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Men's Knowledge and Perceptions of Cervical Cancer: Influence upon increase in cervical cancer screening in rural Kenya

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2020

Abstract

Men's Knowledge and Perceptions of Cervical Cancer: Influence on Increase in Cervical Cancer Screening in Rural Kenya

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Lydia A. Oriko

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Many facilities in Kendubay, Kenya offer cervical cancer screening and treatment services, yet many women in this rural community do not undergo screening. This lack of preventive care may be attributable to lack of support from men in the community. There exists a gap in the literature concerning the knowledge and perceptions of men about cervical cancer and related screening procedures. The purpose of this qualitative study was to describe the knowledge and perceptions of men in the community about cervical cancer and screening, and how men's knowledge and perceptions influence women to undergo cervical cancer screening. The study used a narrative design and was guided by the structures of the health belief model. Face-to-face interviews, using a semi structured interview protocol, were conducted with 15 men aged 18–60 years. The data were analyzed to identify themes and subthemes. Five themes were developed in the areas of 1) Knowledge and awareness of cervical cancer and screening. 2) Perception of cervical cancer and screening. 3) Sources of information for cervical cancer and screening. 4) Action for or against cervical cancer and screening and 5) Cultural and religious beliefs. The main findings of the study were that the men did not have knowledge of cervical cancer, and their perceptions of the disease were negative. Because of this, the men did not support women's pursuit of cervical cancer screening. These Findings may lead to positive social change in that they may indicate a need for public health practitioners to institute health education and promotion programs related to cervical cancer that specifically target men.

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Dedication

For those who suffered and others still suffering from cervical cancer, and their affected families all over the world.

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Table of Contents

List of Tables vi

Table 1. Data Analysis Framework vi

Table 2. Participant Demographic Information vi

List of Figures vii

Chapter 1: Introduction to the Study 1

Introduction 1

Background of Study 4

Problem Statement 6

Purpose of the Study 7

Nature of the Study 8

Theoretical Framework 10

Research Questions 14

Definition of Terms 14

Assumptions 15

Scope and Delimitations 15

Limitations 16

Significance 17

Summary 17

Chapter 2: Literature Review 19

Introduction 19

Literature Search 22

Search Criteria 22
Keywords and Phrases 22
Literature Search Process 23
Theoretical Foundation 23
Literature Review Related to Key Variables and Concepts 25
Cervical Cancer—An Overview 25
The Burden of Cervical Cancer in Kenya 26
Knowledge, Perceptions, and Behavior Towards Cervical Cancer and Screening 27
Uptake of Cervical Cancer Screening in Rural Communities 28
Women's Diseases and Illnesses 29
Women's Health-Seeking Behavior 31
Involvement of Males in the Prevention of Diseases Affecting Women 31
Culture, Religion, and Men's Participation in Women's Health Matters 33
Summary 35
Chapter 3: Research Method 37
Introduction 37
Research Design and Rationale 38
Role of Researcher 39
Methodology 40
Participant Selection Logic 40
Instrumentation 42

Procedures for the Pilot Study 42
Procedures for Recruitment, Participation, and Data Collection 43
Data Analysis Plan 43
Issues of Trustworthiness 45
Ethical Procedures 47
Summary 48
Chapter 4: Results 50
Introduction 50
Research Tool 51
Pilot Study 52
Setting 52
Participants' Demographics 53
Data Collection 54
Data Analysis 55
Evidence of Trustworthiness 56
Research Questions 57
Results 58
Part 1: Respondents' Demographic Information 59
Part 2: Knowledge and Awareness of Cervical Cancer Screening 60
Part 3: Perception of Cervical Cancer 69
Part 4: Actions for or Against Cervical Cancer and Screening 76
Part 5: Health Belief Model Constructs 81

Themes and Subthemes....100
Relationship to Research Questions.... 105
Summary....107
Chapter 5: Discussion, Conclusions, and Recommendations....109
Introduction....109
Interpretation of Findings....109
Research Question 1: What Cultural Beliefs, Knowledge, and Perceptions Do Men in Kendubay, Kenya Hold About Cervical Cancer and Cervical Cancer Screening?.... 110
Research Question 2: Where Did the Men in Kendubay, Kenya Get Their Information About Cervical Cancer and Cervical Cancer Screening?.... 114
Research Question 3: Based on Knowledge and Perception of Cervical Cancer and Screening, What Do Men Do or Not Do to Encourage Women to Undergo Cervical Cancer Screening?.... 115
Discussion Related to the Health Belief Model Constructs.... 118
Summary....121
Limitations of the Study....125
Recommendations....126
Implications for Positive Social Change....127
Dissemination of Research Findings....129
Conclusion....130

References.....132

Appendix A: Recruitment Flyer.....147

Appendix B: Interview Guide/Protocol.....148

Appendix C: Research License.....152

Appendix D: NACOSTI Research Authorization.....153

Appendix E: Ministry of Health—Authority to Conduct Research.....154

Appendix F: Ministry of Education—Research Authorization.....155

List of Tables

Table 1. Data Analysis Framework 44

Table 2. Participant Demographic Information 54

Table 3. Themes and subthemes ……...58

List of Figures

Figure 1. Health belief model 11

Chapter 1: Introduction to the Study

Introduction

The World Health Organization (WHO, 2012) has indicated that cervical cancer is responsible for killing more than 250,000 sexually active women worldwide every year. WHO (2012) found that among the factors that hinder its early detection and subsequent treatment is a low level of awareness and knowledge about the condition. Another factor is a negative perception of the disease among both men and women, especially pertaining to the procedures for screening as was noted in a Nigerian study in Africa (Akanbi, Ivanda, Osundare, & Opaleye, 2015).

The associations between knowledge and the structural barriers to screening for cervical cancer as well as factors that contribute to low uptake of cervical cancer screening from the woman's point of view are well documented from different localities in Africa such as Nigeria and Kenya, and even outside the African continent, such as in Santiago, Chile. (Ndikom & Ofi, 2012; Ngugi, Boga, & Muigai, 2011; Rosser, Njoroge, & Huchko, 2015; Sudenga, Rositch, Otieno, & Smith, 2013; Urrutia & Poupin, 2015). However, little is known about the knowledge and perceptions of men about cervical cancer and screening, and whether men's knowledge and perceptions influence women to undergo cervical cancer screening. The literature suggests that there is a low level of awareness and understanding about cervical cancer and a negative perception of the disease among both men and women, especially concerning the screening procedures (Akanbi et al., 2015). These and other factors may be an explanation as to why men may offer very little support, if any, towards preventing the disease.

On another level, Ngugi et al. (2011) noted that the disease is often considered a woman's problem, leading to a perception that women are solely to blame for lack of preventive or curative action against it. The understanding that this disease is a woman's issue alone fails to consider men's contributions to the occurrence and propagation of the condition. According to Palefsky (2010), men can and do sometimes harbor the human papillomavirus (HPV) that is responsible for causing the disease, making this condition an issue for both men and women. There has, however, been a failure to hold men accountable where the prevention of the disease is concerned (Palefsky, 2010).

Ndikom and Ofi (2012) investigated awareness and perceptions of cervical cancer screening. These researchers noted that in many instances, people believed that the condition was brought about by witchcraft and that only a witch doctor could cure it. Women would not, therefore, undergo screening, perceiving this as a possible means of being bewitched. The researchers also sought to establish factors that influenced the use of cervical cancer screening services and found that many women lacked knowledge and had negative perceptions about the disease, as did men. Despite these beliefs, both men and women were willing to get more information on the condition from health workers attending them. The investigators also found that women cited support from spouses, both financial and otherwise, as a factor that would help them undergo cervical cancer screening.

Other researchers who carried out studies in Mexico, United States of America and in several other parts of Africa have also noted low awareness and low knowledge about cervical cancer among men (De Bocanegra, Trinh-Shevrin, Herrera, & Gany, 2009;

McPartland, Weaver, Lee, & Koutsky, 2005; Trevino, Jandorf, Bursac, & Erwin, 2012; Williams & Amoaten, 2012). In a study conducted by McPartland et al. (2005) among males aged 18–25 years from Yale University, questions on knowledge about cervical cancer and HPV were almost always incorrectly answered. For example, the men believed that women brought this disease upon themselves through what they termed irresponsible behaviors such as indulgence in bad diets, smoking, or the suppression of negative thoughts. Some men gave responses indicating a belief that contracting the disease was a punishment from God for wrongs committed. In other instances, the men believed that they were not susceptible to HPV. The scant and often incorrect information that men have about cervical cancer may hinder them from providing support to prevent and reduce the incidence of cervical cancer (Sudenga et al., 2013).

According to De Bocanegra et al. (2009), men are willing to support their partners' decisions to be tested for cervical cancer if they know what their role in preventive healthcare entails. There are various factors that predict an individual's intention to make positive behavioral health changes, but these may not be clear where they concern men's position to encourage women to undergo cervical cancer screening. Rosser, Zakaras, Hamisi, and Huchko (2014) noted that among many men living in rural areas, there is a need to subscribe to a culturally desired norm of women entering marriage in a virginal state. In this context, there is a belief that screening for cervical cancer will interfere with a woman maintaining her virginity, and no man is willing to marry a woman who is supposedly not a virgin. Rosser et al. also found that it is taboo to discuss such ailments with men, even in relation to their own wives. These beliefs—and

possibly many others—may affect the likelihood that women will decide to undergo screening. An awareness campaign targeting men and women alike could be used to encourage women to undergo cervical cancer screening and men to give support for this behavior among women.

Key sections of this chapter present the background of the study, the statement of the problem, the purpose of the study, and the significance of the study. Research questions, as well as the nature of the study, are also given, and a transition to Chapter 2 of the dissertation is provided in the summary of the chapter.

Background of Study

Knowledge and perceptions are fundamental in the prevention of cervical cancer among women. It is necessary that both men and women know that cervical cancer screening must be undertaken if the incidence of the condition is to be reduced (American Cancer Society, 2017). For this reason, supporting women in any way to undergo screening is necessary to reach this aim (WHO, 2012). The support of men is especially significant, but the literature indicates that men do not provide much support for women to undergo screening. A gap exists about men's knowledge of the disease and screening procedures and whether their knowledge affects their participation in supporting women to take up screening (De Bocanegra et al., 2009; McPartland et al., 2005; Trevino et al., 2012; Williams & Amoaten, 2012).

The early detection of cervical cancer is a tactic to encourage observance of and action against signs and symptoms that may be indicative of the disease (American Cancer Society, 2017). Early detection and treatment of cervical cancer are known to

reduce the burden of this condition significantly and to improve health outcomes (WHO, 2012). Even though there are proven benefits of early detection of cervical cancer (American Cancer Society, 2017), there is little information about screening for the disease in many rural communities in Kenya (Ministry of Public Health and Sanitation & Ministry of Medical Services [MoPHS and MoMS], 2012).

The rural town of Kendubay is located in the county of Homabay and has a population of 29,638, composed mainly of subsistence farmers and petty traders (Kenya National Bureau of Statistics [KNBS], 2011). There are no statistics for literacy levels for Kendubay per se, but general observations indicate these levels to be deficient (KNBS, 2011). Low literacy levels possibly stem from the town having just three primary public schools and two secondary public schools that serve the region (KNBS, 2011). On completing either primary or secondary education, many students are recruited into small-scale businesses within the town, rather than moving on to higher levels of education. Because of this, many residents have very little exposure to information on health issues affecting the community, and whatever is known may be incomplete and/or inaccurate and may come from sources that are not medically reliable (MoPHS and MoMS, 2012).

Concerning the general health of the community, health conditions such as tuberculosis, breast cancer, and even HIV/AIDS are prevalent. According to MoPHS and MoMS (2012), these conditions are prevalent because people continue to live either in ignorance or denial of these conditions, despite the availability of a few healthcare institutions where they can get treatment and other information necessary to ward off the

diseases. Increased awareness of these health conditions could lead to notable behavior changes to curb these and other diseases (Population Action International, 2014).

A disturbing trend in this town is the large number of deaths that occur among women and girls for which cervical cancer listed as the primary cause (MoPHS and MoMS, 2012). In many of these cases, the individuals did not show any signs or symptoms of illness; only a postmortem analysis revealed the cause of death as being cervical cancer (Kidula, 2012).

An examination of the perceptions and knowledge of men in Kendubay may lead to greater understanding of the cervical cancer screening behavior of women in this rural community. Insights gained from this inquiry may inform efforts to promote the prevention and treatment of the disease more effectively.

Problem Statement

One of the most easily detectable and treatable conditions, when detected early, is cancer of the cervix (American Cancer Society, 2017). Detection is done through screening, but women in the rural community of Kendubay often do not undergo screening despite the existence of facilities to carry out this procedure (MoPHS and MoMS, 2012). A substantial body of evidence is available about the knowledge and perceptions of women concerning the condition, and presently, the motives that impact cervical cancer screening behavior in women are well understood (Kidula, 2012; Ma et al., 2013; Rosser et al., 2014). However, there exists a gap in the description of the knowledge and perceptions of men about cervical cancer and related screening

procedures, and how men's knowledge and perceptions could impact women's uptake of cervical cancer screening.

In this study, therefore, I sought to examine the knowledge and perceptions of men about cervical cancer and related screening procedures so as to understand why it is that men either encourage women to seek cervical cancer screening services or hinder them from doing so. Knowledge and understanding gained from this investigation may be helpful in addressing significant issues of public health affecting the cervical cancer status of women in this community.

Purpose of the Study

The purpose of this study was to examine the knowledge and perceptions of men in the rural community of Kendubay about cervical cancer and screening for the condition. This examination may facilitate an understanding of how men's knowledge and perceptions influence women in relation to the decision to undergo cervical cancer screening. The results of this study may inform the practice of healthcare providers concerning involving men in healthcare issues and preventive action against cervical cancer.

Outcomes of the study may also influence policy-making decisions about men's participation in women's preventive healthcare activities. Ultimately, the knowledge gained from this study may assist in empowering men toward supporting suitable and acceptable decisions concerning the health of women in the community.

Nature of the Study

This research was qualitative. A narrative qualitative descriptive approach was undertaken to address the research questions and to describe the knowledge and perceptions of men about cervical cancer and screening for the condition. Men aged only between 18 and 60 years, both married and unmarried, were interviewed. The aim was to describe the men's perceptions and knowledge about cervical cancer and screening, as well as their participation in helping to encourage women to undergo screening and reduce the incidence of the condition, as influenced by their knowledge and perceptions of the disease.

The decision to use a narrative qualitative descriptive approach was based on Flick's (2014) explanation that different qualitative research theories help to determine the best strategy to use, but a researcher must explore the most appropriate method for a qualitative study. In this study, it was necessary to make descriptions of the issues involved, and even though the basis of a qualitative descriptive approach is description, there was also some element of essential interpretation carried out, as noted by Vaismoradi, Turunen, and Bundas (2013), hence the choice of a narrative qualitative descriptive technique. Creswell (2013) supported this interpretive position, noting that it offers a universal viewpoint on an entire qualitative investigation. Creswell (2014) further suggested that a qualitative inquiry focuses on thoughtful consideration of the impacts of specific behaviors and how these behaviors arise because of knowledge and perceptions.

Open-ended, semistructured interviews were used to collect data. The data collection method was face-to-face interviewing guided by a semistructured

questionnaire. Bryman (2012) noted that this is an appropriate method because participants tend to describe their involvement in specific activities with a particular purpose in mind.

Creswell (2014) supported the use of qualitative research to understand the influences of specific behaviors, knowledge, and perceptions on the uptake of desired actions. According to Englander (2012), interviews are considered a primary method of collecting qualitative information from study participants. The data for this study were therefore obtained from interview transcripts and audio recordings.

Inductive qualitative analysis of data was used for this study and was supported by Patton (2002) as an appropriate method of systematically analyzing data through the use of detailed readings and interpretation of the raw data collected in a study. Patton suggested that this permits the emergence of themes and allows a researcher to identify themes, any patterns and categories, and maybe even a different theory from the data collected. Data from this research were repeatedly read to exhaust all possible descriptions of knowledge and perceptions, and to identify themes, patterns, and categories. When, finally, no new ideas emerged, I assumed that all critical themes had been identified, following Creswell (2013).

Participants were selected through a purposive sampling technique. The inclusion criteria specified that each participant needed to be (a) a male Kenyan aged between 18 and 60 years, (b) married or single and betrothed for marriage, (c) a permanent resident of the rural town of Kendubay, and (d) able to write and speak English, Kiswahili, Dholuo, or all three. Exclusion criteria applied to single males aged below 18 years and

men aged above 60 years, as well as males with difficulty in writing and speaking English, Kiswahili or Dholuo.

The number of participants was proposed as eight to 15; however, as recommended by Creswell (2013), data collection may stop at the point of data saturation, such that a small number of participants to be interviewed may be adequate to assist in appreciating the diverse aspects of the issues of interest in a study. According to Creswell (2013), it is also important to use small sample sizes in qualitative studies because such studies do not have the goal of generalizing findings to other populations. The study drew on the views of male participants concerning the condition of cervical cancer and related screening procedures to ascertain men's role in encouraging women to undergo cervical cancer screening. The social implications of this study reside in its potential to help men to become more knowledgeable about cervical cancer and to involve them more in supporting women to take up activities to prevent cervical cancer. Such knowledge could considerably reduce the incidence of the disease in the community, helping to improve the health of women and ultimately that of the general population.

Theoretical Framework

The health belief model (HBM) was the conceptual framework that I used for this study. The HBM, developed in the early 1950s by social psychologists Hochbaum, Rosenstock, and Kegels, is a tool to help in understanding, predicting, and explaining health-related behaviors, especially those that concern the uptake of health services (Rosenstock, 1974). The HBM is a model for behavioral change. It is used to define and

evaluate health behaviors by focusing on an individual's emotional state, ideals, and views of other people. With its focus on the individual, the model is useful in explaining how the individual adopts a specific action that eventually leads to a healthy behavioral change (Humiston et al., 2011). The HBM is depicted in Figure 1. This was depicted in the following figure that is adapted from Glanz, Rimer, and Viswanath (2015).

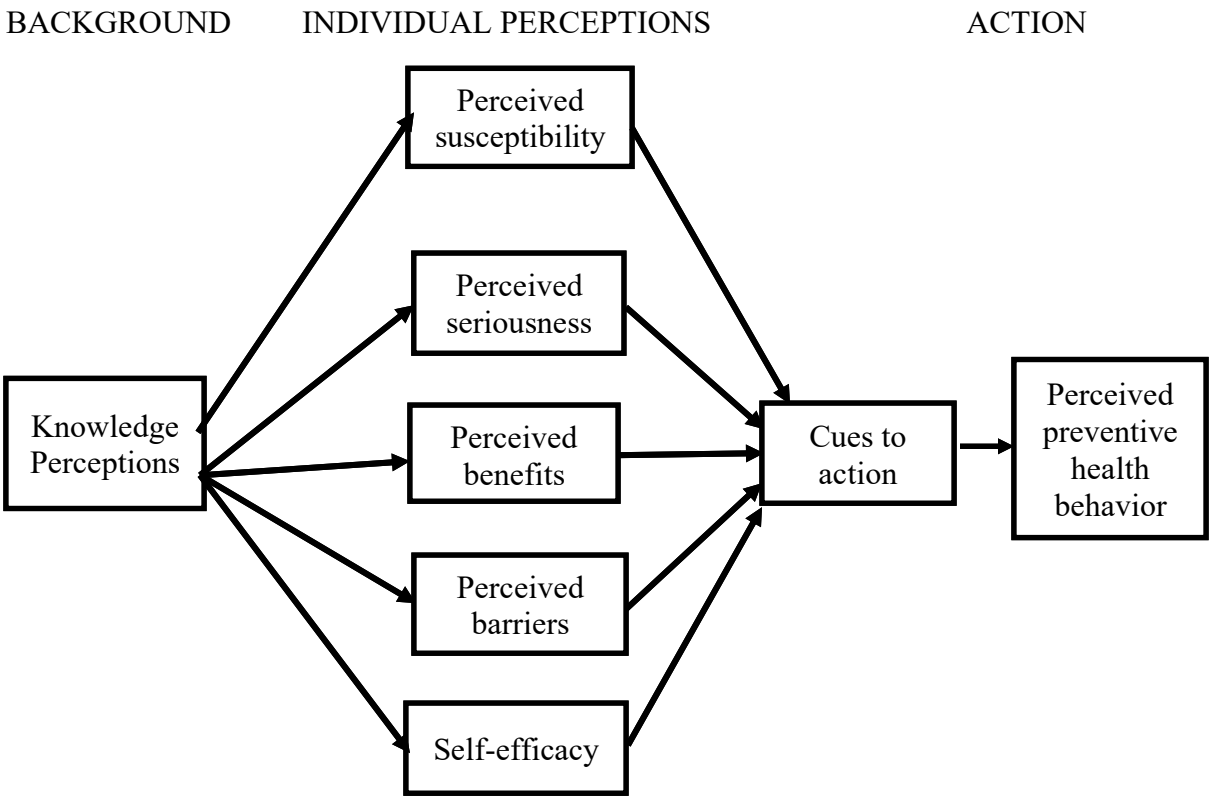

Figure 1. Health belief model. Adapted from *Health Behavior: Theory, Research, and Practice* (p. 79), by K. Glanz, B. K. Rimer, and K. Viswanath, 2015, San Francisco, CA: Jossey-Bass.

