FATALISM AND ITS INFLUENCE ON UPTAKE OF CERVICAL CANCER SCREENING AMONG WOMEN AGED 15-54 YEARS IN KIAMBU SUB-COUNTY, KIAMBU COUNTY, KENYA

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Fatalism and its Influence on Uptake of Cervical Cancer Screening among Women Aged 15-54 years in Kiambu Sub-County, Kiambu County, Kenya

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DECLARATION

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

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DEDICATION

This study is dedicated to my family especially my daughter Tiffany whom I adore so much.

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ABBREVIATIONS AND ACRONYMS

CDC Centre for Disease Control

HBM Health Belief Model

HINTS Health Information National Trends Survey

HPV Human Papilloma Virus

KII Key Informant Interviewee

LMICs Lower- and Middle-Income Countries

PIACC Program for the International Assessment of Adult Competencies

SCT Social Cognitive Theory

SMS Short Message Service

VIA Visual Inspection with Acetic Acid

VILI Visual inspection with Lugol's Iodine

WHO World Health Organization

DEFINITION OF OPERATIONAL TERMS

Cervical cancer	A cancer that arises from the organ connecting the uterus the vagina due to the growth of abnormal cells that are capable of spreading to other body parts.
Cervical cancer fatalism	A belief that a diagnosis with cervical cancer means death and one has no control over it
Fatalism	Is the perception that an individual has no control over a disease or a condition since it dictates life and death
Screening	It's the examination of the cervix to detect the abnormal cells growth in the cervix

ABSTRACT

While cervical cancer screening is key for early diagnosis and treatment, its uptake is often sub-optimal and may be adversely affected by fatalism. The study aimed to establish the factors associated with fatalism and its influence on cervical cancer screening among women aged 15-54 years in Kiambu sub-county. This was because the sub-county is more representative of the larger Kiambu County in terms study population characteristics. A cross-sectional study design, involving a sample size of 400 obtained through simple random sampling was employed. A standard in-person administered structured questionnaire was initially pre-tested (Cronbach's alpha 0.7) among 10 women and later used for data collection from among selected households across Kiambu sub-county. Before the actual data collection, consent was taken from eligible participants. Data collected involved socio-demographic and socio-economic factors, knowledge, fatalism and cervical cancer screening practices. After data collection, the questionnaires were checked for completeness, and respective data entered into a standard excel data sheet. This was followed by data cleaning, and coding for analysis. Descriptive statistics generated cervical cancer screening, knowledge, and fatalism levels. Binary logistic regression was used for all bivariable, and multivariable analyses to identify factors associated with fatalism, knowledge on cervical cancer and cervical cancer uptake. To establish the influence of fatalism on cervical cancer screening, a univariable and multivariable logistic regression analysis was done adjusting for fatalism. A slightly above a third 134 (34.5%) of the study participants were aged between 25-34 years, with almost half being married 179(45.8%). A majority 267(70.1%) of the participants had no substantial income, with slightly above half 203(52.2%) of them being protestants. The prevalence of cervical cancer screening was 25.8%, whereas that of fatalism was 14.3%. Only age of 35-44 years (AOR 2.1; 95% CI; 1.1-3.9; P=0.02) and being a Muslim (AOR 9.9; 95% CI 1.6-61.7; P=0.02) were significantly associated with fatalism. A majority (80.6%) of the study participants had good knowledge on cervical cancer and screening. Only the age of 45-54 years, (AOR 1.6; 95% CI 0.8-3.3; p=0.02), having attained a tertiary level of education (AOR 0.45; 95% CI 0.3-0.8; p=0.01), and being a Muslim (AOR 0.13; 95% 0.02-0.8; p=0.03) were significantly associated with knowledge of cervical cancer and screening. On adjusting for fatalism, there were no factors that significantly influenced fatalism among the study participants. Conclusively, 25.8% uptake of cervical cancer screening is low at 25.8%. A majority (80.6%) of women aged 15-54 years have good knowledge of cervical cancer and screening in Kiambu Sub-County. While the level of fatalism was low at 14.3%, more public health awareness campaigns should be focused to women aged 35-44 years and the Muslims who constitute the factors significantly associated with fatalism. While fatalism had no significant influence on cervical cancer and screening, there is still the need to dispel any existing related fatalistic beliefs among women aged 15-54 years in Kiambu Sub-County. The study recommends more public health sensitization, and awareness campaigns to reach as many women aged 15-54 years of age as possible with cervical cancer screening and linkage of those infected in care and follow-up.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Cancer fatalism is defined as the perception that a cancer diagnosis dictates life or death, hence a person has no control over it or the belief of an inevitable death when diagnosed with cancer (Powe, 1995). Cancer fatalism and fear have related constructs: cancer fear is the psychological response of an individual to a cancer threat, while cancer fatalism are the thoughts and perceptions of cancer. The fear and fatalistic attitude towards cancer have a strong connection; more fatalistic cancer perceptions are often related to being more scared/dreadful of cancer.

Cancer fatalism and fear are perceived to be experienced more among groups that are ethnically divided and contribute to low levels of prevention techniques of cancer and detection at its early stages. Fatalism is comprised of fear, pessimism, pre-determinism and the belief of an inevitable death (Maercker et al., 2019). In relation to health, fatalism is in many instances operationalized as pessimistic or negative attitudes relating to practices of prevention and outcomes of illness. Literature has established that fatalism entails a main barrier to prevention of cancer and behaviour of screening especially among people of lower income status (Maercker et al., 2019). Literature has also established that fatalistic attitudes are connected with low levels of intention to a health seeking behaviour change (Latunji & Akinyemi, 2018). Cervical cancer is a preventable as well as a curable illness which is also the second leading cancer among women across the globe. The illness is preventable using vaccine and curable when early detected and treated. HPV is spread through sexual contact and is the core cause for the cancer of the cervix accounting for more than 99% of the diagnosis (World Health Organisation (WHO), 2019a).

Cultural beliefs such as making it an abomination for a woman to show her private parts to other people other than their spouses has contributed to lower levels of cervical cancer screening. In Addis Ababa, women have been found to perceive cervical cancer screening

as unnecessary when they did not feel sick (Mohammed et al., 2025). Different ethnic groups such as the Korean American, African American and the Latin women, are likely to indulge in beliefs of fatalism on cancer, its prevention and seeking preventive care.

In 2012, 7.5% of cancer-related deaths in women totalling to 266,000 were from cervical cancer. Moreover, 87% of these deaths were evidenced in developing nations (WHO, 2019). According to WHO, (2019), the mortality rate is different in different areas globally with the rates varying from less than 2: 100,000 women in Australia/New Zealand, Western Europe and Asia; in Melanesia the ration stands at 30: 100,000; 22.2 in middle Africa, and 27.6 in Eastern Africa. In addition, in developing nations, many young women lose their time to cervical cancer at a time when the society highly relies on them within their families and economically (WHO, 2019).

Cervical cancer in Kenya is a leading cancer among women with 4,802 new diagnoses and 2,451 deaths. Documentations from the Kenyatta National Hospital reveals that in the years 2014 and 2016, an estimated 64% of cancer patients received a diagnosis of stage III and IV cervical cancer, at this stage a curable treatment is a challenge to achieve. Kenya has recorded suboptimal surveillance and registration for cancer. Presently, there are two identified geographical population-based registries for cancer in Nairobi and in Eldoret which covers an approximate of 10% of the population of Kenya (Korir et al., 2016). The use of a Pap smear during screening enhances early detection of the illness, and facilitates early treatment lowering cervical cancer mortality rate. Although, in Kenya, there is an existence of cervical cancer screening, its mortality rate is still high. Presentation of symptoms at its late stages make it difficult for a cure to be achieved which is a common challenge in the country similar to other middle and lower income nations where there is inadequate services for diagnosis and treatment (WHO, 2019a).

1.2 Statement of the Problem

In Kenya, cervical cancer is the most common cancer among women with 4,802 diagnoses (2012 estimation) and annually recording 2,451 deaths from cervical cancer. Moreover, Kenya is positioned 16 out of the 20 nations with a high burden of cervical cancer with an

age standardized ration of 40.1: 100,000 globally. Death rates according to age standardization for nations with high level of screening for cervical cancer such as in Canada and the U.S are 2.5:1000 women while in Kenya it stands at 28.7:1000 women.

In 2018, data from Kenya Health Information System showed that only 316,842 out of 12,544,645 eligible women were screened for cervical cancer in 2018. This accounted for 2.5% which is low. Out of the total screened, Kiambu County had 21,612, less than 10% of the total national cervical cancer screening coverage. Kiambu town sub-county screened 3,167 women which was less than 20% of the total women screened for cervical cancer in Kiambu County.

In 2018, an estimated 9.6 million people died from cancer globally. The new cases reported were 17,036,901. Africa recorded a total of 683,130 cancer deaths with 1,031,046 incidences. The estimated annual global economic cancer cost was 1.16 trillion USD. Holding position four as a cause of death among women was cervical cancer with an approximate 570,000 (6.6%) new cases of all female cancers globally. About 85% of detected new cases and more than 80% deaths from cervical cancer were from the Low and Developing Countries (LDC) (WHO, 2019). Africa was 2nd after Asia on cervical cancer cases and mortalities at 20.9 % and 26.9% respectively. East Africa was leading in Africa in both cervical cancer cases and deaths at 52,633 and 37,017 respectively. Kenya is positioned among the top twenty nations with the highest burden of cervical cancer at 33.8 per 100,000 cases (Mwenda et al., 2022).

In Kenya, majority of cancers are diagnosed at their late stages leading to physiological, structural, socioeconomic and psychological difficulties, (Makau-Barasa et al., 2018). A growth in the number of cervical cancer- related deaths in Kiambu Sub-County which are screened and detected in late stages has been recorded. There is little information on cancer fatalism and its effect on cervical cancer screening uptake of women in Kenya. Therefore, the present study sought to fill the gap by assessing the factors associated with fatalism and its effect on cervical cancer screening uptake of women of aged 15-54 years in Kiambu Sub- County. The study was carried in Kiambu Sub-County since it’s among the Sub-Counties with the lowest uptake of cervical cancer screening uptake.

1.3 Justification of the Study

The study will enhance cervical cancer preventative service utilization measures among women of reproductive age in the larger Kiambu County. This will enhance knowledge and practices on the actual uptake levels of cervical cancer screening and associated factors. Eventually, this will contribute to reduction of mortality rates and improved productivity among women of the reproductive age. Indeed, this can lead to optimal reproductive health outcomes and economic growth at large.

Study will benefit policy guidelines in realizing the global effort to end cervical cancer by 2030 (Lancet, 2023), besides the study will help health policymakers strengthen existing policies focused on cervical cancer prevention among women of reproductive age. This will generally lead to improved health outcomes on cervical cancer prevention not only to women in Kiambu County but other parts of the country with similar demographic trends.

The findings will contribute to the body of knowledge to the scholars and academicians. This could create more interest into studying the gaps around cervical cancer and thus enhancing the body of evidence around this study area. As such, the study is also bound to create a better understanding of fatalism and how it influences the uptake of cervical cancer screening. This aspect is likely to spawn more studies in the area of fatalism and cervical cancer screening uptake especially in Kenya.

1.4 Objectives

1.4.1 General Objective

To determine the factors associated with fatalism and its influence on uptake of screening for cervical cancer among women of aged 15-54 years in Kiambu Sub- County.

1.4.2 Specific Objectives

The specific objectives included:

1. To establish the uptake of cervical cancer screening among women of between age 15-54 years in Kiambu Sub- County
2. To determine the prevalence of fatalism and associated factors among women aged 15-54 years in Kiambu Sub-County
3. To assess the level of knowledge on cervical cancer and screening among women aged 15-54 years in Kiambu Town, Sub-County
4. To determine the influence of fatalism on uptake on cervical cancer screening among women aged 15-54 years in Kiambu Sub-County.

1.5 Research Questions

1. What is the uptake of cervical cancer screening among women of between ages 15-54 years in Kiambu Sub- County?
2. What is the prevalence of fatalism and associated factors among women between the ages of 15-54 years in Kiambu -Sub County?
3. What is the level of knowledge on cervical cancer screening among women aged 15-54 years in Kiambu Town, Sub-County?
4. What is the influence of fatalism on uptake of cervical cancer screening among women aged 15-54 years in Kiambu Sub-County**?**

1.6 Scope of the Study

All the women residing in Kiambu sub-County aged 15-54 were the focus of the study. The four wards of Kiambu sub-County are Ting'ang'a Ward, Ndumberi Ward, Riabai Ward and Township Ward.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter two documents the literature review relating to fatalism and its influence in uptake of cervical cancer screening among women from the age of 15-54 years. It is divided into theoretical framework, a review of empirical literature and the conceptual framework.

2.2 Theoretical Framework

This section highlights the different theories that the study is based on with respect to the factors associated with fatalism and its influence on uptake screening for cervical cancer. The theories are; theory of planned behaviour, health belief model and social cognitive theory.

2.2.1 Theory of Planned Behaviour

Ajzen (1991) proposed the theory of planed behaviour. The theory contends that if individuals view a behaviour to be positive (attitude), and if the individual has the perception that other individuals want and require them to take part in the behaviour (subjective norm), this yields a higher goal (motivation) and have a greater potential to do so. A great connection between subjective norms and attitudes to behavioural goals and thereafter to behaviour, has been established in literature (Sniehotta, 2009).

The theory assumes that the individual has gained resources and opportunities to become successful in taking part in desired behaviour, despite the intention. It does not cover other factors that contribute into motivational and behavioural goals including threat, fear, previous experience and fear (Sniehotta, 2009). Despite perceiving normative effects (the influence of other people that leads one to conform in order to be liked and accepted by them), it does not consider the economic and environmental factors influencing the intention of an individual to undertake behaviour. The assumption made by the theory is

that an individual's behaviour emanates from a single decision-making process and does not put into consideration the variation over time.

The theory is critical to the present research since it reveals a connection between beliefs and individual behaviour implying that human behaviour is critical for the current study. The theory offers an understanding for the evaluation of behavioural and normative belief. Examples of behavioural beliefs are apprehension, belief that screening is beneficial and fatalistic beliefs. On the other hand, normative beliefs include; a person's view point of cervical cancer screening, which is often influenced by assessing significant others (spouse, parents, physicians, and friends).

2.2.2 Health Belief Model (HBM)

Janz & Becker (1984) proposed the HBM at the Unites States Public Health Service. The goal of the model was to understand why people failed to adopt strategies of prevention of illness or early disease detection through screening. Later the use of r the HBM grew to address the patients' responses to diseases symptoms and treatment compliance. According to Bandura et al. (1980), the HBM posits that the belief of an individual on an illness threat of a disease together with their perception of the effectiveness of a course of action or behaviour can forecast the probability that the individual is going to adopt the suggested behaviour. According to Albarracín et al. (2001), the HBM originates from the theory of behaviour and psychology.

More to being descriptive, HBM is also explanatory and does not recommend a technique to change the actions related to health. Bandura et al. (1980) explained that with respect to preventive behaviours to health, studied explain that perceived advantages, susceptibility and hindrances are related with the desired health behaviour; severity was not in many instances related to a health behaviour that was desired by the individual. A person's constructs are helpful, this depends on the outcomes of interest but with regards to the key critical use of HBM, it ought to be combined and used together with other models that consider the aspects of the environment and recommend techniques for change.

The theory is critical to the study since it elaborated on individual's health beliefs. The HBM posits that the beliefs of individuals about problems of health, the perceived advantages of action and self-efficacy suggest the interaction in health-advancing behaviour. A cue/stimulus to action, needs to be present so as to advance a health-advancing behaviour. Health-related behaviours are affected by the perceived advantages of acting. The perceived benefits entail a person's evaluation of the efficacy or values of integrating in a health-advancing behaviour to lower the risk for illness.

2.2.3 Social Cognitive Theory

Bandura et al. (1980) in the 1960s proposed the social cognitive theory. It contends that learning is evident in social settings with varying and reciprocal engagement of an individual, the environment and behaviour. The key element of the SCT is its inclination on social effects and its emphasis on the internal and external social reinforcement. The theory considers the way in which a person acquires and maintains behaviour, while at the same time accounting the social environment where people engage in different behaviours. The theory considers the previous experiences of an individual, a factor into the decision to either act or not (McAlister et al., 2008).

