

Structural Determinants Influencing the Utilization of Cervical Cancer Screening Services among Women of Reproductive Age (WRA) in Isiolo County

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ABSTRACT

Cervical cancer is the second most common cancer among women and the leading cause of deaths among women worldwide. Preventable approaches like screening for the disease which have been instituted by the various governments have not been fruitful and the uptake has remained lower than the targeted levels. In Kenya, much research has been carried out, strategic planning and formulation of policies have been put in place but cervical cancer screening uptake rates are at 3.2% which is far below targeted 70% uptake. In the year 2017, Isiolo County had two thousand out of 22,558 women of reproductive age (WRA) who had been screened for the disease. This translates to 7.8% compared to the national target of 70%. Thus, the objective of this study was to establish the structural determinants affecting the utilization of cervical cancer screening services among women of child bearing age in Isiolo County. A descriptive research design was adopted with a sample size of 87 clients derived from WRA seeking reproductive health services in the family planning clinic, Antenatal clinic and Maternity Unit of Isiolo County Referral Hospital (ICRH). Additionally, 66 nurses working at the referral hospital also participated in the study since they were the primary health care providers. A scheduled interview was conducted and questionnaires were used for both the nurses and clients. The instruments' validity was checked by experts in nursing while their reliability was determined by use of Cronbach alpha. Data obtained was analysed for both descriptive and inferential statistics using Statistical Package for Social Sciences version 25.0. Qualitative data was analysed and the results presented by use of tables, graphs and narratives. From the findings of the study the main structural determinants identified included distance to the facilities. Nearly a half 42.7% of the WRA were living over the 5 km recommended distance from health care facilities. In addition, 68.7% of the nurses were not trained on the cervical cancer screening services. Other structural factors included shortage of nurses and lack of diagnostic pathological tests, specialized x-rays and cancer treatment options. The study revealed that structural determinants affected utilization of cervical cancer screening services thus more focus should be instigated to improve cervical cancer screening.

Keywords: Cervical Cancer, Structural Determinants, Screening

INTRODUCTION

Cervical cancer puts great strain on the economy with far-reaching implications because the disease is expensive to treat once a diagnosis is made [1] [2]. The global

cancer burden is increasing day by day with the incident and mortality rates continuing to rise globally with an estimated 18.1 million new cases and 9.6 million deaths in 2018 [3]. The numbers are expected to rise

by about 70% over the next two decades raising the economic effects globally [4] [5]. In a WHO report, the worst hit is the low and middle-income countries [6] due to the disease burden once a diagnosis of cervical cancer is made. The cost implications include the surgery, radiotherapy, chemotherapy and other disease management options of all which attract enormous economic implications.

The burden of cancer at the macro and micro level is huge and this is compounded by a severely limited capacity of most low-income countries to provide the necessary health care [2] [7]. In 2015, only 35% of low-income countries reported having pathology services being available in the public sector. More than 90% of high-income countries reported availability of treatment services compared to less than 30% of low-income countries [6]. This means that patients in low-income Countries are disadvantaged because they have to travel to advanced facilities for a conclusive diagnosis and treatment. In such scenarios, such specialized treatments are found in urban towns missing out on the rural areas where most of the populations live making it very costly [8].

A report by the National Cancer Institute (NCI) indicates that an estimated 256,078 women were living with cancer in the United States (US) in the year 2014, with 12,578 women having been diagnosed with cervical cancer and 4,115 died from the disease in the same period. Though the disease used to be the leading cause of cancer deaths for women in the United States, in the past 40 years the numbers of cases and deaths have decreased significantly [9]. This is as a result of advanced treatment and technological medical options in the Western Countries. Most cervical cancer cases in the US occur in women who have not been screened appropriately but those who attend the screening services are offered advice on appropriate follow-up and interval thus reducing cervical cancer incidence and mortality in the US [10].