The aim in using the HBM in this study was to lay a foundation for the understanding of knowledge and perceptions of men about cervical cancer and screening

procedures for the condition. This, in turn, would facilitate a greater understanding of the behavior of men toward the disease and their willingness to support women in seeking preventive services and treatment for the disease. The key theoretical proposition was that having knowledge would trigger a specific perception that, in turn, would help with the understanding of a particular health behavior that an individual engages in or supports.

In previous studies that have employed the constructs of the HBM, researchers have found that it is useful in predicting individuals' likelihood to take up desired or recommended health actions, particularly pertaining to breast cancer (Fronda, 2017; Tanner-Smith & Brown, 2010). There is scant evidence, however, that the same applies where screening for cervical cancer is concerned (Ma et al., 2013). A study by Fronda (2017) successfully used this framework to predict the health behavior change of individuals and noted that the desires of an individual to participate in screening for breast cancer was influenced by the individual's perception of susceptibility and perception of severity of breast cancer. In another study (Carter, 2014), the researcher sought to understand views of medical professionals about mental health screening and the effect of the HBM on women's decisions to undergo mental health screening. Results indicated that the constructs of perceived severity, perceived threat, and perceived benefits played significant roles in influencing the decisions that women took to undergo screening.

There are six levels of influence with the HBM, which Glanz (2015) suggested are in play for the adoption of behavior to take place: perceived susceptibility, perceived

severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. Any one or more of these constructs may influence an individual's decision to make a behavioral change (Simpson, 2015). In this study, the HBM helped with understanding an individual's health behavior and the likely explanations as to why there could be noncompliance with specific health actions that the model recommends (Becker & Rosenstock, 1984). The information collected for this study may be used by others to design particular health programs or help to change behavior. DiClemente, Salazar, and Crosby (2007) supported the notion of planning a study to support behavioral change at various levels, and one of the primary objectives of the HBM is to prevent injury before it starts.

According to Glanz (2015), each of the constructs of the HBM works as follows:

- *Perceived susceptibility*: Where individuals believe that there is a likelihood of contracting a disease, they are also likely to decide to take preventive action.
- *Perceived severity*: Individuals are influenced to act when they estimate that the threat of a disease is great and that they are vulnerable to the disease and to the complications that may arise if they suffer the condition.
- *Perceived benefits*: The individual believes that acting in a recommended way will bring positive outcomes and therefore is influenced to do so.
- *Perceived barriers*: Anything that will act as an obstacle is also considered by the individual, and in most cases is seen as that which will contribute negatively to the process of adopting the desired behavior.

- *Cues to action*: Individuals are also helped along the decision-making pathway by either internal or external factors that remind them of the seriousness of acting in a recommended way. These can come by way of awareness creation, knowledge impartation, or even calamities that may befall individuals that are connected to the disease in question.
- *Self-efficacy*: Individuals with self-efficacy believe and are confident that they can and will act as recommended.

Research Questions

The following were the research questions for this study:

RQ1. What cultural beliefs, knowledge, and perceptions do men in Kendubay, Kenya, hold about cervical cancer and cervical cancer screening?

RQ2. Where did the men in Kendubay, Kenya, get their information about cervical cancer and cervical cancer screening?

RQ3. Based on knowledge and perception of cervical cancer and screening, what do men do or not do to encourage women to undergo cervical cancer screening?

Definition of Terms

Cervical cancer: A disease that affects sexually active women in which cells of the cervix grow out of control and become malignant and may eventually cause death.

Cervical cancer screening: Procedures and tests undertaken to detect the presence of cervical cancer in an individual.

Assumptions

There was the assumption that an adequate number of participants who met the inclusion criteria would be available for participation in the study and would describe their perceptions and knowledge about cervical cancer and screening for the condition. I assumed that an adequate number of qualified individuals would be available to participate based on the outlined inclusion criteria. Another assumption was that selected and consenting participants would give honest descriptions of their knowledge and perceptions of cervical cancer and screening.

Scope and Delimitations

It is clear from several significant sources of literature that early detection of cervical cancer can and does lead to increased survival with the condition and also causes reduction of the disease (American Cancer Society, 2016, Johnson, Mues, Mayne, & Kiblawi, 2008; Tanner-Smith & Brown, 2010). The analysis of data leading to such a conclusion has mostly been conducted from women's point of view. However, women were not included in this study, which instead targeted the knowledge and perceptions of men aged 18–60 years. A second delimitation is that the study findings should not be generalized to other populations because it was assumed that environmental, socioeconomic, and other differences would prevent such generalizations. The issue of credibility and potential transferability of results was addressed through the process of sampling of study participants.

Limitations

One limitation was that participants might not give truthful answers. Untruthful information negatively affects the validity of the study (Noble, & Smith, 2015), yet there are insufficient ways of verifying information given by a single participant. Asking one question in different ways may lessen the possibility of a participant providing different responses. Similar responses would denote that there is some honesty in the responses given, particularly where respondents share similar experiences (Jacob & Furgerson, 2012).

Researcher bias often gets in the way of attaining credible results from a study. One such form of bias involves personal preconceived notions about the issue under investigation. To prevent this, I isolated and bracketed any preconceived notions by making a record of these ideas through journaling. Creswell (2014) recommended this procedure to avoid probable tainting of the research process.

Qualitative descriptive studies are often criticized as lacking in rigor. This was another limitation of the study, which I sought to overcome through the reduction of subjective elements, especially during the analysis of data. Neergard, Olesen, Andersen, and Sondergaard (2009) indicated that the provision of evidence of rigor is necessary to address the issue of trustworthiness. In this case, therefore, personal biases were accounted for to ensure credibility of the results. Creswell (2014) suggested journaling of thoughts and isolation of preconceived ideas to prevent any tainting of the research process.

Significance

Several studies have indicated that where there is a lack of knowledge and negative perceptions about cervical cancer and screening for the disease, women are not willing to undergo testing for the condition (Akanbi et al., 2015; Hussain et al., 2014; Urrutia & Poupin, 2013). As De Bocanegra et al. (2009) noted, men's influence on and contribution to women's cervical cancer screening uptake have not received the importance they deserve. Information collected in this study may be useful for the development and institution of appropriate interventions and maybe even policies to promote the control of cervical cancer. Additionally, such information may be helpful in determining the best ways to involve men in supporting women to undergo cervical cancer screening. The data may lead to communities undertaking activities and programs to reduce morbidity and mortality due to cervical cancer. Through this study, I aimed to fill the gap in the literature concerning the knowledge and perceptions of men about cervical cancer and cervical cancer screening. The findings may guide future studies and inform public health practice by assisting in the provision of adequate and appropriate information about cervical cancer healthcare to women in distinct communities.

Summary

Cervical cancer is the number one killer of women in rural communities in Kendubay, Kenya, but despite the availability of cervical cancer screening services, many women in these communities do not go for screening. This lack of preventive behavior has been attributed to lack of support from the men in the community, who may be lacking knowledge and may hold negative perceptions about the condition. This

qualitative descriptive study ascertained what men in Kendubay, Kenya knew about cervical cancer and screening for the disease. The study may be helpful in gaining an understanding of men's perceptions about cervical cancer and its screening, as well as how men could influence women's decisions to undergo cervical cancer screening. The theoretical base that was used to provide insight into this problem was the HBM. Participants in the study were limited to men aged between 18 and 60 years who were permanent residents of the rural community of Kendubay. Study findings should not be generalized to other populations, but the results may be useful in informing public health practice, in as far as they provide information to support the institution of interventions to improve men's support for women to undergo cervical cancer screening.

In Chapter 2, I present an in-depth review of the significant literature related to the social issue under investigation, which supported the need for the study. The HBM, which formed the theoretical framework used to guide the research, is presented in detail and provides the groundwork for understanding men's knowledge and perceptions about cervical cancer and how they impact women's uptake of cervical cancer screening. Chapter 3 details the procedures that were undertaken to collect, analyze, and synthesize information from the ground. An analysis and synthesis of the data collected was carried out in chapter 4, and in Chapter 5, there is the provision of the introduction and summation of the study findings, where also greater insight into the study findings, limitations of the study, implications for social change and recommendations for future research are given.

Chapter 2: Literature Review

Introduction

One of the most easily detectable and treatable conditions, when detected early, is cancer of the cervix (American Cancer Society, 2017; Centers for Disease Control and Prevention [CDC], 2014; Dunne & Park, 2013). A substantial body of evidence is available about the knowledge and perceptions of women concerning the condition, as well as the motives that impact cervical cancer screening behavior in women. However, there exists a gap in the literature concerning the knowledge and perceptions of men about the disease and how these affect women's uptake of cervical cancer screening. In this study, I sought to examine men's knowledge and perceptions about the disease and to gain an understanding of why men seem to be indifferent to the need to support women to go for screening.

This chapter contains a review of scholarly literature that identifies the need to investigate and examine the knowledge and perceptions of men concerning cervical cancer and screening for the condition. The theoretical framework, the HBM, that guided the study is presented in detail and provides groundwork for understanding men's knowledge and perceptions of cervical cancer and how these impact women's uptake of cervical cancer screening.

The CDC (2014) has listed cervical cancer as the fourth leading cause of death among women worldwide. Each year, more than 527,000 new cervical cancer cases are diagnosed and 265,000 women die from the disease, with cervical cancer constituting 8% of all cancers suffered by women (Smith, 2017). Of these deaths, 85% occur in low- and

middle-income countries where women do not take part in cervical cancer screening. Martinez-Danote et al. (2013) noted that the disease is diagnosed mainly in young adult women aged between 35 and 44 years who are sexually active. The greatest predisposing risk factor for cervical cancer is infection with HPV. This virus can be and often is harbored by men, who may pass it on to women. Palefsky (2011) reported that many men may not be aware of this or may have perceptions about the disease that may increase its incidence in different communities.

Women, too, seem not to receive adequate support from men, financial or otherwise, to undergo cervical cancer screening (Kidula, 2012), and so the disease is still prevalent in many rural communities in Kenya (MoPHS and MoMS, 2012). It is not immediately clear whether a lack of knowledge or specific perceptions about the disease among men constitute the basis for lack of support for women to undergo cervical cancer screening.

Several studies have stressed the importance of leveraging knowledge and perceptions regarding cervical cancer and screening as one way to reduce the occurrence of this disease (Drewry, Garces-Palacio, & Sacrinci, 2010; Duggan et al., 2012; Karjane & Chelmow, 2013). Because much of this information is from women, little is known about men's participation in supporting women to undergo cervical cancer screening or how this might contribute to reduction in the disease. In the following section, there is a description of the theoretical framework (HBM) that was used to support this qualitative study. There is also a review of relevant literature on cervical cancer and the factors that influence screening uptake by women. I also examine the knowledge and perceptions of

men about the disease and other diseases that affect women. Finally, I review the literature on men's participation in the reduction of health problems that affect women.

The purpose of this study was to examine the knowledge and perceptions of men in the rural community of Kendubay, Kenya, about cervical cancer. Kendubay is a rural town within the county of Homabay in Kenya. The population of Homabay is 29,638 (KNBS, 2011), but there are no statistics for the number of people in Kendubay alone. People here are mainly subsistence farmers and petty traders (KNBS, 2011). General observations indicate low literacy levels and low exposure to health matters among the population of the area, suggesting that any information that community members have concerning health issues is either incomplete or inaccurate and may come from sources that are not credible (MoPHS and MoMS, 2012).

There are many prevailing health conditions within the community, notably tuberculosis, breast cancer, and HIV/AIDS (MoPHS and MoMS, 2012). Another concern is the incidence of cervical cancer. Detection for this disease is done through screening, but women in the rural community of Kendubay often do not undergo screening despite there being facilities to carry out this procedure (MoPHS and MoMS, 2012). Community members do not make use of these facilities even to get information, and so there are no health behavior changes to control diseases. Population Action International (2014) has stated that health behavior changes are possible with increased awareness of health conditions; awareness is probably what the community needs to curb diseases.

The results of this study add new knowledge that may inform the practice of healthcare providers concerning involving men in women's healthcare issues and

preventive action against cervical cancer and possibly other diseases affecting women. Outcomes of the study could also influence policy-making decisions about men's participation in women's preventive healthcare activities. Ultimately, the knowledge gained from this study could assist in empowering men toward making suitable and acceptable decisions concerning the health of women in the community.

Literature Search

Search Criteria

For this investigation, I used peer-reviewed journals, books, and information from relevant research articles. Research studies published between the years 2012 and 2017 formed the greater part of the literature covered in this review. The research databases that I used within the health sciences field included Cumulative Index to Nursing & Allied Health Literature (CINAHL) Plus with Full Text, MEDLINE with Full Text, PubMed, ProQuest, and Science Direct. Google Scholar, which is linked to Walden library databases, was also used in the search.

Keywords and Phrases

The keywords and phrases that were used for the literature search included *cervical cancer*, *cervical cancer screening*, *health belief model*, *knowledge*, *perception*, *knowledge of cervical cancer*, *perception of cervical cancer*, *cervical cancer in rural communities*, *cervical cancer in Kenya*, *men's knowledge and perceptions of cervical cancer*, and *screening*. Other keywords and phrases included *women's diseases and men's role in prevention*, *family involvement in women's diseases and illnesses*,

importance of men's roles in the prevention of women's diseases and illnesses, and *cultural and religious beliefs that inhibit involvement of men in women's health issues*.

Literature Search Process

Peer-reviewed journals, books, and relevant research articles were used to assess and explore several aspects of the study, which included the following: (a) current and historical information on cervical cancer and screening for the disease, (b) methods used for the detection of cervical cancer, (c) obstacles to cervical cancer screening, (d) knowledge and perceptions of cervical cancer and cervical cancer screening, and (e) effectiveness of cervical cancer screening in the reduction of the condition as perceived by different groups. Internet search was also used to retrieve information about cervical cancer and screening in various parts of the country and elsewhere in the world. I searched the Internet for information on how men are involved in women's health issues and how this involvement influences women's preventive health-seeking behaviors.

Theoretical Foundation

The theoretical framework for this study, the HBM, provided a basis to understand men's knowledge and perceptions of cervical cancer and screening for the disease, and further understand how these influence their actions to support women to undergo cervical cancer screening. Hochbaum, Rosenstock, and Kegels developed the HBM in the early 1950s to help in the precise explanation and prediction of preventive health behavior (Raingruber, 2014; Rosenstock, 1974). This theoretical model suggests that a person's decision to act against a disease or to work toward the prevention of the disease is determined by several factors, which include an understanding of the disease

and the consequences of its contraction, the benefits of prevention, and the belief that the individual will successfully ward off the disease, among other factors (Glanz et al., 2015; Julinawati, Cawley, Domegan, Brenner, & Rowan, 2013). These factors, known as constructs in the HBM, include perceived severity of the disease, perceived threat of contracting the disease, perceived vulnerability to the disease, perceived benefits of acting against the disease, perceived costs or barriers of acting, and self-efficacy to measure the belief in the individual's ability to act desirably. The constructs of the HBM, derived from psychological and behavioral theory, indicate that the intents and actions of an individual in the setting of health-related behavior are dependent upon two influences: (a) the individual's desire to prevent the occurrence of a disease and (b) the individual's belief that a specific behavior will actually prevent the disease (Glanz et al., 2015).

In this study, the actions that could be taken to influence women's uptake of cervical cancer screening were based on the constructs of the HBM. Researchers who have used the HBM as their theoretical framework have found that it is a useful tool for the prediction of who is likely to act against various diseases (du Pre, 2014; Rosenstock, 2000). Strong support has been noted for the HBM's constructs of perceived benefits and perceived barriers, while weaker support has been noted for the construct of prediction of undergoing screening. Little information, however, is available about applying constructs of the HBM for the prediction of cervical cancer screening (Tanner-Smith & Brown, 2010).

The HBM was explicitly developed to explain why screening programs failed where they were intended to be successful (Noar & Zimmerman, 2005). It is necessary

that a disease is recognized and subsequently treated, and this is mainly the work of medical practitioners, but individuals must also understand the seriousness of a disease and be sure of the importance of screening and subsequent treatment where applicable. Several researchers (Chasco, 2015; Gan & Dahlui, 2013; Julianawati et al., 2016; Ndejjo et al., 2016; Sudenga et al., 2013) have recognized that men may have genuine reasons for failing to support women in undergoing screening, but this should not negate their responsibility in supporting the reduction of cervical cancer in the community through the support they can offer to women to undergo screening.

The application of the HBM in this study is relevant in that I made an assumption that individuals are likely to modify their health behavior or support others in making necessary health behavior changes to ward of illness based on the constructs of the model. The HBM suggests that individuals are influenced by their knowledge and perceptions of a phenomenon and will effect changes based on their perceptions (Glanz et al., 2015). This framework, therefore, relates to this study because it touches on the individual perceptions that go to help effect the desired change in behavior.

Literature Review Related to Key Variables and Concepts

Cervical Cancer—An Overview

Cervical cancer is a condition that affects the cervix or the entrance to the uterus within the female reproductive system (Dunne & Park, 2013). When it is detected, cancer presents as abnormal cells that result from the mutation of healthy cells. These cells grow uncontrollably and excessively and eventually accumulate to form a tumor and may spread to other tissues in the body. According to the National Cancer Institute (2014),

cervical cancer is commonly caused by HPV, a sexually transmitted virus that is carried by both men and women. There are over 100 different types of HPV, 13 of which can cause cervical cancer (CDC, 2014). The disease can be prevented by undergoing routine screening and HPV vaccination and can also be successfully treated when detected early (Dunne & Park, 2013). There are no visible symptoms of the disease in the early stages of infection, but in later stages, women may present with several symptoms, including bleeding in the vagina, pain, bleeding during sexual intercourse, loss of weight, fatigue, and loss of appetite, among other symptoms (Kumar et al., 2007). Most of the newly detected cases of cervical cancer have been found among younger adult women aged between 33 and 45 years (Martinez-Danote et al., 2013). This is a significant public health concern because the disease continues to wreak havoc, adversely affecting the lives of millions of women the world over and, by extension, the lives of their family units, especially in developing countries where women are the mainstay of the economy (Population Action International, 2014).

The Burden of Cervical Cancer in Kenya

Although there have been breakthroughs in modern screening procedures as well as in the treatment of cervical cancer, there is still a continuous burden of the disease, and cervical cancer remains the most common cause of death among women the world over (WHO, 2012). Cervical cancer ranks as the number one cause of female deaths from cancers in Kenya. Each year, approximately 4,800 women are diagnosed with cervical cancer, and about 2,450 die from the disease annually (ICO/IARC Information Centre on HPV and Cancer, 2017). Out of the 20 high cervical cancer disease burden countries

worldwide, Kenya is placed at number 16 (Ferlay et al., 2013). This is based on Kenya's age-standardized death rate of 28.7/100,000, compared to the United States and Canada, whose figures both stand at 2.5. It is noteworthy that in Kenya, cancer is often diagnosed when the disease is well advanced (Kidula, 2012). This brings with it many operational, physical, emotional, and socioeconomic challenges (Abdikarim, Atieno, & Habtu, 2017), making it somewhat difficult to contain the spread of the disease.

Knowledge, Perceptions, and Behavior Towards Cervical Cancer and Screening

A review of the significant literature demonstrates that the decision to undergo cervical cancer screening is influenced by various perceptions about the disease and screening procedures (Krakow, 2015). The literature also provides different risk factors for cervical cancer, which include HPV infection, immune system deficiency, genital herpes, smoking, age, and socioeconomic factors, among others. While a few individuals, particularly women, may know of one or more of these risk factors, there is very little information as to how much men know about the condition or what they are doing about it. There may be misperceptions and negative attitudes about the disease and screening procedures among both men and women, and these attitudes may adversely influence women's uptake of cervical cancer screening.

Fronda's 2017 study undertaken in Saudi Arabia noted that the attitudes of both men and women about cervical cancer do not correspond to what is socially acceptable, and so they hinder the success of early detection and subsequent treatment where necessary. According to Fronda, one such attitude and misperception is that male physicians must not undertake to screen and that it is taboo to discuss and expose body

parts to these male physicians for examination. This finding is consistent with a study by Munyaradzi et al. (2014), who also found that women feel embarrassed when they have to be examined by a male physician. This, in turn, adversely affects women's decisions for the prevention of cervical cancer, in that they more often choose not to undergo screening. Health outcomes, therefore, are negative, and this adversely affects the broader community of women of childbearing age living in Zimbabwe, where the study (Munyaradzi et al. 2014), took place.