Individuals' previous experiences affect reinforcements, expectancies and expectations that shape the decision by an individual to take part or not in a particular behaviour and to provide a justification for behaving in a particular way. SCT assesses that the effect of the experiences of a person, the behaviour of other people, and the factors of the environment on the per son's health behaviours. SCT offers an opportunity for social support by having expectations, self-efficacy, and making use of observations to learn and different reinforcements to attain behaviour change.

SCT is a learning theory grounded on the concept that individuals learn by making observation of other people. The learned behaviours can be core to the personality of an individual. While social psychologists are in agreement that the environment where an individual grows up in facilitates his/her behaviour, the person is also as critical. People learn through the observations of other people, with behaviour, environment, and

cognition as the main factors that affect enhancement in a reciprocal triadic interrelationship.

2.3 Empirical Literature Review

2.3.1 Uptake of Cervical Cancer Screening

In developing nations, cervical cancer is the main cause of deaths associated with cancer among women. Globally, it is the second commonest cancer affecting women (WHO, 2019). Peltzer (2001) explained that Papinicolaou (Pap) smear is a technique used for precancerous lesions identification has contributed greatly lowering the burden rate of cervical cancer. However, screening is perceived as a cost-effective technique globally, the uptake of screening is low in less developed nations (Baykemagn et al., 2025; Emagneneh et al., 2025). A key barrier to access it that in most developing nations, cervical cancer services offered by nongovernmental and governmental institutions has been sporadic and lacks effective coordination (Baykemagn et al., 2025). Often the services are urban-based; hence the semi-urban and rural residents do not get access to the services (Emagneneh et al., 2025). Another challenge is the low levels of awareness amongst women on screening. Such issues are identified by physicians often than not when the patients are in their advanced stages where nothing can be done to help the patients.

The accessibility to cervical cancer screening is factor that hinders uptake of screening. Screening services are often accessible in governmental institutions and secondary health facilities with the assistance of some NGOs. Black et al. (2019) notes that screening services in such facilities could be costly. In most developing nations with a large population living in poverty and with healthcare systems that heavily rely on out-of-pocket expenditure, these costs can be a hindrance (Baykemagn et al., 2025). However, the use of a Pap smear appears to be the most common technique of screening in such facilities. Despite, the efforts by both governmental and NGOs to enhance the access to screening services, it has a low uptake. According to Karadag et al. (2014), the factors related with

cervical cancer screening uptake at a global lens include the age of women, parity, the marital status of women, knowing other women suffering from cervical cancer and parity.

Fatalism and cancer fear is related with the lower cancer screening uptake and may facilitate to the delayed presentation of symptoms of cancer. It is hence, increasingly identified that emotional factors and fatalistic beliefs such as a fear for cancer need be solved in the campaigns of public health to effectively change the behaviour. Messages such as “cancer screening saves lives” are becoming critical elements of campaigns on cancer campaigns in the developed countries (Karadag et al., 2014).

According to Beeken et al. (2011) fatalistic perceptions on cancer have been attributed to the low screening uptake and in the presentation delay, especially among groups with low socioeconomic status, however, no studies have systematically assessed the connection between fatalism, socioeconomic status, and early detection behaviours. The findings, revealed that fatalism was less positive in relation to early detection and more dreadful about seeking help in the detection of a suspicious symptom. Groups with lower levels of income were established to be more fatalistic. Path analysis explain that socioeconomic variations in fatalism may give an explanation to the socioeconomic variations in attitudes regarding initial stages detection (Black et al., 2019).

In Uganda recent evidence has shown that cervical cancer screening uptake is sub-optimally low (Felisi et al., 2025). To evaluate the facilitators and barriers of accessing screening of cervical cancer, the study used a systematic review of reports on women and health workers. The core goal of the review was to evaluate the development of screening of cervical cancer educational and promotional programs in promoting screening uptake and improving early-stage diagnosis among women with cervical cancer symptoms. The study identified 21 facilitators and 19 barriers. The study targeted all the districts in Uganda. The most common facilitators established was being recommended to undertake screening (Beeken et al., 2011). On the other hand, the common barriers identified were; fear, embarrassment, limited resources and residing in remote regions.

In Cameroon, the recorded cervical cancer prevalence is 23%. Annually, the country records an approximate 1993 new cases and 1676 deaths. Despite the risky situation, cervical cancer screening uptake is still low at 19.6% in Cameroon. According to Abdikarim et al. (2017), although the uptake is low in Cameroon, it is higher than the national uptake. The country experiences a low level of awareness of the symptoms and risk factors of cervical cancer, demanding a need to emphasize on creating and awareness and educating more people on cervical cancer. The education and awareness messages ought to cover topics of the risk factors, signs and symptoms and preventive measures in all the regions in the country.

Locally, there has been widespread campaigns for scale of cervical cancer screening at various levels (Mwenda et al., 2022). However, just like in other global settings, uptake of cervical cancer screening has been marred with a myriad of challenges. These include; the COVID-19 which widely disrupted the routine uptake of various health services (Castanon et al., 2022), inadequate equipment and healthcare facilities, inadequate staffing in the health facilities, lack of up-to-date training among the healthcare providers, and unaffordability of the healthcare services (Choi et al., 2022; Ng'ang'a et al., 2018; Rosser et al., 2015). The national uptake of cervical cancer screening is estimated to be between <1% and 36%, which is largely lower than the recommended 70% by the WHO (Mwenda et al., 2022). Elsewhere, studies have established uptake of 35.6% cervical cancer screening in Kisumu (Choi et al., 2022), and 56% established in several other settings in Kenya (Kemper et al., 2022). Age, (Choi et al., 2022; Kinney et al., 1998; Mwaliko et al., 2023), employment status (Black et al., 2019), and income levels (Biddell et al., 2021) are among the factors that have been associated with uptake of cervical cancer screening (Choi et al., 2022)

2.3.2 Level of Knowledge on Cervical Cancer and Screening

Screening is a core preventive, measure utilized to lower the cervical cancer burden. The core goal of screening for cervical cancer is identifying the early phases of an invasive cancer as reported by (Marván et al., 2016). This is attained by using Pap smears for the cancer of the cervix precursor's identification that can be removed prior to an invasive

cancer progression. The commonest difficulties in the prevention programs of cervical cancer in less developed nations include, raising awareness among women, and conducting effective evaluation techniques.

Documentation by Bandura et al. (1980) record that in a majority of less developed nations women have poor understanding of the risks, causes and preventive techniques of cervical cancer. Screening is an efficient technique of lowering the mortality incidences with regards to the cancer of the cervix, however, the attendance rate of screening is still abysmal in developing nations. Presently, few publications have recorded data with regards to the attitude, practice and knowledge of screening in urban areas. Notably, even fewer studies have attempted to assess the barriers of screening among women residing in remote regions (Padela et al., 2014). So as to increase the screening uptake of cervical cancer, it is critical to have an understanding that potential obstacles and knowledge in order for policymakers to address the challenges.

Screening for cervical cancer, has constantly revealed its effectiveness in lowering the rate of new occurrence or incidences and cervical cancer mortality rate. However, the screening attendance for cervical cancer is poor in a majority of less developed nations. This can be explained by limited screening facilities resulting from poor knowledge, infrastructure and illiteracy. Albarracín et al. (2001) found that the uptake of cervical cancer screening was low among the women who resides in areas where the facilities were available and accessible.

According to Manikandan et al. (2019), Knowledge on the susceptibility of the cervical cancer, the need to go for screening for cervical cancer, and the prevention techniques among female students is still limited. Hence, there is a need to focus on educating students on the associated cervical cancer risk factors by conducting campaigns to promote awareness each semester which ought to focus on advocating the practice of vaccination and cervical cancer screening. According to Abdikarim et al. (2017), while studying the factors and prevalence of screening for cervical cancer among women from Somali who have settled in the urban regions in Kenya; the findings showed that there is a need to emphasis on increasing the awareness of cervical cancer screening using a well-

designed programme of health education. Moreover, knowledge of cervical cancer and screening has been attributed to enhanced uptake of the respective services (Al-Naggar et al., 2010; Tapera et al., 2019; Urasa & Darj, 2011; Gitonga et al., 2022; Alwahaibi et al., 2018; Bansal et al., 2015; Manikandan et al., 2019; Mupepi et al., 2011; Ndejjo et al., 2017; Osei et al., 2021). Studies have also shown that religion may have a role to play in poor knowledge levels of cervical cancer and screening (Afsah & Kaneko, 2023; Padela et al., 2014).

Mutua et al. (2017) in Kenya, conducted research on the cultural factors related to prostate cancer screening intentions among men in remote regions of Kenya the research findings revealed that the family is critical in the role in affecting the decisions make in association to screening of prostate cancer by male Africans. Further the research concluded that adult males who were over 40 years were not viewed to be at risk of getting fatalistic beliefs in relation to the screening of prostate cancer, greater apprehension or fear prostate cancer screening and greater impact to families as a result of screening. The Wald criterion was used and showed that only the family effect significantly contributed to the intention to undergo a screening for prostate cancer. Education, age, fear, advantage of screening, and fatalism were not connected to the intention of undergoing a screening for prostate cancer.

A rise on awareness of knowledge of cancer screening significantly impacts the behaviour of health promotion which reduced the rates of incidence. In many nations, providers of health care are the core sources of data or information relating screening of cancer. According to Sedrak et al., (2016) established that there is a lower to moderate level cancer screening knowledge detected among medical students who were selected for the study in their enrolment year into medical school or during their year of graduation, resulting in negative effect on detection at early stages particularly in low countries with low resources such as Egypt.

According to Korkut, (2019), in general, women are less knowledgeable on the methods of breast and cervical cancer screening, and in instances where they possess the knowledge, they in most cases do take part in regular Breast Self-Examination (BSE) or mammography on regular basis. Further, the author noted that the surveyed respondents

revealed that the level of education raised the BSE frequency and Pap smear testing also increased, however, it was insignificant to any changes. The study also assessed the distribution of behaviour among women on health in relation to homemakers, occupation and health workers took part in the practices in most instances but without any significant variations.

2.3.3 Prevalence and Influence of Fatalism on Cervical Cancer Screening

Studies have shown that fatalistic beliefs toward cervical cancer can be a key barrier to its control and prevention (Guo et al., 2021; Marván et al., 2016). For instance, lower levels of fatalism have been associated with adherence and screening of cancer screening among Hispanic and Latino communities (Moreno et al., 2019). Age, (Befort et al., 2013; (Goldzweig et al., 2009), marital status (Goldzweig et al., 2009), education level (Keller et al., 2021) and income levels (Cidade et al., 2016) are among the factors that have been associated with prevalence of cancer fatalism from previous studies.

The negative emotional response to a cancer threat is known as cancer fear. On the other hand, cancer fatalism is the perception that cancer dictates life or death, a person has no control over it (Ramírez, 2014) or the perception of an inevitable death when diagnosed with cancer (Powe, 1995). Cancer fatalism and fear are different, however, the have related constructs: cancer fear is the psychological response of an individual to a cancer threat, while cancer fatalism are the thoughts and perceptions of cancer. The two concepts moderately correlate; perceptions that are inclined to fatalism towards cancer are often related to being more scared/dreadful of cancer (Beeken et al., 2011).

Peltzer (2001) has identified that fatalistic perceptions on cancer have been attributed to the process of making decisions on cancer screening and the presentation of symptoms. Traditionally, fatalism was conceived as the belief that health issues are not in the control of an individual. It is different from other similar concepts such as low efficacy response and a great external control locus in that, more to believing individuals cannot have control over health issues outcomes, a fatalistic person makes the assumption that the results will be negative (a fatal disease). The view of fatalism on the survivability of cancer of the

cervix has been related to a lower probability of being updated with the screening of cervical cancer in a sample of women, and fatalistic concepts on curability are related with lower probability of having undergone clinical skin tests (Padela et al., 2014). Fatalism is also associated with avoidance of information on cancer.

According to Niederdeppe & Levy (2007), cancer fatalism entails the deterministic perception on the external cancer causes, the lack of ability of prevention, and the perception that death is inevitable after diagnosis. Cancer fatalism can be a result of coping and living with different experiences that result in despair and hopelessness. Individuals with low levels of literacy on health matters have a higher probability to hold on to poor cancer outcomes within their social settings. Cobran et al. (2014) in the United States assessed the points of view of prostate cancer fatalism and behaviour of screening between the black males born in the US and those born in the Caribbean. According to the findings, the native status did not have an effect on the cases of screening using prostate-specific antigen testing. The study, however, recommended that more studies ought to be conducted to assess the connection between the screening behaviour and fatalism levels of prostate cancer fatalism cases.

Literature by Kobayashi & Smith (2016), attempted to assess cancer fatalism, level of literacy and seeking of information on cancer among the public in America. In spite of the continuous and consistence evidence-based recommendations on cancer prevention and the growing rates of population of cancer survivors, the nationally representation data revealed that 66.67% of the population in U.S had the perception that everything can cause cancer, while 33.33% did not perceive cancer to be preventable, moreover, more than half of the respondents believed in the inevitable death after a cancer diagnosis.

Niederdeppe & Levy (2007), studied the fatalistic beliefs on prevention of cancer and 3 prevention behaviours in the U.S.A. Phone interviews were used to collect primary data from adult Americans. Random, digit dialling using HINTS was adopted for the study. The research found that the Americans perceived that fatalistic beliefs on prevention of cancer can be a greater cancer risk since they have a lower probability to take part in

preventive behaviours. The outcomes significantly affect the future of communication about cancer and efforts of increasing education and awareness.

Marván et al. (2016) in Mexico, studied fatalistic beliefs on cervical cancer among 464 women in the country and how the perceptions affected to their engagement in cervical cancer screening. The research concluded that women in remote areas had a lower probability than women in urban regions of undergoing a Pap smear test and were more probable to perceive the disease to be caused by fate or bad luck. These were the perceptions that most of the women related to non-screening among the women living in rural regions while women in urban regions were of the opinion that little can be done when diagnosed with cervical cancer, this was in relation to non-screening.

Further, Mosavel et al. (2009) in South Africa, assessed the beliefs and attitudes of cervical cancer in Cape Town and the response by the community on the world cancer day. The study surveyed the women in Cape Town, historical background of screening in South Africa, beliefs and knowledge on cervical cancer, and the access challenges to Pap smears. Over 50% of the individuals surveyed reported to never having taken part in a Pap smear test or had undergone testing once in more than ten years. 33.33% of the respondents were did not understand a Pap smear. Lengthy periods of waiting and fatalistic beliefs were also factors that influenced the individual's screening behaviour. In addition, ethnicity was related to the varying beliefs.

A study by Wachira et al. (2018) established that fatalistic beliefs were a facilitator to the extreme low rates of pro state cancer screening uptake. This was despite the high awareness level on prostate cancer. Fatalistic beliefs contribute to ethnic/racial health differences. Bandura et al. (1980) observed that cancer fatalism, the belief of inevitable death after cancer diagnosis, has a direct connection with the low rates of cancer screening, treatment delays, and reluctance to participate in healthy lifestyles in the aim of reducing the risk of cancer. In every case, patients with fatalistic health beliefs are of the opinion that they can do nothing to avoid cancer and death as a result of cancer. The perception that their fate ends in death caused by death. Lower rates of cancer screening and treatment

delays lower the survival rates of cancer and have the potential to inadvertently reinforce the perception that cancer is a fatal illness.

Vrinten et al. (2016) pointed out that f is ear and the fatalistic attitude towards cancer is thought to be higher among people from ethnic minority groups and contributes to the lower rates of screening for cancer. In the UK, cancer fatalism and fear are common among women in women from ethnic minority groups than women who are white British and is even high among acculturated ethnic minority groups. This has the potential to influence their engagement in early detection and cancer preventions. In correlation to White British women, the women from India and Africa are more dreadful about cancer, the women from Bangladesh are not as fearful while the Caribbean and Pakistani women have the same perception as the White British women. Mosavel et al. (2009) found that cancer fatalism is more in minority ethnic groups unlike the White British women.

