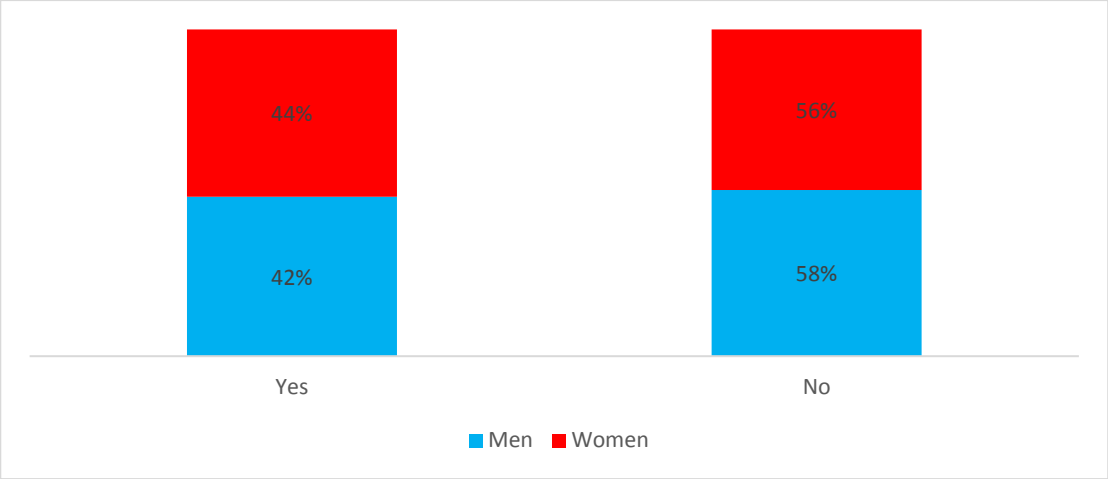
The majority (86%) of the men and 96% of women indicated that they were aware of the fact that different types of cancers were manageable if diagnosed early. However, 14% of the men and 4% of women were not aware of the fact that different types of cancers could be treated if they were detected early. More women than men understood the preventable nature of cancer when detected early through cancer screening, hence more women being likely to uptake cancer screening than men. Their individual awareness influenced uptake of cancer screening among residents of Nakuru North Sub-County. The majority of the residents were well informed of the fact that early detection of cancer through cancer screening would increase chances of healing compared with late detection. This individual awareness was critical in enhancing uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub-County. The findings agree with Lyimo and Beran (2012), Abotchie and Shokar (2009) whose study established that residents from Tanzania and Ghana respectively understood that early detection of cancer through cancer screening would increase chances of healing compared with late detection. Therefore, the individual awareness played a role in enhancing uptake of cancer screening.

4.3.4 Awareness of training programs on cancer

The respondents were to indicate whether there were any training programs on cancer that they knew of.

ST. PAUL'S UNIVERSITY

Figure 4.9 Awareness of training programs on cancer



Source: Field Data (2017)

Figure 4.9 indicates that 58% of the men and 56% of women indicated that they were not aware of any training programs on cancer while 42% of the men and 44% of women were aware of training programs on cancer. This was a low availability of awareness of training programs on cancer as attested by similar number of men and women. Lack of forums and training programs where the Nakuru North Sub-County men and women would be empowered about cancer and its screening contributed to incomprehensive individual awareness on cancer screening. The findings are similar to Merchant (2007) and Nakalevu (2009) who discovered a gap of clear understanding and interpretation of the test results. Many have the notion that an abnormal result is an indication of a cancer invasion. These results in fear and distress during uptake of cancer screening, in case of abnormal results, therefore majority shun the screening process. The same studies realised that cultural norms of secrecy barring women to publicly discuss reproductive health issues also has hindered women from gaining knowledge on the importance of cervical cancer screening. Such lack of understanding was as a result of low level forums and programs to enlighten people about different forms of cancers.

4.3.5 Participation in cancer sensitization forums.

The study inquired on how often the respondents attended cancer sensitization forums.

ST. PAUL'S UNIVERSITY

Table 4.5 Participation in cancer sensitization forums.

	Men		Women	
Participation in cancer sensitization forums	**F**	**%**	**F**	**%**
None	45	30	13	9
Weekly	5	3	7	5
Monthly	9	6	9	6
Quarterly	6	4	21	11
Semi-annually	21	14	17	14
Annually	64	43	83	55
Total	**150**	**100**	**150**	**100**

Source: Field Data (2017)

On how often the men attended cancer sensitization forums, 43% attended on annual basis, 14% on semi-annual basis, and 6% on monthly basis while 4% attended the cancer sensitization forums on quarterly basis.

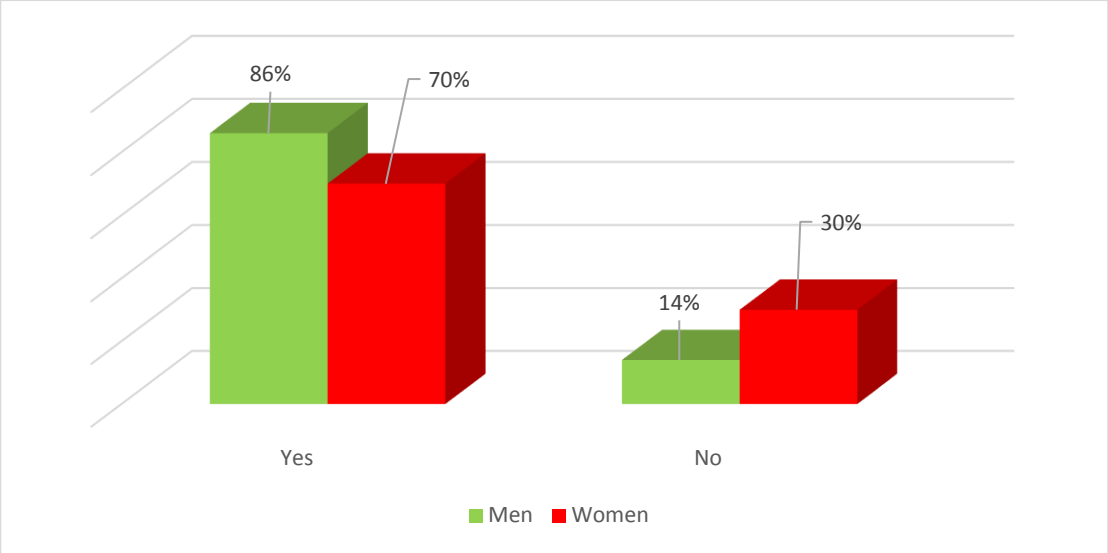
On the other hand, on how often the women attended cancer sensitization forums, 55% attended on annual basis, 14% on semi-annual basis and 11% on quarterly basis, 6% monthly basis while 5% attended the cancer sensitization forums on quarterly basis. Given the finding, more women than men participated in cancer screening and in higher frequency than men depicting a higher uptake of cancer screening among women than men as a result of participation in cancer sensitization forums. The high levels of individual awareness on the uptake of cancer screening among the residents was eroded by the low frequency of cancer sensitization forums offered which was mainly on annual basis. The findings are in line with Ansink (2008) who indicated that in Bangladesh the awareness of cervical cancer was wide spread among the community but lack of regular forums to increase knowledge on cancer causes was inadequate.

4.3.6 Cancer screening services

The study inquired on whether the respondents had ever heard about cancer screening services.

ST. PAUL'S UNIVERSITY

Figure 4.10 Cancer screening services



Source: Field Data (2017)

The majority of the men (86%) and women (70%) indicated that they had heard about cancer screening services while 14% of men and 30% of women had never heard about cancer screening services. A higher proportion of men than men were aware of cancer screening but the fact that different cancer affect men and women differently required a gender specific approach in creating individual awareness about cancer screening.

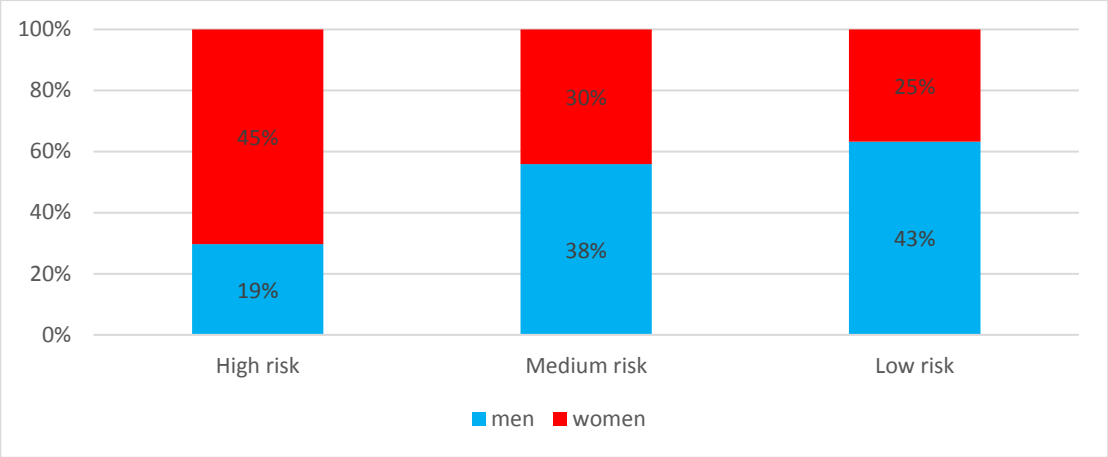
The majority of the men and women from Nakuru North Sub-County aged 18-49 years were well conversant with cancer screening. Their high appreciation of cancer screening services was likely to influence their decision to seek cancer screening services. The low uptake of cancer screening among residents of the study area confirms existence of a strategic factor that influenced their health seeking behavior with regard to cancer screening. The findings are in line with Mutyaba, (2007) and Ngugi (2012) whose studies established that the individual awareness on cancer was a strategic factor that influencing cancer screening. Women who have had an awareness of cervical cancer are more likely to have screened for cervical cancer.

4.3.7 Risk of developing cancer

The respondents were to judge their risk of developing cervical cancer

ST. PAUL'S UNIVERSITY

Figure 4.11 Risk of developing cancer



Source: Field Data (2017)

When men were asked about how they would rate their risk of developing cancer, 43% rated their risk as low, 38% rated their risk as medium while 19% of the respondents rated their risk of developing cancer as high. On the contrary, 45% of women rated their risk as high, 30% as medium while 25% rated their risk as low. The fact that women perceived themselves to be at a higher risk of developing cancer than explains the importance of individual awareness in enhancing cancer screening, hence a higher uptake rate of cancer screening for women than men.