Munyaradzi et al. (2014) noted that the almost always negative perceptions about cervical cancer and related screening procedures, especially among men, may be attributed to a lack of awareness of the existence of the disease, as well as a lack of programs that increase awareness and knowledge about the disease (Allison, 2016). In Africa, projections are that the disease will kill 1 million women every year by the year 2030 if not arrested in time (Sylla, & Wild, 2011).

Uptake of Cervical Cancer Screening in Rural Communities

Several factors often hamper women's decisions to undergo screening for cervical cancer. Ndejjo et al. (2016) noted that issues of access to effective screening and lack of knowledge are perhaps the greatest hindrances. Other factors include negative perceptions about the condition and lack of family support for women to undergo cervical cancer screening. Various studies (Gharoro & Ikeanyi, 2006; Gichangi et al., 2003; Sudenga et al., 2013) have focused on issues in urban areas and in health care settings and have found that knowledge gaps exist about cervical cancer and that various barriers, including culture, have negatively influenced women's decisions to undergo cervical

cancer screening. The studies also focused on women's viewpoints, with little discussion of men's views and how they impact women to make the crucial decision to undergo screening. Gan and Dahlui (2013) suggested that to boost the uptake of screening among women in rural areas, men must give their full support in all ways.

Women's Diseases and Illnesses

Male involvement

Recently, interest has been growing in the integration of men in the health issues affecting women and children. Several studies (Amooti-Kaguna, & Nuwaha, 2000; Farquhar, Kiarie, Richadson, Kabura, John, Nduati, Mbori-Ngacha, & John-Stewart, 2004) have found positive male involvement in specific health issues affecting women and children, while other researchers have specifically studied the influence of the participation of men in women's uptake of cervical cancer screening (Rosser et al., 2014). Men's roles in the prevention and treatment of various diseases and illnesses range from sharing in decision making about a course of action to take, granting women time off work to seek health services, or authorizing the uptake of specific health services to giving financial support and facilitating transportation to and from health institutions (Muia, Olenga, Kimani, & Leonard, 2010).

Community Support

Hurdle (2001) noted that the support of community members has a strong influence on individuals' reaction to issues of prevention of illnesses and diseases. Hurdle suggested that health behavior in a positive sense is more noticeable when family members and other close associates are positively supportive. Baeten et al. (2013) also

noted that the uptake of preventive measures improves when there is support from close associates irrespective of gender. Social support has, therefore, been used to influence particular health behaviors such as termination of smoking (Kviz, Crittenden, Madura & Warnecke, 1994) self-examination of the breast and uptake of mammography in women (Mayor, Beach Carter, Hillman, & Kellogg, 1991). Although there is little said about the use of the positive influence of men on women's uptake of cervical cancer screening, the above information may be an indication that men may be more willing than is evident to support women in taking up preventive health activities.

Male Roles

Men who closely relate with women in communities at work or home may also have an encouraging impact on women's acceptance of measures to avert illness and diseases that affect the women (Hurdle, 2001). Hurdle further noted that the role of the man is especially important because a woman's willingness and ability to take preventive measures against sickness and disease is influenced by her male counterpart's understanding of the issues related to the disease and are more likely to engage in preventive activities. Women regard the male's knowledge and involvement as desirable and culturally proper and so will participate in the preventive activities of an illness or disease (Montgomery, van der Straten, Chidanyika, Chipato, Jaffar, & Padian, 2010). On the other hand, the disapproval of the man will hinder the woman's acceptance and uptake of specific illness preventive measures (Hurdle, 2001). It is essential to identify the procedures that are acceptable to males and which women can freely use to ward off disease and illnesses.

Women's Health-Seeking Behavior

Family contribution

According to Frederiksen, (2000) the family structure in sub-Saharan Africa, is set such that there are stiff feminine and masculine ideologies and frameworks for living entailing both privileges and responsibilities for men and women and which support separate divisions of work and supremacy relations. Frederiksen notes that customs, ethics, and supremacy relations do often control health issues in communities. The community portrays the male as the head of the household and the males too, present themselves as such. Muia et al. (2010) suggested that in support of the male figure, many customs enhance the role of the man in making sure that the men often do not address health issues of women in a clear-cut way. Married women, for example, could demand the support of the husband or even of his extended family, but this, noted Muia et al, is not always given as needed.

Ohashi et al. (2014) noted in a study in Egypt that the closest members of a family were always ready to support the women's health-seeking behaviors. The challenge, however, was that a married woman must adhere to the rules of a mother-in-law who in turn consults with the son before approving any health care provided to the woman. Other family members could not freely give support until the males in the community sanctioned particular health activities where a woman could participate.

Involvement of Males in the Prevention of Diseases Affecting Women

Collective energies to extend the responsibility of men so that they are more involved in health matters, both their own and that of their partners and families is the

focus of many health programs today (Rahman, Islam, Mostofa, & Reza (2015). The men can plan the activities to undertake to reduce morbidity and mortality in their families. They can also promote a safe and conducive environment ensuring that all mechanisms are in place for women to access health services. Studies show that where men are more involved in the health matters of women and children, there is much improvement in health outcomes (Freeman, Coast, & Murray, 2017; Rahman et al., 2015).

Freeman et al., noted that men will influence whether women will or will not seek health services to prevent illness or disease. The researchers found that the lack of action or any anticipated activities be they positive or negative on the part of men, reflected wide femininity discriminations. Some of the critical influences the researchers noted include abandonment by the men, the avoidance of disclosure of ailment, the fear of the men's reactions or inferences to the disease. On a positive level, men's influences include paying for the required services where applicable because in many cases, they have higher economic power.

Challenges perceived by men as hindrances to involvement

Ganle and Dery (2015) named several hindrances to male participation in maternal health issues. One such barrier is a contrary belief about women's illness and diseases mentioning that female diseases are solely a female issue. Another obstacle cited is that men felt that the costs incurred in the treatment of such conditions were too high and unnecessary. Several other studies in various parts of the African continent noted similar barriers (Kwambai, Dellicour, Desai, Ameh, Person, Achieng', et al. 2013; Onyango, Owuoko, & Ogutu, 2010). Whereas these studies focused on maternal health

care during pregnancy, the same male sentiments can be inferred to cervical cancer and screening for the disease as well as other diseases that affect women.

Culture, Religion, and Men's Participation in Women's Health Matters

According to Ganle and Dery (2015), culture and beliefs played a significant role in influencing men's involvement in issues of women's well-being. The view is that men were the breadwinners and providers of protection from physical harm and danger. Society expects men to engage in these roles and leave the task of healthcare to the women. The men's involvement, therefore, in matters of health issues affecting women, seems to pose a conflict between traditional descriptions of male roles and their contribution to the wellbeing of women. The society views the male as family head and so expects him to engage more in economic activities to fulfill this role. Society considers this a masculine role while healthcare is 'relegated' to the feminine sphere and thought a female responsibility.

The 'masculine' roles of men as defined by society further makes it difficult for women to discuss their health conditions because the men see the time spent on these discussions as time wasted when they could have been engaged in 'more productive' activities like farming or fishing (Ganle & Dery). Onyango, Owuoko, and Ogutu (2010) previously described similar sentiments as expressed by men who reported that they would not go with their wives when they sought healthcare services opting instead to use the time in income-generating activities.

Culture and religion have their place and roles in influencing the preventive health-seeking behavior of women. Withers et al. (2015) noted that in the current times,

there is a shift in women's roles and many women are assuming male roles as provider and protector. The change in functions is a threat to men and has caused them to become unsure of what role they must play in the healthcare of women. The shift, in turn, has the negative consequence of discouraging men from getting more involved in the healthcare of women and entirely taking part in and supporting women's preventive health seeking activities.

Religion for the African rural person means attending church and the different religious ceremonies and believing that God is the cause of all things good and bad (Kreuter et al., 2003). Because of this belief, men think that a woman suffering from a disease is the result of admonition from God (Ndikom & Ofi, 2012), and so the men will not be involved in any way in supporting any health intervention for the woman, rationalizing that they may share a punishment for a sin they did not commit. Religious beliefs of the general rural community members, therefore, are a significant barrier to women's access to preventive and curative healthcare.

According to Creswell (2014), a researcher must create an environment where study participants will be free to interact with one another and learn from each other. For this reason, qualitative methods were used to create such an environment and give each participant the opportunity to provide their thoughts and narrate their experiences. The method that was used in this study is a qualitative narrative procedure. Krakow (2015) successfully used narrative persuasion to identify features that influence behavior and the procedures suggested by Krakow were modified and employed in this study. This method is essential in this study because as noted by Creswell (2014), it would yield personal

information which is necessary for researchers who wished to gain a better understanding of what motivated individuals to act a certain way as they are influenced by their perceptions and knowledge of specific issues. Interviews were conducted in a very informal setting and took place as in conversation with individuals. Before this, a pilot study was undertaken to assess the relevance of the research questions.

Summary

In this chapter, I reviewed literature that recognized the need for further study on the knowledge and perceptions of men about cervical cancer, and how this influenced women's uptake of cervical cancer screening in rural communities. It was noted that there is scanty information about this. Much research has been conducted on women's knowledge, beliefs, and perceptions about cervical cancer and how these have impacted their preventive health-seeking behaviors. This study attempts to fill the gap that still exists on the knowledge and perceptions of men about cervical cancer and the impact this knowledge and perceptions could have on women's uptake of cervical cancer screening in the rural community of Kendubay.

I also reviewed the literature that shows men's involvement in other illnesses and diseases that affected women and how the men participated in prevention or curative activities. Literature shows much male participation in issues of pregnancy, childbirth, and childcare. These studies form a background for how men are likely to participate in and influence women's preventive health care. Results of the studies have been used to make inferences about male participation in matters concerning cervical cancer and the uptake of cervical cancer screening by women in rural communities.

The HBM is the theoretical framework that was used to guide this inquiry. The six constructs of the model provided the context for comprehending knowledge and perceptions of men about cervical cancer and how these factors come together to influence the men to either support or not to support women in undergoing cervical cancer screening. There is little information from literature about men's involvement in this issue, but evidence from research suggests that knowledge and a positive perception of cervical cancer and cervical cancer screening of both men and women could increase uptake of cervical cancer screening and thereby help in the reduction of cervical cancer.

A better understanding of men's knowledge and perceptions about cervical cancer and screening for the disease may serve to help break down the barriers that may hinder the men's participation in supporting women to undergo cervical cancer screening. Awareness will be created among both men and women, and this may help to reduce incidences of cervical cancer in rural communities. It is important to establish what rural men know and perceive about the disease and the influence this could have on women's uptake of cervical screening. This, in turn, will help fill the gap that exists in the literature. Chapter 3 details the procedures that were used to help gain an understanding of the investigation.

Chapter 3: Research Method

Introduction

The purpose of this study was to examine the knowledge and perceptions of men in the rural community of Kendubay about cervical cancer and screening for the condition. This examination may facilitate an understanding of how this knowledge and these perceptions influenced women to undergo cervical cancer screening. The results of this study add new knowledge that could inform the practice of healthcare providers concerning involving men in women's health care issues and the preventive action that men can take against cervical cancer.

Detection of cervical cancer must be carried out through screening, but women in the rural community of Kendubay did not undergo screening despite there being facilities to carry out this procedure (MoPHS and MoMS, 2012). There could also have been other factors that deterred women's preventive action against cervical cancer, among which included men's involvement in women's health issues. These issues need to be addressed if a reduction of the harmful effects of women's diseases and illnesses is to be seen. Outcomes of the study could, therefore, influence policy-making decisions about men's participation in women's preventive healthcare activities. The knowledge that would be gained could aid in empowering men to make suitable and acceptable decisions concerning the health of women in the community.

Chapter 3 outlines the design of the study and the rationale for undertaking the research methodology to investigate the knowledge and perceptions of men about cervical cancer and screening, and how this knowledge and these perceptions could

influence women to undergo cervical cancer screening. The chapter also contains descriptions of the setting of the study, the process of selecting study participants, and my role as the researcher. Additionally, ethical considerations and the protection of the study participants' rights, as well as the procedures that were used to gather data and to analyze the information collected, are described.

Research Design and Rationale

The three research questions for this study were as follows:

RQ1. What cultural beliefs, knowledge, and perceptions do men in Kendubay, Kenya, hold about cervical cancer and cervical cancer screening?

RQ2. Where did the men in Kendubay, Kenya, get their information about cervical cancer and cervical cancer screening?

RQ3. Based on knowledge and perceptions of cervical cancer and screening, what do men do or not do to encourage women to undergo cervical cancer screening?

According to Sandelowski (2000), the narrative descriptive approach used in this study, is a combination of sampling, data collection, analysis, and interpretation that helps to facilitate direct descriptions of the topic under investigation. As the focus of the qualitative descriptive approach is to describe, it also allows for some degree of straightforward interpretation (Vaismoradi et al., 2013), which, according to Creswell (2013), provides a universal perspective on the different aspects of a qualitative investigation. The use of this research design aligned with the aim of the study, which

was to understand the influences men's knowledge and perceptions could have on women's uptake of screening for cervical cancer.

Role of Researcher

My role in this study was that of principal investigator, in that I was responsible for all activities in all stages of the investigation. As recommended by Sanjari, Bahramnezhad, Fomani, Shoghi, and Cheraghi (2014), the principal investigator must be involved in all stages of the research process and ensure that all ethical considerations are maintained. In this respect, I developed the instrument for data collection and collected the information necessary for this qualitative study. According to Creswell (2014), it is also essential for researchers to recognize any personal biases, values, or assumptions that they may have and that may influence the research process in any way. I ensured this at the start of the data collection process by adequately preparing for it through the detailed planning of the methods in the study (Creswell, 2013) so that any challenges would be mitigated in good time.

One of the biases that researchers must be aware of is the personal bias they may introduce into the process of interviewing. Such bias may relate to dress, facial expressions, tone of voice, and body language. Some of these influences on respondents are unavoidable, but as recommended by Smith and Noble (2014), I sought to control them by remaining as neutral as possible, ensuring that I did not give my personal opinions during data collection. Smith and Noble also identified another bias that may arise during questioning when the temptation to ask leading questions is great.

Researchers can minimize such bias by scrutinizing the interview protocol and removing or rephrasing leading questions; this was the process that I employed.

Methodology

Participant Selection Logic

The participants in this study were men between the ages of 18 and 60 years who lived in the rural community of Kendubay, Kenya. Another criterion was that all participants should be able to communicate in any or all of the languages of English, Kiswahili, or the vernacular language of Dholuo. A purposive sampling technique was employed for selecting these participants. This technique was appropriate in that it permitted consideration of the availability and willingness of male residents to participate. The necessary criteria that participants met to be included in the study were the following:

1. Be male aged between 18 and 60 years
2. Be a permanent resident of the Kendubay community
3. Be able to communicate in English, Kiswahili, or the vernacular language of Dholuo

Participants were recruited through flyers posted in public places such as markets, lake shores, trading centers, and other locations that the target participants frequented. Potential participants were requested to state and confirm that they met the above inclusion criteria before they were asked to participate in the study.

The number of participants for this study was 15. This sample size was selected based on Creswell's (2013) recommendation that a small number of participants, usually

between 5 and 20, is sufficient for a qualitative study because the aim is not to generalize findings but rather to appreciate the different aspects of the issue under investigation. The concept of content saturation was also used as a guide for sample size. Saturation is defined as the collection of data until it becomes redundant (Ruderstam & Newton, 2007). According to Mason (2010), saturation is the guiding principle for the data collection process and helps in determining sample size. Data collection therefore ceased once adequate information was collected from willing and available participants.

Potential participants were given information about the study through flyers posted strategically in various public places. After confirmation of their availability and willingness to participate in the study, volunteers were given an appointment to meet on a day convenient to them. The volunteers were provided with a consent form detailing the formal invitation to participate in the study. The consent form included information concerning the nature, purpose, risks, and benefits of the research and the protection rights of participants. Adequate time was allowed to participants to read and understand the consent form so that they could make a final decision as to whether to participate in the study. Participants who committed to participating were asked to sign the consent form, and an arrangement was made for an appropriate time and place in which to carry out the interview. Any participant who expressed a desire to withdraw, even after signing the consent form, would be granted this request, and the interview process would stop immediately and without prejudice. Each participant who completed the study to the end was offered an incentive of Kshs. 500 (approximately $5) to compensate for the time spent and transportation costs to the interview venues.

Instrumentation

The data collection instrument for this study was an open-ended semi-structured interview protocol that I developed according to the research questions I intended to ask. A digital tape recorder was used to capture data as the face-to-face interviews were carried out. Validity was present in the instrument because it consistently produced similar results of what was to be measured. Results were seen to be similar when asked of different study participants as was recommended by Bastos et al., (2014). All this was captured in the pilot study; therefore, content validity was established. Items for the interview guide were developed based on the constructs of the HBM. The pilot study enabled the establishment of the sufficiency of the interview guide to answer all of the research questions.

Procedures for the Pilot Study

A pilot study was conducted to assure validity. The questionnaire was administered to the first two participants to make sure that the participants understood the questions, and that the answers to those questions provided the data I was seeking. Because there were no changes to the questionnaire, the responses of these participants were used as part of the data collected. I recruited participants for the pilot study in the same manner as in the main study, purposively selecting participants and conducting them through the process of taking part in the study. The purpose of this pilot study was to establish sufficiency of the instrument to collect all necessary information.

Procedures for Recruitment, Participation, and Data Collection

Data were gathered from study participants based on the described inclusion criteria. I gathered this information as the principal investigator. Each interview took about 30 minutes. Transcription of the interview was undertaken thereafter. A digital recorder was used to capture information from study participants, but I also took field notes and made necessary comments on the interview process.

Data collected from study participants were treated confidentially, and pseudonyms were used so as not to identify any participant. Data were collected in one sitting for each study participant, who exited the study after providing relevant information. Participants who wished to receive a copy of the results once the study was completed will have a copy sent to them. Participants also received an incentive of Ksh.500 (approximately US $5) at the close of the interview.

Data Analysis Plan

The qualitative data collected were categorized into various themes as they emerged following an inductive analysis process. This process was recommended by Thomas (2006), who specified that inductive analysis allows for the systematic examination of raw data and the subsequent interpretation of those data. Coding of information gathered ensued immediately after the interviews with study participants. This information consisted of interview transcripts, field notes, and all information that I recorded as the researcher. Coding was carried out in two phases. In the first phase, the data, which often differed in magnitude from single words to full sentences, were coded. In the second phase, a reconfiguration of the codes was undertaken to capture the primary

content and context (Saldana, 2016). A data analysis framework adapted from Walker and Avant (2005) aided this process, as depicted in Table 1. Data were organized, coded, and managed using MAXQDA, computer-assisted qualitative data analysis software (CAQDAS) that provided the study with a broad range of tools for ease in management and analysis of the data (Hilal & Alabri, 2013; Leech & Onwuegbuzie, 2011).

Table 1

Data Analysis Framework

	Phase I	Phase II
Goal	Development, analysis, and synthesis of study concepts	Development, analysis, and synthesis of narrative statements
Core procedures	Development of study concepts by coding themes as they arose Analysis of the ideas as they arose Synthesis of concepts	Identification of study concepts from statements of participants Analysis of the statements of the study participants
Other activities	1. Coding 2. Category identification and selection 3. Reflective note writing 4. Selection of core concepts 5. Attribute definition of each concept 6. Identification of knowledge and perceptions 7. Identification of significant experiences 8. Definition of practical experiences	1. Specification of ideas in narrative form 2. Writing analytic narratives from statements 3. Simplification of statements as necessary 4. Statement analysis 5. Statement synthesis

In any data set, there are likely to be responses and observations that challenge or contradict analytic interpretation (McPherson & Thorne, 2006). Such responses should not be ignored because they may expose the assumptive claims arising from many methodological orientations and shed light on alternative descriptions of information (McPherson & Thorne, 2006). In this study, therefore, such cases were coded and analyzed in the same way and, as noted by Miles and Huberman (1994), served to test and strengthen the basic findings of the study.

Issues of Trustworthiness

Trustworthiness in this study was provided by keeping to a single research tradition throughout the study and giving evidence of rigor in support of the value and strength of the study. The evidence to support value and strength was shown by the detailed procedure and adequacy of selecting study participants (Anderson, 2010). A detailed description ensures reliability and transferability of results (Anderson, 2010). When this is undertaken consistently, then the interpretation of results is made more credible and adds strength to the study (Jeanfreau & Jack, 2010). According to Creswell (2013), rigor is present when widespread collection of data is undertaken and several stages of abstraction occur during data analysis. For this to take place, I collected information from the largest number of participants possible and used inductive analysis to perform multiple abstractions.