2.3.4 Factors Associated with Fatalism

Socio-demographic factors include: gender, age, religion, status of employment, marital status, living arrangements and number of individuals living in the house (Aggarwal et al., 2007; Beeken et al., 2011; Franklin et al., 2007; Acevedo, 2008). . While holding views of fatalism, having the perception of greater overload of cancer information, worrying about inadequate knowledge of cancer can influence the preventive behaviour and screening performance. For instance, cancer fatalism, inadequate knowledge and information overload can potentially lower the probability of undergoing screening for cancer; if an individual perceives that cancer is difficult to prevent and cure, perceives that information on cancer is contradictory, or has low or inadequate knowledge on cancer, the action to undergo screening is highly unlikely (Padela et al., 2014). Worrying about cancer is normally positively associated with the behaviour of screening; since an individual is motivated to worry about the potentiality of being diagnosed with cancer, the behaviour for screening increases.

According to literature by Moorthy et al. (2021), the surveyed participants who had graduated from high school, students who had completed high school and students who

had not graduated college had high probability of getting into an agreement with the studied beliefs than the participants who were college graduates. Provided the vitality of numerical skills in information comprehension on health and in making decisions, lower perception of numerical scores were critical at personal level determination of disparities on health by advancing knowledge, beliefs and effects on cancer (Johnson et al., 2008).

In Chicago, Padela et al. (2014), studied the relationship between cervical cancer screening and religious factors among Muslim women in Chicago. The study participants were used to collect primary data through self-administered study surveys which involved the measures of perceived discrimination, modesty among Muslims, fatalism, the use of a Pap smear, and religiosity. The findings of the research revealed that the correlation between religion and screening behaviours for cancer needs more research in order assess the values of religion when dealing with programs of cancer screening.

In Kenya, Abdikarim et al., (2017), found that age is positively associated with fatalistic belief. In comparison to males, females were found to demonstrate higher odds of being in agreement with the perception that everything can be a cause of cancer. Insurance and employment status, and income were not correlated with any beliefs of fatalism on the prevention of cancer. Living married or being married had a positive correlation with fatalism beliefs. According to Schapira et al., (2011), in comparison without a history of family, the participants with a cancer history were more probable to perceive that all things can cause cancer.

According to Peretti-Watel et al. (2016), social status, and income record a negative correlation with destiny. This implies that an income/social status increase is followed by a decrease in tendencies in fatalism and this outcome is statistically strong in the 3 specifications. An increase in education results in a decrease in the potential of having highly fatalistic tendencies. According to Peltzer (2001), the concept that religion and institutions contribute to a joint function is identifying fatalistic beliefs, the engagement between religious affliction and freedom is significant among the Hinduism, Buddhist, Muslim, Orthodox, and Otherrel

Hortobagyi et al. (2005), contend that education can result in a weak correlation between culture that is transmitted and beliefs and result in people being more inclined to the perception that they can control life events. The authors found a similar connection between fatalism and education. However, these findings were obtained using an accurate and an appropriate measure of fatalistic tendencies (Karadag et al., 2014). Sadly, it is a challenge to link a causal connection from literacy to fatalism since an increase in education is able to mirror an increased rate of unobserved ability of a person, so that a decrease in fatalism can be as a result of the skills of an individual (Karadag et al., 2014). Among controls of marital status, only the widowed had a high likelihood to possess fatalistic beliefs in comparison to single individuals.

Other measures of control include social status, income, and education have a strong correlation with fatalistic tendencies. Especially, individuals with lower levels of income and in consideration that they themselves fall at the bottom of social groups inclined to be fatalistic, implying that the findings by Manikandan et al. (2019) were correct.

2.4 Conceptual Framework

The dependent and independent variables and how they relate is demonstrated in this framework (Molefe et al., 2022). Socio-demographic factors and the level of cervical cancer and screening knowledge are this study's independent variables. Fatalism is a moderating variable while the uptake of cervical cancer screening is the dependent variable.

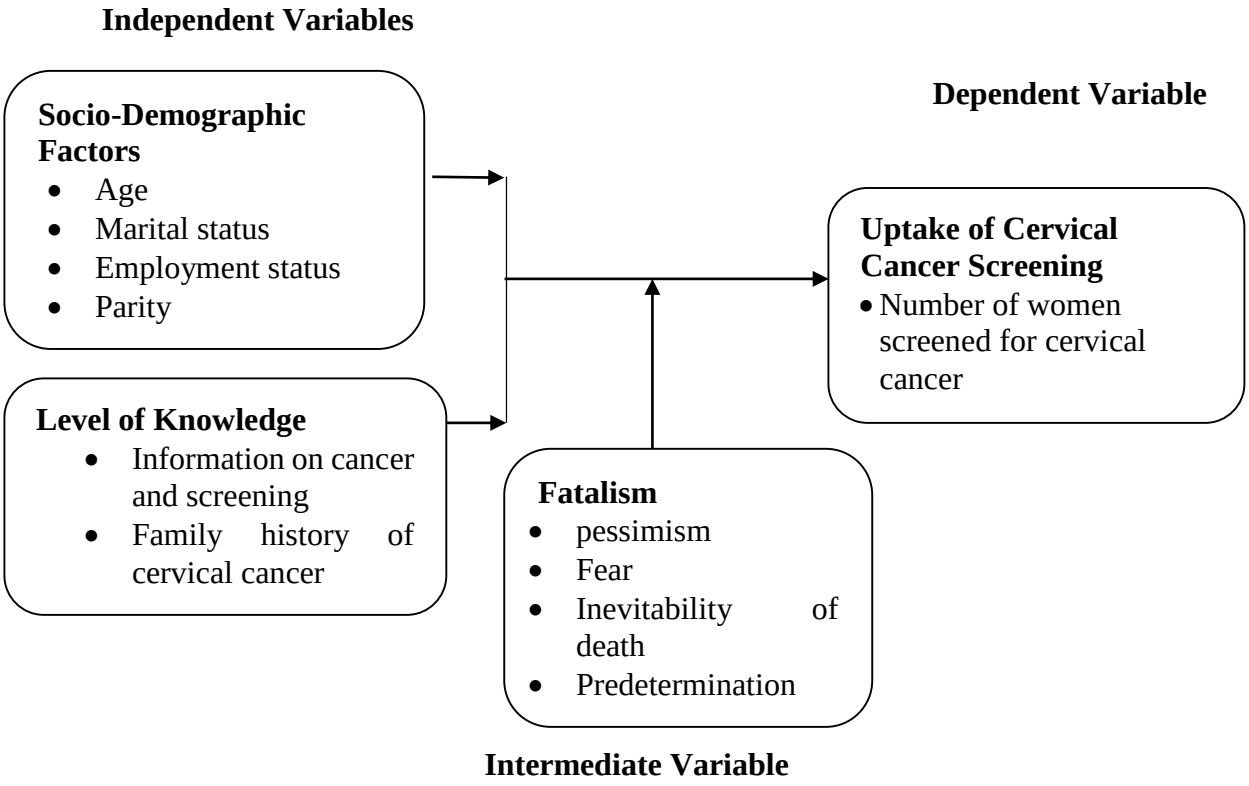

Figure 2.1: Conceptual Framework

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CHAPTER THREE

MATERIALS AND METHODS

3.1 Introduction

The chapter explains the intended research methodology. It explains the choice of the study site research design, population, research procedures, data collection techniques, sample design, pilot testing, validity and reliability of research instruments, methods of data analysis and ethical considerations.

3.2 Study Site

The study site was Kiambu sub-county. Kiambu Sub-County was purposively selected as the study site to represent Kiambu County due to its demographic, socio-economic, and health system diversity, which mirrors that of the wider county. The sub-county comprises urban, peri-urban, and semi-rural populations, providing a heterogeneous study population suitable for examining variations in cervical cancer fatalism among women aged 15–54 years. The study population represents the reproductive and economically productive segment of the population and aligns with national cervical cancer prevention and screening guidelines that target sexually active women. Women within this age range are at varying stages of risk exposure, health-seeking behaviour, and interaction with reproductive health services, making them an appropriate population for assessing fatalistic beliefs and their influence on screening uptake. It has a total human population of 145,903 with rate of population growth of 1.6%. The study was conducted in the four administrative wards within Kiambu Sub County namely: Ting'ang'a Ward, Ndumberi Ward, Riabai Ward and Township Ward. The administrative wards have 52 villages cumulatively. The total human female population within the sub county is 76,225. The socio-economic activities in the area includes mixed farming and small and micro enterprises. The larger portion of road network in the area consists of tarmac and murram roads. The sub-county has five health facilities namely Kiambu Level Five Hospital, Ting'ang'a, Riabai, Anmer and Lioki dispensaries.

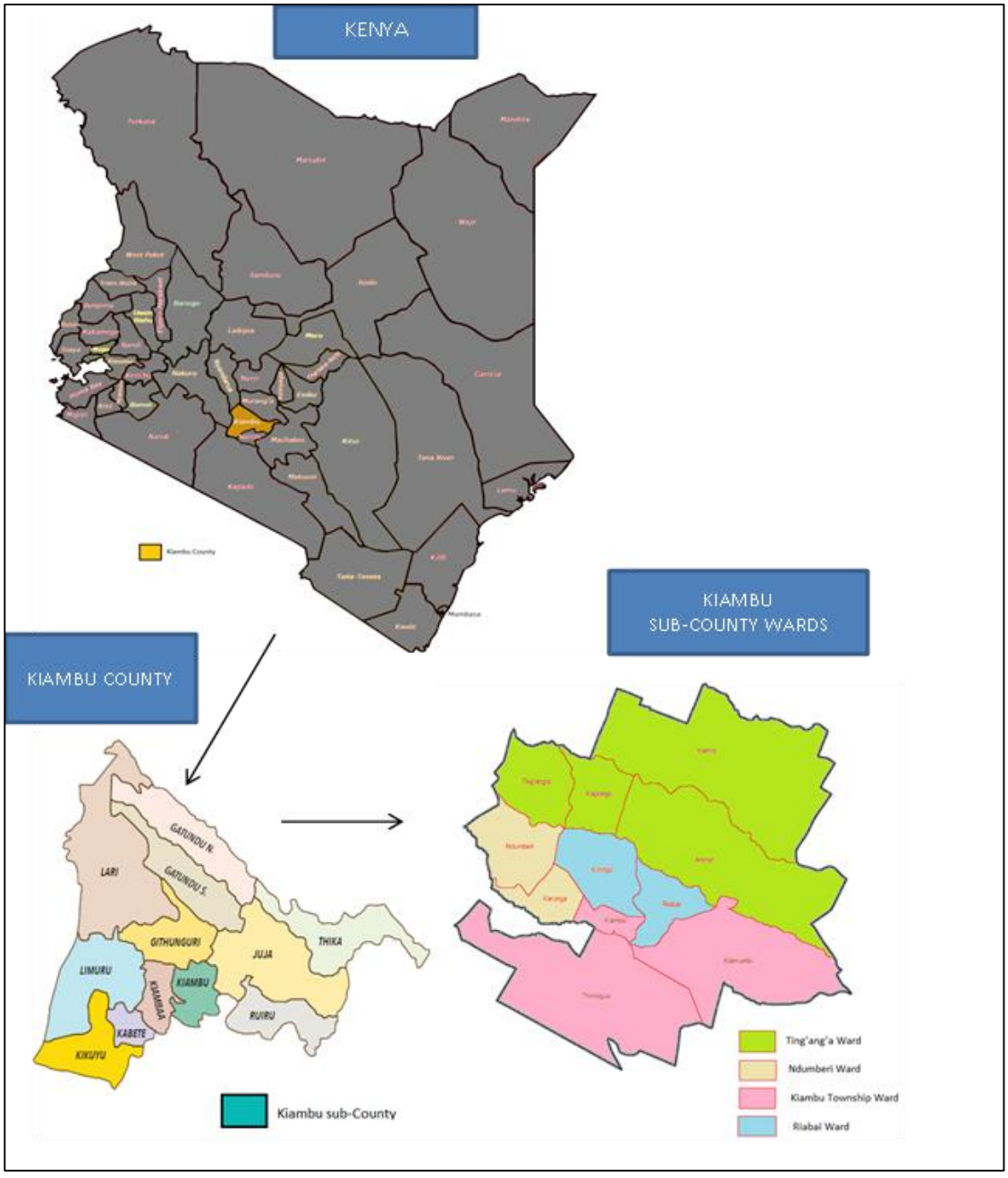

Figure 3.1: Map of Kenya Showing the Location of Kiambu County

Bottom left is a map of Kiambu County showing sub-county administrative areas and bottom right are wards within Kiambu sub-county which were the study area

3.3 Research Design

The study adopted a cross sectional design involving quantitative techniques. Quantitative data were gathered using interviewer administered questionnaires. The aim was to describe the distribution of individual variables in the population in place, point and time in determining factors associated with fatalism and its effect on cervical cancer screening uptake.

3.4 Study Population

Population is the whole group of individuals and interests that a researcher wished to assess. A study/researcher population is a collection of units, or cases from which a researcher desires to investigate and make conclusions. A key step in developing a research design is the identification of the population and in connection to the study objectives. In the current research, the study population comprised of 38,113 women residing in Kiambu Town, sub-County aged 15-54 years.

3.4.1 Inclusion Criteria

The inclusion criteria were:

All women aged between 15-54 years residing in Kiambu Town, Sub-County.

All women who had resided in Kiambu town sub county for more than six months.

All the woman aged 15-54 years who were willing to participate.

All the women aged 15-54 years who had given a written consent.

All women who had mental ability to respond to the questions.

3.4.2 Exclusion Criteria

Those who were mentally incapacitated were excluded.

3.5 Sample Size Determination

Lai (2018) posited that sampling involves choosing a segment of a population used to test a targeted entire population's hypothesis. Cochran, (1977) formula was used in the calculation of the sample size for the exact probability test.

$\boldsymbol{n_0 = \frac{z^2 pq}{e^2}}$ $\boldsymbol{n_0 = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2} = \frac{0.9604}{0.0025}}$=384 minimum sample size.
Where: n = Sample size

Z = 1.96 (Standard normal variate at confidence interval at 95%)

P = Prevalence of fatalism not known so we used 0.5

q = (0.5) 1-P

d = Acceptable margin of error of (0.05)

$n=(1.96)^2*(0.5*(1-0.5))/(0.05)^2$

n=384

Sample was adjusted to 400 to allow for any dropouts

3.6 Sampling Technique

All the four administrative wards were included in the study whereby a probability proportional to size sampling was applied with the administrative ward with the highest population having the highest number of study respondents. A list of households with women aged 15-54 years was obtained from the household register the MOH 513 which is the tool used by the community health volunteers (CHVs) for mapping the populations at the household level. Each CHV was requested to list all his/her households with the eligible respondents after which the households were numbered and thereafter a simple random sampling was done to obtain the sample size per the four administrative wards. The selected respondents were requested to take part in the research after consenting

through filling and signing of the consent form. The prevalence of women between ages 15-54 by 2022 was estimated to be 68.05% (County Government of Kiambu, 2019).

3.8 Pre-Testing of Data Collection Tools

According to (Junyong, 2017), a pilot study is carried out to assess the questionnaire validity. The key reason for a pilot test is to determine the potential errors, discrepancies, and omissions in the research instruments and address them prior to its use in gathering the real data. A pre-test was undertaken using 10 women aged 15-54 years from Kiambu sub-County.

3.8.1 Validity

Validity is the degree to which a research instrument measures that which it purports to measure. It explains the accuracy and meaningfulness of inferences which are based on the research results (Heale & Twycross, 2015). Validity, which reveals whether an item is able to measure the items they are designed to assess has several categories (Heale & Twycross, 2015). The content validity (measures the degree to which the test items represent the domain or universe of the trait or property being measured), construct validity (concerns the degree to which the test measures the construct it was designed to measure), and criterion-related validity (concerned with detecting the presence or absence of one or more criteria considered to represent traits or constructs of interest) (Heale & Twycross, 2015).To ensure both content and construct validity, the research supervisors at the Department of Environmental Health and Disease Control of Jomo Kenyatta University of Agriculture and Technology read through the proposal questionnaire and then suggested necessary changes before the questionnaire was used for data collection. The length of data collection, the language of participants, and interviewer choices were all taken into consideration by the researcher in order to maximize the validity of the questionnaire.