There is a gaps in the individual awareness on cancer and its screening given that the men and women of Nakuru North Sub-County, had a low perception of the risk of developing cervical cancer. The study targeted age of 18- 49 years was noted by WHO (2015) to be a high risk and therefore the low perception of the risk of developing cervical cancer among the residents contributed to low uptake of cancer screening. The study findings are in agreement with KNBS (2016) which revealed that majority of the youths perceive themselves as low risk towards getting cancer which made them less likely to seek cancer screening. The low perception on developing cancer among the age group 18- 49 years also led to lack of enquiring about the different forms of cancers as opposed to older generations.

ST. PAUL'S UNIVERSITY

4.4: Social economic factors and the uptake of cancer screening

The second objective of the study was to determine the effects of social economic factors influencing the uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub-County.

4.4.1 Occupation

The respondents were to indicate their occupation.

Table 4.6 Occupation of the respondents

	Men		**Women**	
Occupation	**Freq**	**%**	**Freq**	**%**
Self Employed	67	45	83	55
Salaried employment	27	18	16	11
Farming	32	21	30	20
Casual worker	24	16	21	14
Total	**150**	**100**	**150**	**100**

Source: Field Data (2017)

Based on the findings, 45% of the men were self-employed, 21% were farmers, and 18% were in salaried employment while 16% were casual worker. On the other hand, 55% of the women were self-employed, 20% were farmers, 14% were casual workers while 11% were in formal employment. This is indicative of the higher disparity of access to economic opportunities between men and women. More men than women being in formal employment and more women than being in self-employment confirm that men had better access to income compared to their women counterparts given that self-employment where women were largely deriving their income from is low paying and unreliable. This was likely to influence their health seeking behavior where men stood a better access than women. Therefore, the occupation as an economic factor influenced uptake of cancer screening. The majority of the residents surveyed were involved in menial occupations to earn their livelihood. Since there were cost related to uptake of cancer screening such as transport, access cost and opportunity costs, the unreliable nature of occupation by the study participants limited

ST PAUL'S UNIVERSITY

their uptake of cancer screening. The age group surveyed was also bread winners in their households and therefore had other dependants to support which was likely to reduce their disposable income that would otherwise be used for catering for cancer screening services.

4.4.2 Respondents' income per month

The study sought to establish the respondents' income per month.

Table 4.7 Monthly income

	Men		Women	
Monthly income	**Freq**	**%**	**Freq**	**%**
No monthly income in Kshs	19	13	37	25
1,000-5,000/=	30	20	60	40
5,000 - 10,000/=	33	22	32	21
11,000 - 20,000/=	48	32	11	7
21,000-30,000	12	8	7	5
Above 30,000/=	8	5	3	2
Total	**150**	**100**	**150**	**100**

Source: Field Data (2017)

In terms of monthly income, 32% of the men had a monthly income of Kshs 11,000 - 20,000/=, 22% had monthly income of Kshs 5,000 - 10,000; 20% had monthly income of Kshs 1000 - 5,000 while 13% had no monthly income.

On the other hand, most of the women (40%) earned a monthly income of Kshs 1,000-5,000, 25% did not earn any monthly income while 21% earned between Kshs 11,000-20,000. The findings show serious disparity between monthly income between men and women with men earning more than women. Hence, being better placed to cater for expense related to cancer screening. In addition, the majority of both men and women, earned meager monthly income of Kshs 1,000 and 20,000 which was supposed to cater for all their household and personal needs including catering for cancer screening services. The limited disposable income reduced the likelihood of the residents to seek for cancer screening services as well as determined the source of

ST PAUL'S UNIVERSITY

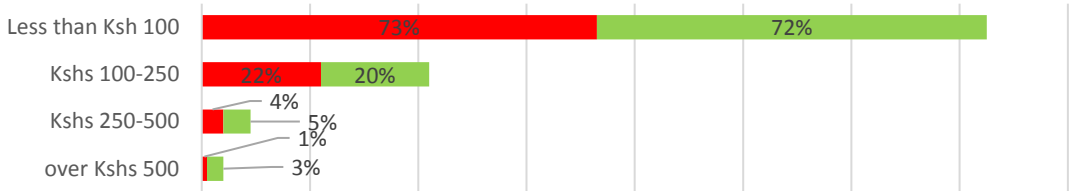
information that they accessed all of which influenced health seeking behaviors like cancer screening. Therefore, household income as a social economic factor negatively influenced uptake of cancer screening.

The findings are supported by Bouchardy*et al*. (2006) and Alice *et al*. (2008) whose earlier findings indicated that cancer screening uptake is negatively impacted by socio - economic and demographic factors that include; income status and economic deprivation.

4.4.3 Transport Cost

The study inquired on how much it coasted the respondents to reach the nearest health facility offering cancer screening services.

Figure 4.12 Transport Cost



	over Kshs 500	Kshs 250-500	Kshs 100-250	Less than Ksh 100
men	1%	4%	22%	73%
women	3%	5%	20%	72%

Source: Field Data (2017)

According to the Figure 4.12 above, 73% of the men paid less than Kshs 100 in order to reach the nearest health facility offering cancer screening services while 22% paid Kshs 100 to 200. Similarly, 72% of women indicated paying Kshs 100 while 20% paid Kshs 100 to 200 in order to reach the nearest health facility offering cancer screening services. The findings confirm a similarity in transport cost paid by both men and women to reach the nearest health facility offering cancer screening services. The transport cost to cancer screening facility was reasonable and affordable and was likely to encourage uptake of cancer screening. The findings are not in agreement with Maheswarab *et al.*, (2006) whose study on travel distance, urban-rural status, and

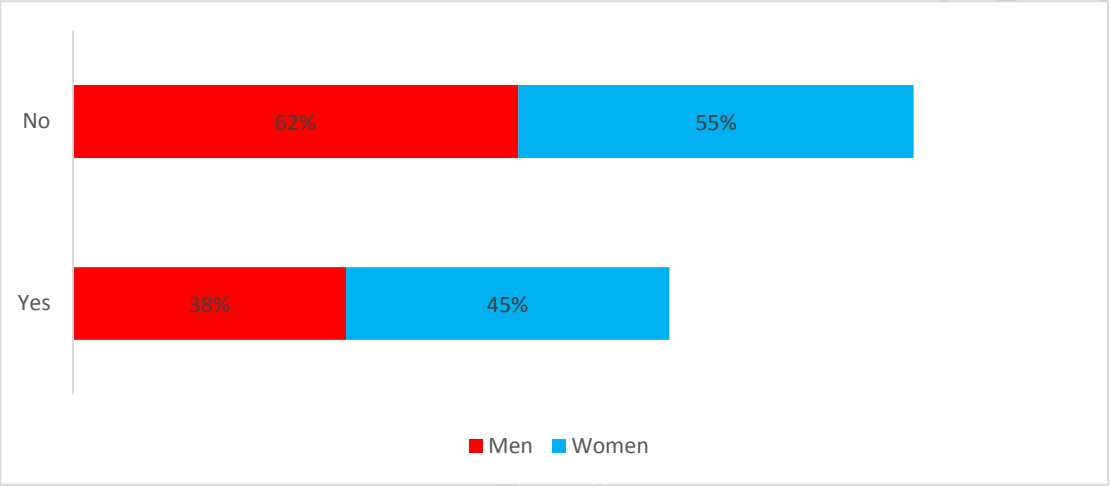
ST PAUL'S UNIVERSITY

location revealed that the travel distance and travel distance was a major contributor of non-compliance with cancer screening initiatives.

4.4.4 Health care insurance cover

The study inquired on whether the respondents' had any kind of health care insurance cover, including health insurance such as NHIF.

Figure 4.13 Health care insurance cover



Source: Field Data (2017)

Most of the men (68%) and women (55%) were not holders of any health insurance cover such as NHIF. Only 38% of the men and 45% of women had a health care cover, including health insurance such as NHIF. There were more women with insurance covers than men, hence higher number of women who sought cancer screening services than men. The lack of health insurance among both men and women from Nakuru North Sub-County was likely to limit their uptake of cancer screening services. The health insurance like NHIF would go a long way in enhancing uptake of cancer screening. However, given that the residents were economically deprived, they could not afford health insurance and would not benefit from subsidized cost through insurance.

The study findings agree with KNBS (2016) which indicates that the penetration of insurance among the Kenyan population remains very low and majority of the population used cash to pay for all their medical services. Therefore, given the high

ST. PAUL'S UNIVERSITY

level of poverty in Kenya, they were highly unlikely to seek for preventive health services like cancer screening which costs had related to such.

4.4.5 Rating the cost of cancer screening

The respondents were to indicate how they would rate the cost of cancer screening, if they had ever been screened.

Table 4.8 Rating the cost of cancer screening

	Men		Women	
cost of cancer screening	**Freq**	**%**	**Freq**	**%**
Very expensive	28	19	27	17
Expensive	68	45	70	47
Cheap	7	5	5	3
Very cheap	12	18	27	19
Free	35	13	21	14
Total	**150**	**100**	**150**	**100**

Source: Field Data (2017)

Nearly half (45%) of the men rated the cost of cancer screening as expensive while 19% indicated that the procedure was very expensive. Only 23% of men rated cancer screening procedure as free of charge. Similarly, about half (47%) of the women rated the cost of cancer screening as expensive while 17% indicated that the procedure was very expensive. Only 14% of women rated cancer screening procedure as free of charge. The findings point to high similarity in the cost of cancer screening between men and women which was largely exorbitantly high, hence explaining the low uptake of the cancer screening services. The major reason(s) given by across the gender divide for not seeking cancer screening services included that: they could not afford; the nearest medical facility does not have that service; their medical cover does not have that provision; and that even if they were screened, they could not afford the treatment. The cost of access of healthcare services and cancer screening in particular was a hindering factor towards uptake of cancer screening. The cost of access was noted to be unaffordable to the majority of surveyed residents.