In Zimbabwe, 2270 women were diagnosed with cervical cancer annually and a mortality of 64% has been recorded, with a high disease burden as a result of the late presentation of the disease. This has been attributed to poor screening and treatment options after being diagnosed with the disease. The delays are caused by cost implications and delay in seeking help, which results in very poor prognosis and most women cannot be helped. Without any medical interventions, the disease spreads to adjacent organs making it hard to treat and contain resulting high mortalities from the same. In Zambia, about 2330 women have been diagnosed with cervical cancer and 1380 die yearly out of the disease which is a major cause of morbidity and mortality [7] [11].

In Kenya, cervical cancer cases are estimated at 4,802 and mortality of about 2,451 annually according to the Kenya Demographic Health Survey [12]. Cancer of the cervix ranks as the first leading cause of female cancer deaths in Kenya among women aged 15 to 44 years, at 3.2% far from the expected 70% coverage despite a previous preventive strategic plan in place [13]. By the year 2012, there were approximately 10 to 15 new cases of cervical cancer in Nairobi each week according to the Kenya Cancer Registry [14]. Thus, it's evident that if no interventions are put in place the disease will claim more lives than estimated in years to come. With the new cancer prevention strategic plan being rolled out by Ministry of Health (MOH), its success will be based on identifying and addressing the challenges experienced in the previous programs [2] [15].

Research has been undertaken on cervical cancer in other urban towns for example in Kisumu by Ochomo, Atieli, Gumo, and Ouma, in 2017 [16], Nairobi by Njuguna, Ilovi, Muiruri, and Mutai, in 2017 [17], Embu by Kibicho, 2014 [18], Eldoret by Were, Nyaberi, and Boziba, in 2011 [19], Mombasa by Onditi, in 2013 [20] and Nyeri by Gichogo in 2012 [21] among others.

There are no reliable records that support any research that has been undertaken in the marginalized areas of Kenya and especially in the Northern frontier part of Kenya. The marginalized areas have different challenges compared to other parts of the country which makes them unique due to limited resources, harsh climate, poor infrastructure, and poor resource allocation among other factors thus the purpose of undertaking the research study.

MATERIALS AND METHODS

The study was carried out in Isiolo County referral hospital located in Isiolo Town which is a Kenyan town situated in the Upper Eastern part of Kenya, formerly known as the Northern Frontier District. The County of Isiolo is mainly a cosmopolitan town with the major occupants being the Borana's, Meru's, Turkana's, Somali's, Rendiles and the Samburu's. A descriptive research design

was used with the aim of describing the structural determinants influencing the utilization of cervical cancer screening services. The target population were 25,584 women of reproductive age (WRA) who sought reproductive health services at the ICRH [12]. In addition, 104 nurses who were offering services at the same hospital and key informants at the policymaking level were study participants involved in the study. Cluster random sampling was used in selecting the departments where screening services were offered. Systematic random sampling was then used in selecting the individual participants to participate in the study as well as in the selection of nurse respondents while purposive sampling was used in the identification of key informants who participated in the study.

The sample size was arrived at, as shown in Table 1 which is modified from the source (District Health Information System, DHIS-2).

Table 1: Sampling Frame

Department/Clinic	Total clients per year	Totals per month	Sample Size
Family planning	1074	89	91
Antenatal	6651	554	
Maternity	4521	377	
Total clients		1024	
Nurses in ICRH	104	104	71
Key Informants		3	3
Total			165 subjects

The sample size for the clients and nurses was derived according to Nassiuma (2000). A coefficient of variance of at most is 30% is considered adequate for most surveys (Nassiuma, 2000).

$$n = \frac{NC^2}{C^2 + (N - 1)e^2}$$

where

n = sample size

N = population from which sample is obtained

C = coefficient of variance

e = standard error

For the purposes of this study, a coefficient of variance of 20% was used for the clients and 30% for the nursing staff so as to obtain a manageable size of

respondents that represents the general status of the population.