During the data collection stage, I endeavored to establish rapport with study participants so that they would be encouraged to provide rich and thick information. Noble and Smith (2015) recommended recording interviews to remain true to the

perspectives of study participants, and after that repeatedly revisiting the qualitative data. In this way, I established the trustworthiness of the study. I also kept meticulous records and ensured consistency and transparency in interpreting the data, which, according to Noble and Smith, is another way of ensuring trustworthiness. Finally, I accounted for my personal biases by isolating any preconceived ideas and recording these ideas and my thoughts in a series of journaling notes. This helped to prevent potential tainting of the research process and ensured the credibility of the study findings (Creswell, 2014).

Transferability was established by providing readers with evidence that the research study's findings would apply to other contexts, situations, times, and populations. Guba and Lincoln (1985) noted that it may not be possible for a researcher to prove that a study's findings will be applicable, suggesting that a researcher should only give evidence that findings might be applicable by providing a database that makes it possible to make judgments about transferability by those interested in applying it. Researchers also spend much time with the information they have collected in an attempt to gain a better understanding of it. This enables the researcher to transform the data in a way that can easily be understood by any reader. Dependability of the results must then be established; in this case, this was done by asking for an external audit of the study. This process has been recommended by Guba and Lincoln (1985), who suggested that it can confirm the accuracy of findings and ensure that the findings are supported by the data that were collected. The results of the study can then be reported in much detail so that the investigation becomes a prototype for upcoming researchers. All of these

procedures were carried out in the context of the connection between the research questions and the methods chosen to undertake the study.

It was necessary to address how confirmability would be established for this study. One way of doing this was to conduct an audit trail where according to Guba & Lincoln (1985), details and the thought processes of the researcher are noted and recorded as the research processes occur. These are then used to make confirmations of the processes that were planned. Having the data available also addressed the issue of credibility because it was possible to explain the process of undertaking the study, the roles of each player, and the results that were established. With all this in place, confirmability would not be difficult, in that readers would be able to follow the logic of the study and identify its strengths and weaknesses.

Ethical Procedures

Data collection commenced once I gained Walden University Institutional Review Board (IRB) approval which included the appropriate address of various ethical issues. According to Sanjari et al. (2014), several critical ethical issues that was required to be addressed included confidentiality, anonymity, and informed consent. Informed consent for this study was asked of the study participants before they participated in the study. The informed consent included the researcher's identity and the objectives of the study. These along with the procedures of the study were discussed with participants after which they were allowed ample time to understand the process of the research and to voice any concerns. This was important so that participants could join the study from the point of knowledge.

I ensured the privacy of the participants by using a coding system that neither permits the use of participants' names nor identifies their residential or occupational locations. This information was also mainly used in the study and was not shared with any other party. Participant information was also not used for any purpose outside the research project. The data collected was secured in a locked file to which only the principal investigator had access. Participants were made aware that their participation in the study was voluntary and if they wished to drop out they could do so at any time. Explanations about any risks and benefits arising from joining the study were made known to potential participants. There was a team of counselors available to study participants who would require counseling services. The contacts of the counselors were made available to each participant at the start of the interview session.

Summary

This qualitative study explored the knowledge and perceptions of men about cervical cancer and how this influenced women's uptake of screening. The research was guided by the HBM as its theoretical framework and used a qualitative descriptive narrative approach for its study design. The chapter depicted the actual methods that were used for conducting this study such as interviews that were carried out at the convenience of study participants who in turn, were selected through a purposive sampling technique. A semistructured, open ended interview protocol was used to collect data. A pilot study with two participants was carried out to confirm the relevance of the interview questions as well as the research questions. Data from the interviews were coded using the

MAXQDA software coding system. An analysis and synthesis of the data collected was then carried out in chapter 4.

Chapter 4: Results

Introduction

The purpose of this study was to examine the knowledge and perceptions of men in the rural community of Kendubay about cervical cancer and screening for the condition. Through this examination, I sought to facilitate an understanding of how this knowledge and these perceptions influence women to undergo cervical cancer screening. The results of this study were expected to add new knowledge that could inform the practice of healthcare providers concerning involving men in healthcare issues and preventive action against cervical cancer.

Many studies have described the current situation of women's uptake of cervical cancer screening based on the women's own understanding of the disease (Ndikom & Ofi, 2012; Ngugi et al., 2011; Rosser et al., 2015; Sudenga et al., 2013; Urrutia & Poupin, 2015). However, there still exists a gap in the literature concerning men's knowledge and perceptions about cervical cancer and the screening procedures for the disease, as well as what men's contribution is towards women's uptake of screening.

Chapter 4 presents the findings of the study. The findings of this study were based on responses to 40 in-depth interview questions, which were answered by 15 male respondents living in the rural town of Kendubay, Homabay County in Kenya. In addition, this chapter contains descriptions of the research tool, pilot test, setting, recruitment protocol, participant profile, qualitative data collection process, and data analysis. The interpretation of the data is discussed in Chapter 5.

I employed the use of a qualitative descriptive approach to address the research questions. The choice of this approach was built around the focus of describing knowledge and perceptions of study participants.

Research Tool

An interview protocol was developed and used to obtain the required qualitative data from the study participants. The instrument consisted of 40 semistructured and open-ended questions designed to answer the research questions.

The research questions for this study were as follows:

RQ1. What cultural beliefs, knowledge, and perceptions do men in Kendubay, Kenya hold about cervical cancer and cervical cancer screening?

RQ2. Where did the men in Kendubay, Kenya get their information about cervical cancer and cervical cancer screening?

RQ3. Based on knowledge and perception of cervical cancer and screening, what do men do or not do to encourage women to undergo cervical cancer screening?

All of the participants gave responses to the 40 questions concerning their knowledge and perceptions of cervical cancer and cervical cancer screening. There were also follow-up questions that were asked as necessary while each interview was carried out. Interviews were recorded using the Audacity Voice Recorder, a voice recording app downloaded from the Internet onto a laptop.

Pilot Study

The pilot study participants were recruited after they read flyers posted in public places in and around the town of Kendubay. The participants contacted me using a phone number given on the flyer. An initial meeting was set up, and the participants' eligibility was confirmed. An interview was undertaken with each of the first two eligible study participants, and these were the participants for the pilot study. The pilot study was conducted in order to establish validity and reliability of the instrument and to establish sufficiency of the instrument to collect all necessary information. I explained the process of the study to the pilot study participants and provided more information about the nature of the study. Informed consent was obtained before the interviews were carried out.

The pilot study revealed that the questions were well understood by the study participants and the answers they provided were those that were sought for the study. There was therefore no change made to the interview guide, and the two pilot study participants became part of the study sample that was later recruited for the main study.

Setting

The setting of the study was the rural town of Kendubay in Homabay County, Kenya. Interviews were conducted in various places that were suggested by and convenient to the study participants. The actual interview locations included workplaces, business premises, and homes of participants. All of the venues chosen by the participants were conducive to face-to-face interviews and quality recording of the interview process.

The qualitative data were collected through in-depth face-to-face interviews with 15 male respondents after I had received IRB approval. Only men aged between 18 and 65 years living in Kendubay were recruited. I decided upon this age range because men in this age group are most likely sexually active and likely to harbor the HPV virus responsible for cervical cancer, which men are then likely to transmit to women during sexual intercourse.

Each individual participant was asked to confirm his age, place of residence, and ability to speak in English, Kiswahili, or Dholuo before being invited to participate in the study. My contact information was given to each potential participant. A total of 15 qualified participants, including the two participants from the pilot study, confirmed their willingness to participate after gaining an understanding of the entire process of the research along with their rights as participants in the study. Appropriate times and venues were then set to carry out the interviews. Informed consent was obtained through the signing of the consent form before each interview was carried out. Participants also indicated approval of recording the interview process.

Participants' Demographics

Participants' demographic information was documented as part of the interview and are shown in Table 2.

Table 2

Participant Demographic Information

Participant pseudonym	Age	Marital status	Number of children	Occupation	Level of education
Okoth	30	M		Accountant	Bachelor's degree
Ochieng'	43	M		Businessman	Sec Sch. Form 4
Otieno	27	M		Safaricom agent	Sec Sch. Form 4
Ouma	34	M		Contractor	Sec Sch. Form 4
Owuor	40	M		Staff supervisor	Sec Sch. Form 4
Ouko	31	M		Driver	Sec Sch. Form 4
Odera	28	S		Registration officer	Diploma Year 2
Opiyo	45	M		Water technologist	Diploma
Odongo	32	M		Public health officer	BSc—Ongoing
Miruka	45	M		Registration officer	Diploma
Ojuka	52	M		Clerk	Diploma
Owino	23	M		Clerk	Diploma
Obiero	50	M		Chief	Diploma
Misawo	40	M		Self-employed	Primary school
Onyango	38	M		Construction aide	Sec Sch. Form 4

Note. Sec Sch. Form 4 = Secondary school, fourth year of study.

Data Collection

Once approval from the Walden University IRB was received, data collection commenced. Pseudonyms were used in place of participants' names to protect their privacy and to de-identify the data. Data collection involved audio taped interview sessions with the 15 participants using open-ended questions. Consent to audio tape the interviews was obtained. Interview sessions ranged between 14 and 27 minutes and were conducted in venues conducive to the interviews as suggested by the study participants. The interview venues ensured privacy and confidentiality and were free from distractions.

This enabled proper audio recording of the interviews. At the end of each interview session, the participant was thanked for his time and received an incentive of Ksh. 500 (approximately $5) as an expression of appreciation for taking part in the study.

Data were recorded using Audacity Voice Recorder, a voice recording app that was downloaded from the Internet onto a laptop. Notes were taken during the interview as a backup plan in case of malfunction of the recording device. The qualitative data collected were then transcribed and stored in a file folder of the laptop and locked. The data were accessible only to me through the use of a password. Immediately after each interview, fieldnotes were written containing observations and thoughts about the interview. The qualitative data that were collected were then immediately transcribed and stored in a folder of the laptop and locked with a password.

Data Analysis

Transcribed data that were stored in a locked file accessible only to me through a password were uploaded into a project file created in the MAXQDA 2018 software. The data were organized in the internal menu of the software and labeled as study participant interviews. An inductive analysis was carried out on the qualitative data. The analysis enabled the creation of a composite description of the knowledge and perceptions of the condition of cervical cancer and its screening among males in Kendubay. Thomas (2006) noted that inductive analysis in qualitative research enables systematic analysis primarily using detailed readings and interpretation of raw data that allow for the emergence of themes or categories. The data from the interviews were repeatedly read to facilitate the

identification of categories and themes. Rigorous and systematic reading and coding of the transcripts allowed for the emergence of major themes.

Coding began with a review of the characteristics of the research questions. The data were rigorously and systematically read several times over to get a sense of what the data contained and to allow for the emergence of major themes. Different codes were reviewed, revised, or combined into themes. Recurring themes, language, opinions, and beliefs were noted and recorded. This process for the analysis of the data facilitated the coding and identification of themes. The use of MAXDA 2018 provided the study with a broad range of tools that made management and analysis of qualitative data easier. The organization and management of the data as they evolved from the coding process eventually gave way to a visual representation of data.

Evidence of Trustworthiness

Trustworthiness in the study was addressed by keeping to a single qualitative tradition throughout the study. This issue was also addressed by the provision of evidence of rigor that supported the quality and strength of the study. This evidence was shown in the detailed description of sampling and in the adequate description of the selection of study participants. A detailed description of the process of sample selection ensures credibility of findings as well as transferability of results. Jeanfreau and Jack (2010) also noted that an explanation of consistency supports the interpretation of the meaning of study results while strengthening a study.

Additionally, trustworthiness in this study was ensured by observing rigor in the data collection process, in the analysis process, and in detailing the results. Rigor is

observed when a researcher carries out extensive data collection and performs several levels of abstraction during data analysis (Creswell, 2013). Rapport and trust were established between me and the study participants at the beginning of the data collection process so that extensive data collection could be conducted. Creswell (2013) stated that establishing rapport and trust can encourage extraction of rich and thick information from participants. I investigated deep into the individual accounts of the participants' knowledge and perceptions about cervical cancer and cervical cancer screening. This was done using guide questions developed before the actual interviews were carried out. Follow-up questions were also done as they developed through the progression of the interview process. The interview process was audio recorded. The recording of semistructured interviews enables a researcher to revisit qualitative data repeatedly for emerging themes and remain true to the perspectives of participants (Noble & Smith, 2015).

Research Questions

Data collected from 15 study participants and carried out through face to face interviews were used to answer three research questions. To address the research questions, I asked a series of open-ended questions from the interview guide and followed up by probing further on specific issues, as was necessary. Each research question was addressed through specific questions asked of the study participants, and these produced themes and subthemes as depicted in Table 3 below.

Table 3

Themes and subthemes

SN	Themes	Subthemes
1	Knowledge and Awareness of Cervical cancer and screening	A. Treatment is difficult B. The disease affects women C. No knowledge or little knowledge of the disease D. Disease is transmitted to men by women E. The disease has links to smoking F. The disease is associated with sexual activities G. I have heard about other cancers but not cervical cancer
2	Perception of cervical cancer and screening	A. It is a dangerous disease B. The disease brings only death C. It is a feared disease D. Screening interferes with virginity
3	Sources of information for cervical cancer and screening	A. From advertisements on television, radio and social media. B. Word of mouth through interacting with other men C. Non-governmental organizations who try to educate on different health conditions D. When the men went for the rite of circumcision
4	Actions for or against cervical cancer and screening	A. Initiate process of screening B. Financial support C. Moral and physical support
5	Cultural and religious beliefs	A. Role reversal – Men do not ordinarily undertake women's duties in the home, but I would be forced to do it B. Culture and religion C. Women's virginity status.

Results

The results of the interviews are presented in this section using the structures of the HBM and the interview questions as guides in organizing the themes that emerged.

The themes that were identified during the coding process were interwoven throughout the findings. The findings provided richer detail and adequate validation for the themes.

The interview guide was divided into five parts with sections headed as follows:

Part 1—Respondents' demographic information

Part 2—Knowledge and awareness of cervical cancer and screening

Part 3—Perception of cervical cancer

Part 4—Actions for or against cervical cancer screening

Part 5—HBM constructs

Each part of the interview guide contained various questions developed with the intention of eliciting detailed information about a very specific issue that was being investigated at that point in time. The aim of the research study was to gain an understanding of men's knowledge and perceptions about cervical cancer and screening for the cancer, and how this knowledge and these perceptions influence women to undergo cervical cancer screening.

Part 1: Demographic Information

Questions in this part of the interview guide were asked to establish the eligibility of study participants. All 15 participants met the criteria as outlined in the guidelines for inclusion in the study. Other than Interview Question 9, results of Part 1 of the Interview Guide were as depicted in Table 1.

Interview Question 9: What is your religious affiliation?

A total of 13 participants professed the Christian faith under different denominations. One participant reported not going to church at all, and one participant

chose not to give information about his religious affiliation. Much is taught concerning religion, and various beliefs and religious practices dictate what activities can and cannot be engaged in by individuals. This question was therefore asked to elicit such information and to understand any restrictions there might be for undertaking screening and treatment for cervical cancer. Results in this respect did not show any dictates of the religious affiliations that would negatively impact women's uptake of cervical cancer screening. Many study participants reported that they would encourage their partners to go for cervical cancer screening.

Part 2: Knowledge and Awareness of Cervical Cancer Screening

Interview Question 10: Have you heard about cervical cancer?

This question was asked to elicit information on knowledge of the existence of cervical cancer. All the 15 participants reported having heard about the condition of cervical cancer. Okoth said,

> Yes, but I know it's a disease which exists, and it affects the women and interferes with the vagina, the cervix or the vagina and if not well controlled early it can lead to death, that is something I know

Ouma also had heard about the disease and said, "Yes, I have heard about it, but I don't know how it is because I have not seen any person who has it." Ouko's response was "Yes, some bit of it." Odera narrated having had an unpleasant experience, and he said, "Yes, I have heard about cervical cancer and I have witnessed two relatives die of cervical cancer. One was my grandmother … and the other one was a step mum … also died because of cervical cancer." Misawo was not sure about cervical cancer specifically

because he said, “I have heard of cancer, but I don’t understand the difference between the different types of cancer.” Owuor said, “Yes, I have heard about it but I don’t know how it is because I have not seen any person who has it.” All the other respondents reported having heard about the diseases and gave simple responses such as “Yes, I have heard about it” or “Yes I have” or “I have heard of cervical cancer” (Otieno, Owino, Ochieng’, Opiyo, Ojuka, Onyango, Miruka, Odongo, Obiero),

Interview Question 11: What have you heard about the condition?

This question was asked to find out the type of information participants had heard about cervical cancer and to see if it was correct or incorrect information. Ochieng’ said he had heard this about the disease, that “it gets to a certain stage that treatment becomes very difficult and you might need medical care abroad … you cannot feel comfortable sitting close to other people because of the bad smell.” Owuor said, “The cervical cancer is mostly with women and it affects the cervix, that is all I have heard.” Odongo gave another perspective when he narrated that

> Apart from it being the cancer of the cervix, it is one of the cancers that is associated with sexual activities … that it can be managed or prevented by reduction of sexual partners as well as practicing safe sex. Again, it has links to smoking so again reducing or stoppage of smoking could also reduce or prevent cervical cancer.

Onyango said,

> Cervical cancer is a disease that usually affects women and they are the carriers of that disease, so most of the affected people are women. I also heard that once a

> woman is affected they can spread this disease to the man. And if a young girl is affected they can spread it to their sexual partners through sexual intercourse. Then I also heard that treatment is very difficult especially if the disease is not detected at an early stage.

Owino narrated that "Cervical cancer is a disease that usually affects women particularly the uterus part of the women and it's a cancer kind of disease that mostly could lead to death if not discovered at the right time." Misawo had also heard about cervical cancer. He said,

> Yes. I have heard of cancer but not cervical cancer. They are different categories but today I have been able to hear from you more about cervical cancer though I hear about cancer and that it is a deadly disease that is what I have heard. I have heard people's breasts being cut or even people losing limbs or even amputated due to cancer.

Interview Question 12: What do you know about this disease?

This question was asked to establish the knowledge of study participants on the condition of cervical cancer. Responses given were diverse. Okoth said,

> I have a little knowledge about it because my field is business not health … But I have heard that it majorly affects women and it affects the cervix … And I have heard some myths about it, that it's carried by the men … that men give it to women…. I have not read to prove that.

Odera did not know much about the condition, saying,

> I don't know much about it but what I know is it's severe and can be controlled. I am not sure if it's treatable and I have lost two relatives … so that gives me some thoughts that it has no cure.

Fear of the disease was a recurrent response to this question. Another was that women were responsible for transmission of the disease. Ouma had this to say:

> … very dangerous disease and it is a very feared disease, even me I fear it … What I know about the cancer is if you have cancer automatically on my side I know if I have cancer, I am totally dead, so I really fear cancer. It is better I have HIV positive than cancer … specifically, about cervical cancer, I don't have any information about that.

Ojuka's response was "It affects people, mostly men. I may not know more. I am not a health expert; I know general information about it." Opiyo, who thought that he may have been exposed to the condition, said, "The few cases I have seen and heard … some have been isolated from their homes because of this disease."

The knowledge that the participants have of this condition is deficient and incorrect as noted by the responses. This question also elicited responses that are disturbing in that the information that may have been passed on was inadequate as note by the following responses. Ochieng's response was "Like I know that it affects the private parts." Ouko thought the condition affected the breast. He said, "They say that it affects women more so the breast. It is a cancer that affects the breast and more so the women should go and be tested when they are still young."

Interview Question 13: What do you know about screening for cervical cancer?

This question was asked to elicit information on knowledge and perception about the procedure of cervical cancer screening. On several occasions I had to explain what screening is before I got a response. Okoth frankly posed the question "What is screening first of all?" After an explanation of what screening was, his response was "Okay, so in my locality screening is not something people do." Obiero, also after the term *screening* had been defined, said, "I would say that screening is less here in Luoland." Obiero went on to give an explanation, saying,

> I think what most luos are afraid of … what they dislike is when they go for the screening … then someone starts asking you some petty questions and some people might be discouraged by that kind of procedure … you are asked some questions that you find unnecessary and you even prefer death and not being asked such questions.

Miruka, Otieno, Odera, Ojuka, and Onyango were all aware about screening for cervical cancer. Onyango, however, was not sure what exactly screening was because he said, "I just know that they do the screening, but I don't know what this screening involves."

Interview Question 14: Where and how did you get this information?

The aim of this question was to find out the sources of information about cervical cancer if these sources gave credible information about cervical cancer to participants. Study participants reported various sources of information, the media being a major source.

Otieno reported getting information about the disease from a very different and unlikely source for this locality. He said, “I got to know about it when I was going for circumcision.” Circumcision is not a practice of this community and so it is not expected that the men who go for this procedure would be taught about other diseases. This therefore is a potential avenue to pass on correct information about diseases that affect women and about cervical cancer.