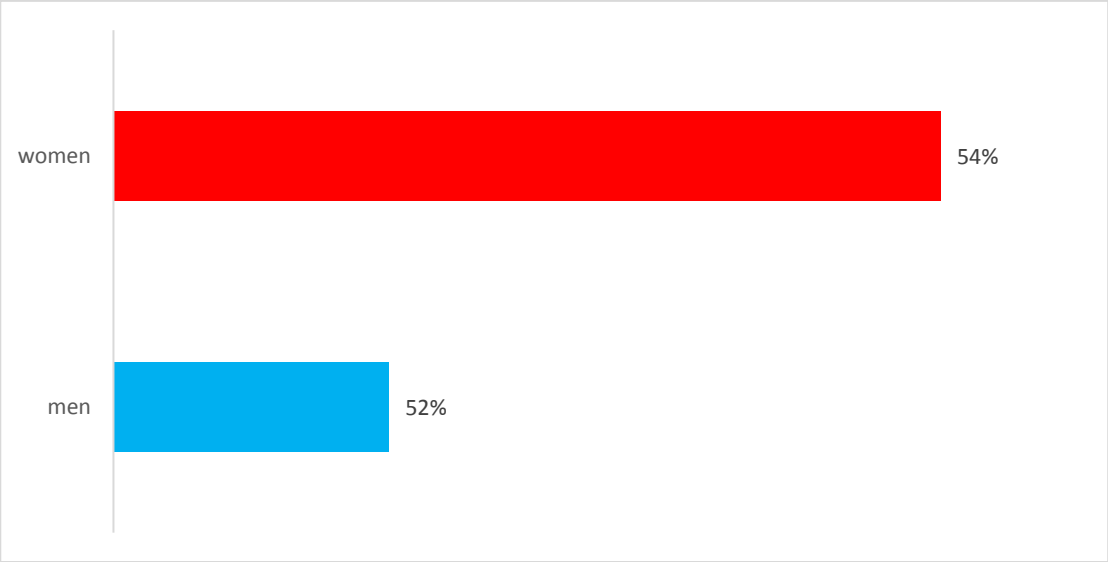
ST. PAUL'S UNIVERSITY

The findings are similar to Were, et al., (2012) whose study revealed that 11.4% of the participants from Uashin Gichu County lacked the finances to pay for the test and they identified this as the reason they do not go for screening. Another study by in Bangladesh also reported the high costs of screening services as one of the most common barriers to screening (Ansink, *et al.,* 2008).

4.4.6 Clash of economic activities with clinic appointment

The study inquired on whether the clash of economic activities with clinic appointment times caused on-uptake of cancer screening.

Figure 4.14 Clash of economic activities with clinic appointment



Source: Field Data (2017)

According to 52% of men and 54% of women, the clash of economic activities with clinic appointment times caused non-uptake of cancer screening. However, 42% of the men and 46% of women indicated that clash of economic activities with clinic appointment times never caused non-uptake of cancer screening. This is a convergence between the two genders about the challenge of competition between health seeking and bread winning roles. There was conflict between cancer screening and respondents' economic activities such as their breadwinning role. The fact that the time for cancer screening clinic appointment was the same time that the respondents were involved in earning their livelihood, meant that they had to choose

ST PAUL'S UNIVERSITY

between the two. They were likely to postpone going for cancer screening to attend to the more urgent role of earning their livelihood, leading to low uptake of cancer screening in the Sub-County. Therefore, social-economic factors significantly influenced the uptake of cancer screening among the residents.

The findings resonate with Abdulahi, *et al*., (2009) whose findings were revealed clash of economic activities with clinic appointment times lead to low uptake of cervical cancer screening. Among ethnic Somali women found that the clash of clinic appointment time with market days and child care needs were associated with low uptake of screening.

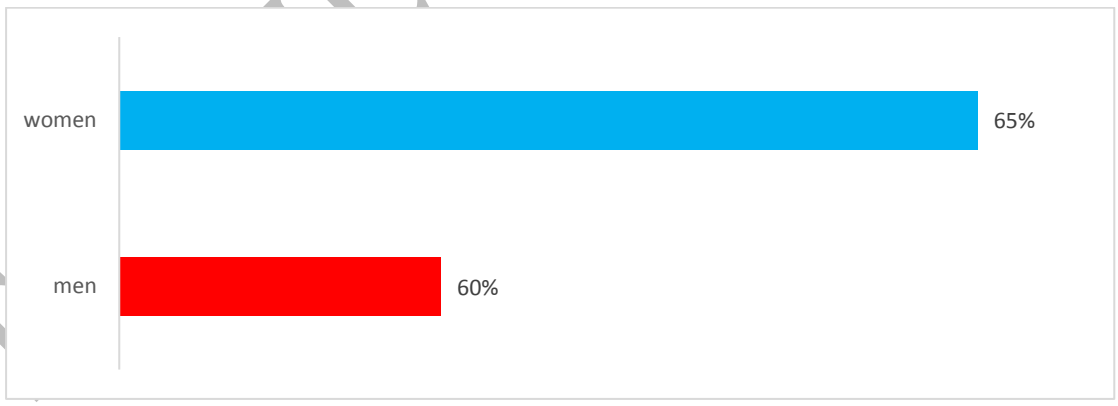
4.5: Access to health facility and the uptake of cancer screening

The third objective of the study sought to assess the effects of the access to health facility on the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-County.

4.5.1 Awareness of facilities offering cancer screening

The study inquired on whether the respondents were aware of any facilities that offered cancer screening services.

Figure 4.15 Awareness of facilities offering cancer screening



Source: Field Data (2017)

The majority of men (60%) and women (65%) indicated that they were aware of facilities that offer cancer screening services. The slightly higher appreciation of availability of facilities offering cancer screening by women compared to men was likely to explain higher numbers of women likely to prescribe to cancer screening.

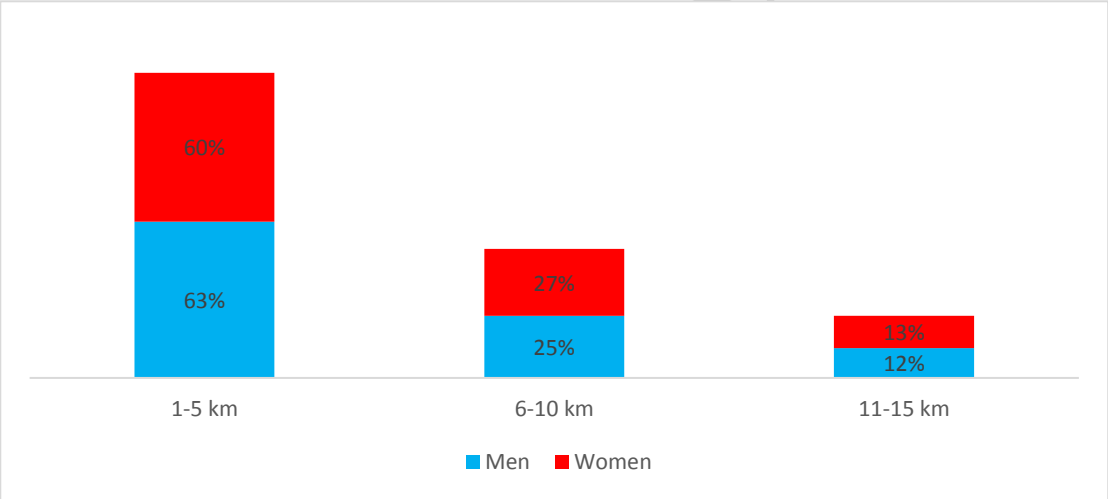
ST. ...'S UNIVERSITY

Knowledge about the availability of facilities offering cancer screening was a critical component of access to health facility that subsequently influenced uptake of cancer screening among the residents. The majority of these residents were aware of health facilities offering cancer screening in their locality. The findings are in line with Satija (2009) and WHO (2010) which revealed that the higher the number of health facilities in the locality offering cancer screening services, the higher the likelihood of increased health seeking behavior among the local population.

4.5.2 Distance to the nearest health facility

The respondents were to indicate how far their house was to the nearest health facility.

Figure 4.16 Distance to the nearest health facility



Source: Field Data (2017)

From the findings, the majority of men (63%) and women (60%) travelled 1-5km to reach the nearest health facility offering cancer screening, 25% of men and 27% of women travelled 6-10km while 12% of men and 13% of women travelled 11-15km to reach the nearest health facility. There was no major difference in distance travelled to reach the nearest health facility by both men and women. Access to health facility based on distance to the nearest health facility affected compliance with cancer screening among the residents of Nakuru North Sub-County. The closeness of health facilities was likely to be an encouraging factor towards the residents' uptake of

ST. PAUL'S UNIVERSITY

cancer screening. Therefore, access to health facility influenced uptake of cancer screening given that health facilities offering cancer screening were in proximity. However, depending on other issues like cost of access, competence of medical practitioners and quality of service, the uptake of cancer screening would vary.

The findings are similar to PATH (2004) whose study in western Kenya revealed that cancer prevention should be offered side by side with other existing reproductive health services in the MCH/FP clinics, so that the same personnel and equipments, are used to safe on resources and be efficient and cost effective. This will motivate more people to take up the preventive services. The study findings are similar to NCCPP (2006) which revealed that the main challenges to increasing access to cancer screening services include inadequate equipment and supplies; high cost of access, lack of competent medical practitioners, low quality of service offered, lack of treatment facilities when there is pre-cancer or cancer diagnosis; inadequate monitoring and evaluation, especially data collection and management. According to Nyaberi (2007) the uptake of cancer screening is a function of; availability of trained health personnel at all levels to provide cancer screening and treatment services; provision of facilitative supervision and refresher training and on job certification to enable them to maintain or enhance their skills.

4.5.3 Access time

The study inquired on how much time the respondents waited at the hospital to receive cervical cancer screening services

Table 4.9 Access time

	Men		**Women**	
Access time	**Freq**	**%**	**Freq**	**%**
30 minutes to 1 hour	60	40	27	18
1-2 hours	54	36	57	38
Over 2 hours	36	24	66	44
Total	**150**	**100**	**150**	**100**

Source: Field Data (2017)

ST PAUL'S UNIVERSITY

The results showed that, 40% of men indicated that it took 30 minutes to 1 hour to receive cervical cancer screening services, 36% indicated that it took 1-2 hours while 24% indicated that it took over 2 hours to receive cervical cancer screening services. On the contrary, most of the women (44%) noted that they took over 2 hours to receive cervical cancer screening services, 38% of them took 1-2 hours while 18% took 30 minutes to 1 hour. The huge difference in access time between men and women where men took shorter time than their women counterparts could be a limiting factor towards uptake of cancer screening. Time taken to receive cancer screening services was reasonable given that it took 30 minutes to 1 hour to be attended to. This was likely to enhance uptake of cancer screening among the men and women aged 18- 49 years in Nakuru North Sub-County. However, since only a small proportion of residents of the residents had sought cancer screening services, only a small number of area residents knew that it only took a short time to be served in the cancer screening facilities. Thus, time as a construct of access to health facility did not positively influence uptake of cancer screening in the area of the study.