For the clients using a 20% coefficient of variance

$$n = \frac{1024(0.2)^2}{0.2^2 + (1024 - 1)0.02^2} = 91 \text{ clients}$$

For the nurses using a 30% coefficient of variance

$$n = \frac{104(0.3)^2}{0.3^2 + (104 - 1)0.02^2} = 71 \text{ nurses}$$

A pilot study was conducted at the Marsabit County Referral hospital on 17 participants who were a 10% representation of the sample size. Marsabit County has similar characteristics with Isiolo County and therefore; the reason as to why it was

selected for the pilot study. This was done before the data collection so as to ascertain whether the instrument captured all the required information and also time taken to fill the questionnaire, the researchers revised the instrument and made amendments as was necessary. After collecting the pre-test data, a reliability test was run for Cronbach alpha which was 0.74 and was considered adequate. The data generated was checked for completeness, coded and keyed in the computer using Statistical Package for Social Sciences (SPSS) version 25. Both quantitative and qualitative methods were used in data analysis.

A research permit was issued by the National Commission for Science, Technology, and Information (NACOSTI)

through the Chuka University Ethics and Research Committee after approval was obtained. At the county level, the relevant stakeholders were involved and approval from the Director of Health sought. Research assistants were trained before being engaged in the process of data collection. All participants were assured of confidentiality, voluntary participation was encouraged and informed consent obtained. Names of the respondents were not included nor their identity revealed during the research process. Respondents were assured that the information got was for the research purpose, and that the research findings would be used to improve on the cervical cancer screening services.

RESULTS AND DISCUSSION

Questionnaire Return Rate

Table 2: Questionnaire Return Rate

Category	Sample size	Respondent rate	Percentage
Clients and key informants	94	90	95.7%
Nurses	71	66	92.9%
Total	165	156	94.5%

The study had a questionnaire return rate of 94.5% as shown in the findings obtained from the participants. According to Werner, results from surveys with response rates above 80% are considered reliable (Warner, 2004).

Structural Determinants Influence on Utilization of Cervical Cancer Screening Services among the WRA in Isiolo County

The study sought to explore the factors within the systems which affect the uptake of the cervical cancer screening services. Some of the structural factors explored include government policies, distance from the health facilities and accessibility of services. The cost of services was also considered bearing in mind that Isiolo has poverty levels of 72% according to the Isiolo County UHC report of 2019.

Government Policies and Cervical Cancer Screening Services Uptake

During the interview with the key informants, a scale of good (above 70%), fair (50%) and poor (below 50%) was provided so that they could rate the implementation of the policies and guidelines from the MOH. According to responses it was found out that cervical cancer screening services uptake in Isiolo County was fair (50%) by all of them. Isiolo County has one County referral hospital and only two sub-county hospitals, these are Merti and Garbatulla [12]. ICRH is the only referral hospital in the County which serves the residents in together with the two subcounty hospitals. Some private low volume hospitals are also found within the township which provide health services. It's worth noting that the ICRH also serves the Southern parts of Marsabit, Samburu County and lower parts of Meru County.

The County is classified among the hardship areas in Kenya whereby most of the communities living in Isiolo are pastoralists in nature. The Isiolo population is sparse and the distance between health

facilities is 49kms far from the recommended 5kms by the WHO [3]. This determines the health-seeking behaviour of the communities to a large extent affecting all health indicators including cervical cancer screening services. Musa *et al* (2017) [22], found out that most of the people live far away from health facilities and especially in the low-income Countries posing a challenge of affordability, accessibility, and availability of the screening services. A WRA who lives far away from a facility will rarely seek routine examinations not unless she has other medical needs which will prompt her to seek health services.