Advertisements were also cited as a source of information, and these, according to Owuor, Ouko, Miruka, Ojuka, Owino and Obiero, came through television, the radio and from social media. Opiyo reported getting information from “everywhere, everywhere here I mean class, I mean interaction with people like you … and I am also a fan of reading a lot of articles even on the internet.”

Onyango got information by word of mouth through discussions with family and friends. He said, “Even family members who lost their loved ones as a result of this disease, mainly we talk about what the disease is and why it affects people.” Odera said he got information from a hospital, while Owino cited “an NGO that was moving around trying to advise people to go for cancer screening.”

Interview Questions 15, 16, and 17: Do you think women should undergo cervical cancer screening? If so, Why and when should they go? If not, why not?

These questions were intended to obtain the participants’ individual knowledge about the reasons for women’s actions of screening. Despite indications of having little or no knowledge of screening, all the 15 participants thought it necessary that women should go for cervical cancer screening. As Okoth put it, “They should go for cervical

cancer screening because if the myth I heard is true, then it does not affect men … the women do not know when they have it or when they don't." Opiyo said, "we should not be asking the question of whether a woman should go for cervical cancer screening. Like any other test … screening should be part of a woman's life…. they should make it a routine." Still other participants, without elaborating on reasons why, said, "Obviously they should go" (Ojuka) and "I think it's quite necessary" (Obiero).

On the question of when women should go for cervical cancer screening, Ochieng said, "they should go for screening at any time." Owuor said, "I think as early as possible." The other participants gave specific periods such as "even from 10 years or 21 years" (Opiyo), "I think from 16 years and above" (Miruka), and "I think they should go at around 12 years for the young girls" (Onyango). Ojuka was of the view that screening should take place when a woman is 28 years of age. He said, "because at 28 it's the peak."

On the question of why the women should or should not go for cervical cancer screening, Misawo was very honest and gave the response that

> I honestly don't know how to respond to that. I am not sure if I ask her to go for cervical cancer screening if she will be willing to go or not. She might even tell me to go first … and she will follow me.

Ochieng's response was "So that they can be aware of their status and if detected then it can be treated before it gets to a stage where it cannot be treated." Misawo also agreed that "It is important for them to know their status." He went on to explain that

> Yes, she might go or not go. And we all live differently in our households and a woman might feel that her husband is not behaving well and she would rather go for testing so that she can know her status and take care of her own life, so that is what many people do.

Interview Question 18: Tell me about any risk factors that you know for cervical cancer.

As concerns risk factors for cervical cancer, the study participants did not seem to know what to say. Unprotected sex was however mentioned by two participants. Miruka was of the view that men could do things differently to help lower risks for women contracting cervical cancer. His statement was "even the men are being encouraged to undergo circumcision to prevent women from getting cervical cancer." Misawo was not sure of the risk factors, stating that "I am not very sure because I don't even know if I have the virus." Onyango stated that "women have many issues, but I think it depends on their body and due to this they risk being affected." He went on to give an explanation, saying that

> It also depends on the environment … for instance, if they use toilets that are not very clean … if that water splashes in her private parts maybe she can be affected. … it's because of the environment, some areas are not conducive and so it's easy for them to be affected.

Ochieng had a very unusual perspective of the risk factors. He said,

> There are a lot of things that women are doing which are not good. Someone might come to research but they don't have good intentions. For instance, the way

> Aids was spread to the humans, it's been said that the Aids was spread through human interaction with an animal. And there was a lady who was paid to go and engage in sex with an animal. So I think that the money issues have driven women to do very bad things which have had very serious consequences to the other human beings. And now this disease is really affecting them.

Owuor thought delivery could be a risk factor when he said, "The bit I can say is about delivery it might affect the delivery for the women. They can have that delivery problem, so that kind of challenge." Odera was in support of Owuor's statement when he said,

> One I think that cervical cancer would in a way hamper your reproductive system for the ladies. And I also think it might affect your reproductive system in that, you will have complications leave alone the pain, but complications in delivery and expectancy will also be hindered.

Okoth's response was "Maybe one is unprotected sex … The second one is maybe not being aware of having cervical cancer, so it is risky." Owino suggested that the risk factors had something to do with men. He said,

> You know this cervical cancer is common to women and you know it is we men that normally carry the virus. So what I can say it's like being married to somebody who is HIV positive, chances of getting this to women is very high.

Interview Question 19: What more information would you like to know about cervical cancer?

All the participants had questions concerning the condition of cervical cancer and screening and expressed a desire to know more about the disease. Some of their

responses concerning this were as follows: “Is it true that men are the main carriers of cervical cancer? So, where do men get the HPV?”(Okoth); “I would like to understand more about how the infection occurs … But these days it has come in so many ways that it’s not clear how the infection occurs” (Ochieng’); “How would I know if I have this virus? What about the men, do they get screened?” (Ouma); “I would like to know the symptoms…. How does it start? … What do you feel?” (Owuor); and “the way it affects people and how it gets to the person and the prevention … what is the cause and if at all it is caused by this food, we eat …?” (Obiero). Onyango wondered,

> Are there signs that I can observe on me before my wife notices and then I can go to the hospital to seek medical care? … when a woman has it, what happens? … how come she doesn’t even feel any pain, yet it might cause death?

Opiyo asked,

> Why don’t you have screening center for both? Because if we are the people having it, then why don’t you do the screening for both so that if it’s detected in early stages, then it can be treated before it is transferred from point A to point B?

The above questions from the study participants, are pertinent questions and point to a genuine need for men to be made aware of the condition of cervical cancer and the screening for the same.

Part 3: Perception of Cervical Cancer

Interview Question 20: What do you think about cervical cancer?

This question was asked to elicit information on the men's individual perceptions of cervical cancer. Participants gave responses that brought out the theme I labeled "danger."

When they were asked about their thoughts of cervical cancer, participants gave the following responses. Okoth stated, "I think it's a dangerous condition, which should be controlled earlier before it gets worse. If not so it will lead to many deaths, particularly am talking about my area, in Kendubay." Ochieng' replied,

> I feel that this disease is even more deadly than AIDS, because AIDS can be controlled but this disease once it enters your body or maybe entered and you were not aware because you didn't go for screening then treating it might be very difficult.

Otieno said, "It is a bad disease. Anything that is negative to human life is bad."

On screening, Okoth had this to say:

> Because cancer is a major killer nowadays. If you hear of ten deaths seven of them died because of cancer. So this cervical cancer in particular and maybe those other cancers should be controlled. Should be contained…. I don't know the Government should do something about it. Like this screening, I know screening is expensive but if offered for free then the society would be aware of this virus and this cancer, this cervical cancer and it will be contained.

These responses were given based on perceptions and what each participant had heard about the disease.

Interview Question 21: Do you think women are at risk of developing cervical cancer?

This question was asked to elicit information about men's perceptions of whether women can get cervical cancer. Many study participants thought women were at risk of developing cervical cancer but were not able to elaborate on the risk factors. From Okoth, the response was

> Women are at risk of developing cervical cancer here because first of all, Kendu Bay town has got a higher rate of HIV AIDS. Meaning that people have unprotected sex here regularly and this one, the HPV virus is transmitted the same as HIV virus. So, if one happens to be in this locality then women are at risk of being affected here.

"It is possible," said Ouma. "Yes, it can happen," stated Ouko. "Of course" was Miruka's response. "Very much," said Obiero.

Ojuka explained that

> Women cannot unless passed to them by their counterparts. The factors that makes it easy for their partners to pass it are we don't go for screening as men so that we know our status. That is one factor, the second factor is that in fact even if I am affected I will not feel anything, I will not see any signs or not feel pain so I may not be in a position to know that I am already affected. So we also should be going for the screening.

"I feel that it's almost similar to HIV" was the response given by Misawo.

Interview Question 22: Why do you think women are/are not at risk of developing cervical cancer?

This question was asked to get clarification of the responses to Question 21. It was noted that even though the participants did not have a sound knowledge of risk factors, they still gave responses about why they thought women were at risk for developing cervical cancer. Some of the responses were as follows: “Because it is something that comes from men and if you cannot go and get screened you can die” (Ouko); “Because it’s a disease we know it’s bad and we cannot run away from it” (Opiyo); and “I think so because they live with men who pass this to them” (Miruka). Odongo had an elaborate explanation, even comparing Kendubay to Ukunda in Mombasa. He said,

> Just like Ukunda in Mombasa, Kendu bay is normally a sexual city. It is a very busy town and since cervical cancer has linkage to sexual activity then women are really at risk. And considering Kendu Bay again is in a traditionally Luo town and Luo’s and sex (waves hand in the air suggestively) though its mythical that we say that where there is smoke there is fire and then there could be a truth that there is a lot of sexual activity around this place. And this exposes women to the cervical cancer.

Obiero also gave the following explanation:

> One it’s as a result of being female and quite a number of them are reluctant to go for screening. At the same time people who go for circumcision … when your husband is circumcised the risk of getting it or even getting affected by cervical cancer is reduced. So this one is also another challenge we are having, not so many men are willing to go for circumcision. So these are the risks.

Interview Questions 23 and 24: In your household, who decides on whether the women should or should not undergo cervical cancer screening? Why is this decision made by you/wife/both/any other person?

This question was asked to establish just how much men were involved in the women's cervical cancer prevention activities. The question also sought to establish whose sole responsibility it was to ensure that women were in good health all the time. So, on the question of whose decision it was for the woman to go for cervical cancer screening, several responses were recorded.

Okoth said,

> In our household we are subscribed to NHIF (National Hospital Insurance Fund), so whenever one falls sick and it is not getting any better, … then we move to the hospital. So it's decided on by the condition of the sickness. But the rule I put in the house is that whenever someone is sick they just go to the hospital even if it is small sickness because we have subscribed to the health.

Okoth went on to explain about cervical cancer and said,

> When it comes to cervical cancer, okay my wife is always reluctant to go to the hospital but I always push her to go there. So unless she is feeling pain here she will not just go there. I don't know why.

Ochieng's response was "I would even offer my time and accompany when she goes for the cervical cancer screening." "It is my partner" was Otieno's response. "My wife," said Ouma and Ouko. Odera made the following explanation:

> I think this decision should be personal. The woman should decide to go for this screening. Actually my sister is over 18 and with the knowledge I have known from you, I think if I give it out to her or to my mum it will give them that morale of going for cancer screening.

"It is me," said Owuor. "It's a family thing we can discuss, and they go," said Opiyo. He further went on to give a different opinion, saying, "Now that is an individual decision because if I say there is free cervical cancer screening and you don't go now that is an individual decision." Obiero explained,

> I think both of us, me and my wife. We need to sit together because there will be a problem if my wife is sick then I am also sick, and everybody is sick in the house. When I am sick my wife and children are also sick because the normal operation of the house will come to a standstill. So it's important for both of us.

Odongo gave a different answer from the other participants, saying,

> I am a very liberal person even in my house and for me everyone makes a decision. I believe human health is their own right and I shouldn't be making a decision whether my wife should go for treatment or not. If she feels sick or needs medical attention, she should be very free to just walk to a facility and get checked.

Miruka on the other hand thought differently. He said, "I think given that the women are at risk, I think they should be in the forefront of this and we should support them to undergo such screening so that they know their status."

Ojuka said, “We should sit together and talk, it is not a one man show, and it’s a family affair.” Owino said it was a joint decision, stating, “It is me and my wife.”

On few occasions did the men make this decision and this was because they were the ones to provide the financial support needed for the women to go and get screened. Many times, though, the woman was left to make this decision. As Otieno put it, “In most cases, these things are for ladies … she just updates me on the next issue.”

Other participants thought it should be the women themselves to decide whether they would go and get screened. Their responses were as follows: “On my side I can advise her about the disease but really she is the one who should go so that she can know her status” (Ouma) and “it should be their decision, but I would advise them so that they see the importance of screening” (Odera).

Interview Question 25: How would you feel if your partner was diagnosed with cervical cancer?

This question was asked with the aim of establishing men’s feelings about the disease and further to prick their conscience and to think about the condition and what they could possibly do about it. Further, the responses would give information about how they would cope, if their partner were diagnosed with cervical cancer. Various responses were recorded as follows: “I would feel sad, but I would support her” (Okoth); “In fact it would make me feel very bad” (Ouma); “Okay it will make me feel bad” (Otieno); and “I will not feel that good” (Ouko).

Some participants mentioned anger, pain, hurt and instability saying, “what would anger me most is if the cause is something other than me” (Ochieng); “That would be

very painful … and it's going to hurt me because they are part of my family" (Odera); and "I will feel a bit unstable, but we must accept …" (Ojuka).

Owuor thought he had no control over what could or could not happen and thought it to be the responsibility of his partner to handle it. He said,

> It is just a circumstance and maybe if my wife has it, she is the one to be counselled on how to handle the situation. This disease is there with us and even if I have anything against it, then I will just welcome it. Yes, because there is nothing much which can be done.

Other participants mentioned terror and misfortune, saying, "Of course, terrible, considering the things I know about cancer" (Odongo) and "Definitely it is a sad story; I would consider myself to be one of the most unfortunate people" (Obiero).

Miruka said acceptance of the situation and finding ways to control it would be the way to deal with a positive diagnosis of cervical cancer for his partner. His response was "I will accept it and maybe find out what stages it has gone to so that we can look for how it can be controlled from there."

Part 4: Actions for or Against Cervical Cancer and Screening

Interview Question 26: Would you encourage your wife/daughter/partner to undergo cervical cancer screening?

This question was asked to establish if respondents talked about the condition with their partners and took the initiative to advise them on going for screening. All the respondents said they would encourage their partners to go for cervical cancer screening. A cross section of responses was as follows.

Odongo was quick to say, “Yes, initially I have worked for a project that did cervical cancer screening as part of our outreach initiatives and I always encouraged her to get to one of our outreach sites and get checked.” Ochieng’ replied, “Yes, I would allow her to go for screening and even accompany her.” “I would seriously encourage her,” stated Miruka. “Yes, because if we go together, we can get so many things, said Ouma. Obiero gave an explanation, saying,

> Yes. I would encourage her and not only cancer but any other disease. I also encourage her to go for check-up and myself, in case I am sick I must go for serious medical check-up so that I know exactly what I am suffering from and then it can be managed.

Owuor expressed a desire to do so, saying, “I would wish.”

Interview Question 27: Why or why not?

This was a follow up question that aimed to help with the understanding of just how important it was for men to act in order to have women go for cervical cancer screening. The reasons given for encouraging partners to go for screening were quite varied.

Owino’s response was “This is a killer disease and so you better get tested and know your status.” Otieno said, “I have to encourage her so that she has all the information of her life status.” “I would like her to be free with me especially with the cervical cancer which the male carry, the virus so I would even be free with her and tell her in white and black,” said Ochieng’. These responses indicate a willingness on the part of the men to act one

way or another so that the condition could be controlled. Another response given was "Because I want her to be free from that cervical cancer."

Owuor's reasoning was "For them to know at early stage if something of that sort is there."

Interview Question 28: Would you give support towards uptake of screening?

This question aimed at eliciting information from men about their willingness to support women to go and get screened for cervical cancer. Study participants mostly supported uptake of cervical cancer screening. Ouma dramatically explained that "In fact if my wife has interest to go, I can even take her." Ouko too was willing to give support. His response was "At first you can advise them the risk of getting this disease and second if you have financial support you can give them some money to go for screening." Opiyo said he would "definitely" give "financial support" or "Any support because once somebody is sick, they need psychological support; they need financial support." Odera said,

> I would do anything. If it's taking them to the screening physically, I would take my time off from my work, pick my siblings, my sister and my mum and take them for screening if that would be the problem, they have in going.

Odongo gave an elaborate explanation, saying,

> I will talk about general facilitation that is if it's necessary, because I believe my wife is empowered and she might not be asking for 20/-, 80/=to go to the facility which is just across the road. And I don't live far from the health facility. But then I have also worked with an organization that she had an insurance card and any

> time she felt that she needed to go to a facility for check-up she did that, so she is generally facilitated.

Interview Question 29: Why or why not?

Responses from this follow up question were to give more information about men's reasons for either supporting or not supporting the uptake of cervical cancer screening. The reason for supporting uptake of cervical cancer screening was well summarized by Owino, who said, "This is a killer disease and so you better get tested and know your status."

Interview Question 30: What kind of support would you give?

Support could be given in many ways - in kind, financial and other ways and this question sought to find out the different ways men thought they could support women to undergo screening. Responses ranged from giving financial support to general facilitation as was necessary. Odera said,

> One, actually on my side personally if I realize my mum has this or my sister has this, I would look for a counsellor … somebody who knows more about this for example you, or I believe you know more about this. I would put her with my parent or sister and give them the right directives to follow on how to handle this.

Miruka said, "It could be financial and any other support that she needs from me." Ojuka's response was "Moral support and financial support, any support that they need." Misawo said, "Yes, I would even accompany them to the health facility." Other responses were as follows: "I would give her the moral support and I would also dedicate my time to make sure that she goes through it, feeling that I got her back in everything"(Okoth);

"Any, because once somebody is sick, they need psychological support, they need financial support" (Opiyo); and "By giving her whatever she will need while going for the screening and even after" (Onyango).

Despite promising the support, some men expressed concerns and indicated what might be challenges either with giving the support or with the women to whom the support was to be given. Misawo said,

> It depends on the level of the cancer, because cancer is not like malaria that you can go and buy Panadol and give to the patient. Cancer is cancer and the cancer survivors in Kenya and not only in Kenya but the whole world are few. So, if I hear about that kind of news and for someone like me who earns less than two hundred in a day then it will take me time to support them. Because I still have to buy food and all the other expenses. I might be required to provide for something's that I might not be able to afford because of the low salary that I earn. I could even be paid less than 150/- per day so with that kind of income, how can I even support them?

Interview Question 31: What assistance if any would you give in the event of a positive cervical cancer diagnosis?

Probed further about the specific type of assistance they would give in the event of a partner's positive diagnosis with cervical cancer, the men had the following to say. Otieno replied, "I have to find out a way it can be controlled or treated." Ouma said,

> You see there is nothing I can do about it because you said when I have that virus, for example if my wife went for the health screening and she came back that she

> has that virus automatically I will know that I have it. And so, there is nothing that I can do because you said I cannot see any sign, any sickness.

Owuor said, "I think I will give her every support she needs …… It's my responsibility." Ojuka also responded by saying, "If it's a matter of employing someone to look after her, I can take that part." Obiero was ready to take up the woman's responsibilities in the home envisioning that she would no longer be able to carry them out effectively. His response to this effect was "I know I will take even her responsibilities of now being the mother which I know when she is sick, quite a number of normal work or duties will not be done." Misawo thought about not giving up and letting the partner die. Here was a hint of despair that was displayed but also courage to deal with any eventual consequence of the disease. His response was

> That is really difficult though as a parent and human being you cannot just give up and watch your children die. And so it can be difficult to support them financially because I have all these expenses at home then in addition to that I want to support my children so that they can have a future life but it's really difficult at times.

Part 5: Health Belief Model Constructs

Perceived susceptibility.

Interview Question 32: What do you think are the chances of your partner being diagnosed with cervical cancer?

This question was asked to elicit information about how the men's perceptions of susceptibility would dictate women's screening behaviour. The responses that emerged

from this question included Okoth's statement that "Yes, I think so, there are chances." Otieno doubted and simply stated that "on my side, I doubt." He then went on to state that "Yes, they can if their partners have no information about it." Ouma simply stated, "I think so." Miruka thought, "The chances of her getting cervical cancer? It may be high." Ochieng voiced that "Like any other person they can be affected." Ouko said, "There are high chances." Odongo did not however think this was possible. Hs response was "Chances are I think very minimal." Ojuka thought it possible and said,

> I may say she is likely to get it but since the virus is with us, I don't know whether it is possible. We went for the test, but I was not tested because of the gadgets which were to be used were not there, but the women's gadgets were available. So, I don't know whether I have the virus, so I still feel she can get it.

Onyango even thought the chances of getting the disease were high because he said, "I can say the chances are very high and she can easily get the disease. I can say it's because of our lifestyle and the environment that we live."

Perceived seriousness.

Interview Question 33: What factors do you consider would increase a woman's chances of developing cervical cancer?

This question was asked to further probe the issue of perceived susceptibility and to elicit more information on men's perceptions of the contributory factors to women contracting cervical cancer. Single hood was stated as a factor that could increase the development of cervical cancer. Otieno said, "You know the single have many problems and also given that somebody can get the disease by having more than two partners."

Otieno further went on to state that “I feel that the ladies who are at risk is mostly the single ladies.” This statement was supported by other participants who also cited sexual activity and having multiple sexual partners as contributory factors. There were divergent responses where Miruka said,

> Based on the information we have the uncircumcised men are at risk of spreading this to the women. In this our area I do not think men who have undergone the circumcision so the chances of them getting this disease I think is relatively high,

and Owino said,

> In fact I think it even depends on the type of foods that we take. Yes, and even the environmental factors. For example, if we are living near some factories, there are some chemicals that are not good for health and this can even contribute.