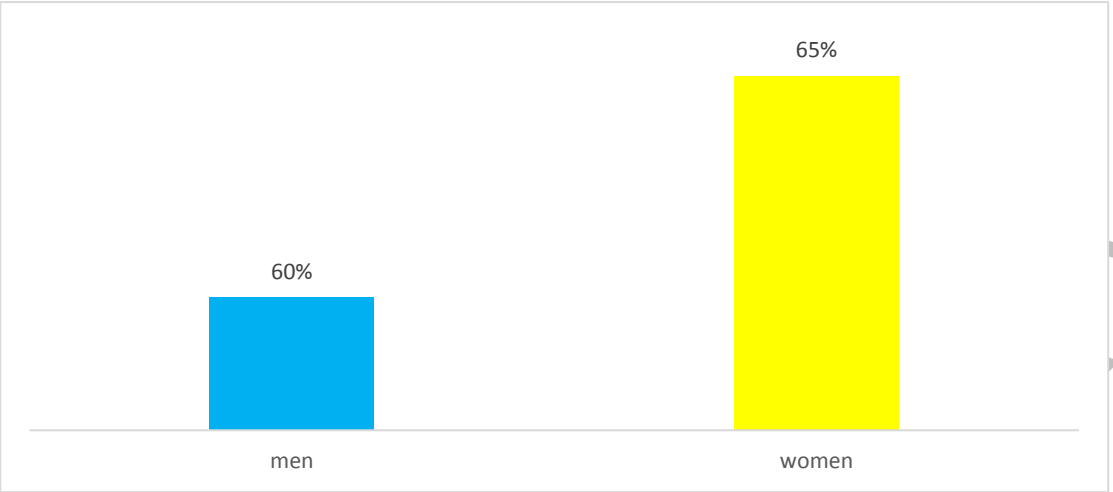
The study findings are in agreement with NCCP (2015) which indicated that the access time of majority of health services in rural Kenya has significantly improved given the uplifting of healthcare services by the county governments. This is likely to enhance the uptake of preventive services including cancer screening compared to years back when access time was over two hours.

4.5.4 Healthcare providers' competence

The study inquired on whether the doctors/healthcare providers were competent in provisions of cancer screening services.

ST. PAUL'S UNIVERSITY

Figure 4.17 Healthcare providers' competence



Source: Field Data (2017)

The majority men (79%) and women (65%) noted that the healthcare providers were competent provisions of cancer screening services. However, 21% of men and 35% of women indicated that the healthcare providers were not competent in provisions of cancer screening services. There seem to be a huge difference in healthcare providers' competence in provisions of cancer screening services as noted by men and women. This indicates that the low perception of competence of healthcare providers by women could hinder their participation in cancer screening. Given that some types of cancers are gender specific, women required women responsive healthcare providers to participate more freely in the process. Access to health services influenced uptake of cancer screening given that the competence of doctors/healthcare providers' in provisions of cancer screening services. The perception of high competence of healthcare providers among the residents of the study area was likely to be a motivating factor towards their uptake of cancer screening services. The adequacy and specialty of health personnel available in the study area was however likely to compromise their efficiency in service delivery as screening of different types of cancers required specialized skills and adequate number of healthcare providers.

The findings concur with Buziba *et al* (2011) whose study revealed that the competence of healthcare providers for cancer screening services determined the compliance with the cancer screening calls by the government. Lack of capacity

ST. PAUL'S UNIVERSITY

among the healthcare providers remained a major impediment towards enhancing cancer screening uptake.

4.5.5 Outreach programs

The study inquired on how often the health facilities near the respondents organized for outreach programs on cancer screening.

Table 4.10 Outreach programs

	Men		Women	
Outreach programs	**Freq**	**%**	**Freq**	**%**
Monthly	7	5	0	0
Quarterly	17	11	11	7
Semi-annually	66	40	57	38
Annually	60	44	82	55
Total	**150**	**100**	**150**	**100**

Source: Field Data (2017)

According to the findings, 44% of men and 55% of women indicated that the health facilities near them organized for outreach programs on cancer screening on annual basis while 40% of men and 38% of women noted that it was semi-annually. There are more women (93%) than men (84%) who happened to be aware of the fact that the health facilities near them organized for outreach programs on cancer screening. Hence disparity in uptake, between men and women in the Sub-County. Cancer screening uptake initiatives were likely to be negatively affected by minimal outreach programs on cancer screening which were on annual and semi-annual basis in the study area.

The findings agree with MOH (2016) and Buziba *et al* (2011) which indicated that cancer preventive services should be offered alongside other RH outreach activities such as RH/FP, health information programmes, medical camps and health challenge months in order to reach more women especially in hard to reach areas. This is because there were limited funds that could sustainably finance its own outreach

ST. PAUL'S UNIVERSITY

programs, hence the needs to mainstream cancer screening campaign with other health outreach program.

ST. PAUL'S UNIVERSITY

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1: Introduction

The chapter presents the summary, conclusion and recommendations of the study on factors affecting the uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub-County. The researcher focused on included; individual awareness, social economic factors and access to health facility. The chapter also suggests on areas for further studies.

5.2: Summary of major findings

The study established that majority (77%) of the residents had never undergone cancer screening. Among the participants that underwent cancer screening, their reasons for undertaking the test included; to allow them to be treated early in case they had cancer, to comply with government messages through media on the need to go for cancer screening and to fit in among their friends who also went for cancer screening. From the findings, it is evident that the uptake of cancer screening among the residents was very low given that only 23% of the sampled population had ever sought cancer screening services.

The study revealed that 32% of men and women aged 18-49 years had cancer screening 3-5 years ago, 30% had cancer screening 1-2 years ago, 23% had been screened for cancer over 5 years ago while 15% had cancer screening on annual basis. Therefore, only a small proportion of the residents of Nakuru North Sub-county complied with the WHO recommended cancer interval of 1-2 years. In addition, it is evident that cancer screening in Nakuru North Sub-County would only be minimally effective in mitigating and coping with different types of cancer given the lack of health seeking behavior of cancer screening among the majority of the people in the Sub-County and the failure to comply with the recommended interval for cancer screening.

ST. PAUL'S UNIVERSITY

5.2.1: Effects Individual awareness on the uptake of cancer screening

The study revealed that that majority of the men (75%) and women (68%) indicated that they had heard of different types of cancers. The high appreciation of different types of cancer among the both men and women which corresponds with high individual awareness on the need for uptake of cancer screening. However, it's worthy noting that the individual awareness on the need for uptake of cancer screening was higher for men than women, pointing to higher access to information among men. However, the high level of awareness did not translate into their health seeking decisions with regard to uptake of cancer screening given the low uptake of cancer screening in the Sub-County which stands at stands at 7% for men and 15% for women. Implying that despite their lower level of awareness, women were more likely to comply with the call to regularly screen for cancer than their male counterparts. It further points to existence of barriers towards up-taking of cancer screening in the Sub-County. In addition, the awareness that existed among the men and women was likely to be incomprehensive given the differing nature of various forms of cancers affecting different genders and those that cut across, hence need for clarity in creating awareness with respect to different types of cancers. The sources and channels of information that the male respondents had heard about the different types of cancers included; radio (56%), Television (41%), social media (Whatsup, Instagram, Facebook) (35%), internet (25%), school/college (22%), Newspaper (18%), seminars and conferences (16%) and through local community Programs (12%) respectively.

On the other hand, the sources and channels of information that the male respondents had heard about the different types of cancers included; radio (48%), Television (35%), social media (Whatsup, Instagram, Facebook) (30%), internet (20%), school/college (18%), Newspaper (15%), seminars and conferences (11%) and through local community Programs (10%) respectively. There is a clear differentiation between access to different sources of information between men and women with men having a higher access. This was likely to be attributed to the fact that access to diverse information has cost implications where men had an advantage having generally a bigger financial muscle than women. Similarly, access to information especially internet based channels required a more technologically savvy

ST. PAUL'S UNIVERSITY

use where men had an edge over women hence higher access, consequently better individual awareness.

From the findings, it is further evident that cancer screening advocacy used different channels of communication and depending with the channel of communication, the men and women had access determined their level of individual awareness on the uptake of cancer screening. Each of the channels of communication had its merits and demerits in creating cancer screening awareness. The residents of Nakuru North Sub-County had access to various sources of information on cancer screening through diverse communication channels cutting across the key strategic communication approaches namely; print media, mass media, social media, interpersonal communication and community mobilization. However, access to information on cancer screening differed between the different channels of communication where most of the people accessed information on cancer screening. Through interpersonal channels such as through peer educator/community health workers, health provider and friend/relatives and schools compared to mass mediated channels. The exposure to messages on cancer screening through various channels would motivate an increased uptake of cancer screening.

The majority (86%) of the men and 96% of women were aware of the fact that different types of cancers were manageable if diagnosed early. More women than men understood the preventable nature of cancer when detected early through cancer screening, hence more women being likely to uptake cancer screening than men. Their individual awareness influenced uptake of cancer screening among residents of Nakuru North Sub-County. The majority of the residents were well informed of the fact that early detection of cancer through cancer screening would increase chances of healing compared with late detection. This individual awareness was critical in enhancing uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub-County.

However, the study established that 58% of the men and 56% of women were not aware of any training programs on cancer. This was a low availability of awareness of training programs on cancer as attested by similar number of men and women. Lack of forums and training programs where the Nakuru North Sub-County men and

ST. PAUL'S UNIVERSITY

women would be empowered about cancer and its screening contributed to incomprehensive individual awareness on cancer screening. The study revealed that most of the residents (43%) of men and 55% of women attended cancer sensitization forums on annual basis. Given the finding, more women than men participated in cancer screening and in higher frequency than men depicting a higher uptake of cancer screening among women than men as a result of participation in cancer sensitization forums. The high levels of individual awareness on the uptake of cancer screening among the residents was eroded by the low frequency of cancer sensitization forums offered which was mainly on annual basis.

The majority of the men (86%) and women (70%) indicated that they had heard about cancer screening services. A higher proportion of men than men were aware of cancer screening but the fact that different cancer affect men and women differently required a gender specific approach in creating individual awareness about cancer screening. The majority of the men and women from Nakuru North Sub-County aged 18-49 years were well conversant with cancer screening. Their high appreciation of cancer screening services was likely to influence their decision to seek cancer screening services. The low uptake of cancer screening among residents of the study area confirms existence of a strategic factor that influenced their health seeking behavior with regard to cancer screening.

The men (43%) rated their risk as low, 38% rated their risk as medium while 19% of the respondents rated their risk of developing cancer as high. On the contrary, 45% of women rated their risk as high, 30% as medium while 25% rated their risk as low. The fact that women perceived themselves to be at a higher risk of developing cancer than explains the importance of individual awareness in enhancing cancer screening, hence a higher uptake rate of cancer screening for women than men. There is a gaps in the individual awareness on cancer and its screening given that the men and women of Nakuru North Sub-County, had a low perception of the risk of developing cervical cancer. The study targeted age of 18- 49 years was noted by WHO (2015) to be a high risk and therefore the low perception of the risk of developing cervical cancer among the residents contributed to low uptake of cancer screening.