3.8.2 Reliability

According to Ahmed and Ishtiaq (2021) reliability entails the level of measure to which study instruments are able to produce constant outcomes after repeated trials. Reliability involves the consistency and replicability of research instruments. To test for reliability, the researcher used a test-retest method during a pilot study. This means that the questionnaire was administered to the same group of respondents with a span of two weeks during the month of May 2021. The respondents were from the same area of the study but their results were never considered during the main study. To test reliability, 39 questionnaires were used which was equal to 10% of the sample size. The scores from both tests were obtained and correlated to obtain reliability co-efficient using the Cronbach's Alpha(α). Cronbach's alpha was computed using Statistical Package for Social Sciences (SPSS), a statistical computer software, that correlated the score for each scale item with the total score for each test and then compared that to the variance for all individual item scores.

Cronbach's alpha coefficient which ranges between 0 and 1 was used to determine the data reliability. Higher alpha coefficient values mean that scales are more reliable. As a rule of thumb, acceptable alpha should be at least 0.70 or above (Tavakol & Dennick, 2011).

3.9 Data Collection and Tools

An in-person administered questionnaires (Appendix III) which was divided into 3 sections.

Socio-demographic factors of study respondents

Cervical cancer screening uptake

Cervical cancer screening as a medical condition

Cervical cancer screening knowledge.

Fatalism on cervical cancer.

Respondents who could not understand English were given a translated Swahili version (Appendix IV).

The data were gathered with the assistance of two research assistants. The research assistants were educated on the goals of the study and on the techniques that were utilized to gather the primary data using questionnaires. The assistants were also required to sign a secrecy document (Appendix XII) that ensured that they commit to keep the information on the study participants confidential. The questionnaires were administered in-person to the respective women in Kiambu Sub-County Kenya. The questionnaires were structured in a way that ensures uniformity, hence improving the compatibility of response by the respondents. Powe Fatalism Inventory was used to design the questions for assessing the level of fatalism among the respondents. The inventory included questions on predetermination, inevitability of death, pessimism and fear. The questions on fatalism were designed using a Likert scale; the participant was required to give their opinion on a scale from 1-5. Ali & Bhaskar (2016), explained that the structured questionnaires improve the uniformity of responses by participants while questions that are unstructured offers a participant to offer their own opinion. Before collecting primary data, a consent form was presented to each participant to ensure voluntary participation.

3.10 Data Management and Analysis

All The data collected for this study was analyzed utilizing STATA software version 15 (StataCorp, 2017). Descriptives statistics for the characteristics of participant were calculated and presented. Categorical variable presented as frequencies with respective percentages while continuous variable- number of children- was presented as median and interquartile range (IQR) since it was skewed. For objective 1, the uptake of cervical cancer screening among women of between ages 15-54 years in Kiambu Sub- County was determined as proportion of those who reported to have been screen for cervical cancer. The overall prevalence of cervical cancer uptake was calculated as total participants screened divided by then total population and multiplied by 100. The prevalence and

corresponding 95% confidence intervals were calculated for categories such as age group, marital status, and level of education, occupation, monthly income, and religion.

For objective 2, fatalism was measured in a Likert scale rating for 1 to 5. The total raw fatalism scores were computed by summing the scores for respective questions (ranging from 10 to 44). The raw scores were then transformed by dividing the total raw scores by 10 to get the transformed scores ranging from 1 to 4.4. Using a cut off 3 the researcher created a binary variable called fatalism status where those with transformed scores of above 3 were considered fatalistic while those with transformed scores of three and below were considered non fatalists. The proportion of fatalism was determined. Fatalism was then stratified by participant characteristics. The difference in distributions between fatalists and non-fatalists was compared using a binomial test as follows: Bivariate analyses of continuous data was conducted using the Mann-Whitney U test to compare skewed distributions, while proportions of categorical data were compared using the Pearson chi-square test or Fisher's exact test where appropriate.

For objective 3, knowledge on cervical cancer was measured in a binary scale either true or false. The total raw knowledge scores were computed by summing the correct scores for respective questions. There is no agreed upon cut off criteria for the used knowledge tool, therefore, basing on rule of the thumb where such cut offs are unknown, the researcher calculated a medium knowledge score and categorized participants as having good knowledge if they had total scores above median and poor knowledge if their scores were same as median or lower. The proportion of good knowledge was determined. Knowledge was then stratified by participant characteristics. The difference in distributions between fatalists and non-fatalists was compared using a binomial test as explained in objective 2 above.

For objective 4, to determine the influence of fatalism on cervical cancer screening, the researcher determined the frequency of not being screened if one is fatalist and has poor knowledge.

Bivariable regression models were performed for each independent variable. Multivariable analyses were conducted separately for each of the outcomes. Backward stepwise selection was used to identify the most significant variables for the model. An exhaustive model containing all predictor variables was initially established. The variable with the highest p-value was subsequently eliminated from the model. This iterative process was continued until the stopping criterion ($p<0.05$) was reached and the model selected as final.

3.11 Ethical Considerations

A letter from the Ethical Review Committee (ERC) of the University of Eastern Africa Baraton and licensed by NACOSTI (Appendix VI and IX) were obtained prior to the actual collection of research data. Only those research participants who gave their personal and written consent took part in the research. The research participants also explained to the respondents that all the information obtained would be held with confidentiality and strictly used for research purposes. The participants were also requested not to write their personal identification marks on the questionnaires. For respondents below the age of 18 years, the guardian was requested to consent on their behalf. The researcher also sought permission from the medical officer of health and other relevant administrative authorities before carrying out the research (Appendix X and XI). Before collecting the data, the researcher educated the respondents on the objective of the research. Furthermore, the participation in the research study was fully voluntary. The research findings presentation would be without any data manipulation.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter aims to present the results obtained from the analysis of the data collected in the study. This chapter begins with a report on the response rate for the questionnaires. The reliability and validity of the questionnaire are then examined. Next, the socio-demographic and socio-economic characteristics of the participants are provided. The subsequent parts of the findings are presented based on the study's objectives.

4.2 Response Rate

The response rate to the questionnaires deployed in the survey exercise was assessed to determine whether the gathered data was representative of the study's sample. A response rate denotes the proportion of participants who respond to a research instrument vis-à-vis the number of eligible participants (Fincham, 2008). A breakdown of this study's response rate is presented in Table 4.1.

Table 4.1. Response Rate of Study Participants Who Completed the Study Questionnaire, Kiambu County, 2020

Response Status	Number of Respondents	Percent (%)
Completed	391	97.75
Did not complete	9	2.25
Total	**400**	**100.00**

A total of 400 questionnaires were administered. Of these questionnaires, 391 were returned giving a response rate of 97.75%. According to Bryman and Bell (2014), a response rate of 50% generates satisfactory statistical results; a rate of 60% is good enough and that which is at least 70%, excellent. Following this recommendation, it is valid to conclude that the response rate obtained for this study was excellent as pertains to the adequacy of the data generating meaningful analytical results.

4.3 Reliability of Test Results

The survey questionnaire utilized in the study comprised three scales. The scale for level of knowledge comprised 23 items; the cervical cancer fatalism contained 13 items and the cervical cancer screening scale had 12. Cronbach's alpha was used to measure the reliability (internal consistency) of these scales. The alpha coefficients of the three scales are summarized in Table 4.2.

Table 4.2: Cronbach's Alpha Coefficients of the Questionnaire Items

Variable	Cronbach's Alpha	No. of Items
Level of knowledge	0.724	23
Cervical cancer fatalism	0.713	13
Cervical cancer fatalism	0.707	12

As seen in Table 4.2, the Cronbach alpha varied from 0.707 to 0.724. According to Tavakol & Dennick, (2011), alpha values higher than 0.6 reflect reliable scales. Thus, the scales for the level of knowledge, cervical cancer fatalism and cervical cancer screening signify an overall reliable instrument.

4.4 Validity of Test Results

The validity of the study findings was ensured by first entering data into an Excel sheet dataset. This ensured that all data from the respective questionnaires were fully captured. This was followed by data cleaning, and later analysis based on scientific techniques to ensure accurate and valid results.

4.5 Socio-Demographic and Socio-Economic Characteristics

A slightly above a third 134 (34.53%) of the study participants were aged between 25-34 years, and the minority 61(15.60%) were aged between 45-54 years. Almost half of the study participants were married 179 (45.80%). Similarly, an estimated 185(47.31%) of the study participants had attained a secondary level of education. A majority of 267(70.08%) of the participants had no substantial income, whereas 109 (27.88%) of them had no specific occupation. Whereas slightly above half 203(52.20%) of the study

participants were protestants, a significant minority 10 (2.57%) were not affiliated with any specific religion. A detailed summary of the socio-demographic and socio-economic characteristics is given in Table 4.3. A histogram showing the distribution of the number of children is given in figure 4.1.

Table 4.3: Socio-Demographic and Socio-economic Characteristics of the Study Participants, Kiambu County, 2020

Characteristics of Participants		
Variable	**Category**	**Frequency N (%)**
Age	15-24	89(22.76)
	25-34	134(34.53)
	35-44	106(27.11)
	45-54	61(15.60)
Marital status	Married	179(45.78)
	Single	156(39.9)
	Separated /Divorced	29(7.42)
	Widowed	27(6.91)
Number of children; Median (IQR)		3(2-3)
Level of education	None	13(3.32)
	Primary	99(25.32)
	Secondary	185(47.31)
	Tertiary	94(24.04)
Occupation	None	109(27.88)
	Business	92(23.53)
	Formal employment	47(12.02)
	Farming	80(20.46)
	Informal employment	63(16.11)
0> but < 10,000	65(17.06)	267(70.08)
	0> but < 10,000	65(17.06)
	10-30,000	16(4.20)
	31000 - 50,000	20(5.25)
	51,000 and above	13(3.41)
Religion	Catholic	170(43.70)
	Protestant	203(52.19)
	Muslims	6(1.54)
	Others	12(3.07)

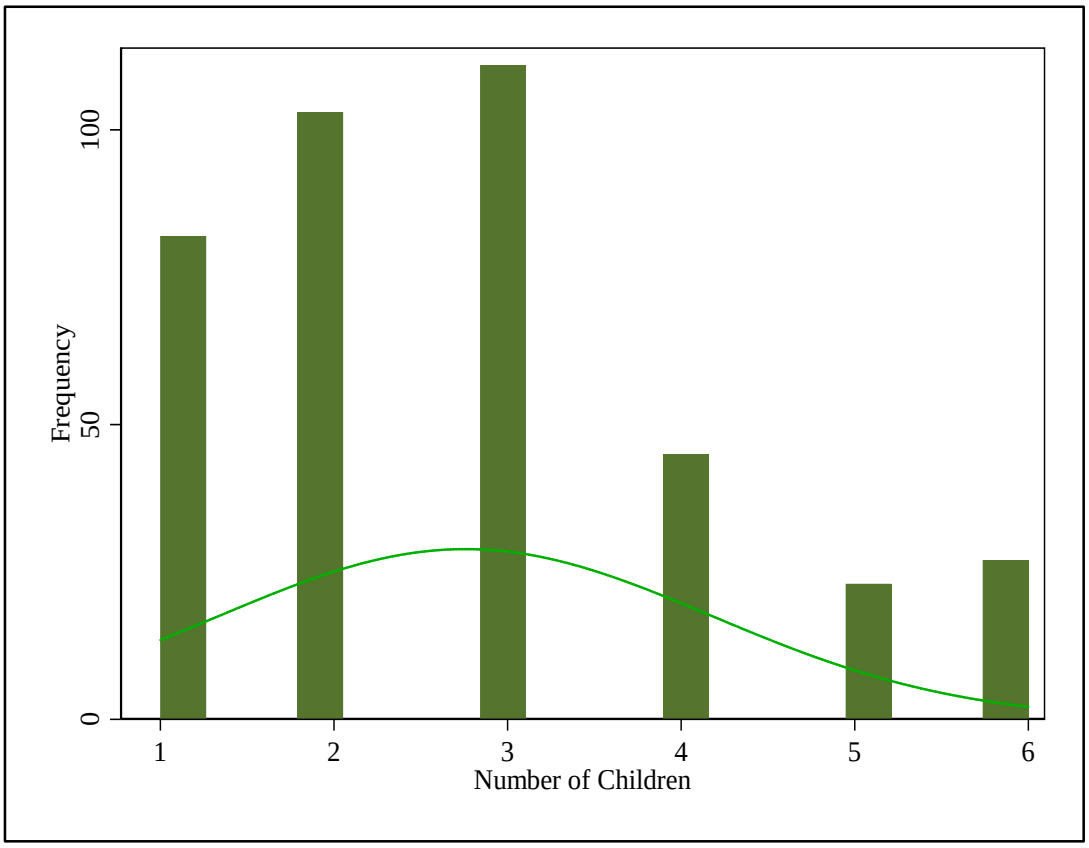

Figure 4.1: A Histogram Showing Distribution of Number of Children among Study Participants

4.6. Uptake of Cervical Cancer Screening among Women of between Age 15-54 Years in Kiambu Sub-County, 2020

The overall prevalence of cervical cancer screening was 25.80%. By age, slightly above a third 34.90% of the study participants who had cervical cancer screening were between 35-44 years, with the minority 21.30% being those 15-24 years. In terms of marital status, closely similar proportions of those who had cervical cancer screening were those who were separated or had been divorced 31% and those who were married 29.10% as shown in Table 4.4.

Table 4.4: Uptake of Cervical Cancer Screening among Women of Between Ages 15-54 Years in Kiambu Sub- County, 2020

Variable	Category	Uptake of Screening % (95% CI)
Overall Prevalence of Cancer Screening		25.8(21.70-30.40)
Age	15-24	21.3(14.00-31.20)
	25-34	23.0(16.60-30.90)
	35-44	34.9(26.40-44.50)
	45-54	23.0(14.00-35.30)
Marital status	Married	29.1(22.80-36.20)
	Single	22.4(16.50-29.70)
	Separated /Divorced	31.0(16.80-50.10)
	Widowed	18.5(7.80-38.00)
Level of education	None	23.1(7.20-53.60)
	Primary	22.2(15.10-31.50)
	Secondary	26.5(20.60-33.40)
	Tertiary	28.7(20.40-38.70)

By occupation, cervical cancer screening was highest among those who owned businesses and lowest among those who had formal employment. In terms of monthly income, those who had no substantial income rates had the highest prevalence of cervical cancer screening, with the least being among those who earned above 50,000 KShs. Protestants registered the highest prevalence of cervical cancer screening, with the least being from Muslims as shown in Figure 4.2.