Owuor had this to say: “I think moving about with other women you can get from other women and then come and transmit back to your wife something like that.” Ouko pointed out that

> I think fast maybe if she is not my wife, if she keeps changing men because you don’t know the type of men you are dealing with. Maybe you have gone with someone who has got this virus in their body and you don’t know they will transmit it to you that cancer.

Odongo also spoke out his thoughts, saying,

> We talked about multiple sex partners as one thing that would increase. There is also the question of exposure to STI’s which would later on turn to cervical cancer and there is the issue of the general hygiene of the woman’s reproductive

organ and that would put her at risk. I had earlier talked about smoking as a factor and then probably I will also talk about safe sex practice.

Miruka was of the opinion that

> Based on the information we have the uncircumcised men are at risk of spreading this to the women. In this our area I do not think men who have undergone the circumcision so the chances of them getting this disease I think is relatively high. I think they should get that education, that further education to tell them the dangers of this disease and there is hope of controlling it if they agree to undergo this screening.

Perceived barriers.

Interview Question 34: Are there any concerns you have about cervical cancer, screening and treatment? What are they?

A number of concerns were expressed by the participants about the condition of cervical cancer, screening and treatment. Okoth narrated the following:

> My concern is that cervical cancer is not new to the Government and the society at large…. they address orphans and vulnerable children and also people living with HIV and AIDS but they don't consider those who live with cancer, or those who are at risk of getting cancer … so it's high time that these partners or these parties come up together and decide to consider this cervical cancer as a killer disease and maybe have some budget for it. Like for example if you go for HIV testing its free you can get here, but if you want to go for cancer screening its costly. But now HIV has been contained but when you go for cancer at the next

> stage cannot contained. Now even HIV virus, when you are giving the ARV's you will be restored back to life and you can live for long. But cancer there is a stage it reaches, however chemotherapy you do you will just die. So I think it's high time that the Government and these other bodies should come together and put things and these facilities should be everywhere in these our health facilities in these hospitals so that you can walk in and do cancer screening. And we have a cancer free area such that cancer is identified at a first stage and you are helped.

Participants also confirmed and were concerned that there was a lack of awareness about the condition. This was expressed by Okoth this way:

> And even the knowledge, the awareness, the cancer awareness is not that widespread because people just even those who have HIV Aids, now they think if they have HIV Aids they are just having unprotected sex, but you can also get cancer in between. So if you are suffering from HIV and then get cancer again so you should still protect yourself because there is Human papillomavirus that can also get you in the middle of this. So this awareness should go viral.

This issue of awareness was reiterated by Odongo, who said,

> my biggest concern is it's a topic of concern because not just cervical cancer but cancers are generally growing and its currently killing more than any other disease … and this is because people are not well informed. So my biggest issue is information outside there and people still think that cancer is … a disease of a given class, and … they don't take it as serious as it deserves. And again there is a question of resources and a question of facility as a concern. You would be

> having resources but maybe there are no adequate facilities to take care of all the cancer patients. And also there would be facilities but there are no people so it's generally a public health concern.

Misawo's concern was expressed as follows: "Of course I am scared of any disease that can kill. I have to be afraid of it. I cannot pretend that I am not afraid but anyway we need to have more information within the community." He went on to elaborate, saying,

> But the main issue we have here is poor income if it was something that we can deal with easily it would be good, because if your family members need money to constantly go for screening and then they go and they are required to go back then it might not be an easy thing for us to get that transport money for instance. So finance is a big issue for most of the people around here.

Onyango voiced his concern, saying, "The fact that there are no symptoms when someone has this disease and they might be affected but nobody knows and even he doesn't know and he might spread it to other women."

The issue of resources with which to address the disease was also of concern to the participants. The concern was expressed by Misawo as follows:

> But the main issue we have here is poor income. If it was something that we can deal with easily it would be good, because if your family members need money to constantly go for screening and then they go and they are required to go back then it might not be an easy thing for us to get that transport money for instance. So finance is a big issue for most of the people around here.

On another level, a different concern was expressed. This was to do with symptoms of the disease. Onyango said, “The fact that there are no symptoms when someone has this disease and they might be affected but nobody knows and even he doesn’t know and he might spread it to other women.”

Interview Question 35: What do you think would make it easy or difficult for women to undergo screening?

The ease or difficulty of undergoing screening may be an issue in women’s uptake of cervical cancer screening. The men thought support was a very important factor in making it easy for women to go for screening. Questioned about this, the men said the following. Otieno mentioned “the support that she will get.” Ouma thought outside influences could be what the women needed. His response was “For women to understand this the way we are talking with you if you can come to the ground and get the women and teach them they will automatically understand.” Owuor said, “The encouragement, you just do the encouragement that these are the things you need to go for checking, it’s just checking.” Odera explained that “I think it is support and encouragement from family … and support from the people you are very close to will make it easier for her to attend the screening.” Discussion with husband was Ojuka’s response to this question. He said, “Because they normally talk with their husbands, they share issues and so it will be easy for her to go for the test.”

Having information about the condition and communicating the same to the women was another factor that was frequently cited. This was compared to information given about HIV/AIDS where the men noted that women and men alike had much

information on this diease. The thought was that the same should happen with cervical cancer. Odongo expressed it this way:

> What would make it easy is information, education and communication, and for me that route. Now people see the sense of going for HIV test because it has been talked and talked about but if we get the same vigor to cancer and generally health seeking behaviours then women will go and seek to be screened.

Miruka supported the issue of education, saying, "I think when they are educated on it. Yes, the education can make them easily avail themselves for the screening."

Comparison was made of cervical cancer to AIDS and even malaria. In the same breath, participants still cited support as a major factor that would make it easy for women to undergo screening. Ouma said,

> I don't see anything that would make it difficult because it's not the kind of disease that for example AIDS in the past there was that perception if you contracted AIDS that you were a prostitute … And so I feel that this disease is just like malaria and its more about the support that is given to these people once infected.

The theme on possession of information also arose when the men were questioned about what would make it difficult for women to undergo screening. Odongo elaborated by saying,

> People need to have information and we say information is power and for as long as a clique of people are the only group with the information then it's still going to be very difficult. Now people see the sense of going for HIV test because it has

> been talked and talked about but if we get the same vigor to cancer and generally health seeking behaviours then women will go and seek to be screened.

Onyango reiterated that

> At times some people are not well informed and they are afraid of knowing their status. For instance, if someone is told that they have cervical cancer then they feel that it's the end for them and they will even be more stressed after receiving that information. So some people opt to stay without knowing their status so that they can avoid feeling stressed about it.

Participants also thought that they themselves could be a factor that made it difficult for women to go for screening.The relationships they had with their partners was significant because women would be afraid on several levels. One is that the women would be afraid of the explanations they would have to make in the event of a positive diagnosis. On another level, the men thought the women would be afarid of that positive diagnosis. Responses to this effect were as follows: "Maybe on the other side it might depend with the partner, maybe she is scared in case she is affected, how to explain herself to the partner, something like that" (Otieno); "Just fear. That fear that once she is screened and the results come that she is in that state" (Owuor); and

> It depends with the husband in the sense that I may not be free with my wife and so she may not be in a position to go for tests because if she is tested and found that she is a carrier then I will not accept her, so that is a factor. So it depends on how we relate with my wife. (Ojuka)

Another hindrance to women's uptake of cervical cancer screening as percieved by the men were the perceptions, knowledge or imaginations of what women thought about the procedure for screening. As Odera put it,

> You know this majorly goes to young ladies and young women, they tend to be shy. I tend to imagine the screening of cervical cancer involves a medical practitioner who is viewing your private parts. So the young ladies and young women tend to be shy about this.

Decision making and empowerment were other factors that were cited. Alongside this was the decision to either buy food or use the little the family has to go for screening. The decision almost always was to buy provisions for the family rather than spend money on an item that is deemed unecessary. This was expressed by Odongo as follows:

> One of the things, in most circumstances women are not decision makers and women are not economically empowered. A woman would still need 100/= (approximately $1) for boda-boda (a form of cheap local transportation) to go to the facility and more so in the rural areas … and sometimes the husband is not so economically empowered and they have to make a decision between 100/- to buy food or 100/- to go to the facility and probably they will think that buying food will be more important, so I think that makes it difficult.

Onyango said,

> At times some people are not well informed and they are afraid of knowing their status. For instance, if someone is told that they have cervical cancer then they feel that it's the end for them and they will even be more stressed after receiving

that information. So some people opt to stay without knowing their status so that they can avoid feeling stressed about it.

Perceived benefits.

Interview Question 36: What do you think are the consequences of one developing cervical cancer?

This question was asked with a view to identify what participants saw as consequences of infection. The themes that emerged from this question were "Death," "Terror," and "Instability." Participants responded in the following ways: "For long, I have known that when you get cancer you die. The consequence is death" (Okoth); "Automatically if you know for example, leave alone women, even men automatically if I go to the hospital and I have cancer it is very terrible" (Ouma); "The family will not be that stable, there will be money required for you to go to the hospital. And then the second one I think the family will keep on asking themselves what if we lose her?" (Ouko); "The main one is death which is very painful and I also think for young ladies who are still undergoing reproduction it might affect their reproductive system and so that dream somebody had of giving birth might be hampered" (Odera); and "I think the consequence is death" (Ochieng). Otieno seemed not sure of the consequences, and he said, "About the impact unless I get to know more about it."

Miruka had a different perspective citing economic activities. His response was "You see when they are having it the consequences will be somebody will start losing hope in life, they may not be active in economic activities." Owino seemed to support of

this when he said, “In fact if your partner happens to be suffering from cervical cancer there is low productivity in the family and the income will tend to decrease.”

Ojuka’s response was “The consequence is almost next to death.” Obiero also cited death, saying,

> The consequences one is death and the other one is you can be rendered incapacitated that you are not able to do your duties. Even as a civil servant chances of being dismissed from services because I am not able to perform, so chances of losing your job are very high.

One other consequence as brought out by Onyango was “If they don’t then the consequences would be many people being infected.” Touching on the wider community, Odongo said,

> The consequences … probably you will end up having a people who are socio-economically un-empowered and we are going to increase the poverty circle because when you are sick you are not able to do anything. A sick society cannot work and if a sick society cannot work, a non-working society cannot develop and if a non-working society cannot develop it means the few social amenities like the social amenities we have will just stagnate or ultimately end up dying … So the consequences … most probably you are going to realize it late and it makes treatment more expensive, makes treatment more complicated and when it gets to a point you cannot be treated, we consider you terminally sick … and all we can do is manage you as you await for your death.

Interview Question 37: What do you think are the benefits of women undergoing cervical cancer screening?

The benefits to women as perceived by study the participants were varied and were related to only the women. These perceived benefits as relayed by the men were as follows: "you would know your status as far as cervical cancer is concerned" (Okoth); "if detected early it can be treated" (Ochieng'); "to live a healthy life" (Otieno); and "Yes, … if you went for screening and you know you have it, you will start treatment and so you can stay longer than waiting" (Ouma).

Odongo elaborately explained that

> The benefits of women going for screening one is when you know your status or the cancer status as a person it gives you the comfort of living freely and it also helps you in decision making. It will help you with making decisions on how to better live your life and two incase you go for checks and you realize you have cancer then you get to know it earlier enough so that you can be managed earlier. And then it also tells you about what stage you are in as a cancer patient and therefore you are able to make decisions on where exactly to seek the proper treatment for your case.

Misawo may not have understood that the screening is for the women. He said the following:

> It is important to go for screening but at times it's very tricky, because I cannot just wake up one morning and ask my wife to go for screening. Would you even accept to do that? And you know men almost 80% of these men are drunkards

> and I might wake up thinking about my own issues and if she pushes me to go to the hospital for screening I might decline.

Cues to action.

Interview Question 38: What would motivate you to encourage women to undergo cervical cancer screening?

This question was asked to elicit information about what men would do or what they did as a result of a reminder of some sort or an encounter with the disease cervical cancer. Odera was particularly passionate about telling the story about cervical cancer and screening because of an experience he underwent. His story was as follows: "Personally when I remember how I lost my family, it is one thing that motivates me in telling people to go and seek that screening because I have lost relatives and I wouldn't want to lose more than this." This response was reiterated by Misawo, who said,

> It would be a very good thing to do because it very painful to lose someone over something that has a cure. It doesn't have to be my wife but it could be someone that I knew maybe a neighbour that you borrow salt from each other. So when they die from a disease that has cure even if you are not related you are affected. So I would be willing to talk to those who are willing to listen because I cannot also force her to come because I cannot carry her on my back and force her to go for screening but if she is willing to go then I will ask her to go.

Other responses included that of Ouko, who explained,

> What would motivate me is if the services are around and if they are affordable because I don't want a situation where we have people dying because of this killer

> disease. I will urge everybody to go and test themselves so that they cannot neglect their families.

Additionally, Miruka reflected, “I think based on the information we have got concerning this disease I may be able to urge them to undergo this clinic so that it can be controlled when it’s found they have it.”

Obiero related the issue to the economy of the community. He said,

> One what can motivate me is the family issues. You know when people go for the screening, they know their status and then the economic status is maintained and they don’t spend so much on treatment. So our economy will be sustained and of course we will use money for the right things that will benefit us. And of course I always talk about in a public baraza and any forum I always organize forums with the health officers so that we enlighten people on how we can handle cervical cancer and what we can do in case one is affected.

Odongo’s response was

> You think with a little more information they would live a better life, for me that is the motivation, the fact that I would want to see one person in the society transform and I know transforming one would help transform the rest.

These responses show that any cue to action is necessary for the man to begin thinking seriously about the condition of cervical cancer, and to take steps to help create awareness or put inplace measures to reduce the disease.

Self-efficacy.

Interview Question 39: If there was an opportunity for women to undergo screening, do you think there is a chance that they would do so?

This question was asked with the aim of establishing men's perception and knowledge of how well women would actually fulfill the activity of going for cervical cancer screening. Answers were varied but a major theme here was an affirmation that women would indeed undertake cervical cancer screening if well supported. Some significant responses were as follows:

> You know this depends and in our environment right here … I think illiteracy is so high. And it might be announced several times but the turn out might be so low. So one thing that makes women not attend to such screening is lack of information on this, they don't know much information on this. (Odera)
>
> Yes, you know maybe the discussions, you know sometimes they go discuss with other women and they have the same problem. But they have not come to say I will go and get screening. That is an individual decision. Yes. It is similar to HIV we have some who have not gone for the test and some have gone so it's an individual decision. That again is an individual thing because you can push them to go and some are not willing to go and so you cannot push them or carry them but there is a scenario where you can mobilize, if there is a vehicle you can take them. (Opiyo)
>
> Some will go depending on how they interact in the house with their husbands. And there are some husbands who are very difficult and maybe the woman is

> found with the cancer he will not accept her back home. So those women may find it difficult to go. But those who interact frequently with their husbands will find it easy to go for screening. (Ojuka)

Several participants however felt that the women would not go for screening if an opportunity arose. They gave reasons as follows:

> I still think some will go not all and that brings us to the question of do they see the sense? Do they see the need to go? So it's the value added to the information you give.… we don't attach seeking treatment and seeking tests to the most important thing. And if I cannot attach seeking test for cervical cancer to the value of being there for your family tomorrow … when you don't have cancer … So I think it's the value addition that we add to the information we share about cancer. (Odongo)

> One thing I fear is ignorance and I know an ignorant person even if you tell her the right thing she may not understand it immediately so that is the challenge. Those things can be there but making use of them, they cannot make use of them because of ignorance. (Obiero)

Without elaborating, Misawo simply stated that "I don't think majority of them would go."

Interview Question 40: Is there something important that I may have forgotten that you think I should know?

This question was asked to elicit information from the men about any other issue that should have been addressed but was not addressed during the interview session.

Some of the concerns that were raised pointed towards an interest to know more about the condition. These were as follows.

> Okoth was appreciative that such a study was being conducted. He said,
>
> There is nothing more, but I would also want to thank you for taking part in this research for. Maybe this department of cervical cancer, and maybe you should help society back after getting your results because it's something that needs to be addressed.

Ochieng asked questions. He said,

> I have another question and why is it that these days there are many cancers cases and I am hearing more about it because while growing up I never used to hear about it? But in the last 10 years I have been hearing more about it, but in the past are you trying to say that those men didn't carry this Human papillomavirus? …
>
> My other question is that you are now doing your PhD of course through the Government and you are now doing a research about cervical cancer, and then it's the same Government that has given KEBS the mandate to manage the quality of products in Kenya. So I feel that the same Government is allowing these cancerous products to be available in the market and to me I feel that the Government is somehow promoting this cancer because if they were not promoting it then they would not have allowed these cancerous products into the market.

Owuor's concern was

> … as per what I have seen I just want to know whatever you are doing, will you have a program that you will bring at least to assist people around? Because as a result of maybe ignorance that our females or wives might be having but once that kind of awareness is out there like what you are doing, they can get to know what is happening in their lives.

Odera also had some questions. He asked,

> I told you I lost two relatives … though I was still young, and I didn't know much about it … And this has in a way opened my eyes and I want to know if this can be controlled. If there is a way, it can be sustained so that if somebody is suffering from this there is some medication that can give her strength to act on this.

From Ojuka, the question was

> In the years of our forefathers we were not hearing about this disease and it has just come around two decades ago, where does it come from? And there were men those years with their families and there were no such diseases?

Onyango also had several questions. These were his statements:

> I have discovered that there is a lot of sensitization about cervical cancer in the media even on the radio, why? Is it that they are now discovering that many people are being affected by it? Or have the cases increases? Why is the Government suddenly interested in cervical cancer? What is going on?

These responses indicate that there is work that needs to be done in order to sensitize men about the condition of cervical cancer and to engage them to fully get involve in matters of women's health and particularly the prevention of cervical cancer.

After a review of the interview questions and transcripts, the knowledge and perceptions of men about cervical cancer and screening for the disease became clear. It was also clear how this knowledge and the perceptions would influence women to undergo cervical cancer screening. The knowledge of the participants about the disease was low and in most cases the knowledge they had was inadequate and incorrect. On perception, the men perceived this to be a disease of women which came about as a result of the women's activities, and that men were not involved in its spread.

On being made aware of the condition, the men explained that they would be willing to support women in going for cervical cancer screening because they now understood what the disease was. Various responses to specific questions however indicated a need for the creation of awareness about cervical cancer and the giving of correct information about the disease. This would in turn play a great role in getting men to support women to undergo cervical cancer screening and reduce the incidence of the disease in the community.

Themes and Subthemes

The themes that emerged in this study were grouped into 4 major categories namely 1) Knowledge and awareness of cervical cancer and screening, 2) Sources of information for cervical cancer and screening 3) Perception of cervical cancer and screening. 4) Action for or against cervical cancer screening, 5) Cultural and religious beliefs. Each theme yielded various subthemes as discussed in the following section:

Theme No. 1: Knowledge and awareness of cervical cancer and screening

The first 14 interview questions were asked with the aim of finding out whether participants knew about or were aware of the condition of cervical cancer and its screening procedures. These 14 questions are also directly related to the research question No. 1.

Participants reported little or no knowledge of cervical cancer or the screening procedures for the disease. Those who were aware of the condition further reported what they thought they knew about the disease

Subtheme A: Treatment is difficult - Participants were not sure if the disease was treatable locally and thought one may need to go abroad to seek treatment

Subtheme B: Disease affects women - Many of the participants thought this was a disease that affected women and mainly interfered with the vagina.

Subtheme C: No Knowledge or little knowledge of the disease - A few participants reported knowing more about other cancers but had no knowledge of cervical cancer

Subtheme D: Disease is transmitted to men by women – Many of the men also thought the disease was found in men and that it transmitted to the men by women

Subtheme E: Disease is linked to smoking and bad diets – Some men thought that cervical cancer could be brought about by the foods they ate and also through smoking much like lung cancer.

Subtheme F: Disease is associated to sexual activities – To reiterate what many men said about the disease being passed on to them by women, other men added

that it was passed on through sexual intercourse and would therefore affect both men and women.

Theme No. 2 – Perception of cervical cancer and screening

There were additional interview questions that were asked to address this theme, and which also addressed specific sections of the research question No. 1. This theme yielded the following subthemes:

Subtheme A: It is a dangerous disease - Participants in the study thought the disease was a dangerous one mainly because one did not suffer any symptoms and so was unlikely to take any action against it at an early stage.

Subtheme B: The disease brings only death – Participant thought that the condition was incurable and so death was imminent.

Subtheme C: It is a feared disease – Participants had not encountered the disease on a personal level but what little they had heard about it caused them to fear the disease, because they said that only death would be the result of a positive diagnosis of the condition.

Subtheme D: Screening interferes with virginity – Study participants did not know what screening is or what the procedure involved. After some education on this, their response was that screening was something that was not done in the community. The perception here is that it would interfere with a woman's virginity.