ST. PAUL'S UNIVERSITY

5.2.2: Social economic factors influencing the uptake of cancer screening

Based on the findings, occupation as an economic factor greatly influenced uptake of cancer screening. Nearly half (45%) of the men were self-employed, 21% were farmers, and 18% were in salaried employment while 16% were casual worker. On the other hand, 55% of the women were self-employed, 20% were farmers, 14% were casual workers while 11% were in formal employment. This is indicative of the higher disparity of access to economic opportunities between men and women. More men than women being in formal employment and more women than being in self-employment confirm that men had better access to income compared to their women counterparts given that self-employment where women were largely deriving their income from is low paying and unreliable. This was likely to influence their health seeking behavior where men stood a better access than women. Therefore, the occupation as an economic factor influenced uptake of cancer screening. The majority of the residents surveyed were involved in menial occupations to earn their livelihood. Since there were cost related to uptake of cancer screening such as transport, access cost and opportunity costs, the unreliable nature of occupation by the study participants limited their uptake of cancer screening. The age group surveyed was also bread winners in their households and therefore had other dependants to support which was likely to reduce their disposable income that would otherwise be used for catering for cancer screening services.

It was further revealed that 32% of the men had a monthly income of Kshs 11,000 - 20,000/=, 22% had monthly income of Kshs 5,000 - 10,000; 20% had monthly income of Kshs 1000 - 5,000 while 13% had no monthly income.

On the other hand, most of the women (40%) earned a monthly income of Kshs 1,000-5,000, 25% did not earn any monthly income while 21% earned between Kshs 11,000-20,000. The findings show serious disparity between monthly income between men and women with men earning more than women. Hence, being better placed to cater for expense related to cancer screening. In addition, the majority of both men and women, earned meager monthly income of Kshs 1,000 and 20,000 which was supposed to cater for all their household and personal needs including catering for cancer screening services. The limited disposable income reduced the likelihood of

ST PAUL'S UNIVERSITY

the residents to seek for cancer screening services as well as determined the source of information that they accessed all of which influenced health seeking behaviors like cancer screening. Therefore, household income as a social economic factor negatively influenced uptake of cancer screening.

Majority (73%) of the men paid less than Kshs 100 in order to reach the nearest health facility offering cancer screening services while 22% paid Kshs 100 to 200. Similarly, 72% of women indicated paying Kshs 100 while 20% paid Kshs 100 to 200 in order to reach the nearest health facility offering cancer screening services. The findings confirm a similarity in transport cost paid by both men and women to reach the nearest health facility offering cancer screening services. The transport cost to cancer screening facility was reasonable and affordable and was likely to encourage uptake of cancer screening.

The study established that reluctances in enrolling in the national health insurance with men leading at 68% and women at 55%.. There were more women with insurance covers than men, hence higher number of women who sought cancer screening services than men. The lack of health insurance among both men and women from Nakuru North Sub-County was likely to limit their uptake of cancer screening services. The health insurance like NHIF would go a long way in enhancing uptake of cancer screening. However, given that the residents were economically deprived, they could not afford health insurance and would not benefit from subsidized cost through insurance.

The study found out that nearly half (45%) of the men rated the cost of cancer screening as expensive while 19% indicated that the procedure was very expensive. Only 23% of men rated cancer screening procedure as free of charge. Similarly, about half (47%) of the women rated the cost of cancer screening as expensive while 17% indicated that the procedure was very expensive. Only 14% of women rated cancer screening procedure as free of charge. The findings point to high similarity in the cost of cancer screening between men and women which was largely exorbitantly high, hence explaining the low uptake of the cancer screening services. The major reason(s) given by across the gender divide for not seeking cancer screening services included that: they could not afford; the nearest medical facility does not have that service;

ST PAUL'S UNIVERSITY

their medical cover does not have that provision; and that even if they were screened, they could not afford the treatment. The cost of access of healthcare services and cancer screening in particular was a hindering factor towards uptake of cancer screening. The cost of access was noted to be unaffordable to the majority of surveyed residents.

The study established that the clash of economic activities with clinic appointment times caused non-uptake of cancer screening as attested by 52% of men and 54% of women. This is a convergence between the two genders about the challenge of competition between health seeking and bread winning roles. There was conflict between cancer screening and respondents' economic activities such as their breadwinning role. The fact that the time for cancer screening clinic appointment was the same time that the respondents were involved in earning their livelihood, meant that they had to choose between the two. They were likely to postpone going for cancer screening to attend to the more urgent role of earning their livelihood, leading to low uptake of cancer screening in the Sub-County. Therefore, social-economic factors significantly influenced the uptake of cancer screening among the residents.

5.2.3: Effect of Access to health facility on the uptake of cancer screening

The study established that the majority of men (60%) and women (65%) were aware of facilities that offer cancer screening services. The slightly higher appreciation of availability of facilities offering cancer screening by women compared to men was likely to explain higher numbers of women likely to prescribe to cancer screening. Knowledge about the availability of facilities offering cancer screening was a critical component of access to health facility that subsequently influenced uptake of cancer screening among the residents. The majority of these residents were aware of health facilities offering cancer screening in their locality.

The majority of men (63%) and women (60%) travelled 1-5km to reach the nearest health facility offering cancer screening, 25% of men and 27% of women travelled 6-10km while 12% of men and 13% of women travelled 11-15km to reach the nearest health facility. There was no major difference in distance travelled to reach the nearest health facility by both men and women. Access to health facility based on distance to the nearest health facility affected compliance with cancer screening among the

ST PAUL'S UNIVERSITY

residents of Nakuru North Sub-County. The closeness of health facilities was likely to be an encouraging factor towards the residents' uptake of cancer screening. Therefore, access to health facility influenced uptake of cancer screening given that health facilities offering cancer screening were in proximity. However, depending on other issues like cost of access, competence of medical practitioners and quality of service, the uptake of cancer screening would vary.

The study found out that time as a construct of access to health facility did not positively influence uptake of cancer screening in the area of the study. 40% of men indicated that it took 30 minutes to 1 hour to receive cervical cancer screening services, 36% indicated that it took 1-2 hours while 24% indicated that it took over 2 hours to receive cervical cancer screening services. On the contrary, most of the women (44%) noted that they took over 2 hours to receive cervical cancer screening services, 38% of them took 1-2 hours while 18% took 30 minutes to 1 hour. The huge difference in access time between men and women where men took shorter time than their women counterparts could be a limiting factor towards uptake of cancer screening. Time taken to receive cancer screening services was reasonable given that it took 30 minutes to 1 hour to be attended to. This was likely to enhance uptake of cancer screening among the men and women aged 18- 49 years in Nakuru North Sub-County. However, since only a small proportion of residents of the residents had sought cancer screening services, only a small number of area residents knew that it only took a short time to be served in the cancer screening facilities. Thus, time as a construct of access to health facility did not positively influence uptake of cancer screening in the area of the study.

The majority men (79%) and women (65%) noted that the healthcare providers were competent provisions of cancer screening services. However, 21% of men and 35% of women indicated that the healthcare providers were not competent in provisions of cancer screening services. There seem to be a huge difference in healthcare providers' competence in provisions of cancer screening services as noted by men and women. This indicates that the low perception of competence of healthcare providers by women could hinder their participation in cancer screening. Given that some types of cancers are gender specific, women required women responsive healthcare providers to participate more freely in the process. Access to health services influenced uptake

ST. PAUL'S UNIVERSITY

of cancer screening given that the competence of doctors/healthcare providers' in provisions of cancer screening services. The perception of high competence of healthcare providers among the residents of the study area was likely to be a motivating factor towards their uptake of cancer screening services. The adequacy and specialty of health personnel available in the study area was however likely to compromise their efficiency in service delivery as screening of different types of cancers required specialized skills and adequate number of healthcare providers.

It was further noted that 44% of men and 55% of women indicated that the health facilities near them organized for outreach programs on cancer screening on annual basis while 40% of men and 38% of women noted that it was semi-annually. There are more women (93%) than men (84%) who happened to be aware of the fact that the health facilities near them organized for outreach programs on cancer screening. Hence disparity in uptake, between men and women in the Sub-County. Cancer screening uptake initiatives were likely to be negatively affected by minimal outreach programs on cancer screening which were on annual and semi-annual basis in the study area

5.3: Conclusion

5.3.1: Effects of Individual awareness on the uptake of cancer screening

The study concludes that the high appreciation of different types of cancer among the both men and women which corresponds with high individual awareness on the need for uptake of cancer screening. However, it's worthy noting that the individual awareness on the need for uptake of cancer screening was higher for men than women, pointing to higher access to information among men. However, the high level of awareness did not translate into their health seeking decisions with regard to uptake of cancer screening given the low uptake of cancer screening in the Sub-County which stands at stands at 7% for men and 15% for women. Implying that despite their lower level of awareness, women were more likely to comply with the call to regularly screen for cancer than their male counterparts. It further points to existence of barriers towards up-taking of cancer screening in the Sub-County. In addition, the awareness that existed among the men and women was likely to be incomprehensive given the differing nature of various forms of cancers affecting different genders and

ST. PAUL'S UNIVERSITY

those that cut across, hence need for clarity in creating awareness with respect to different types of cancers.

From the findings, it is also concluded that there is a clear differentiation between access to different sources of information between men and women with men having a higher access. This was likely to be attributed to the fact that access to diverse information has cost implications where men had an advantage having generally a bigger financial muscle than women. Similarly, access to information especially internet based channels required a more technologically savvy use where men had an edge over women hence higher access, consequently better individual awareness. The cancer screening advocacy used different channels of communication and depending with the channel of communication, the men and women had access determined their level of individual awareness on the uptake of cancer screening. Each of the channels of communication had its merits and demerits in creating cancer screening awareness. The residents of Nakuru North Sub-County had access to various sources of information on cancer screening through diverse communication channels cutting across the key strategic communication approaches namely; print media, mass media, social media, interpersonal communication and community mobilization. However, access to information on cancer screening differed between the different channels of communication where most of the people accessed information on cancer screening. Through interpersonal channels such as through peer educator/community health workers, health provider and friend/relatives and schools compared to mass mediated channels. The exposure to messages on cancer screening through various channels would motivate an increased uptake of cancer screening.

More women than men understood the preventable nature of cancer when detected early through cancer screening, hence more women being likely to uptake cancer screening than men. Their individual awareness influenced uptake of cancer screening among residents of Nakuru North Sub-County. The majority of the residents were well informed of the fact that early detection of cancer through cancer screening would increase chances of healing compared with late detection. This individual awareness was critical in enhancing uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub-County.

ST. PAUL'S UNIVERSITY

There was poor availability of awareness of training programs on cancer as attested by similar number of men and women. Lack of forums and training programs where the Nakuru North Sub-County men and women would be empowered about cancer and its screening contributed to incomprehensive individual awareness on cancer screening. Given the finding, more women than men participated in cancer screening and in higher frequency than men depicting a higher uptake of cancer screening among women than men as a result of participation in cancer sensitization forums. The high levels of individual awareness on the uptake of cancer screening among the residents was eroded by the low frequency of cancer sensitization forums offered which was mainly on annual basis.