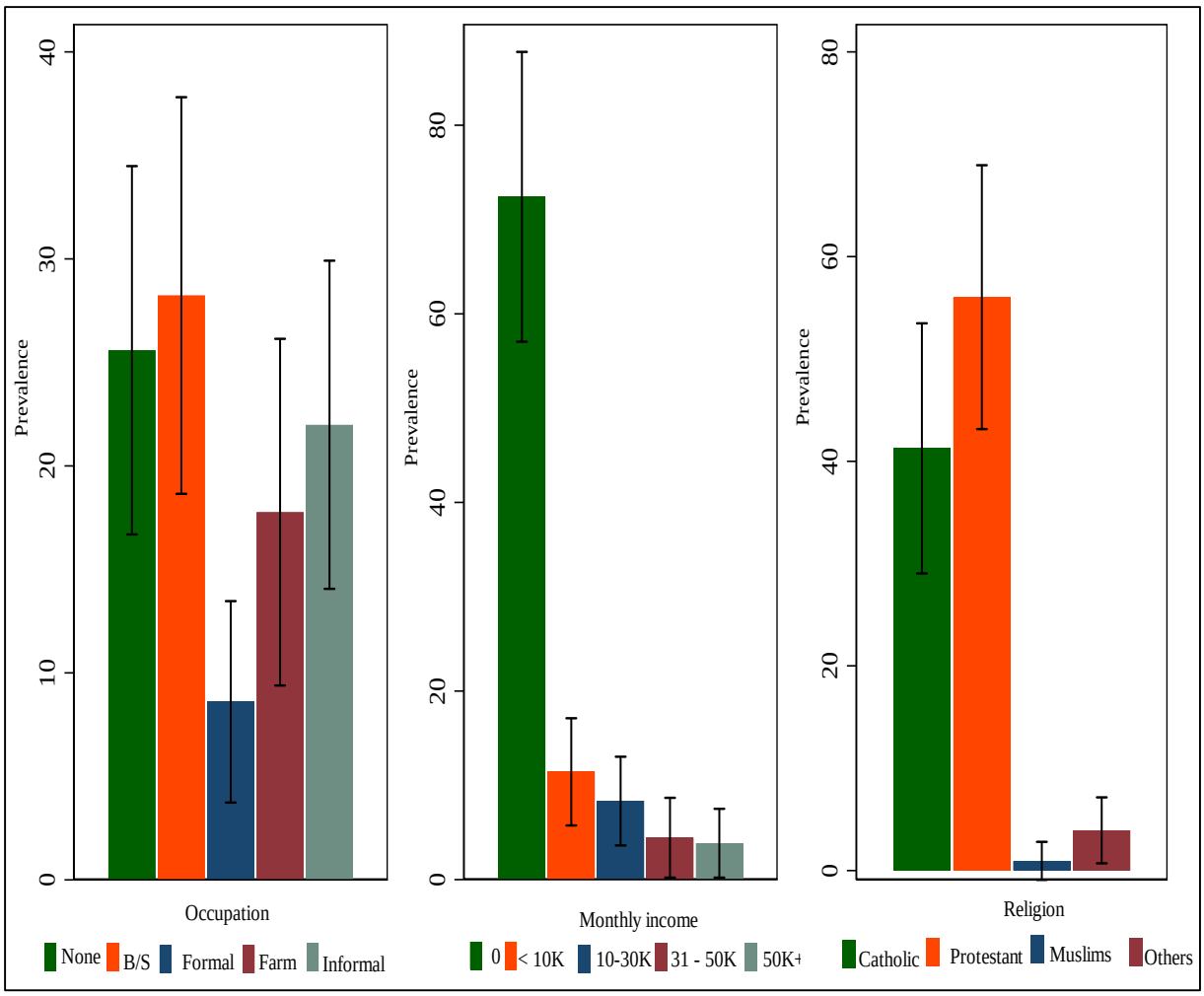

Figure 4.2: Prevalence of Uptake of Cervical Cancer Screening among Women of Between Ages 15-54 Years in Kiambu Sub- County, 2020

4.7 Prevalence of Fatalism and Associated Socio-Demographic Factors among Women Aged 15-54 Years in Kiambu Sub-County

4.7.1 Prevalence of Fatalism among Women Aged 15-54 Years in Kiambu Sub-County

The overall prevalence of fatalism among study participants was 14.32%. The prevalence of fatalism was highest (39.29%) among those aged 35-44 years and lowest (12.50%) among those aged 15-24 years. Those who were married had the highest 42.86% prevalence of fatalism, but the lowest (5.36%) among those who were separated or divorced. In terms of education, the prevalence of fatalism was highest among those who had attained secondary school level of education at 48.21%, but lowest (1.79%) among those who had no education at all. By occupation, the prevalence of fatalism was highest (26.79%) among those who had informal employment. In the category of occupation, those who did not have a substantial income had the highest (67.27%) prevalence of fatalism, whereas in terms of religion, almost above half (54.55%) of those who had fatalism were protestants as shown in Table 4.5.

Table 4.1: Prevalence of Fatalism among Women aged 15-54 Years in Kiambu Sub-County, 2020

Variable	Category	Fatalism Status	
		Non-Fatalistic n (%)	Fatalistic N (%)
Overall prevalence of fatalism		335(85.68)	56(14.32)
Age	15-24	82(24.48)	7(12.50)
	25-34	118(35.22)	17(30.36)
	35-44	84(25.07)	22(39.29)
	45-54	51(15.22)	10(17.86)
Marital status	Married	155(46.27)	24(42.86)
	Single	133(39.7)	23(41.07)
	Separated /Divorced	26(7.76)	3(5.36)
	Widowed	21(6.27)	6(10.71)
Number of children; Median (IQR)		3(2-3)	2(2-4)
Level of education	None	12(3.58)	1(1.79)
	Primary	88(26.27)	11(19.64)
	Secondary	158(47.16)	27(48.21)
	Tertiary	77(22.99)	17(30.36)
Occupation	None	101(30.15)	8(14.29)
	Business	79(23.58)	13(23.21)
	Formal employment	39(11.64)	8(14.29)
	Farming	68(20.30)	12(21.43)
	Informal employment	48(14.33)	15(26.79)
Monthly income	0	230(70.55)	37(67.27)
	0> but < 10,000	52(15.95)	13(23.64)
	10-30,000	13(3.99)	3(5.45)
	31000 - 50,000	20(6.13)	0(0)
	51,000 and above	11(3.37)	2(3.64)
Religion	Catholic	150(44.91)	20(36.36)
	Protestant	173(51.80)	30(54.55)
	Muslims	2(0.60)	4(7.27)
	Others	9(2.69)	1(1.82)

4.7.2 Socio-Demographic Factors Associated With Fatalism among Women Aged 15-54 Years in Kiambu Sub- County

Only age of 35-44 years (AOR 2.1; 95% CI; 1.13-3.89; P=0.018) and being a Muslim (AOR 9.85; 95% CI 1.57-61.66; P=0.015) were significantly associated with fatalism among the study participants. The study participants aged 35-44 years of age were 2.1 times more likely to have fatalism towards cervical cancer compared to those who were

aged 15-24 years of age. The Muslims were 9.85 times more likely to have fatalism towards cervical cancer compared to the Catholics as shown in Table 4.6.

Table 4.2: Demographic Factors Associated with Fatalism among Study Participants in Kiambu Sub- County, 2020

Variable	Category	Bivariable Analysis Odds Ratio OR (95%CI)	P-Value	Multivariable Analysis Adjusted Odds Ratio AOR (95%CI)	P-Value
Age	15-24	1(Reference)	.	1(Reference)	.
	25-34	1.69(0.67-4.25)	0.27		
	35-44	**3.07(1.24-7.57)**	**0.02**	**2.1(1.13-3.89)**	**0.018**
	45-54	2.3(0.82-6.42)	0.11		
Marital status	Married	1(Reference)	.	1(Reference)	.
	Single	1.12(0.6-2.07)	0.73		
	Separated /Divorced	0.75(0.21-2.65)	0.65		
	Widowed	1.85(0.68-5.04)	0.23		
Number of children		1.04(0.85-1.26)	0.71		
Level of education	None		.		.
		1(Reference)		1(Reference)	
	Primary	1.5(0.18-12.67)	0.71		
	Secondary	2.05(0.26-16.42)	0.5		
	Tertiary	2.65(0.32-21.78)	0.36		
Occupation	None	1(Reference)	.		
	Business	2.08(0.82-5.26)	0.12		
	Formal employment	2.59(0.91-7.38)	0.07		
	Farming	2.23(0.87-5.74)	0.1		
	Informal employment	**3.95(1.57-9.94)**	**<0.01**		
Monthly income	0		.		.
		1(Reference)		1(Reference)	
	0> but < 10,000	1.55(0.77-3.13)	0.22		
	10-30,000	1.43(0.39-5.28)	0.59		
	31000 - 50,000	Omitted (.-.)	.		
	51,000 and above	1.13(0.24-5.30)	0.88		
Religion	Catholic		.		.
		1(Reference)		1(Reference)	
	Protestant	1.3(0.71-2.39)	0.4		
	Muslims	**15(2.58-87.22)**	**<0.01**	**9.85(1.57-61.66)**	**0.015**
	Others	0.83(0.1-6.93)	0.87		

4.8 Level of Knowledge on Cervical Cancer and Screening among Women Aged 15-54 Years in Kiambu Sub-County

A majority (80.56%) of the study participants had good knowledge on cervical cancer and screening. Good knowledge was highest at 114 (36.19%) among those who were aged 25-34 years, and lowest at 44(13.97%) among those aged 45-54 years. In terms of education, those who had attained secondary school education had the highest proportion of good knowledge on cervical cancer and screening 149(47.3%). On the other hand, good knowledge of cervical cancer and screening was the lowest 11(3.49%) among those who had no education at all. Closely similar to good knowledge, poor knowledge of cervical cancer and screening was registered highest 36(47.37%) among study participants who had attained secondary school education. In terms of occupation, good knowledge of cervical cancer screening was highest at 88(27.94%) among the proportion of study participants who had no specific occupation. Equally similar, poor knowledge of cervical cancer and screening was highest among the proportion of study participants who had no specific occupation same to those who owned a business at 21(27.63%). The proportion of study participants with no substantial monthly income registered both the highest levels of poor knowledge and good knowledge at 45(65.22%) and 222(71.15%) respectively. Whereas the difference in good and poor knowledge was not statistically significant in all other categories above, there was statistical significance demonstrated in the categories of religion. In religion, the differences between good and poor knowledge of cervical cancer and screening were statistically significant among Catholics p=0.015 as shown in Table 4.7.

4.9 Influence of Fatalism on Uptake of Cervical Cancer Screening among Women Aged 15-54 Years in Kiambu Sub-County

Age of 35-44 years (UOR, 95% CI; 1.98 (1.04-3.77); p=0.04), and monthly income of 10-30,000 KShs (UOR, 95% CI; 2.81 (1.02-7.78); p=0.05, depicted significance before adjusting for fatalism. On adjusting for fatalism none of the factors had a significant influence on cervical cancer screening.

Moreover, the study findings indicate that fatalism had no statistically significant role in influencing the uptake of cervical cancer screening as indicated by p=0.86 as shown in Table 4.9. However, poor knowledge levels on cervical cancer screening played a statistically significant role in influencing the uptake of cervical cancer screening as indicated by p=0.01, as shown in Table 4.9. Equally important, all other socio-demographic and socio-economic factors had no statistically significant role in influencing the uptake of cervical cancer screening among the women aged 15-54 years in Kiambu Sub- County as indicated in Table 4.9.

Table 4.3: Knowledge Levels on Cervical Cancer and Screening among Women Aged 15-54 Years in Kiambu Sub-county, 2020

Variable	Category	Knowledge Level	
		Poor knowledge	Good Knowledge
Overall level of knowledge		76(19.44)	315(80.56)
Age	15-24	21(27.63)	68(21.59)
	25-34	21(27.63)	114(36.19)
	35-44	17(22.37)	89(28.25)
	45-54	17(22.37)	44(13.97)
Marital status	Married	33(43.42)	146(46.35)
	Single	35(46.05)	121(38.41)
	Separated /Divorced	2(2.63)	27(8.57)
	Widowed	6(7.89)	21(6.67)
Number of children; Median (IQR)		3(2-4)	3(2-3)
Level of education	None	2(2.63)	11(3.49)
	Primary	14(18.42)	85(26.98)
	Secondary	36(47.37)	149(47.3)
	Tertiary	24(31.58)	70(22.22)
Occupation	None	21(27.63)	88(27.94)
	Business	21(27.63)	71(22.54)
	Formal employment	10(13.16)	37(11.75)
	Farming	16(21.05)	64(20.32)
	Informal employment	8(10.53)	55(17.46)
Monthly income	0	45(65.22)	222(71.15)
	0> but < 10,000	12(17.39)	53(16.99)
	10-30,000	3(4.35)	13(4.17)
	31000 - 50,000	5(7.25)	15(4.81)
	51,000 and above	4(5.8)	9(2.88)
Religion	Catholic	40(53.33)	130(41.4-.)
	Protestant	29(38.67)	174(55.41-2.39)
	Muslims	3(4)	3(0.96-87.22)
	Others	3(4)	7(2.23-6.93)

Table 4. 4: Factors Associated with Fatalism on Cervical Cancer Screening among Women Aged 15-54 Years in Kiambu Sub- County, 2020

Variable	Category	Unadjusted Analysis		Adjusted Analysis	
		Odds Ratio OR (95%CI)	P-Value	Adjusted Odds Ratio AOR (95%CI)	P-Value
Age	15-24	1(Reference)	.	1(Reference)	.
	25-34	1.1(0.58-2.10)	0.78	0.87(0.41-1.87)	0.73
	35-44	**1.98(1.04-3.77)**	**0.04**	1.95(0.82-4.66)	0.13
	45-54	1.1(0.50-2.40)	0.82	1.14(0.38-3.44)	0.82
Marital status	Married	1(Reference)	.	1(Reference)	.
	Single	0.71(0.43-1.16)	0.17	0.59(0.32-1.09)	0.09
	Separated /Divorced	1.1(0.47-2.57)	0.83	1.14(0.44-2.95)	0.79
	Widowed	0.56(0.2-1.54)	0.26	0.78(0.26-2.34)	0.65
Number of children		1.03(0.88-1.20)	0.71	0.93(0.73-1.2)	
Level of education	None	1(Reference)	.	1(Reference)	.
	Primary	0.95(0.24-3.76)	0.94	0.47(0.1-2.14)	0.33
	Secondary	1.2(0.32-4.55)	0.79	0.61(0.14-2.65)	0.51
	Tertiary	1.34(0.34-5.26)	0.67	0.68(0.15-3.11)	0.62
Occupation	None	1(Reference)	.	1(Reference)	.
	Business	1.33(0.71-2.49)	0.38	1.36(0.61-3)	0.45
	Formal employment	0.86(0.38-1.97)	0.73	0.68(0.25-1.87)	0.46
	Farming	0.8(0.4-1.61)	0.53	0.8(0.35-1.84)	0.6
	Informal employment	1.71(0.87-3.38)	0.12	1.6(0.73-3.51)	0.24
Monthly income	0	1(Reference)	.	1(Reference)	.
	0> but < 10,000	0.7(0.36-1.37)	0.3	0.52(0.23-1.18)	0.12
	10-30,000	**2.81(1.02-7.78)**	**0.05**	2.71(0.87-8.49)	0.09
	31000 - 50,000	0.7(0.23-2.18)	0.54	0.45(0.12-1.70)	0.24
	51,000 and above	1.25(0.37-4.19)	0.72	1(0.25-4.02)	1
Religion	Catholic	1(Reference)	.	1(Reference)	.
	Protestant	1.39(0.87-2.23)	0.17	1.23(0.73-2.06)	0.44
	Muslims	0.69(0.08-6.13)	0.74	Omitted	.
	Others	2.32(0.62-8.63)	0.21	5.07(1.02-25.09)	0.05

Table 4.9: Significant Factors Associated with Cervical Cancer Screening Adjusting for Fatalismomen Aged 15-54 Years in Kiambu Sub- County, 2020

Variable	Category	Cancer Screening Status		P-Value
		Not Screened	Screened	
Overall screening status		290 (74.17)	101(25.83)	
Fatalism	Not Fatalistic	249(85.86)	86(85.15)	0.86
	Fatalistic	41(14.14)	15(14.85)	
Knowledge level	**Poor**	**68(23.45)**	**8(7.92)**	**0.001**
	Good	222(76.55)	93(92.08)	
Socio- demographic Factors				
Age	15-24	70(24.14)	19(18.81)	0.09
	25-34	104(35.86)	31(30.69)	
	35-44	69(23.79)	37(36.63)	
	45-54	47(16.21)	14(13.86)	
Marital status	Married	127(43.79)	52(51.49)	0.38
	Single	121(41.72)	35(34.65)	
	Separated /Divorced	20(6.9)	9(8.91)	
	Widowed	22(7.59)	5(4.95)	
Number of children; Median (IQR)		3(2-3)	3(2-3)	0.85
Level of education	None	10(3.45)	3(2.97)	0.75
	Primary	77(26.55)	22(21.78)	
	Secondary	136(46.9)	49(48.51)	
	Tertiary	67(23.1)	27(26.73)	
Occupation	None	83(28.62)	26(25.74)	0.24
	Business	65(22.41)	27(26.73)	
	Formal employment	37(12.76)	10(9.9)	
	Farming	64(22.07)	16(15.84)	
	Informal employment	41(14.14)	22(21.78)	
Monthly income	0	197(69.86)	70(70.71)	0.18
	0> but < 10,000	52(18.44)	13(13.13)	
	10-30,000	8(2.84)	8(8.08)	
	31000 - 50,000	16(5.67)	4(4.04)	
	51,000 and above	9(3.19)	4(4.04)	
Religion	Catholic	132(45.83)	38(37.62)	0.35
	Protestant	145(50.35)	58(57.43)	
	Muslims	5(1.74)	1(0.99)	
	Others	6(2.08)	4(3.96)	

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMENDATIONS

5.1 Introduction

This chapter discusses the study findings based on the objectives. The discussion gives an interpretation of the results while giving their implications for research and practice on cervical cancer screening. Moreover, the discussion puts into perspective the study findings in relation to other studies done in other settings. The chapter ends with recommendations and conclusions as per the study objectives.