All the nurse respondents felt that cervical cancer screening cancer services uptake would greatly improve if the following were observed; outreach services were offered to the WRA, health education on the same was done on a regular basis, integrating the cervical cancer screening services with other reproductive health services. The same suggestions were reiterated by the key informants when asked for the recommendations that would improve service delivery in regard to cervical cancer screening services. This is in agreement with the NCCPP report of 2012 which advocates for a prevention plan to curb cervical cancer. Part of the plan was to avail the screening services to all WRA and also to inform the public of the availability of the screening services. Of importance is the creation of awareness by involving the community leaders and adopting a multi-sectoral approach so that there can be outreach services [13].

Policies and guidelines are provided by the Government in a bid to standardize the care being provided in various health facilities. They play a major role in the management of cervical cancer and other diseases whereby the best practices in the management of all diseases are advocated for in Kenya and beyond. The interpretation and use of the provided information is highly recommended to avoid disjointed case management [6]. The policies,

guidelines and strategic plans on cervical cancer screening guide the practice and also offer direction to the health care professionals. This ensures that there is consistent use of information provided in the different documents resulting in uniformity in the provision of care. The regular and consistent use of the guidelines by clinicians Countrywide, therefore, culminates to improvement in the management of cancer in Kenya and thereby reducing morbidity and mortality attributed to cancers [23].

Cervical Cancer Services Provision in Isiolo County

The study sought to investigate how the provision cervical cancer screening services was being carried out in Isiolo County. These services include; the availability of screening services, special reproductive health cervical cancer screening centre, pathology services, management of challenges and referral, radiology and chemotherapy centre. The Key informants elucidated that, after explaining the procedure to the client and a verbal consent obtained for the same, the examination is performed by a trained health professional who can be a Doctor, Clinical Officer or a Nurse. For the clients with normal examination results, counselling and advice is given and a return date given.

Additionally, the key informants pointed out that, once a suspicious lesion is identified, the patients are counselled and advised accordingly in addition to being given a referral letter for further management. Owing to the fact that a conclusive diagnosis cannot be made at the ICRH, the patients are referred to other facilities like Kenyatta National Hospital among other hospitals for staging and further management. They are also enrolled for partner support for easy follow up, monitoring of their progress and advice. For those in the advanced stages of the disease, further examinations and interventions are instituted. Enrolled for palliative care in the

nearest health facility is also done in conjunction with home-based care team. The same protocols observed in the management of cervical cancer screening services and care as explained above, are in also in tandem with the NCCPP [13].

The MOH document of 2017 on the management of cancer, reiterates that advice and counselling take a centre stage in all stages of cervical cancer management starting from prevention to rehabilitation [2]. Once abnormal lesions are identified prompt referral services should be instituted to prevent further delay in the management of the disease so as to improve patient outcomes [13]. The prevention plan further explains that for the success of the program, a behaviour change communication strategy should be developed so that the creation of awareness on cervical cancer screening is increased.

‘Health personnel, relevant government staff, community leaders, women, and their spouses need to understand the importance of the service so that they support the program and increase utilization of the services’ [13]. In a study carried out by Ochomo, *et al* (2017) [16] in Kisumu County it was found out that Community health volunteers are important in the provision of cervical cancer screening services by doing community mobilization and educating the community the importance of improving their health-seeking behavior in regard to cervical cancer screening services.

The key informants reiterated that Isiolo County Government was in the process of recruiting and training more nurses who were to run the cervical cancer screening services effectively. Hami, *et al.* (2017) felt that adequate staffing, creation of awareness, provision of health education and special training on cervical cancer screening to improve health provider knowledge was important [24].

Some of the reasons as to why women fail to get screened include the perception of not being at risk and fear that abnormal test results mean existing cancer,

this is in agreement with Were *et al.* (2011) that women with low educational achievement, low awareness of the risk factors for cervical cancer, may also have poor uptake of screening services [19]. This shows that the Government has a great part to play in improving awareness and the knowledge base of both the health care providers and also of the public.