The study concludes that A higher proportion of men than men were aware of cancer screening but the fact that different types of cancer affect men and women differently required a gender specific approach in creating individual awareness about cancer screening. The majority of the men and women from Nakuru North Sub-County aged 18-49 years were well conversant with cancer screening. Their high appreciation of cancer screening services was likely to influence their decision to seek cancer screening services. The low uptake of cancer screening among residents of the study area confirms existence of a strategic factor that influenced their health seeking behavior with regard to cancer screening.

Similarly, the fact that women perceived themselves to be at a higher risk of developing cancer than explains the importance of individual awareness in enhancing cancer screening, hence a higher uptake rate of cancer screening for women than men. There is a gaps in the individual awareness on cancer and its screening given that the men and women of Nakuru North Sub-County, had a low perception of the risk of developing cervical cancer. The study targeted age of 18- 49 years was noted by WHO (2015) to be a high risk and therefore the low perception of the risk of developing cervical cancer among the residents contributed to low uptake of cancer screening.

5.3.2: Social economic factors influencing the uptake of cancer screening

The study concludes that there is the high disparity of access to economic opportunities between men and women. More men than women being in formal

ST. PAUL'S UNIVERSITY

employment and more women than being in self-employment confirm that men had better access to income compared to their women counterparts given that self-employment where women were largely deriving their income from is low paying and unreliable. This was likely to influence their health seeking behavior where men stood a a better access than women. Therefore, the occupation as an economic factor influenced uptake of cancer screening. The majority of the residents surveyed were involved in menial occupations to earn their livelihood. Since there were cost related to uptake of cancer screening such as transport, access cost and opportunity costs, the unreliable nature of occupation by the study participants limited their uptake of cancer screening. The age group surveyed was also bread winners in their households and therefore had other dependants to support which was likely to reduce their disposable income that would otherwise be used for catering for cancer screening services.

Similarly, there is serious disparity between monthly income between men and women with men earning more than women. Hence, being better placed to cater for expense related to cancer screening. The limited disposable income reduced the likelihood of the residents to seek for cancer screening services as well as determined the source of information that they accessed all of which influenced health seeking behaviors like cancer screening. Therefore, household income as a social economic factor negatively influenced uptake of cancer screening.

There is similarity in transport cost paid by both men and women to reach the nearest health facility offering cancer screening services. The transport cost to cancer screening facility was reasonable and affordable and was likely to encourage uptake of cancer screening similarity in transport cost paid by both men and women to reach the nearest health facility offering cancer screening services. The transport cost to cancer screening facility was reasonable and affordable and was likely to encourage uptake of cancer screening.

Its is further concluded that there were more women with insurance covers than men, hence higher number of women who sought cancer screening services than men. The lack of health insurance among both men and women from Nakuru North Sub-County was likely to limit their uptake of cancer screening services. The health insurance like NHIF would go a long way in enhancing uptake of cancer screening. However, given

ST. PAUL'S UNIVERSITY

that the residents were economically deprived, they could not afford health insurance and would not benefit from subsidized cost through insurance.

There is high similarity in the cost of cancer screening between men and women which was largely exorbitantly high, hence explaining the low uptake of the cancer screening services. There is a a convergence between the two genders about the challenge of competition between health seeking and bread winning roles. There was conflict between cancer screening and respondents' economic activities such as their breadwinning role. The fact that the time for cancer screening clinic appointment was the same time that the respondents were involved in earning their livelihood, meant that they had to choose between the two. They were likely to postpone going for cancer screening to attend to the more urgent role of earning their livelihood, leading to low uptake of cancer screening in the Sub-County. Therefore, social-economic factors significantly influenced the uptake of cancer screening among the residents.

5.3.3: Access to health facility and the uptake of cancer screening

The study concludes that the slightly higher appreciation of availability of facilities offering cancer screening by women compared to men was likely to explain higher numbers of women likely to prescribe to cancer screening. Knowledge about the availability of facilities offering cancer screening was a critical component of access to health facility that subsequently influenced uptake of cancer screening among the residents. The majority of these residents were aware of health facilities offering cancer screening in their locality.

Similarly, there was no major difference in distance travelled to reach the nearest health facility by both men and women. Access to health facility based on distance to the nearest health facility affected compliance with cancer screening among the residents of Nakuru North Sub-County. The closeness of health facilities was likely to be an encouraging factor towards the residents' uptake of cancer screening. Therefore, access to health facility influenced uptake of cancer screening given that health facilities offering cancer screening were in proximity. There was no major difference in distance travelled to reach the nearest health facility by both men and women. Access to health facility based on distance to the nearest health facility affected compliance with cancer screening among the residents of Nakuru North Sub-County.

ST. PAUL'S UNIVERSITY

The closeness of health facilities was likely to be an encouraging factor towards the residents' uptake of cancer screening. Therefore, access to health facility influenced uptake of cancer screening given that health facilities offering cancer screening were in proximity.

The huge difference in access time between men and women where men took shorter time than their women counterparts could be a limiting factor towards uptake of cancer screening. Time taken to receive cancer screening services was reasonable given that it took 30 minutes to 1 hour to be attended to. This was likely to enhance uptake of cancer screening among the men and women aged 18- 49 years in Nakuru North Sub-County. However, since only a small proportion of residents of the residents had sought cancer screening services, only a small number of area residents knew that it only took a short time to be served in the cancer screening facilities. Thus, time as a construct of access to health facility did not positively influence uptake of cancer screening in the area of the study

There seem to be a huge difference in healthcare providers' competence in provisions of cancer screening services as noted by men and women. This indicates that the low perception of competence of healthcare providers by women could hinder their participation in cancer screening. Given that some types of cancers are gender specific, women required women responsive healthcare providers to participate more freely in the process. Access to health services influenced uptake of cancer screening given that the competence of doctors/healthcare providers' in provisions of cancer screening services. The perception of high competence of healthcare providers among the residents of the study area was likely to be a motivating factor towards their uptake of cancer screening services. The adequacy and specialty of health personnel available in the study area was however likely to compromise their efficiency in service delivery as screening of different types of cancers required specialized skills and adequate number of healthcare providers.

5.4: Recommendations

The study established that there were individual awareness gaps among the study participants on cancer given that the residents of Nakuru North Sub-County given their low perception of the risk of developing cervical cancer. The government in

ST. PAUL'S UNIVERSITY

partnership with its health programs partners should conduct gender responsive national-wide cancer sensitization campaigns on regular basis. This should be through specific communication channels that majority men and women differently have access to including vernacular stations and opinion leaders of both gender divide at the grassroots levels.

The study established that household income as a social economic factor negatively influenced uptake of cancer screening with a greater negative impact on women than men. The study recommends that the government should consider subsidizing the cost of cancer screening to encourage its uptake for both genders. The lowering of cost of health insurance with special focus on gender needs will go a long way in enhancing uptake of cancer screening services.

The study revealed that access to health facility is a component of various many variables like proximity, access time, competence, adequacy and specialty of healthcare providers, all of which influenced uptake of cancer screening. The gender divide however were majorly impacted differently by the competence of health care providers. The study recommends that access to health facility should be scaled up by the management of health facilities and the government using a hybrid and gender responsive approaches. This is through enhancing proximity, access time, and ensuring hiring of both genders as the health providers to guarantee provision of gender responsive cancer screening services.

5.5: Areas of Further Studies

i. Similar studies should be carried out in other counties in Kenya for comparison and generalization of findings.

ii. Similar studies should also be conducted on the role of county government in the uptake of cancer screening in Kenya.

ST. PAUL'S UNIVERSITY

REFERENCES

Abdulghaffar A., Talpur, A.A., Abdul R. S., & Ali A. G. Late presentation of breast cancer: a dilemma. *JPMA-Journal of the Pakistan Medical Association* 61, (7). 662.

Abdullahi, A., Copping, J., Kessel, A., Luck, M., & Bonell, C. (2009). Cervical screening: Perceptions and barriers to uptake among Somali women in Camden. *Public Health, 2(10)* 680-685.

Abotchie, P. N., &Shokar, N. K. (2009). Cervical cancer screening among college students in Ghana: knowledge and health beliefs. *International journal of gynecological cancer: official journal of the International Gynecological Cancer Society*, *19*(3), 412.

Ahuja, S., &Chakrabarti, N. (2010). To determine the level of knowledge regarding breast cancer and to increase awareness about breast cancer screening practices among a group of women in a tertiary care hospital in Mumbai, India. *Int J Public Health*, *1*(1).

Alice, N., Diane, S., Jasmine, A., & Stephen, H. (2008). Mediating Factors in the Relationship between Income and Mammogram Use in Women. *Journal of Women's Health* , 1371 – 1378.

American College of Clinical Pharmacy (ACCP).2004; *Cancer screening annual report*.Government Press, USA. Washington DC.

Ansink, A. C., Van der Zee, A. G., Oonk, M. H., De Hullu, J. A., Vergote, I., Verheijen, R. H., ... & Van der Velden, J. (2008). Sentinel node dissection is safe in the treatment of early-stage vulvar cancer. *Journal of Clinical Oncology*, *26*(6), 884-889.

Becker. (2007). Scales for Measuring Health Belief Model Dimensions: A Test of Predictive Value, Internal Consistency, and Relationships Among Beliefs. *Health Education & Behavior* , 215-230.

Bouchardy, C., Verkooijen, H., & Fioretta, G. (2006). Social Class is an Important and Independent Prognostic Factor for Breast Cancer Screening. *International Journal of Cancer* , 1145- 1151.

Bradley, J., Thorstad, W. L., Mutic, S., Miller, T. R., Dehdashti, F., Siegel, B. A., ...& Bertrand, R. J. (2004). Impact of FDG-PET on radiation therapy volume

ST. PAUL'S UNIVERSITY

delineation in non–small-cell lung cancer. *International Journal of Radiation Oncology* Biology* Physics*, *59*(1), 78-86.

Bulaporn, N., & Clark, M. (2008). Factors Influencing Breast Cancer screening among Older Thai. *Hong Kong medical Journal* , 334-400.

Buziba, N. & Were, E., Nyaberi, Z., & (2011).Perceptions of risk and barriers to cervical cancer screening at Moi Teaching and Referral Hospital (MTRH), Eldoret, Kenya. *African health sciences*, *11*(1).

Cann, A., Mc Cormack, O., Chung, W. Y., Fitzpatrick, P., Cooke, F., Flynn, B., & Harrison, M. (2008).Growth arrest-specific gene 6 expression in human breast cancer. *British journal of cancer*, *98*(6), 1141-1146.