5.2 Uptake of Cervical Cancer Screening among Women Aged 15-54 Years in Kiambu Sub- County

The study identified that the prevalence of cervical cancer screening was 25.8% among women aged 15-54 years in Kiambu Sub- County. This indicates a low level of uptake of cervical cancer screening considering the widespread awareness campaigns for women of reproductive age to take the service (Mwenda et al., 2022). Several schools of thought may be attributed to the low levels of cervical cancer screening during this period. First, the data collection was done during the COVID-19 pandemic. During this period, general access to a wide range of health services was disrupted in most settings both locally, regionally and globally. This is due to the prevalent lockdowns, restricted movements and much focus channelled to COVID-19, thus limiting access to such services (Castanon et al., 2022). Indeed, studies have shown that access to cervical cancer screening was widely disrupted in most global settings during COVID-19 (Castanon et al., 2022). Other factors that may explain the low uptake of cervical cancer screening in this population include, inadequate equipment and healthcare facilities, inadequate staffing in the health facilities, lack of up-to-date training among the healthcare providers, and unaffordability of the healthcare services especially in low socio-economic settings as identified in previous studies (Choi et al., 2022; Ng'ang'a et al., 2018; Rosser et al., 2015).

The 25.8% uptake of cervical cancer screening is within the national uptake of between <1% and 36% but extremely below the recommended 70% by the WHO (Mwenda et al., 2022). Moreover, the 25.8% uptake of cervical cancer screening is below that of 35.6% established in Kisumu (Choi et al., 2022), and 56% established in several other settings in Kenya (Kemper et al., 2022). This is an indication that cervical cancer screening in Kiambu Sub- County may be lagging compared to other settings in the country. Thus, more campaigns and awareness are needed among this population to enhance their uptake of cervical cancer screening. Moreover, more up-to-date studies on cervical cancer screening in Kiambu Sub- County and other settings of the large Kiambu County, especially during the post-COVID-19 period, are needed to have a more accurate understanding of the situation. This would enable in creation of evidence-based interventions for a more efficient and effective fight against cervical cancer in this population.

It emerged that the proportion of women aged 35-44 years had the highest levels of cancer screening at 34.9%. Understandably, given that this age group constitutes the upper mid-level reproductive age, it is expected such women will have had frequent interactions with healthcare providers since the earlier years of their reproductive age. Thus, they will have benefited from awareness campaigns on the need for cervical cancer screening, and ultimately seeking the services more compared to younger reproductive age groups. Indeed, this assertion is supported by the study findings that the minority of women who had cervical cancer screening were those in the lower reproductive age cohort of 15-24 years. At the earlier ages of their reproductive years, women may not be frequenting healthcare facilities specifically for reproductive health services. Expectedly, such women may not benefit from cervical cancer screening as much as their older counterparts would. Indeed, this is consistent with findings from another study which found that women of a closely similar age cohort (35-49 years) had higher levels of cervical cancer uptake compared to their younger counterparts. Elsewhere, in Kisumu, Kenya, a study found that women aged 45-54 years of age had higher levels of cervical cancer uptake (Choi et al., 2022). The cervical cancer screening uptake disparities around age groups are an indication that there may be missed opportunities for such services, especially at earlier

ages (Kinney et al., 1998). When detected late, the prognosis of cervical cancer may be poor (Mwaliko et al., 2023). Indeed, studies have established that the chances of survival after detecting cervical cancer in earlier stages are eight times higher compared to when detected at a late stage (Mwaliko et al., 2023). Therefore, there is a need to sensitize younger reproductive women to seek cervical cancer screening to enhance early detection for better prognosis among women in this population.

Women who owned businesses had the highest levels of cervical cancer screening. This may be attributed to a consistent source of income among such women, which eventually makes them afford cervical cancer screening (Biddell et al., 2021). However, unexpectedly, the levels of cervical cancer screening were lowest among women who had formal employment. While not entirely factual, this may be explained by the fact that such women are tied in their formal employments, with little time to access cervical cancer screening which is done during the formal hours in most healthcare settings. The findings of this study are contrary to those of another study that found that cervical cancer screening was higher among women who had formal employment (Black et al., 2019).

5.3 Prevalence of Fatalism and Associated Socio-Demographic Factors among Women Aged 15-54 Years in Kiambu Sub-County

5.3.1 Prevalence of fatalism among women aged 15-54 years in Kiambu Sub-County

The overall prevalence of fatalism was 14.32%. This is an indication that a majority of women of reproductive age in Kiambu Sub- County are not fatalistic about cervical cancer. This implies that fatalism may not be a major barrier to cervical cancer screening in this population, perhaps an indication that awareness campaigns may have had significant successes in dispelling the false belief that cervical cancer is by fate and that nothing much can be done to control and prevent it. Studies have shown that fatalistic beliefs toward cervical cancer can be a key barrier to its control and prevention (Guo et al., 2021; Marván et al., 2016). Lower levels of fatalism have been associated with adherence and screening of cancer screening among Hispanic and Latino communities

(Moreno et al., 2019). Whereas the levels of fatalism were low, the 14.32% identified in this study still shows there is a considerable number of people who hold on to fatalism beliefs about cervical cancer. Thus, more sensitization and awareness campaigns are needed to dispel such beliefs. This would eventually lead to enhanced uptake of cervical cancer screening among women of reproductive age in Kiambu Sub- County and Kenya at large.

The prevalence of fatalism was highest (39.29%) among those aged 35-44 years and lowest (12.5%) among those aged 15-24 years. As the age advances, exposure to social media and other unreliable sources of information linked to fatalistic beliefs may also be increasing, hence why the women of 35-44 years had higher levels of fatalism compared to their younger counterparts (Befort et al., 2013). Women of this age (35-44 years) may also have witnessed more of their counterparts who did not survive cervical cancer compared to those at lower ages, hence the findings of this study (Goldzweig et al., 2009). Whereas the study found that those who were married had a higher prevalence of fatalism, other studies have found the contrary that marital status did not play a role in influencing fatalism (Goldzweig et al., 2009). Unexpectedly, fatalism was highest among those who had attained secondary school level of education at 48.21%, but lowest (1.79%) among those who had no education at all. This is contrary to findings that higher levels of education are linked to lower levels of fatalism (Keller et al., 2021). Consistent with other studies done in Brazil, the study established that those who had no substantial level of income had the highest prevalence of fatalism (Cidade et al., 2016).

5.3.2 Socio-demographic Factors Associated with Fatalism among Women Aged 15-54 Years in Kiambu Sub- County

The study established that the age of 35-44 years (AOR=2.1) and being a Muslim (AOR=9.8) were significantly associated with fatalism among the study participants. Given that most cervical cancer cases are diagnosed at advanced age, women approaching such age cohorts may have more fear of the outcomes of cervical cancer as compared to younger age groups, which may partly explain the findings in this study (Beeken et al., 2011). Religion has been linked to fatalism in other studies (Franklin et al., 2007). Indeed,

more specifically, the Islamic religion has been linked to fatalism more than Christianity in previous studies, thus a possible explanation for the findings of this study (Acevedo, 2008). These findings indicate that more targeted awareness campaigns and cervical screening are needed among women aged 35-44 years and those of Muslim religion.

5.4 Level of Knowledge on Cervical Cancer and Screening among Women Aged 15-54 Years in Kiambu Sub-County

The study established that a majority (80.56%) of the study participants had good knowledge of cervical cancer and screening. This is perhaps an indication of successes made in public health awareness against cervical cancer and screening among women in this population. Good knowledge of cervical cancer and screening has been attributed to enhanced uptake of the respective services (Al-Naggar et al., 2010; Tapera et al., 2019; Urasa & Darj, 2011). Thus, high levels of good knowledge may potentially signify high levels of cervical cancer screening. However, this was not the case in this study. Whereas there were high levels of good knowledge, the screening of cervical cancer in the study population was comparatively lower at 25.8%. Therefore, more studies are needed to understand why good levels of knowledge do not translate to good uptake of cervical cancer screening in this population. The study findings on good knowledge (80.56%) of cervical cancer and screening are similar to those of 80% from a similar study conducted in the larger Kiambu County (Gitonga et al., 2022). This is perhaps an indication of similar knowledge trends on cervical cancer and screening prevailing across the larger Kiambu County in recent years. However, there still was a significant proportion (19.4%) of women who were not knowledgeable about cervical cancer in the study population. This shows that there is still a lot to be done as far as sensitizing the population on cervical cancer and screening in Kiambu Sub- County.

The study identified that only the age of 45-54 years, (AOR=1.62), having attained a tertiary level of education (AOR=0.45), and being a Muslim (AOR=0.13) were significantly associated with knowledge of cervical cancer and screening among the study participants. It is understood that women at advanced age may have had more frequent exposure to reproductive health services. Therefore, the more exposure to reproductive

health services, the more one is likely to gain knowledge and awareness on the same, hence the findings in this study. This is consistent with findings from another study that advanced age is associated with higher knowledge levels on cervical cancer and screening (Bansal et al., 2015). Unexpectedly, women who had tertiary education were 0.65 times less likely to be knowledgeable on cervical cancer and screening. Advanced levels of education have been shown to enhance knowledge of cervical cancer and screening (Alwahaibi et al., 2018; Bansal et al., 2015). The study established that women of Muslim religion were 0.87 times less likely to have good knowledge of cervical cancer and screening compared to those who were Christians. Studies have shown that religion may have a role to play in poor knowledge levels of cervical cancer and screening (Afsah & Kaneko, 2023; Padela et al., 2014). Therefore, there is a need to enhance awareness campaigns on cervical cancer screening in Kiambu Sub- County, to reach the women who have poor knowledge on the same.

5.5 Influence of Fatalism on Uptake of Cervical Cancer Screening among Women Aged 15-54 Years in Kiambu Sub-County

Whereas age of 35-44 years (UOR, 1.9), and monthly income of 10-30,000 KShs (UOR, 2.81), depicted significance before adjusting for fatalism, none of the factors had a significant influence on cervical cancer screening after adjusting for fatalism. This is an indication that fatalism may not be a critical barrier to cervical cancer and screening in the women of Kiambu Sub- County. Moreover, the findings indicate that fatalistic beliefs about cervical cancer may not be deeply ingrained in the women of reproductive age in the Kiambu Sub- County. However, given that the findings showed some traces of fatalistic beliefs among the study population, more public health campaigns are needed to completely dispel such beliefs from the population. Given that fatalism had no influence on cervical cancer and screening among the study population, it is expected that the uptake levels of such services ought to be significantly high. However, the study still established low uptake levels of cervical cancer and screening. This calls for more research to identify the existing barriers that can be addressed through targeted interventions, to enhance cervical cancer screening in the Kiambu Sub- County and Kenya at large.

5.6 Study Limitations

This being a cross-sectional study means that a causal inference relationship may not be construed from the study findings. Thus, the study findings may be good for generating hypotheses, which would need further investigations through advanced interventional studies. More importantly, a data collection exercise was carried out during the COVID-19 pandemic. During this time, there were widespread lockdowns, limited travelling, and much focus directed to COVID-19. Therefore, the extent of seeking healthcare services, and especially cervical cancer and screening and been adversely limited during this time. This in one way or another may have affected the nature of the population involved in this study. There was likely an underrepresentation or overrepresentation of women who may have needed the cervical cancer screening but were disadvantaged by COVID-19 in one way or another.

5.7 Conclusion

The uptake of cervical cancer screening is 25.8% among women aged 15-54 years in Kiambu Sub- County. This is a low uptake level, hence the need for more public health sensitization targeting younger reproductive women on cervical cancer and screening to enhance early detection for better prognosis.

The overall prevalence of fatalism is 14.32% among women aged 15-54 years in Kiambu Sub- County who are not fatalistic about cervical cancer. While these are low levels of fatalism in the study population, there is still the need to enhance public health campaigns and awareness to dispel any existing fatalistic beliefs in the study population. The age of 35-44 years, being a Muslim are the factors significantly associated with fatalism among women aged 15-54 years in Kiambu Sub-County. Therefore, public health campaigns and awareness to dispel fatalistic beliefs should be highly targeted among women of 35-44 years and those who are Muslims.

A majority (80.56%) of women aged 15-54 years have good knowledge of cervical cancer and screening in Kiambu Sub-County. However, there is still a significant proportion of 19.4% who have poor knowledge of cervical cancer and screening and are still in need of

more public health campaigns and sensitization on cervical cancer and screening in Kiambu Sub-County.

On adjusting for fatalism there were not factor that significantly influenced the uptake of cervical cancer screening among women aged 15-54 years in Kiambu Sub-County. While this is true, there is still the need to dispel any existing fatalistic beliefs among women aged 15-54 years on cervical cancer and screening.

5.8 Recommendations

5.8.1 Recommendations for Practice

1. The ministries of health in Kiambu and the National government should create more public health sensitization, and awareness campaigns to reach as many women aged 15-54 years of age as possible with cervical cancer screening and linkage of those infected in care and follow-up.

2. The public health campaigns need to be packaged in such a matter that also factors in dispelling fatalistic beliefs among women aged 15-54 years.

3. The ministries of health in Kiambu and at the National government should enhance the provision of educational materials like Information and Educational Material (IECs) or even posters on the need for cervical cancer and screening, with the ultimate goal of enhancing knowledge on the same among women aged 15-54 years.

4. The healthcare providers who offer reproductive health services to women aged 15-54 years should create time amidst their patient interaction routine to assess and dispel any existing fatalist beliefs on cervical cancer and screening.

5.8.2 Recommendations for Research

The study recommends an interventional study to investigate the effect of a targeted educational intervention on fatalism and cervical cancer screening among women aged 15-54 years in Kiambu Sub-County.

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APPENDICES

Appendix I: Informed Consent Explanation

This will be read to the respondents before interview so that their consent is sought.

Title of the study

Factors associated with fatalism and its influence on cervical cancer screening among women aged 15-54 years in Kiambu sub-county

Introduction

My name is Ann Mugure Wambui, a student at Jomo Kenyatta University of Agriculture and Technology conducting research at Kiambu Sub- County which aims at exploring the factors associated with fatalism and its effect on the uptake of cervical cancer screening among women aged 15-54 years.

Purpose of the study

The study will among other things assist the ministry to develop a policy in terms of enhancing prevention and control of cervical cancer through health education messages that will help in reducing fatalistic beliefs while aiming at enhancing uptake of screening for early diagnosis and treatment of cervical cancer.

Procedure to be followed

You have been selected to participate in this study because you are aged 15-54 years. If you agree to participate in this study, you will be asked a few questions regarding your knowledge on cervical cancer, screening and fatalism for a period of 20 minutes.

Risks

Any information gathered from you will be confidential and no mention of names will be done in the report to ensure that the risk of disclosing the information you have given us

will be fully minimized. All data will be stored in computers with passwords and hard copies will be kept in lockable cabinets that have authorized access to the investigators only.

Assurance of confidentiality

The information you will provide will be handled confidentially. Your name will not be mentioned in the reports or publications.

Storage of data

All the records containing your information collected in the study will be stored safely and only be accessible to the investigators.