Theme No. 3 – Sources of information for cervical cancer and screening

This theme addressed the research question No. 2. There were four interview questions as well as some follow up questions that were asked in this area, and the following subthemes emerged:

Subtheme A: Advertisements – Major sources of information about cervical cancer were reported as coming from advertisements seen on television or heard over the radio. Social media was also reported as being a frequent source of information for the disease. Interestingly though, the participants did not seem to know much about the disease despite these sources of information.

Subtheme B: Word of mouth – Reports indicated that there was much discussion among people in the community about the disease. The question is what information was being discussed and spread concerning cervical cancer and screening.

Subtheme C: Nongovernmental organizations – Another frequently cited source of information were the nongovernmental organizations that were working within the area. It was reported however that these organizations were not specifically imparting information about cervical cancer, but more for HIV/AIDS and other ailments that affected the community in general.

Subtheme D: Rite of circumcision – Circumcision is not ordinarily a cultural practice of this community. The men who chose to do it had reasons that were not given. Nevertheless, these men were able to get some information about cervical cancer as they went to undertake this procedure.

Theme No. 4: Actions for or against cervical cancer

There were 40 interview questions that were asked, alongside several follow up questions that directly addressed research question 3. The following subthemes emerged from this theme as follows:

Subtheme A: Willing to Initiate process of screening – Many of the men indicated that they would initiate that their partners go and get screened.

Subtheme B: Willing to Provide Financial support – The men were willing to give the financial support required by the women to go for cervical cancer screening. This is important because the women depended wholly on the men for this kind of support as it is the men who work for wages.

Subtheme C: Would Give Moral and physical support – Screening would perhaps have a negative psychological and social impact on the women and so the men indicated that they would give moral support for this procedure to be undertaken. The participants were willing to personally accompany their partners to the health facilities so that the women could undergo cervical cancer screening.

Theme No. 5 – Cultural and religious beliefs

In this section, questions were asked that touched on the common practices of the community and how these impacted the uptake of cervical cancer screening by the women in the community. Subthemes emerged as follows:

Subtheme A: Concerns about role reversal – The men were worried that they would have to take up the roles and responsibilities of the women should they die as a result of cervical cancer. Many thought it would be too demanding and that they probably would not cope with duties in the home as well as their own duties

as men. This thought perhaps would cause the men to give the support women needed to undergo cervical cancer screening.

Subtheme B: Cultural and religious beliefs – There is nothing religious or cultural that was seen as a hindrance to men giving support for screening.

Subtheme C: Concerns about virginity status – Men would not marry a woman who is supposedly not a virgin. Screening is seen as to interfere with a woman's virginity.

Relationship to Research Questions

It was stated in chapter 1 that the study would be based on three research questions. The research questions are:

Research Question 1. What cultural beliefs, knowledge, and perceptions do men in Kendubay, Kenya, hold about cervical cancer and cervical cancer screening? There were a total of 14 interview questions that were directly related to RQ1 in that they solicited information that would reveal the cultural beliefs, the knowledge and the perceptions of men about cervical cancer and cervical cancer screening. After several reviews of the transcripts and notes taken during the interviews, significant information that emerged was that the men had very little knowledge of the condition of cervical cancer and many did not even know that screening for the disease is available or that it was an option to the prevention of the disease. The themes that emerged indicated that the men reported having knowledge about other types of cancer but not cervical cancer nor were they conversant with the screening procedures for cervical cancer. The perceptions the men had was that the disease is a women's disease and that women got it through

poor hygiene and possibly the foods they ate. Also, that it affected the private parts, with one participant saying it affects the breasts. In as far as cultural beliefs were concerned, non were reported that could hinder men from supporting women to undergo cervical cancer screening.

Research Question 2. Where did the men in Kendubay, Kenya, get their information about cervical cancer and cervical cancer screening? Three interview questions were directly related to RQ2. The study participants reported getting information from various sources which included, the media, advertisements, and social media. Few mentioned that they got to know about the disease through discussions with other men. Experience was also cited where one participant reported having lost two members of his family to cervical cancer. One other source of information about cervical cancer came when the men went for circumcision. The men reported being told about cervical cancer during this time. It is to be noted that circumcision is not a cultural practice of the Luo community, nor is it directly related to issues pertaining to cervical cancer or the screening for the disease. The men who do it would be because they have been sensitized about it and would likely engage medical personnel to carry out the procedure. This procedure would then have been done at a health facility, where it is likely the men would get credible information about the condition of cervical cancer.

Research Question 3. Based on knowledge and perception of cervical cancer and screening, what do men do or not do to encourage women to undergo cervical cancer screening? This RQ had 14 interview questions directly related to it. The analysis indicated that men were willing to support their partners to go and get screened in a bid to

prevent the occurrence of cervical cancer. Financial and moral support was cited by many of the men. One participant made it clear that he would physically go with his wife if she was interested in screening for the disease. Other participants found it difficult to offer support believing the disease to be contracted through promiscuity.

Summary

During this study, I have gained a better understanding of the knowledge and perceptions of cervical cancer and cervical cancer screening of men living in Kendubay. The knowledge here about the condition was low. Information that men had about the disease was insufficient and incorrect. Much as the men indicated a desire to encourage and support women to undergo screening, this was frustrated by the lack of proper information about the condition.

An overview of the results implies the following:

1. That knowledge about the condition of cervical cancer was low. This is depicted from the themes that emerged which indicated that the men had little or no knowledge of cervical cancer and the procedures for screening for the disease. Whatever information the men had was inadequate and incorrect. This could therefore be a hinderance to influencing women to go for cervical cancer screening.
2. That men's perceptions about the condition of cervical cancer and screening were also a hindrance to supporting women to go and be screened for cervical cancer. As per themes that emerged on perceptions about the condition, the men indicated that it was a disease that could only bring death and so did not

want to associate with it in any way. Other men indicated that the condition was a myth and so did not give much serious thought to it.

3. That men living in Kendubay desired a better knowledge of the disease and were willing to support the women to undergo screening. They offered financial and emotional support, with some men indicating they would accompany their partners to go and get screened if need be.

Chapter 5 provides an introduction and summation of the study findings. The chapter also gives greater insight into the study findings, limitations of the study, implications for social change and recommendations for future research.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to examine the knowledge and perceptions of men living in the rural town of Kendubay about cervical cancer and screening for the disease. A qualitative narrative descriptive approach was used to address the research questions. The analyses of data in Chapter 4 yielded various responses that reveal men's knowledge and perceptions about cervical cancer and screening, and how these influences women's uptake of cervical cancer screening. The major themes that emerged from the study were as follows: 1) Knowledge and awareness of cervical cancer and screening, 2) Perception of cervical cancer and screening. 3) Sources of information for cervical cancer and screening. 4) Action for or against cervical cancer screening, 4) Cultural and religious beliefs. In this chapter, I present a detailed discussion of the interpretations of the findings, which include information for each of the three research questions, and I also address specific issues in the context of the HBM, the theoretical framework that guided the study. Indicated also are the relationship of the study findings to similar studies and literature, recommendations for future research, limitations, implications for positive social change, dissemination of the findings, and conclusions of the study.

Interpretation of Findings

One of the reasons for the lack of support cited in literature concerning cervical cancer and its screening is lack of awareness and little or no knowledge about cervical cancer among men (Akanbi et al., 2015). The literature also suggests that this lack of awareness among men about the disease could contribute to a lack of support for women

to undergo cervical cancer screening (Ngugi et al., 2011). Findings of this study indicated lack of awareness among men in Kendubay about cervical cancer, suggesting that because of this, the men did not support women undergoing cervical cancer screening.

Research Question 1: What Cultural Beliefs, Knowledge, and Perceptions Do Men in Kendubay, Kenya Hold About Cervical Cancer and Cervical Cancer Screening?

Much is taught in church and in village gatherings concerning religion, and various beliefs and religious practices dictate what activities can and cannot be engaged in by individuals. Information was therefore sought to understand any restrictions there might be on undertaking screening and treatment for cervical cancer. Concerning cultural beliefs, my study did not find any among the men concerning the disease or its screening. This is contrary to Sudenga et al.'s (2013) finding that men believed that the disease was a punishment from God for wrong doing and that men did not see themselves as involved in any way in its propagation or prevention. Issues of religion were brought out in the demographics of the participants, and results in this respect did not show any dictates of religious affiliations that would negatively impact women's uptake of cervical cancer screening.

In relation to what men knew or had heard about cervical cancer and screening for the disease, results revealed that a few men had heard of the disease and were aware of its existence but were not sure what the disease is or why and how it occurs. Other men had no knowledge of the condition of cervical cancer, although they had heard about other types of cancers. These responses are similar to those noted by Williams and Amoateng (2012), who reported a lack of knowledge and awareness about cervical cancer among

both men and women. Findings further point to the possibility that women did not go for cervical cancer screening because their male counterparts did not have enough knowledge about the disease to encourage or support them to do so. Trevino et al. (2012) noted that people may only be able to act for or against an issue, if they are aware of it and know what to do. Chasco (2015) also found that it is difficult to implement change when one has no idea about what change to implement or has no knowledge that a problem exists; such knowledge gaps may have negatively impacted the uptake of screening for cervical cancer in this study.

Concerning what the men knew about the disease, findings indicate that the information that the men had about cervical cancer was inadequate and incorrect. Further, it was clear that what men knew about cervical cancer and screening was based on what they had heard about the disease. Credibility of these sources of information was also not immediately established. This information was, however, circulating among the men in Kendubay and possibly among the women as well, which may have led to their having similar perceptions. For instance, there was a perception that women were responsible for transmission of the disease because it was a "women's disease," and that the disease resulted from an unhygienic physical environment. The term *screening* was not known to the men. This was noted when the study participants questioned what the term meant. After a brief explanation of the term, the men were then able to respond to the questions pertaining to screening for cervical cancer. This lack of knowledge further hindered the men's involvement in ensuring that women underwent screening for cervical cancer. My study has addressed the gap in literature concerning the lack of knowledge about cervical

cancer among men and how this could make it difficult to implement positive change that would encourage women to undergo screening.

Despite having little or no knowledge of screening, all of the study participants thought it was necessary that women go for cervical cancer screening. There was a common theme in the responses, and all participants were of the opinion that women should go for screening because women need to check and know their status and begin treatment if necessary. Responses were consistent with findings of De Bocanegra et al. (2009), who found that men were willing to support their partners' decisions to be tested for cervical cancer if they knew what their role in preventive healthcare entailed.

My study may provide evidence to support research that would show a connection between men's knowledge of cervical cancer and the age at which women should undergo cervical cancer screening, because the men did not know at what age women should undergo cervical cancer screening. Such a suggestion has been supported by Drewry et al. (2010), Duggan et al. (2012), and Karjane and Chelmow (2013), who stressed the importance of leveraging knowledge and perceptions regarding cervical cancer and screening as one way to reduce the occurrence of this disease.

Concerning risk factors for cervical cancer, the study participants thought that women were at risk of developing cervical cancer; however, the men were unable to name the risk factors, revealing that they had no knowledge of risk factors for cervical cancer. As was noted by Tapera et al (2017) in a study carried out in Botswana, knowledge of risk factors would help to address any negative perceptions or biases that the participants probably had against screening for cervical cancer. The literature

confirms that indeed men do not know about risk factors for cervical cancer, which makes it difficult for them to support women in going for screening (De Bocanegra et al., 2009; McPartland et al., 2005; Trevino et al., 2012; Williams & Amoateng (2012).

On the question of perceptions, the men's perception was that the disease is bad. This perception could not have been based on any personal experiences with the disease, but it might have been based perhaps on the incorrect information that the men had about it. This is consistent with a study by Ngugi et al. (2011), who noted that men considered cervical cancer a problem for women alone and put the blame squarely on women, even though they themselves could be responsible for the propagation and spread of the disease (Palefsky, 2010). The literature also shows that people may believe that cervical cancer is brought about by witchcraft and that only witch doctors can deal with it Ndikom & Ofi 2012). Ndikom and Ofi further noted that even among women, perceptions may be so negative that women themselves will not undergo screening, perceiving this as a means to be bewitched.

Other perceptions noted in the study were that men thought that women brought the condition upon themselves through what they said were the women's irresponsible behavior, and that the women were being punished by God for such behavior. The men also said that indulgence in bad diets, smoking, and even suppression of negative thoughts brought about this disease. Literature has confirmed that this is the perception of men in other areas (McPartland et al., 2005). With this kind of knowledge, it could be difficult to provide the support that women need in order to go for cervical cancer screening.

Research Question 2: Where Did the Men in Kendubay, Kenya Get Their Information About Cervical Cancer and Cervical Cancer Screening?

Results here revealed that there were numerous sources of information about cervical cancer, including advertisements, social media, radio, television, and even word of mouth. One concern about these sources of information is the credibility of the information that was given to the men. Based on responses of the study participants, results revealed that the information imparted was inadequate and incomplete, and in many instances incorrect. This is consistent with findings of similar studies (De Bocanegra et al., 2009; McPartland et al., 2005; Trevino et al., 2012; Williams & Amoaten, 2012) that found that the information both men and women had about cervical cancer and screening was inadequate and incorrect. Because of this, men may not have enough knowledge to help them make decisions about supporting women to undergo cervical cancer screening.

One participant reported getting information about cervical cancer when he went for circumcision. Circumcision is not a typical cultural practice for this community and therefore an unusual source of information. Because many men from this community would not participate in this procedure, it is a source that would not target or reach many men. Among the study participants, men who had gone through this rite of passage were very few—there was one, to be exact—and although the reason for undergoing such a procedure was not given, it was assumed that it was not to get information about cervical cancer. Nevertheless, some information about cervical cancer was given, but it was inadequate and incomplete. Here, there is a gap in the literature about the rite of

circumcision being a source of information for cervical cancer to men. My study is probably the only study that has remotely linked circumcision for men with impartation of information about cervical cancer, but this is not to suggest that receiving clinical care for a sexually related issue might cause one to suffer cervical cancer.

Research Question 3: Based on Knowledge and Perception of Cervical Cancer and Screening, What Do Men Do or Not Do to Encourage Women to Undergo Cervical Cancer Screening?

Results revealed that the men did not do much to encourage women to go for cervical cancer screening. They did, however, express what they thought they could do. This included giving financial as well as emotional support. Few participants talked of accompanying their wives for screening if this was necessary. These results were consistent with findings from previous research (Ngugi et al., 2011; Rosser et al., 2014) where knowledge of the disease or lack of it did not cause any action to be taken by men to encourage or support women to undergo cervical cancer screening, except perhaps a mention of what could be done.

On a few occasions, the men did make decisions on whether a woman should undergo cervical cancer screening. This was because they were the sole financial support providers. The men therefore had a final say as to how the family finances were to be used. Their priority was not screening for cervical cancer. The woman, therefore, was often left to make this decision alone. Kidula's (2012) study found a similar situation that indicated that women did not receive adequate support, financial or otherwise, to go and get screened for cervical cancer, and women were also left to make decisions on their

own about cervical cancer screening or any other health-related matter. This, according to several other studies (Drewry et al., 2010; Duggan et al., 2012; Karjane & Chelmow, 2013), may be attributed to a lack of knowledge among men about women's illnesses.

In this study, there were few instances when both a man and his wife discussed the issue and together decided how best to tackle it. The literature does not indicate this as a common practice. Rosser et al. (2014), in fact, noted that it was taboo for men and women to discuss women's ailments. This study is perhaps the first to note this collaboration between husband and wife. On the question of what motivated the men to encourage cervical cancer screening, participants cited reasons ranging from knowing one's health status to detection of the disease so that treatment could begin. The body of literature available concerning this indicates that men are willing to act against the propagation of cervical cancer, except that the action to be taken depended on articulation of what is required of them to do (De Bocanegra et al., 2009). There is, however, no literature that points towards men's responses as to whether or not they would encourage their female counterparts to undergo cervical cancer screening, and this study is perhaps the only one with responses to this effect.

Participants indicated that they would give support in various ways—in kind, financially, and in other ways as they deemed fit. Financial support was most frequently cited but was also indicated as a major challenge because of the low income of the people of Kendubay (KNBS, 2011). Another challenge that the men talked about was that the women themselves would probably not agree to the support that would be given to them

to go and get screened for cervical cancer. This, according to MoPHS and MoMS (2012), is due to people living in ignorance or denial about prevailing health conditions.

Assistance to women if they were diagnosed with illness was an important factor for the men, and even when they did not know much about the disease and its screening procedures, they were willing to take up responsibility for any consequences attributed to screening for cervical cancer. There is, however, no available literature to support this. The participants made much reference to support given to people with tuberculosis, breast cancer, and even HIV, but not to those affected by cervical cancer. My study therefore provides initial information that could help fill the gap in this area.

Much as the men promised to give support, the undertone was fear of being left alone should the partner die. The men were also curious about the state of health of their partners and for these two reasons, support would be given. This is not consistent with the available body of literature that indicates that financial and moral support is given to women for some health procedures, whereas women must deal with problems pertaining to cervical cancer on their own (De Bocanegra et al., 2009; Williams & Amoaten, 2012).

When study participants were questioned on their feelings should their partner be diagnosed with cervical cancer, sadness, terror, and misfortune were the responses that arose. The literature does not report men's feelings about a positive diagnosis of cervical cancer in their wives, daughters, female partners, and acquaintances. Again, this study is perhaps the only study that has highlighted this aspect of cervical cancer. The few studies in this area have indicated only what women felt about positive diagnosis of the condition (Kidula, 2012; Ma et al., 2013; Rosser et al., 2014). The men were, however, ready to

accept a positive diagnosis and reported that they would find ways to control it. Willingness on the part of men to take action against cervical cancer was also noted by De Bocanegra et al. (2009).

On a more personal level, all of the study participants had questions concerning the condition of cervical cancer and screening and expressed a desire to know more about the disease. The questions pointed to the fact that awareness about cervical cancer needed to be created among the men in the rural town of Kendubay. Second, correct information needed to be given to the men about what the disease is, how it is contracted, and how it can be prevented.

Discussion Related to the Health Belief Model Constructs

Perceived susceptibility. In this study, perceived susceptibility was a participant's perception about the likelihood of his partner contracting cervical cancer. The perceptions that were displayed here reflected several variations of low and high perception of susceptibility. When there was low perception of susceptibility, there was also low motivation for support from the men. When the perception of susceptibility was high, then there was also a high motivation to adopt a recommended course of action.

Many of the participants indicated a high perception of susceptibility that their partner could contract cervical cancer, and a readiness to support their partners in going for screening. These showed a direct relationship of perceived susceptibility to cervical cancer and adoption of a recommended course of action. The literature, however, does not suggest that this is the norm with cervical cancer. This is perhaps the only study that has presented information of this nature from men's perspectives. Literature that is

available pertains to breast cancer and some other types of cancers, as well as to HIV/AIDS (MoPHS and MoMS, 2012).

Perceived seriousness and severity. Perceived seriousness or severity involves an individual's beliefs concerning the severity of contracting a disease. It also includes the seriousness of the complications that may arise from contraction of the disease as well as the consequences that come as a result of infection with the disease. Research stipulates that there is generally a low level of understanding about cervical cancer among both men and women, and the same was noted for this rural community of Kendubay. After brief education on the condition, the men were able to understand the seriousness of the condition and voiced their fear and anxiety. This indicated a high perception of seriousness and severity. For this reason, they were ready to give support for cervical cancer screening.

Perceived barriers. Perceived barriers are the participants' personal perceived hindrances, tangible and intangible, to women's adoption of cervical cancer screening, and to the participants' ability or disability to offering support to the women. Some notable responses from men in this study include lack of awareness, lack of finances, fear, and lack of government support. Some of the concerns raised about cervical cancer screening and treatment were also seen as barriers. One is that the government and the society at large gave prominence to HIV/AIDS, but not much was said about cervical cancer. The men also confirmed and were concerned that there was a lack of awareness about the condition. The issue of resources with which to address the disease was also cited. The biggest concern was that the disease presented no symptoms until it was too

late. These responses are perhaps the first of their kind in as far as men's concerns about cervical cancer. Literature that is available has not indicated what men's concerns are about cervical cancer nor are these brought out as barriers to supporting cervical cancer screening. Available literature does not also bring this out and my study is perhaps the only one that has given an indication of perceived barriers to supporting cervical cancer screening from men's perspectives.

Perceived benefits. Perceived benefits are the participants' beliefs in the positive outcomes from engaging in a recommended health behavior. The men perceived that the disease could bring only death which would bring more problems to the men in the community because they would be forced to take up the roles of women in the home. The issue of role alteration was a big concern to the men who saw themselves as both mother and father in the home, and they indicated that it would be a role that would adversely affect the development of family members. Similar responses were noted from Malaysian women about breast cancer (Fronda, 2018). There is however no literature reflecting this concerning cervical cancer. My study is possibly the only study that has noted men's responses concerning cervical cancer in this respect. Despite the almost negative responses, the men were able to identify the benefits for women's engagement in screening for cervical cancer indicating that women could benefit as individuals, and in turn the benefits would spill over to the immediate family and to the community at large.