Coleman M., Ferlay, J., Héry, C., Autier, P., &Sankaranarayanan, R. (2003).Global burden of breast cancer.In *Breast cancer epidemiology* (pp. 1-19).Springer New York.

Conceptive Tract Cancer Program (2010).*Community Engagement and Sustainable Development.* Washington D C: World Bank.

Cox, B. (2010).Performance of common genetic variants in breast-cancer risk models. *New England Journal of Medicine*, *362*(11), 986-993.

Cuthbertson, S., Goyder, E., & Poole, J. (2009). Inequalities in Breast Cancer Diagnosis in the Trent region and Implications for the NHS Breast Screening Programme. *Journal of Public Health* , 398 – 405.

Donald. F. (2010). The role of behavioral science theory in development and implementation of public health interventions. *Annual Review of Public Health* , 399–418.

Gachago, M., He, L. Q., Njambi, L., Nyamori, J. M., Nyenze, E. M., Kimani, K., &Matende, I. (2014). Developing clinical cancer genetics services in resource-limited countries: the case of retinoblastoma in Kenya. *Public Health Genomics*, *17*(4), 221-227.

Gichangi, P., Estambale, B., Bwayo, J., Rogo, K., Ojwang, S., Opiyo, A., &Temmerman, M. (2003). Knowledge and practice about cervical cancer and Pap smear testing among patients at Kenyatta National Hospital, Nairobi, Kenya. *International Journal of Gynecological Cancer*, *13*(6), 827-833.

GOK. (2010). *National Cancer Control Strategy.* Nairobi: Government Printers.

ST. PAUL'S UNIVERSITY

Ichaminya, M. A. (2015). *Factors influencing uptake of screening cervical cancer among Women of reproductive age in Vihigacounty, Kenya* (Doctoral dissertation, University of Nairobi).

International Agency for Research on Cancer, (2005).*President of the World Bank speech to the World Health Assembly.* New York: World Bank.

Irwin, R. (2004). Historical Origins of the Health Belief Model. *Health Education Behavior* , 328–335.

Janz& Marshall, (2004).*Women and Health: Views of Women living in Lambent, South walk and Lewis ham.* London: South Bank University.

Janz, & Marshall. (2004). The Health Belief Model: A Decade Later. *Health Education Behavior* , 1-47.

Kagumire (2010).Barriers and facilitators to uptake of cervical cancer screening among women accessing maternal and child health services in Kampala, Uganda.

Kaku, M., Mathew, A., & Rajan, B. (2008). Impact of Socio-Economic Factors in Delayed Reporting and Late Stage Presentation among Patients with Cervix Cancer in a Major Cancer Hospital in South India. *Asian Pacific Journal of Cancer Prevention* , 589-94.

Karen. (2008). Social learning theory and the health belief model. *Health Education & Behavior* , 175–183.

Katahoire, R. A., Jitta, J., Kivumbi, G., Murokora, D., Arube, W. J., Siu, G., ...&Mugisha, E. (2008). An assessment of the readiness for introduction of the HPV vaccine in Uganda: original research article. *African journal of reproductive health*, *12*(3), 159-172.

Kibicho (2015). *Educational research for modern scholars.* Enugu: dimension publisher.

Kitchener, K., Chan, H., Lam, E., &Chan, Y. (2006); Factors Affecting Uptake of Breast Cancer Screening among Perimenopausal Women in Hong Kong.*Public Health Nursing*, 212-222.

Kombo, & Tromp. (2006). *Proposal and thesis writing an introduction.* Nairobi: Pauline's publications Africa.

Kothari, C. R. (2004). *Research Methodology Methods & Techniques.* New Delhi: New Age International Publisher.

ST. PAUL'S UNIVERSITY

Lyimo, F. S., &Beran, T. N. (2012). Demographic, knowledge, attitudinal, and accessibility factors associated with uptake of cervical cancer screening among women in a rural district of Tanzania: three public policy implications. *BMC public health*, *12*(1), 22.

Markovic, S. N., Erickson, L. A., Rao, R. D., McWilliams, R. R., Kottschade, L. A., Creagan, E. T., ... &Bardia, A. (2007, March). Malignant melanoma in the 21st century, part 1: epidemiology, risk factors, screening, prevention, and diagnosis. In *Mayo Clinic Proceedings* 82, (3), 364-380).

Matatiele, P. R., & Van den Heever, W. M. J. (2008). Evaluation of breast cancer awareness among women presenting with newly diagnosed breast disease at Universitas Hospital (Bloemfontein, South Africa). *South African Family Practice*, *50*(4), 69-69.

Ministry of Health (MOH).(2015). *Cancer screening annual report*. Government Press, Nairobi. Kenya.

Mona & Farida, (2009).Factors Affecting Uptake of Breast Cancer Screening among Perimenopausal Women in Hong Kong. *Public Health Nursing*, 212-222.

Morema *et al.,* 2014).Attitudes to Screening for Cervical Cancer: A Population-Based Study in Sweden. *Cancer Causes Control* , 519-528.

Muchiri, K. (2015). *Factors Influencing Women Decision for Breast Cancer Screening; A case of Ol-kalou Division, Nyandarua District-Kenya.* Washington, D.C.: UICC World Congress.

Mugenda, O., & Mugenda, A. (2003). *Research methods quantitative approaches African centre for technology studies.* Nairobi: Acts.

Mutyaba, T., Faxelid, E., Mirembe, F., & Weiderpass, E. (2007). Influences on Uptake of Reproductive Health Services on Nsangi Community of Uganda and their Implications for Cervical Cancer Screening. *Reproductive Health* , 67-82.

Mwai, D. (2014). Non-communicable Diseases in Kenya: Economic Effects and Risk Factors . *Economic Journal* , 869-902.

Nakalevu, S. M. (2009). The Knowledge, Attitude, Practice and Behavior of Women towards Cervical Cancer and Pap Smear Screening. A Cross Sectional Study in the Rewa Subdivision. *Masters in Public Health Thesis. Fiji*, 30-44.

ST. PAUL'S UNIVERSITY

National Reproductive Health Approach (2006).*Cancer screening annual Report.* USA. Washington DC.

NCCP, (2012).*Health in the Framework of Sustainable Development: Technical Report for the Post-2015 Development Agenda.* Geneva: SDSN

Ngau, (2014).*Global Burden of Disease and Risk Factors.* New York: Oxford University Press.

Nicky, (2005).*Foundations of Breast Health Promotion.* Toronto: Elsevier limited.

Nieminen *et al.,* (2002).Use of breast cancer screening services by women aged >40 years in Korea. *BMC cancer* , 34-67.

Nyaberi, Z., Were, E., &Buziba, N. (2011). Perceptions of risk and barriers to cervical cancer screening at Moi Teaching and Referral Hospital (MTRH), Eldoret, Kenya. *African health sciences*, *11*(1).

Orodho, & Kombo. (2002). *Research methods.* Nairobi: Masola Publishers.

Orodho. (2004). *Techniques writing Research proposal and reports.* Nairobi: masola publishers.

Oso, W., & Onen, D. (2005). *A general guide to writing research proposal and report. A handbook for beginning researchers.* Lagos: Options press and publishers.

Program for Appropriate Technology in Health (PATH) (2004).*Cancer screening annual Report*. USA. Washington DC.

Rimer. (2008). *Health behavior and health education: theory, research, and practice.* San Francisco: Jossey-Bass.

Rogers, E. M. (2003). A prospective and retrospective look at the diffusion model. *Journal of health communication*, *9*(S1), 13-19.

Ronco, C., Haapio, M., House, A. A., Anavekar, N., &Bellomo, R. (2008). Cardiorenal syndrome. *Journal of the American College of Cardiology*, *52*(19), 1527-1539.

Satija, A. (2009). *Cervical Cancer in India.* Mumbai: South Asia Center for Chronic Disease.

Sen. (2007). Why Health Equity? *Health Economics* , 659-- 666.

Singh, S., &Badaya, S. (2012). Factors influencing uptake of cervical cancer screening among women in India: A hospital based pilot study. *J Community Med Health Educ*, *2*(157), 2161-0711.

ST. PAUL'S UNIVERSITY

Stretcher. (2007). *The health belief model.* London: Cambridge University Press.

Sule, E. A. (2011). Breast cancer awareness and breast examination practices among women in a Niger Delta hospital. *Continental Journal of Medical Research*, *5*(1), 27.

United Nations (UN). (2013). *A Life of Dignity for All.* Geneva: United Nations.

Wardle, J., Robb, K., Vernon, S., & Waller, J. (2015). Screening for Prevention and Early Diagnosis of Cancer. *American Psychologist* , 119-133.

Were, E., Nyaberi, Z., & Buziba, N. (2011). Perceptions of risk and barriers to cervical cancer screening at Moi Teaching and Referral Hospital (MTRH). *African health sciences* , 12-34.

WHO. (2015). *The 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases.* Geneva: WHO.

World Health Organization (2015).*Cancer screening annual Report*. USA. Washington DC.

ST. PAUL'S UNIVERSITY

APPENDICES

APPENDIX I: INFORMED CONSENT FORM

Title of the study: factors affecting uptake of cancer screening among men and women aged 18- 49years in Nakuru North-Sub County, Kenya.

Investigators: Sr. Rose Wanjiru Kuria

Study location: Nakuru North-Sub County

Introduction

My name is Sr. Rose Wanjiru Kuria, a master degree in development studies of St. Paul's university. I am the principle investigator in this study.

Purpose of the Study

The purpose of the study was to determine factors affecting the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-county, Kenya.

Procedures

I would like you to participate in this study. If you agree to participate, you will be asked questions to give any relevant information about factors affecting the uptake of cancer screening among men and women aged 18- 49 years. If therefore, you wish to participate, the principle investigator requests that you give permission by signing the consent form.

Potential Harm or Risks

There is no harm or risks associated with participation in the study.

Benefits

This research project is purely academic and there are no direct benefits to the participants. The findings will benefit science by adding information to solve health challenges in our society.

ST. PAUL'S UNIVERSITY

Compensation

If you agree to participate, you will not be paid for your participation and for any study procedures to be carried out.

Confidentiality

All information relating to your participation in this study will remain private. Your name will not be used. Instead, a unique code for each informant will be used. The questionnaires will be locked up for information security.

Alternative to Participation

Your participation in this study is voluntary. If you do not want to participate there will be no penalty. You may pull out of the participation at any time without penalty or loss of benefits.

Contacts: Person's and Places for Answers

In case of any queries or concerns, please contact the following:

Sr. Rose Wanjiru Kuria, Principle Investigator Cell No: 0720-454-552

Participant Statement

The study you are about to participate in is aimed at determining factors affecting the uptake of cancer screening among men and women aged 18- 49 years in Nakuru North Sub-county. Should you agree to participate in the study, you will be asked to answer questions to give any relevant information about uptake of cancer screening. Any additional information about the study will be provided to you including the final study results.