Right to refuse

Your participation in the study is voluntary. You are free to stop answering questions at any point if you don't feel like without any penalty.

Subject

If during the course of this study you have any questions concerning this research you should contact Ann Wambui P.O. Box 152-0614, Wangige. Telephone Number; 0725157331 if in case you have a question concerning your rights of participation, you should contact; The secretary, JKUAT Institution Ethics Review Committee, P.O. Box 62000-00200, Nairobi. Telephone Number; 0716659077.

I…….. ……have read/been read to the information shown above and had the opportunity to ask questions and all were answered to satisfaction. I hereby give consent for my participation as explained to me.

Study participant's name;…….

Sign;……. Date;……..

Interviewer's signature…… Date……..

Appendix II: Informed Consent Explanation (For Guardians to the Respondents of the under 18 Years of Age)

This will be read to the guardian before interview so that their consent is sought.

Title of the study

Factors associated with fatalism and its influence on cervical cancer screening among women aged 15-54 years in Kiambu sub-county

Introduction

My name is Ann Mugure Wambui, a student at Jomo Kenyatta University of Agriculture and Technology conducting research at Kiambu Sub- County which aims at exploring the factors associated with fatalism and its effect on the uptake of cervical cancer screening among women aged 15-54 years.

Purpose of the study

The study will among other things assist the ministry to develop a policy in terms of enhancing prevention and control of cervical cancer through health education messages that will help in reducing fatalistic beliefs while aiming at enhancing uptake of screening for early diagnosis and treatment of cervical cancer.

Procedure to be followed

Your child has been selected to participate in this study because she is aged 15-54 years. If she agrees to participate in this study, she will be asked a few questions regarding her knowledge on cervical cancer, screening and fatalism for a period of 20 minutes.

Risks

Any information gathered from her will be confidential and no mention of names will be done in the report to ensure that the risk of disclosing the information she has given us

will be fully minimized. All data will be stored in computers with passwords and hard copies will be kept in lockable cabinets that have authorized access to the investigators only.

Assurance of confidentiality

The information she will provide will be handled confidentially. Her name will not be mentioned in the reports or publications.

Storage of data

All the records containing her information collected in the study will be stored safely and only be accessible to the investigators.

Right to refuse

Her participation in the study is voluntary. She is free to stop answering questions at any point if she doesn't feel like without any penalty.

Subject

If during the course of this study you have any questions concerning this research you should contact Ann Wambui P.O. Box 152-0614, Wangige. Telephone Number ; 0725157331 if in case you have a question concerning your rights of participation, you should contact; The secretary ,JKUAT Institution Ethics Review Committee ,P.O. Box 62000-00200, Nairobi. Telephone Number; 0716659077.

I…….. ……have read/been read to the information shown above on behalf of my daughter and were answered to satisfaction .I hereby give consent for her as explained to me.

Study participant's name;…….

Sign;……. Date;……..

Interviewer's signature…… Date……..

Appendix III: Questionnaire

Questionnaire to establish the factors associated with fatalism and its influence on uptake of cervical cancer screening among women aged 15-54 years in Kiambu sub- County.

Questionnaire No. ----------

Enumerator Code----------

Date----------

Ward----------

GPS readings: Latitude: ----------Longitude----------Altitude------

Start time----------End time----------

	Socio- Demographic Factors.		
1.	What is your current age?	1. 15-24 2. 25-34 3. 35-44 4. 45-54	1 2 3 4
2.	What is your current Marital status?	1. Married 2. Single 3. Separated /Divorced **4.** Widowed	1 2 3 4
3.	How many children do you have? (Your own)	1. 0 2. 1 3. 2 4. 3 5. 4 6. Above 4	1 2 3 4 5 6
4.	What is your highest educational level?	1. None 2. Primary 3. Secondary 4. Tertiary (College/University)	1 2 3 4

5.	What is your current occupation? What do you predominantly do for your living?	1. None 2. Business 3. Formal employment 4. Farming 5. Informal employment (Multiple responses allowed)	1 2 3 4 5
6.	What is your total average income per month?	1. 0 2. 0> but < 10,000 3. 10-30,000 4. 31000 - 50,000 5. 51,000 - 80,000 6. Above, 80,000	1 2 3 4 5
Section 2: Knowledge on Cervical Cancer and Screening **Please indicate whether it's true or false for the following statements**			
7. a	I will know I have cervical cancer immediately through the symptoms I experience.	1. True 2. False	1 2
b	Early stages of cervical cancer have no signs or symptoms	1. True 2. False	1. 2.
c	A woman with many unprotected sexual encounters with more than one sexual partner is more likely to develop cervical cancer	1. True 2. False	1. 2.
d	A woman can prevent herself from cervical cancer through vaccination	1. True 2. False	1. 2.

e	Cervical cancer is curable	1. True 2. False	1. 2.
f	Cervical cancer can cause death if left untreated.	1. True 2. False	1. 2.
g	Early diagnosis of cervical cancer through screening has better screening outcome	1. True 2. False	1. 2.
h	All sexually active women should undergo cervical cancer screening.	1. True 2. False	1. 2.
i	A woman who has given birth to many children is more likely to develop cervical cancer	1. True 2. False	1. 2.
j	Women who starts early sexual debut are at risk are more likely to develop cervical cancer	1. True 2. False	1. 2.

k	A woman who smokes has a higher possibility of developing cervical cancer	1. True 2. False	1. 2.
Section 3: Cervical Cancer Fatalism To what extent do you agree with the following statements			
8 a.	I believe if one was meant to get cervical cancer, it doesn't matter what precautions they take, they will get it anyway.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree **5.** Strongly Disagree	1. 2. 3. 4. 5.
b	I believe if someone is meant to have cervical cancer, they will get it.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.
c.	I believe how long I live is predetermined.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.

d	I believe if someone gets cervical cancer, its already too late to get treated for it.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.
e	A cervical cancer test will not decrease my chances of dying from cancer.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.
f	If I was diagnosed with cervical cancer I would not live for more than 5 years.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.

g	There's really no way I can solve some problems in life.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.
h	I believe if someone gets cancer, that's how they were meant to die.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.
i	I believe if somebody gets cancer, it doesn't matter when they find out they will still die.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5

j	I think cervical cancer will kill you no matter when it's found and how it's treated.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.
k	I believe if someone gets cervical cancer their time to die is near.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.
l	Of all the diseases, I fear cancer the most	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.

m	I believe most people do not want to know they have cervical cancer due to fear of dying.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	1. 2. 3. 4. 5.
Section 4: Cervical Cancer Screening			
9.	Are you currently experiencing any of the following symptoms?	1.Pain on the pelvis 2.Vaginal discharge with strong odor 3.Bleeding after sexual intercourse 4.Bleeding between periods 5.Unexplained weight loss 6.Others….. specify	1. 2. 3. 4. 5. 6.
10	Have you ever thought seriously about cervical cancer screening?	1. Yes 2. No	1. 2.
11	Have you ever gone to hospital to have your cervix checked?	1. Yes go to q 12 2. No go to q 13	1. 2.
12	If yes to q 11, were you screened for cervical cancer?	1. Yes 2. No	1. 2.

13	If yes to q 12, which method of screening was used?	1. Via/villi 2. HPV Test 3. Papsmear 4. I Don't Know	1. 2. 3. 4.
14	If yes to q 12, how long ago were you screened?	1. <1 year 2. 1-3 years 3. More than 3 years	1. 2. 3.
15	If yes to q 12, what motivated you to get screened?	1. Routine check up 2. Doctors recommendations 3. Having symptoms 4. Any other…..specify	1. 2. 3. 4.
16	If yes to Q 12 did your healthcare worker explain the benefits before screening?	1. Yes 2. No	1. 2.
17	If Yes to Q 16 who made the decision for you to get screened?	1. Healthcare Worker 2. Self 3. Both 4. Any other….. specify	1. 2. 3. 4.
18	If No to Q 11, are you willing to seek cervical cancer screening services in the future?	1. Yes 2. No	1. 2.

19	If Yes to Q 18, indicate how soon you are likely to seek screening services for cervical cancer?	1. Within a year 2. Immediately 3. Not decided 4. Others…… specify	1. 2. 3. 4.
20	If No to Q 18 what are the reasons that will make you not seek screening services for cervical cancer?	1. I am well, I don't need the test 2. I don't know where to get the test 3. I don't think its beneficial 4. I am not comfortable with the procedure.	1. 2. 3. 4.

Appendix IV: Maelezo ya Idhini ya Kufanya Kazi

Hii itasomewa washiriki kabla ya mahojiano ili idhini yao itafutwa.

Kichwa cha utafiti

sababu zinazohusiana na uzushi na ushawishi wake juu ya uchunguzi wa saratani ya kizazi kati ya wanawake wenye umri wa miaka15-54 katika kaunti ndogo ya kiambu.

Utangulizi

Jina langu ni Ann Mugure Wambui, mwanafunzi wa Chuo Kikuu cha Kilimo na Teknolojia cha Jomo Kenyatta nikitaka kufanya utafiti katika kaunti ndogo ya Kiambu ambayo inalenga kuchunguza mambo yanayohusiana na mawazo hasi kuhusu saratani na jinsi inavyoadhiri uchunguzi wa saratani ya kizazi kwa wanawake wenye umri wa miaka 15-54.

Kusudi la utafiti

Utafiti huo kati ya mambo mengine utasaidia wizara kuendeleza sera katika suala la kuongeza namna ya kuzuia na kudhibiti saratani ya kizazi kupitia ujumbe wa elimu ya kiafya ambayo itasaidia kupunguza imani za kishawishi wakati ikilenga kuongeza utaftaji wa uchunguzi wa utambuzi wa mapema na matibabu ya saratani ya kizazi.

Utaratibu wa kufuatwa

Umechaguliwa kushiriki katika utafiti huu kwa sababu una umri wa miaka 15-54. Ikiwa unakubali kushiriki katika utafiti huu utaulizwa maswali machache kuhusu ufahamu wako juu ya saratani ya shingo ya kizazi, uchunguzi na uzushi kwa muda wa dakika 20.

Tahadhali

Habari yoyote iliyokusanywa kutoka kwako itakuwa ya siri na hakuna kutaja majina katika ripoti hiyo kuhakikisha kwamba hatari ya kufichua habari ambayo umetupa itapunguzwa kabisa. Takwimu zote zitahifadhiwa kwenye kompyuta zilizo na nywila na nakala ngumu zitahifadhiwa kwenye makabati yanayoweza kufungwa ambayo yameidhinisha ufikiaji wa wachunguzi tu.

Uhakikisho wa usiri

Habari utakayotoa itashughulikiwa kwa siri. Jina lako halitatajwa katika ripoti au machapisho.

Uhifadhi wa Data

Rekodi zote zilizo na habari yako iliyokusanywa kwenye utafiti zitahifadhiwa salama na kupatikana tu kwa wachunguzi.

Haki ya Kukataa

Ushiriki wako katika utafiti ni wa hiari. Uko huru kuacha kujibu maswali wakati wowote ikiwa haujisikii bila adhabu yoyote.

Mada

Ikiwa wakati wa masomo haya unayo maswali yoyote kuhusu utafiti huu unapaswa kuwasiliana na Ann Wambui , Sanduku la barua 152-0614, Wangige. Nambari ya simu ; 0725157331 ikiwa una swali kuhusu haki yako ya kushiriki, unapaswa kuwasiliana; Katibu, Kamati ya Maadili ya Taasisi ya JKUAT, P.O. Box 62000-00200, Nairobi. Nambari ya simu; 0716659077.

Mimi…….. …… nimesoma habari iliyoonyeshwa hapo juu na walipata nafasi ya kuuliza maswali na wote walijibiwa kwa kutosheleza. Kwa hivyo natoa ridhaa ya ushiriki wangu kama nilivyoelezea.

jina la mshiriki ;…….

Sahihi;……. Tarehe;……..

Saini ya anayehojiwa …… Tarehe……..

Appendix V: Dodoso

Dodoso ili kubaini sababu zinazohusiana na uzushi na ushawishi wake juu ya uchunguzi wa saratani ya kizazi kati ya wanawake wenye umri wa miaka15-54 katika kaunti ndogo ya kiambu.

Nambari ya Dodoso. ----------

Nambari ya usanifu ----------

Tarehe----------

Kata ----------

Usomaji wa GPS: Latitudo: ----------Longitude----------Altitude--

Masaa ya kuanza ----------Kumalizia----------

	Maswala ya kijamii.		
1.	Umri wako wa sasa ni upi?	1.15-24 2.25-34 3.35-44 4. 45-54	1 2 3 4
2.	Je! Ni hali yako ya sasa ya ndoa?	1. Nimeolewa 2. Sijaolewa 3. Tumetengana 4. Mjane	1 2 3 4
3.	Una watoto wangapi? (Walio wako)	1. 0 2. 1 3. 2 4. 3 5. 4 6. Zaidi ya 4	1 2 3 4 5 6
4.	Je! Kiwango chako cha juu zaidi cha elimu ni kipi?	1. Sijasoma 2. Msingi 3. Sekondari 4. Chuo / Chuo Kikuu	1 2 3 4

5.	Kazi yako ya sasa ni gani?	1.Hakuna 2. Biashara 3. Ajira rasmi 4. Ukulima 5. Mfanyakazi wa kawaida	1 2 3 4 5
6.	Je! Mapato yako ya wastani kwa mwezi ni nini?	1.< 10,000 2.10-30,000 3.31000 - 50,000 4. 51,000 - 80,000 5.Zaidi ya, 80,000	1 2 3 4 5
Sehemu ya 2: Maarifa juu ya Saratani ya kizazi na Uchunguzi Tafadhali onyesha ikiwa ni ya kweli au ya uwongo na taarifa zifuatazo			
7. a.	Nitajua kuwa na saratani ya mlango wa kizazi mara moja kupitia dalili ninazopata.	1. Ukweli 2. Uongo	1 2
b.	Hatua za mapema za saratani ya kizazi hazina dalili	1. Ukweli 2. Uongo	1. 2.
c.	Mwanamke aliye na wenzi wengi wa ngono ana uwezekano wa kupata saratani ya kizazi	1. Ukweli 2. Uongo	1. 2.
d.	Mwanamke anaweza kujizuia kutokana na saratani ya kizazi kupitia chanjo	1. Ukweli 2. Uongo	1. 2.
e.	Saratani ya kizazi inapona	1. Ukweli 2. Uongo	1. 2.
f.	Saratani ya kizazi inaweza kusababisha kifo ikiwa itaachwa bila kutibiwa.	1. Ukweli 2. Uongo	1. 2.
g.	Utambuzi wa mapema wa saratani ya kizazi kupitia uchunguzi ina matokeo bora ya uchunguzi	1.Ukweli 2. Uongo	1. 2.

h.	Mwanamke ambaye ameanza kushiriki ngono lazima afanyiwe uchunguzi wa saratani ya kizazi	1. Ukweli 2. Uwongo	1. 2.
i.	Mwanamke ambaye amezaa watoto wengi ana uwezekano wa kupata saratani ya kizazi	1.Ukweli 2. Uongo	1. 2.
j.	Wanawake ambao huanza mapema ngono ni katika hatari na wana uwezekano wa kupata saratani ya kizazi	1.Ukweli 2. Uongo	1. 2.
k.	Mwanamke anayevuta sigara ana uwezekano mkubwa wa kupata saratani ya kizazi	1.Ukweli 2. Uongo	1. 2.
Sehemu ya 3: Mawazo hasi kuhusu Saratani ya Kizazi Je! Unakubaliana na maelezo gani yafuatayo?			
8.a.	Ninaamini ikiwa mtu alidhamiriwa kupata saratani ya kizazi, haijalishi ni tahadhari gani wanachukua, wataipata.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
b.	Ninaamini ikiwa mtu anatajwa kuwa na saratani ya kizazi, atapata.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
c.	Ninaamini muda gani nitaishi umepangwa.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
d.	Ninaamini ikiwa mtu anapata saratani ya kizazi, tayari amechelewa sana kutibiwa kwa ajili yake.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.

e.	Uchunguzi wa saratani ya kizazi hautapunguza nafasi yangu ya kufa kutokana na saratani.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
f.	Ikiwa ningepatikana na saratani ya mlango wa kizazi ningekuwa siishi kwa zaidi ya miaka 5.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
g.	Hakuna njia kabisa ninaweza kutatua shida kadhaa maihani.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
h	Ninaamini ikiwa mtu ana ugonjwa wa saratani, ndivyo walivyopaswa kufa.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
i	Ninaamini ikiwa mtu ana ugonjwa wa saratani, haijalishi wakati watagundua bado watakufa.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
j	Nadhani saratani ya kizazi itakuua haijalishi inapatikana wakati upi na jinsi itatibiwa.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
k	Ninaamini ikiwa mtu atapata saratani ya kizazi wakati wao wa kufa uko karibu.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.

l	Kwa magonjwa yote, ninaogopa saratani zaidi	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.
m	Ninaamini watu wengi hawataki kujua wana saratani ya kizazi kwa sababu ya kuogopa kufa.	1. Kubali sana 2. Kukubaliana 3. Nasi 4. Kutokubali 5. Kukataa kabisa	1. 2. 3. 4. 5.