Cues to action. These are the participants' perceived triggers or the necessary prompts for them to engage in health promoting behavior and for this study, to support women to undergo cervical cancer screening. Any cue to action is necessary for the man

to begin thinking seriously about the condition of cervical cancer, and to take steps to help create awareness or put in place measures to reduce the disease. It was noted that those who had had a painful experience were quick to commit to engaging in some activity to reduce harm.

The question of what motivated the men to encourage women to go for cervical cancer screening elicited varied responses but may have been influenced by what would seem desirable to the men. Such responses were also noted by Rosser, et al. (2018), who indicated that this is perhaps a result of a limitation of social desirability bias.

Self-efficacy. Self-efficacy is the confidence an individual has that they will successfully execute a desired health behavior. Few men had the confidence that their partners would successfully undergo cervical cancer screening if they had the opportunity and were given the support necessary to do so. The men were able to discuss confidence related to what they should do to support their partners in undergoing cervical cancer screening. Responses such as 'I will accompany her to the hospital' and I will give the moral support needed' were a common thread among the respondents. The men's self-efficacy for advancing support for cervical cancer screening is however unclear. The literature does not give an indication of men's self-efficacy in supporting women to undergo cervical cancer screening, and this study has perhaps given an insight into gaps that still need to be filled where this issue is concerned.

Summary

The findings in my research are unique and as far as I can determine have not been noted in literature to date. The major themes that emerged from the study are as

follows: 1) Knowledge and awareness of cervical cancer and screening, 2) Perception of cervical cancer and screening. 3) Sources of information for cervical cancer and screening. 4) Action for or against cervical cancer and screening, 5) Cultural and religious beliefs. The major themes and the subthemes as were identified were the basis of findings of the study. These findings are:

1. Knowledge ad perceptions of men about cervical cancer and screening for the disease influenced women's uptake of cervical cancer screening negatively because the women did not undergo cervical cancer screening due to a lack of support from the men who had little or no knowledge about the condition.
2. My study is probably the only study that has remotely linked circumcision for men to impartation of information about cervical cancer and screening for the disease. It must be noted, however, that undergoing circumcision, which is basically a clinical procedure, has nothing to do with the issue of cervical cancer as discussed in this study. It was identified as a possible means of information about the disease.
3. Spouses in this research site do not normally discuss illnesses that affect women, and the literature does not also indicate this as a common practice. This study is perhaps the first to note this collaboration between husband and wife.
4. The participants in this study made much reference about support given to tuberculosis, breast cancer and even HIV infected persons, but not about those who would be infected by cervical cancer. My study has therefore provided

this initial information that could help fill the gap that not much information about cervical cancer and screening is available to community members, and also that there is no support from different organizations towards eradication of the disease, as there is for other ailments.

5. Some concerns from study participants about cervical cancer were, that the government and the society at large gave prominence to HIV/AIDS, but not much is said about cervical cancer. The men confirmed and were concerned that there was a lack of awareness about cervical cancer or screening for the disease. The issue of resources with which to address the disease was also cited. The biggest concern was that the disease presented no symptoms until it was too late. These responses are perhaps the first of their kind in as far as men's concerns about cervical cancer is concerned.

As I undertook this study, I gained a better understanding of how cervical cancer and screening for the disease is perceived by men living in Kendubay, and how their perceptions influence the support they give to women to undergo cervical cancer screening. I analyzed the Health Belief model from the men's perspectives as it relates to their support to women for cervical cancer screening. I described the factors considered by men in influencing women's cervical cancer screening based on their knowledge and perceptions of the disease. As a result of the outcomes of the analysis, the following inferences can be noted:

In relation to Research Question 1—*What cultural beliefs, knowledge, and perceptions do men in Kendubay, Kenya hold about cervical cancer and cervical cancer*

screening?—there were no cultural beliefs that the men in Kendubay held concerning cervical cancer or screening for the disease. The study noted that the men did not have much knowledge about the condition. However, their perception of the condition was that it was women's disease and as such the men had nothing to do with it. For this reason, not much support was accorded women, by the men, to go and get screened. However, after a bit of education on the condition, the men indicated willingness to support women to go and get screened.

In relation to Research Question 2—*Where did the men in Kendubay, Kenya get their information about cervical cancer and cervical cancer screening?*—several sources of information for cervical cancer was reported by the men. These included, the media, advertisements and the social media and word of mouth. One unusual source that was also cited was a circumcision site. This is an unusual source of information because circumcision is not ordinarily a cultural activity of this community. The men who go for circumcision do so out of choice and are very few. Nevertheless, it is a source of information that can be further investigated to pass on information about cervical cancer to men. Despite there being these sources of information, the study found that the information the men got from these sources about cervical cancer and the screening procedures, were often inaccurate or incorrect and misleading.

In relation to Research Question 3—*Based on knowledge and perception of cervical cancer and screening, what do men do or not do to encourage women to undergo cervical cancer screening?*—the key findings resulting from the interview questions addressing this research question was that men did not do anything to

encourage women to go for cervical cancer screen. This was because of a lack of knowledge about the condition. The men however expressed willingness to support women if they knew what their roles in this was. To this effect, they suggested ways in which they could support. These include giving moral and financial support as was necessary. Some of the men indicated that they would personally go to the clinics with their partners if it was necessary.

It is apparent through this study that knowledge and perceptions of men about cervical cancer and screening does influence women's uptake of cervical cancer screening in a negative way, in that women do not go for the screening due to a lack of support because of a lack of knowledge of the condition on the part of the men. This has also been noted by Rosser et al. (2014), and it is necessary therefore that men be given sound knowledge about the condition in a bid to involve them fully in the reduction of the incidence of the disease.

Limitations of the Study

The findings of this study were limited to men aged 18 – 65 years of age and living in the rural town of Kendubay. The results of the study may not, therefore, be generalizable to other locations in the country of Kenya. The sample size for this study was 15 which according to Leedy and Omrod (2010) is an adequate number for a qualitative study. The sample does not, however, reflect the entire population of Kenyan men living in rural areas.

There is always the probability that participants would not answer questions truthfully or honestly and this could be a limitation to the study because it will threaten

the integrity of the information collected. It was noted, however, that the results from the responses of study participants were virtually the same although participants were from different backgrounds. Secondly, participants were not given a chance to compare their perspectives of the different issues that were addressed. Moreover, the participants' identities were anonymous and were not shared with anyone. Interviews were also carried out on different days and in different locations and this gave no opportunity for participants to meet and prepare or compare their views.

Recommendations

This study was carried out to bridge the current gap in literature available on the knowledge and perceptions of men about cervical cancer and screening and how this influences women to undergo cervical cancer screening. While there are several studies about cervical cancer and screening which focus on women (Fronda 2017; Sudenga et al., 2013; Trevino et al., 2012; Ngugi et al., 2011; Chasco 2015; Akanbi et al., 2015), there is lack of research focusing on men and their contribution in supporting women to undergo cervical cancer screening, or in reducing mortality due to cervical cancer. Recently, however, there have been studies carried out that have looked at the involvement of men with cervical cancer (Rosser et al., 2014, Solli, de Boer, Solbraekke and Thuresen 2018; Kim, Kim and Kim, 2018). These studies are, however, different from my study in that the focus of these studies was knowledge of cervical cancer among men. My study went a step further to look at how the knowledge was an influence for women's preventive health behavior. And so, there is a growing body of literature in this area.

My study did provide some insight into this area, but more research is needed to delve further into the subject. Men in the African rural setting are the main decision makers for many processes in the home including healthcare (Alemayehu & Mesekele, 2017), and some studies have acknowledged that it is important to involve men in women's preventive healthcare decisions because the men's involvement may impact the positive health outcomes that are so needed in different healthcare situations (Rosser et al. 2014). For this reason, more studies need to be conducted on men's involvement on women's preventive healthcare decisions. It would be of much benefit to access factors that influence men's decision-making processes to support women's preventive healthcare decisions.

In many instances, women, particularly from rural settings, have suffered many preventable illnesses because of no support from their male counterparts (Kim, Ati, Kols, Lambe, Soetikno, Wysong, Tergas, Rajbhandari, & Lu, 2012)). Many times, too, the men were not aware of their roles in preventive healthcare or had no knowledge of the preventable illnesses women suffer. Coupled with the lack of knowledge on various women's illnesses may be negative prejudices or perceptions that would hinder the men from giving support to women when it is most needed. Studies in these areas could further help to understand the issues necessary to address them.

Implications for Positive Social Change

The results from this study contributes to the literature by providing a clearer understanding of the knowledge and perceptions of men about cervical cancer and screening and how this could influence women to undergo screening for the disease. The

results may promote social change by providing information that can be used to involve men more in the health issues of women. The practice of periodically screening for cervical cancer has several implications for positive social change. It can help in improving the health of women in communities and lowering mortality due to the disease. This will further improve the health of the community at large and enhance productivity because there will be healthy manpower to work the fields and engage in other income generating activities for self-sustenance. Women who will be screened and treated where necessary will be in a better position to provide for their families and support their spouses physically and economically.

The implication for positive social change has far reaching developments for public health practitioners who understand the importance of preventive healthcare. Health Education and Promotion is an integral part of public health and so educational programs related to cervical cancer and screening and specifically targeting men would place practitioners in a better position to educate the male population.

There are national recommendations and policies that govern healthcare activities in the different counties in Kenya. Not much is seen, however, on the implementation of the policies, particularly in rural areas. The processes for the implementation of these policies need to be initiated in these areas. A positive implication for positive social change, therefore, would be to initiate these processes and help in the identification and treatment of cervical cancer.

Finally, findings from this study may contribute to the knowledge base of how it is that men's knowledge and perceptions of cervical cancer could influence women's

uptake of cervical cancer screening. Such information may help in the development of targeted interventions to educate men on cervical cancer and other illnesses that affect women, and to address their participation in preventive healthcare. This in turn will contribute to the reduction of mortality due to cervical cancer and possibly other illnesses in rural communities.

Dissemination of Research Findings

The study findings will be disseminated to the Ministry of Public Health and Sanitation and the Ministry of Health in Kenya, who are responsible for all health matters in the country pertaining to different groups and sectors in the country. Information disseminated will be used to develop educational materials that target men to be more involved in women's health issues and to develop interventions and strategies for well-being of women and the general population. Study findings will also be shared with public health professionals in different counties in the country, and with other rural communities that did not participate in the study. Information will be disseminated through oral presentations at various levels, and also aired over the radio having translated the information to reach the different communities in the country.

The research findings will also be submitted to the National Commission for Science and Technology Innovation (NACOSTI) which is the body that the Kenyan government has mandated to set research priorities that address the most immediate needs of the nation and respond to the national development aspirations. Through this body, the study findings will provide a base for the implementation of the research priorities which are expected to result in increased research and development in areas critical to national

development particularly in the health sector. One of NACOSTI's priority areas is Universal Healthcare Coverage, and the information from this study may help to achieve this priority. This in turn will result in improved health standards and possible eradication of specific diseases that affect women. Additionally, the research will be submitted for publication in various research journals.

Conclusion

The purpose of this qualitative study was to examine the knowledge and perceptions of men about cervical cancer and screening, and how this knowledge and the perceptions influenced women to undergo cervical cancer screening. The data collected through face-to-face interviews with 15 male participants indicated that the participants did not have a sound knowledge of the disease, nor were their perceptions of the disease accurate. Because of this, it was noted that not much support was given the women to go and get screened for cervical cancer. On the one hand, the low perceptions of susceptibility and severity to the disease would result in a low probability of men acting against the development of the disease in women. On the other hand, the high perceptions of susceptibility and severity would result in a high probability of the men acting to influence women to undergo screening.

There was a universal consensus among the study participants that cervical cancer was not given much recognition as was HIV/AIDS and so people in this rural community had very little knowledge about it. The lack of awareness or knowledge among the men could be the greatest hindrance to their participation in reducing mortality due to the disease. This lack of knowledge would also contribute to the ack of involvement to

encourage women to undergo screening. There was, however, a willingness to support the women to undertake screening because as the participants reported, it would help with early detection and treatment where necessary. This is supported by Cancer Research UK (2014) and Shah et al (2014) who note that early diagnosis and treatment of cancer increases survival.

Concerning the cues that could trigger the men into action were the experiences some of the men had had with losing loved ones and also the thought that they would have to take up the role of the partner in the home as both father and mother should the partner succumb to the disease. The men recognized that the screening was important, and all women should be screened. The concern, however, was that finances would not allow because decisions had to be made as to whether this was more a priority than other important family obligations.

Ultimately, the findings of this study could contribute to the knowledge base of the perceptions and knowledge of men of cervical cancer and screening and how these influences them to support women to undergo cervical cancer screening. As part of the recommendations, men could be educated about the disease and interventions set up to involve men more in women's preventive health issues. The sources of information that were reported by the men could be used to provide accurate and complete information about the disease. One such source that was reported as being frequently used is the social media. Pistolis et al (2016) posits that health information obtained from social media could be effective cues for action because the men who use the platform are likely to adopt the health information, they get from here.

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Appendix A: Recruitment Flyer

INVITATION TO PARTICIPATE IN A RESEARCH STUDY:

MEN'S KNOWLEDGE AND PERCEPTIONS OF CERVICAL CANCER AND SCREENING

You are invited to participate in this research study which is being carried out by Lydia Oriko a Ph.D. student at Walden University

WHAT IS THE STUDY ABOUT?

In this study I am interested in finding out from men their knowledge and perception of cervical cancer and cervical cancer screening and how this knowledge and the perceptions impact women's uptake of screening for the disease

WHO CAN PARTICIPATE?

- Men aged between 18 and 60 years, AND
- Men living in this town of Kendubay

WHAT IS INVOLVED?

- A face-to-face interview that will take up to half an hour at a time and place that is convenient for you

Participants will receive a 500/- gift at the end of the interview

PARTICIPATION IS VOLUNTARY AND CONFIDENTIAL

Appendix B: Interview Guide/Protocol

Information about the interview questions

The questions I will ask will give you an idea of what I would like to learn concerning your knowledge and perception of cervical cancer. The information you give will help me to understand the influence men have on women's uptake of screening for the disease. This interview is a one-on-one interview and is open-ended, meaning I am expecting more than just 'Yes or No' answers. The wording of my questions may change from time to time, and you may notice that at times I will ask short questions and at other times I may probe a little longer. You will, therefore, hear questions like 'so you are saying that …….', or 'please tell me more about ……'. Where I need to learn about what you think or feel about something, I will prompt you by a statement like 'why do you think ……?' or 'what do you feel about ……?'.

Part 1: Respondents' demographic information

1. How old are you?
2. What is your marital status?
3. Do you have any children?
4. How many girls?
5. How many boys?
6. What are their ages?
7. What is your occupation?
8. What is your highest level of education?
9. What is your religious affiliation?

Part 2: Knowledge and awareness of cervical cancer and screening

10. Have you heard about cervical cancer?

11. What have you heard about the condition?

12. What do you know about this disease?

13. What do you know about screening for cervical cancer?

14. Where and how did you get this information?

15. Do you think women should undergo cervical cancer screening?

16. If so, why, and when should they undergo screening?

17. If not, why not?

18. Tell me about any risk factors that you know for cervical cancer.

19. What more information would you like to know about cervical cancer?

Part 3: Perception of cervical cancer

20. What do you think about cervical cancer?

21. Do you think women are at risk of developing cervical cancer?

22. Why do you think that women are/are not at risk of developing cervical cancer?

23. In your household, who decides on whether the women should or should not undergo cervical cancer screening?

24. Why is this decision made by you/wife/both/any other person?

25. How would you feel if your partner was diagnosed with cervical cancer?

Part 4: Actions for or against cervical cancer screening

26. Would you encourage your wife/daughter/partner to undergo cervical cancer screening?

27. Why or why not?

28. Would you give support towards uptake of screening?

29. Why or why not?

30. What kind of support would you give?

31. What assistance if any would you give in the event of a cervical cancer diagnosis?

Part 5: Health Belief Model constructs

a) Perceived susceptibility

32. What do you think are the chances of your partner being diagnosed with cervical cancer?

b) Perceived seriousness

33. What factors do you consider could increase a woman's chances of developing cervical cancer?

c) Perceived barriers

34. Are there any concerns you have about cervical cancer, screening, and treatment? What are they?

35. What do you think would make it easy or difficult for women to undergo screening?

d) Perceived benefits

36. What do you think are the consequences of one developing cervical cancer?

37. What do you think are the benefits of women undergoing cervical cancer screening?

e) Cues to action

38. What would motivate you to encourage women to undergo cervical cancer screening?

f) Self-efficacy

39. If there was an opportunity for women to undergo screening, do you think there is a chance that they would do so? Please explain your response to this.

40. Is there something important that we may have forgotten that you think I should know about?

This is the end of this interview. I appreciate your taking time to answer these questions. Should you have any questions concerning this study, please feel free to call me or to send me an email. My contact is in the consent form you signed earlier. I will be happy to answer any questions you may have.

Appendix C: Research License

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

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TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 22893

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MS. LYDIA AKINYI ORIKO
of WALDEN UNIVERSITY, 0-200 Nairobi,has been permitted to conduct research in *Homabay County*

on the topic: *"MEN'S KNOWLEDGE AND PERCEPTIONS OF CERVICAL CANCER: INFLUENCE UPON INCREASE IN CERVICAL CANCER SCREENING IN RURAL KENYA."*

for the period ending:
31st January,2020

Permit No : NACOSTI/P/19/91959/27653
Date Of Issue : 31st January,2019
Fee Recieved :Ksh 2000

.....
Applicant's Signature

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

Appendix D: NACOSTI Research Authorization

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/19/91959/27653**

Date: **31st January, 2019**

Lydia Akinyi Oriko
Walden University
USA

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Men's knowledge and perceptions of cervical cancer: Influence upon increase in cervical cancer screening in rural Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Homa Bay County** for the period ending **31st January, 2020.**

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

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Homa Bay County.

The County Director of Education
Homa Bay County.

Appendix E: Ministry of Health—Authority to Conduct Research

MINISTRY OF HEALTH

Telegrams: "MOH" Homa Bay
TELEPHONE: 21039
When replying please quote
homabaychc@gmail.com

MINISTRY OF HEALTH
HOMA BAY COUNTY
P.O. BOX 52
HOMA-BAY

REF: MOH/RA/VOL.2 (163)

16th April, 2019

Lydia Akinyi Oriko
Walden University
USA

RE: AUTHORITY TO CONDUCT RESEARCH

Following your request to carry out research on **"Men's knowledge and perceptions of cervical cancer: Influence upon increase in cervical cancer screening in rural Kenya"** in Homa Bay County has been approved for the period ending 31st January,2020.

You will be required to adhere to the hospital's norms regulations and involve both the County Health Management Team and Sub County Health Management Team during the research period. You are also expected to communicate your findings to the Sub County Health Management Team plus the Directors' Office at the end of the research period.

Wish all the best in your research.

MINISTRY OF HEALTH
DIRECTOR OF MEDICAL SERVICES
16 APR 2019
Sign
P.O. Box 52-40300 HOMA-BAY

Dr. Gordon Okomo
Director of Health Services
HOMA BAY COUNTY

Appendix F: Ministry of Education—Research Authorization

MINISTRY OF EDUCATION

STATE DEPARTMENT OF EARLY LEARNING & BASIC EDUCATION

Telegrams: "SCHOOLING" Homa Bay
Telephone
When replying please quote
cdehomabay@gmail.com

COUNTY DIRECTOR OF EDUCATION
HOMA BAY COUNTY
P.O BOX 710
HOMA BAY
DATE: 16TH APRIL, 2019

REF: MOEST/CDE/HBC/ADM/11/VOL.2/142

Lydia Akinyi Oriko
Walden University
USA

RE: RESEARCH AUTHORIZATION –LYDIA AKINYI ORIKO

Following your application for authority to carry out research on ***"Men's knowledge and perceptions of cervical cancer: Influence upon increase in cervical cancer screening in rural Kenya,"*** in Homa bay County for the period ending 31st January, 2020.

I am pleased to inform you that you have been authorized to undertake research in Homa Bay County for the period ending **31st January, 2020.**

Please submit a copy of your findings both in soft and hard copies to this office.

Thank you in advance.

COUNTY DIRECTOR OF EDUCATION
HOMA BAY COUNTY
P.O. Box 710 - 40300, HOMA BAY
Email: cdehomabay@gmail.com

MILLICENT M. NYABUNGA
FOR: COUNTY DIRECTOR OF EDUCATION

Cc.
1. **County Commissioner**
   Homa Bay County.

ISO 9001 BUREAU VERITAS Certification