The methods and means by which the study will be conducted have been explained to me by the researcher. All questions have been answered to my full satisfaction. I also understand that withdrawal from the study at any point is voluntary and not subject to penalty. I agree to participate in this study.

Participant name ----------

ST. PAUL'S UNIVERSITY

Participant signature ----------

Date ----------

Researcher's signature ----------

Date ----------

ST. PAUL'S UNIVERSITY

APPENDIX II: QUESTIONNAIRE

I am Rose Kuria, a student at St Paul's University taking a master's degree in development studies. As a requirement for the fulfillment of the Master's degree, I intend to carry out a research on "**factors affecting uptake of cancer screening in Nakuru North -Sub County between men and women aged 18- 49years Kenya**." This questionnaire is therefore for the purpose of the academic research only and the information gathered will be treated confidentially. Please answer all the questions provided as honestly as possible, to the best of your knowledge.

Do I have your consent to proceed? Yes [ ] No [ ]

Section A: Background Information (Tick (√) the appropriate option (bracket)

1. What is your age?

   ……

2. Please tick against your sex

   a) Male [ ] b) Female [ ]

3. What is your highest level of education?

   None [ ] Primary [ ] Secondary [ ] Certificate [ ]

   Diploma [ ] Bachelor's degree [ ] Master's degree [ ]

Section B: Uptake of cancer screening

4. Have you ever had a cancer screening test?

   Yes [ ]No [ ]

5. If yes, how frequent have you had a cancer screening test?

   Monthly [ ]

   Quarterly [ ]

ST. PAUL'S UNIVERSITY

Semi-annually [ ]

Annually [ ]

6. Why did you undergo a cancer screening test?

……

Section C: Individual awareness and the uptake of cancer screening

7. Have you heard about the different types of cancers?

   Yes [ ] No [ ]

8. Where did you hear about cancer?

   a) Social media (whatsup, Instagram, facebook)
   b) Television,
   c) internet,
   d) Newspaper
   e) Radio
   f) School/college
   g) Seminars and Conferences
   h) Local community Programs

9. Are you aware of the cancers that can be treated if detected early?

   a) Yes
   b) No

10. Are there any training programs on cancer that you know of?

    a) Yes
    b) No

11. How often have you attended cancer sensitization forums?

    a) Weekly [ ]
    b) Monthly [ ]

ST. PAUL'S UNIVERSITY

c) Quarterly [ ]
d) Semi-annually [ ]
e) Annually [ ]

12. Have you ever heard about cancer screening services?

Yes [ ] No [ ]

13. Have you ever attended any training programs on cancer screening?

Yes [ ] No [ ]

14. Are you aware of any facilities that offer cancer screening services?

Yes [ ] No [ ]

15. How would you judge your risk of developing cancer?

High risk [ ] Medium risk [ ]

Low risk [ ] Don‘t know [ ]

16. Have you ever visited any of such facilities?

Yes [ ] No [ ]

Section D: Socio-economic factors and cancer screening

17. What is the occupation of the majority of parents in this area?

Self Employed [ ]
Salaried employment [ ]
Farming [ ]
Casual worker [ ]
None [ ]

18. What is your income per month?

a) Below 5,000/= [ ]
b) 5,000 - 10,000/= [ ]

ST. PAUL'S UNIVERSITY

c) 11,000 - 20,000/= [ ]
d) 21,000-30,000 [ ]
e) Above 30,000/= [ ]
f) No income [ ]

19. Do you have any kind of health care cover, including health insurance such as NHIF?

a) Yes [ ]
b) No [ ]

20. How often do you visit hospital for normal check-up?

a) Monthly [ ]
b) Twice/ year [ ]
c) Once/ year [ ]
d) I don't [ ]

21. If you have ever been screened for cancer, how would you rate the cost of cancer screening?

Very expensive	Expensive	Cheap	Very cheap	Free

22. If no, kindly tick against the following reason(s) for not screening for cancer:

a) I can't afford [ ]
b) Even if I screened, I can't afford the treatment [ ]
c) My medical cover does not have that provision [ ]
d) The nearest medical facility does not have that service [ ]

23. Do you think that clash of economic activities with clinic appointment times cause non-uptake of cancer screening? Yes [ ] No [ ]
Do you attribute lack of education to being one of the main reasons for non-uptake of cancer screening services? Yes [ ] No [ ]

Section E: Social cultural factors and uptake of cancer screening

ST. PAUL'S UNIVERSITY

23. Do cultural beliefs hinder you from going for cervical cancer screening?

    Yes [ ] No [ ]

24. Does cigarette smoking and alcohol intake increase the risk of developing cancer?

    Yes [ ] No [ ]

25. Is your community aware of cancer screening? Yes [ ] No [ ]
26. What is your marital status?

    a) Single (never married) [ ]
    b) Married (Living with partner) [ ]
    c) Separated [ ]
    d) Divorced [ ]
    e) Widowed [ ]

27. What is your religion?

    Traditionalist [ ] Christian [ ] Muslim [ ] Hindu [ ]

28. Does the religion affiliation you belong to encourage you to go for cancer screening?

    Yes [ ] No [ ]

29. Number of children you have given birth? …….
30. Who makes decisions about seeking health services?

    Myself [ ] my partner [ ] my parent [ ]

31. Does your spouse/partner/family support you to undergo cancer screening?

    Yes [ ] No [ ]

32. Does the gender of the healthcare provider determine if you would accept to undergo cancer screening? Yes [ ] No [ ]
33. My spouse/partner/family provides me with financial support for seeking cervical cancer screening services? Yes [ ] No [ ]

ST. PAUL'S UNIVERSITY

Section F: Access to health care services and uptake of cancer screening

34. How far is your house to the nearest health facility?

    (a) 1 – 5km [ ]
    (b) 6 – 10 km [ ]
    (c) 11-15 km [ ]
    (d) 16 km and above [ ]

35. How much does it cost you to reach the nearest Health facility offering cancer screening services? ……
36. How much time do you wait at the hospital to receive cervical cancer screening services?

    Less than 30 min [ ] 30 minutes to 1 hour [ ] 1-2 hours [ ]
    Over 2 hours [ ]

37. Does the nearest health facility to your house offer cancer screening services?

    (a) Yes [ ] (b) No [ ]

38. Are the doctors/healthcare providers' competent provisions of cancer screening services? Yes [ ] No [ ]
39. Do health facilities provide free cancer screening?
40. Are people seeking for cancer screening charged?
41. If yes, is the charge affordable? Yes [ ] No [ ]
42. Do you have a hospital insurance cover that covers cancer screening?
    Yes [ ] No [ ]
43. How often do health facilities near you organize for outreach programs on cancer screening? Monthly [ ] Quarterly [ ] Semi-annually [ ]
    Annually [ ]

Thank you for your time and participation

ST. PAUL'S UNIVERSITY

APPENDIX III: KEY INFORMANT INTERVIEW GUIDE

I am Rose Kuria, a student at St Paul's University taking a master's degree in development studies. As a requirement for the fulfillment of the Master's degree, I intend to carry out a research on "**factors affecting uptake of cancer screening in Nakuru North -Sub County between men and women aged 18- 49 years Kenya**." This questionnaire is therefore for the purpose of the academic research only and the information gathered will be treated confidentially. Please answer all the questions provided as honestly as possible, to the best of your knowledge.

Do I have your consent to proceed? Yes [ ] No [ ]

What is your designation? ……

Section A: Uptake of cancer screening

1. What are the statistics of cancer screening over the last five years in your area?
2. What are the main reasons that make people undergo or not undergo a cancer screening test from your area?

……

Section: Individual awareness and the uptake of cancer screening

3. Are members of your area aware of cancer?
4. What are the main channels of information about cancer that people from your area have access to?
5. Are the people from your area aware that cancer that can be treated if detected early?
6. Are there any cancer awareness programs on cancer that are undertaken in your area? If yes, how often are the cancer sensitization forums held?
7. In which ways does the individual awareness influence their uptake of cancer screening?

ST. PAUL'S UNIVERSITY

Section C: Socio-economic factors and cancer screening

8. Would you say that the occupation of the majority of parents in your area determine the uptake of cancer screening? If yes/no explain your response?
9. How would you rate the cost of cancer screening?
10. Which socio-economic factors are responsible for the uptake or non-uptake of cancer screening in your area?

Section D: Social cultural factors and uptake of cancer screening

11. Do cultural beliefs hinder people in your area from going for cervical cancer screening? Kindly explain your answer.
12. Does cigarette smoking and alcohol intake increase the risk of developing cancer? Kindly explain your answer.
13. How does marital status and religion contributing to uptake or non-uptake of cancer screening in your area?
14. Which socio- cultural factors are responsible for the uptake or non-uptake of cancer screening in your area?

Section E: Access to health care services and uptake of cancer screening

15. How far are the health facilities from the people in the area?
16. How much does it cost members of your area to reach the nearest Health facility offering cancer screening services? ……
17. How much time do you wait at the hospital to receive cervical cancer screening services?
18. Do health facilities provide free cancer screening?
19. Does the hospital insurance cover that majority of the people use covers cancer screening?
20. How often do health facilities near you organize for outreach programs on cancer screening?
21. In which ways, does access to health care services contribute to the uptake or non-uptake of cancer screening in your area?

Thank you for your time and participation.

ST. PAUL'S UNIVERSITY

APPENDIX IV: RESEARCH PERMIT

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEACH CLEARANCE PERMIT

Serial No.A 13027

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MS. ROSE WANJIRU KURIA
of ST. PAULS UNIVERSITY, 3729-20100
NAKURU,has been permitted to conduct
research in *Nakuru County*

on the topic: *FACTORS AFFECTING UPTAKE OF CANCER SCREENING AMONG MEN AND WOMEN AGED 18- 49YEARS IN NAKURU NORTH -SUB COUNTY, KENYA*

for the period ending:
6th March,2018

Permit No : NACOSTI/P/17/47604/15908
Date Of Issue : 7th March,2017
Fee Recieved :Ksh 1000



.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

APPENDIX IV: AUTHORIZATION LETTER



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email:dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.
NACOSTI/P/17/47604/15908

Date:
7th March, 2017

Rose Wanjiru Kuria
St. Pauls University
P.O. Private Bag - 00217
LIMURU.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Factors affecting uptake of cancer screening among men and women aged 18-49 years in Nakuru North Sub County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Nakuru County** for the period ending **6th March, 2018.**

You are advised to report to **the County Commissioner and the County Director of Education, Nakuru County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. STEPHEN K. KIBIRU, PhD.
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nakuru County.

The County Director of Education
Nakuru County.

National Commission for Science, Technology and Innovation is ISO 9001:2008 Certified