Sehemu ya 4: Uchunguzi wa saratani ya kizazi

9.	Je! Unapitia dalili zifuatazo kwa sasa?	1.Maumivu kwenye pelvis 2.Kutokwa kwa harufu kali kwenya sehemu za siri 3.Kutokwa na damu baada ya kujamiiana 4.Kutokwa na damu kati ya vipindi 5.Kupunguza uzito usioelezewa 6.Mengine… .. taja	1. 2. 3. 4. 5. 6.
10	Je! Umewahi kufikiria sana uchunguzi wa saratani ya kizazi?	1.Ndio 2.La	1. 2.
11	Je! Umewahi kwenda hospitalini kukaguliwa kizazi chako?	1. Ndio nenda kwa q 10 2. Hapana nenda kwa q 30	1. 2.
12	Ikiwa ndio kwa q 10, je! Ulipimwa saratani ya kizazi?	1.Ndio 2.La	1. 2.
13	Ikiwa ndio kwa q 12, ni njia gani ya uchunguzi ilitumiwa?	1.Via/ villi 2. Jaribio la HPV 3. Papsmear 4. Sijui	1. 2. 3. 4.
14	Ikiwa ndio kwa q 12, ulipatiwa uchunguzi muda gani uliopita?	1. < mwaka 1 2. miaka 1-3 3. Zaidi ya miaka 3	1. 2. 3.

15	Ikiwa ndio kwa q 12, ni nini kilikuchochea kupitiwa uchunguzi?	1. Njia ya kukagua 2. Mapendekezo ya madaktari 3. Kuwa na dalili 4. Yoyote ...	1. 2. 3. 4.
16	Ikiwa ndio kwa Q 12 je mfanyakazi wa huduma ya afya alielezea faida kabla ya uchunguzi?	1. Ndio 2. La	1. 2.
17	Ikiwa Ndio kwa Q 15 ni nani aliyefanya uamuzi?	1. Mfanyikazi wa Afya 2. Binafsi 3. Wote 4. Yoyote mengine… .. taja	1. 2. 3. 4.
18	Ikiwa Hapana kwa swali 15, uko tayari kutafuta huduma za uchunguzi wa saratani ya kizazi katika siku zijazo?	1. Ndio 2. La	1. 2.
19	Ikiwa Ndio kwa q 18, onyesha ni lini unaweza kutafuta huduma za uchunguzi wa saratani ya kizazi?	1. Ndani ya mwaka 2. Mara moja 3. Haikuamuliwa 4. Wengine	1. 2. 3. 4.
20	Ikiwa Hapana kwa Q 18 ni nini sababu zinazokufanya usitafute huduma za uchunguzi wa saratani ya kizazi?	1. Mimi niko vizuri, sihitaji mtihani. 2. Sijui wapi mtihani. 3. Sidhani kama ina faida. 4. Sina raha na utaratibu.	1. 2. 3. 4.

Appendix VI: Ethical Approval Letter

OFFICE OF THE DIRECTOR OF GRADUATE STUDIES AND RESEARCH
UNIVERSITY OF EASTERN AFRICA, BARATON
P.O. BOX 2500-30100, Eldoret, Kenya, East Africa

B0417022020 February 17, 2020

TO: Ann Mugure Wambui
Department of Public Health
Jomo Kenyatta University of Agriculture and Technology

Dear Ann,

RE: Factors Associated With Fatalism And Its Influence On Uptake Of Cervical Cancer Screening Among Women Aged 15-54 Years in Kiambu Sub-County

This is to inform you that the Research Ethics Committee (REC) of the University of Eastern Africa Baraton has reviewed and approved your above research proposal. Your application approval number is UEAB/REC/04/02/2020. The approval period is 17th February, 2020 – 16th February, 2021.

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by the Research Ethics Committee (REC) of the University of Eastern Africa Baraton.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to the Research Ethics Committee (REC) of the University of Eastern Africa Baraton within 72 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to the Research Ethics Committee (REC) of the University of Eastern Africa Baraton within 72 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to the Research Ethics Committee (REC) of the University of Eastern Africa Baraton.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Sincerely yours,

Jackie K. Obey

17 FEB 2020

Prof. Jackie K. Obey, PhD
Chairperson, Research Ethics Committee

Appendix VII: Study Approval by JKUAT BPS

JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY
DIRECTOR, BOARD OF POSTGRADUATE STUDIES

P.O. BOX 62000
NAIROBI – 00200
KENYA
Email: director@bps.jkuat.ac.ke

TEL: 254-067-52711/52181(6114)
FAX: 254-067-52164/52030
Mobile: 0708-602225

REF: JKU/BPS/HSH311-1655/2018 **2nd October, 2020**

MS. ANN MUGURE WAMBUI,
C/o SOPH
JKUAT

Dear Ms. Wambui,

RE: APPROVAL OF RESEARCH PROPOSAL AND SUPERVISORS

Kindly note that your MSc. research proposal entitled: **"Factors associated with Fatalism and its influence on uptake of Cervical Cancer screening among Women aged 15-54 Years in Kiambu Sub-County."** has been approved. The following are your approved supervisors:-

1. Dr. John Gachohi, JKUAT
2. Dr. Susan mambo, JKUAT
3. Dr. Salome W. Wanyoike

PROF. LUSENGE TUROOP
DIRECTOR, BOARD OF POSTGRADUATE STUDIES

Copy to: Dean, SOPH

Appendix VIII: Introductory Letter from School of Public Health

JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY
COLLEGE OF HEALTH SCIENCES (COHES)
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF ENVIRONMENTAL HEALTH AND DISEASE CONTROL
TEL: 067-5870001-4 Extn. 3061

JKU/2/159/033 **2ND MARCH, 2020**

The National Commission for Science Innovation and Technology
(NACOSTI)
P.O. BOX
NAIROBI

Dear Sir/Madam,

RE: INTRODUCTORY LETTER FOR ANN MUGURE WAMBUI: HSH311-1655/2018

The above named student is pursuing **MSc. Public Health** in the College of Health Sciences (COHES) at Jomo Kenyatta University of Agriculture and Technology (JKUAT). As part of her training, she is required to collect data for her research project, which have been reviewed and approved by the School of Public Health and received ethical approvals from the University of Eastern Africa Baraton (UEAB/REC/04/02/2020). In this regard, we are kindly requesting your office to assist her to get permit to enable her do her research.

We highly appreciate your assistance in this endeavor and look forward to your continued support.

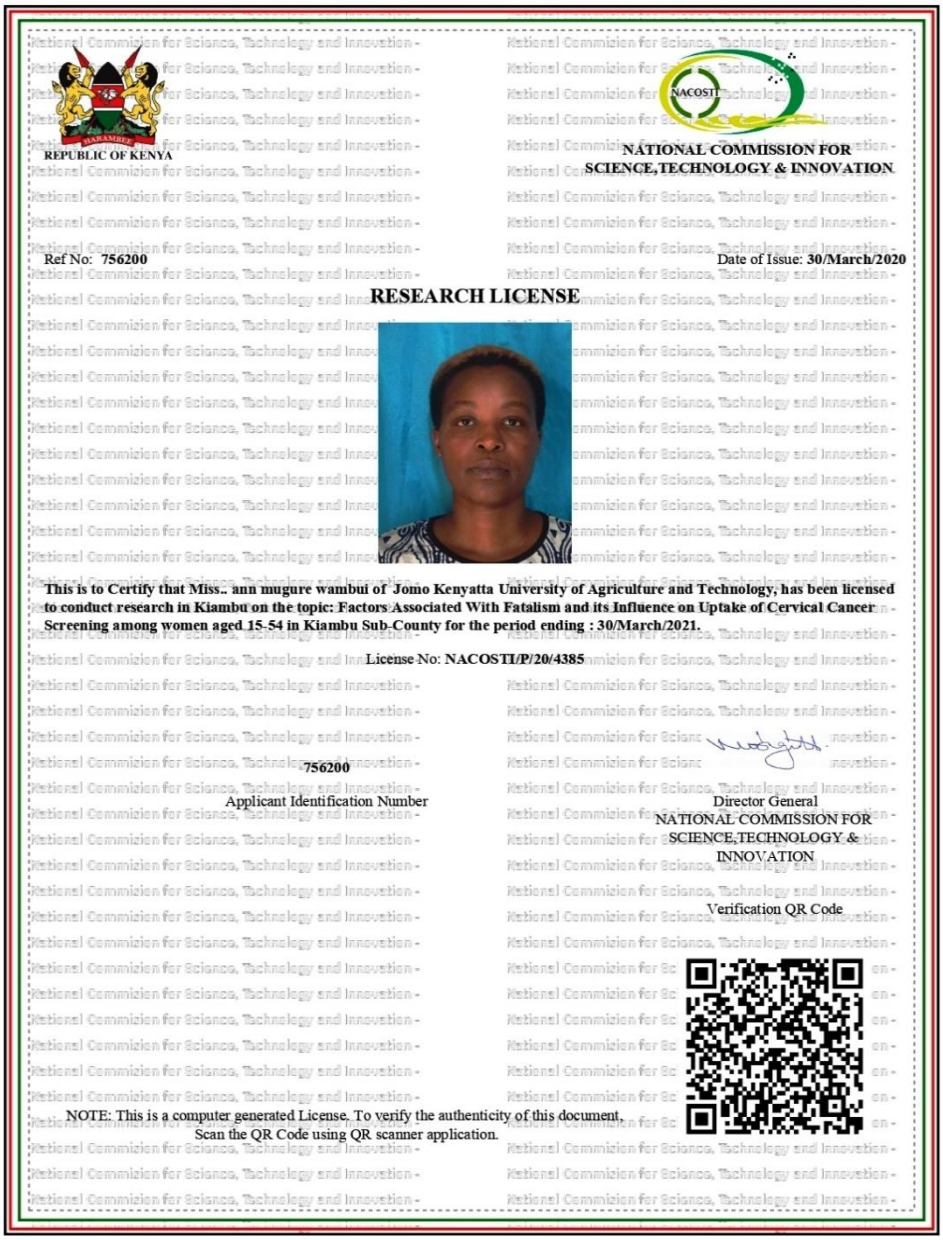
Yours faithfully,

JKUAT
www.jkuat.ac.ke
P.O. Box 62000-00200, NAIROBI
02 MAR 2020
SIGN:.....

MR. AGGREY MOKAYA
AG. COD; ENVIRONMENTAL HEALTH AND DISEASE CONTROL

JKUAT is ISO 9001:2015 and ISO 14001:2015 Certified
Setting Trends in Higher Education, Research, Innovation and Entrepreneurship

Appendix IX: Research Permit by NACOSTI



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **756200**

Date of Issue: **30/March/2020**

RESEARCH LICENSE

This is to Certify that Miss.. ann mugure wambui of Jomo Kenyatta University of Agriculture and Technology, has been licensed to conduct research in Kiambu on the topic: Factors Associated With Fatalism and its Influence on Uptake of Cervical Cancer Screening among women aged 15-54 in Kiambu Sub-County for the period ending : 30/March/2021.

License No: **NACOSTI/P/20/4385**

756200

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix X: Research Authorization Kiambu County

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT
COUNTY COMMISSIONER, KIAMBU

Telephone: 066-2022709
Fax: 066-2022644
E-mail: countycommkiambu@yahoo.com
When replying please quote

Kiambu County
P.O. Box 32-00900
KIAMBU

Ref. No: **ED.12 /1(A)/VOL.IV/47**

Date: **8TH JUNE, 2020**

Miss.. Ann Mugure Wambui,
Jomo Kenyatta University of Agriculture and Technology,
P.O. Box 62,000 – 00200,
NAIROBI- KENYA

RE: RESEARCH AUTHORIZATION

Reference is made to National Commission for Science, Technology and Innovation letter Ref No. **NACOSTI/P/20/4385** dated **30th March, 2020**.

You have been authorized to conduct research on ***"Factors Associated with Fatalism and its Influence on Uptake of Cervical Cancer Screening among women aged 15-54 in Kiambu Sub-County."*** The data collection will be carried out in **Kiambu Sub-County,** for a period ending **30th March, 2021**.

You are requested to share your findings with the County Education Office, Kiambu County upon completion of your research.

Festus Kimeu
FOR: COUNTY COMMISSIONER
KIAMBU COUNTY

Copy to: The Director General / CEO
National Commission for Science, Technology and Innovation
P.O. Box 30623-00100
NAIROBI

The County Director of Education
KIAMBU COUNTY

The County Director of Health Services
KIAMBU COUNTY

All Deputy County Commissioners (***For information and record purposes***)
KIAMBU COUNTY

"Our Youth our Future. Join us for a Drug and Substance free County".

Appendix XI: Research Authorization Ministry of Education Kiambu County

MINISTRY OF EDUCATION

State Department of Early Learning & Basic Education

Telephone:Kiambu (office) 0768 970412

Email:directoreducationkiambu@yahoo.com
When replying please quote

COUNTY DIRECTOR OF EDUCATION
KIAMBU COUNTY
P. O. Box 2300
KIAMBU

KBU/CDE/DEPT 8/Vol. I

8th June, 2020

Miss Ann Mugure Wambui
Jomo Kenyatta University of
Agriculture and Technology
P. O. Box 6200-00200
NAIROBI

RE: RESEARCH AUTHORIZATION

Reference is made to NACOSTI letter NACOSTI/P/20/4385 dated 30th March, 2020.

You have been authorized to conduct research on ***"Factors Associated With Fatalism and its Influence on Uptake of Cervical Cancer Screening"*** for a period ending 30th March 2021.

Please accord her the necessary assistance.

AGNES THEURI
For: COUNTY DIRECTOR OF EDUCATION
KIAMBU COUNTY

COUNTY DIRECTOR OF EDUCATION
JUN 2020
KIAMBU COUNTY

MY EDUCATION, MY FUTURE ***MY EDUCATION, MY FUTURE***

Appendix XII: Research Assistant Confidentiality Agreement

Study Title: Factors Associated with Fatalism and its Influence on Uptake of Cervical Cancer Screening among Women aged 15-54 years in Kiambu Sub-County

NACOSTI License No.756200

I, the undersigned Research Assistant, understand that during this research I will interact with participants and access private and sensitive information.

I agree to the following:

1. I will keep all information about research participants strictly confidential.

2. I will not disclose names, identities, responses, or any personal details to anyone who is not part of the approved research team.

3. I will use the information collected only for the purposes of this research.

4. I will respect participant privacy and dignity at all times.

5. I will follow all research ethics requirements as approved by NACOSTI and the relevant ethics committee.

6. I will securely handle all questionnaires, notes, recordings, and electronic data.

7. I understand that this obligation continues even after the research ends.

I am aware that breaching confidentiality is a serious violation of research ethics and may result in removal from the study and other actions as provided under the Kenya Data Protection Act (2019) and NACOSTI regulations.

Declaration:

I have read and understood this agreement and agree to comply fully.

Research Assistant Name: _____

Signature: _____

Date: _____

Principal Investigator / Supervisor Name: _____

Signature: _____

Date: _____