Proximity to Health Care Facilities

The study sought to establish how the distance from health facilities affected the uptake of cervical cancer screening services. The client respondents were asked to indicate the approximate distance they cover from their homes to the nearest health facility. Referral networks require linkages between the different levels of health care from the community to the tertiary care facilities and also the private facilities whose services are faster compared to the public health care facilities. The responses on the distance of the nearest health facility are illustrated in Table 7.

Table 7: Distance of the Nearest Health Facility

Distance in km	Percent
Below 1	29.2
1 – 5	28.1
5 – 10	22.5
Over 10	20.2

Results from the study show that those who lived below 1km from the nearest health facility were 29.2%, being the majority. Those who travelled for over 10kms were 20.2% showing that quite a number of clients came from far. This is in agreement with Hami *et al.* (2014) [24] and Ichamina (2015) [8] who found out that distances between facilities are some of the factors affecting the uptake of cervical cancer screening services. The recommended distance between health facilities should be 5Kms radius for the populations to be able to access health care services [25]. This is in line with the provision of UHC as projected in the SDGs Vision 2030 [3].

In the provision of cervical cancer screening services, the distance covered by clients when seeking the service is important considering that the WRA are not sick but going for a routine check-up only. When the key informants were asked for their opinion as to why the clients failed to attend cervical cancer screening services in Isiolo County, one of the key informants felt that distance from the health facility was a major factor. The other two felt that the lack of awareness and lack of knowledge were more of key factors compared to the distance. This is in agreement with Ichaminya who reported that cervical cancer can be cured through prompt treatment if precancerous lesions are diagnosed early by screening, but in sub-Saharan African countries disease screening is not routine [8].

The study by Ichaminya further states that, in the African tradition, people do not access health-care check-ups or screening because the concept of a check-up is not known and is not a common practice, instead, people tend to access healthcare when they have disease symptoms [8]. As explained by the key informants, the screening services are not conducted routinely in all health facilities in Isiolo County. This is as a result of health provider shortages which the County was addressing. This is in agreement with the cervical cancer prevention plan by the MOH which reiterates that cervical cancer screening is done in few selected sites in disjointed projects other than being a fully-fledged National program [13]. The cervical cancer prevention plan advocates for the program being a fully-fledged program just like the HIV/AIDS program, else the WRA will continue to suffer despite the formulation of all the strategic plans, policies, guidelines and protocols in place.

Access to Cervical Cancer Screening Services in Isiolo County

Health care that is inaccessible results to immense suffering of the populations and especially if they are not in

a position to attend return visits for the same service. Such missed opportunities should be avoided so that health care seekers may access the services to prevent them from coming at a late stage progression of diseases where little help can be offered [13].

The study sought to establish from the Key Informants the challenges experienced in relation to accessibility and availability of cervical cancer screening services in regard to human resource and equipment. The responses included; severe staff shortages, stigma associated with being found out to have the cervical cancer disease, knowledge gap on the disease, lack of pathological services and a cancer treatment centre also called Oncology clinic.

A report by WHO alludes to the above findings in that by 2015, only 35% of low-income countries reported having pathology services being available in the public sector [6]. Carla *et al.* (2014) [26] reiterate that in the provision of primary health care, increasing patient to nurse ratios are increasing day by day, therefore, the need to improve organizational and systemic levels that might enhance capacity, improve the process and facilitate the implementation of quality and service improvement efforts. Such a move will ensure that service provision will be conducted according to service need but not when service providers are available.

For the screening services to run smoothly, the human resource workforce must be adequate to attend to the clients and patients' needs and concerns satisfactorily [16]. Lack of access to the services can occur even if all other factors are held constant. A client who is free and seeks for services over the weekend, on a public holiday or at night will not access the screening services since the clinics operate during the day time and on weekdays only. According to WHO, more than 90% of high-income countries reported treatment services being available as compared to less than 30% of low-income countries [6]. The screening services would benefit the WRA

if it was offered round the clock considering the busy schedules of clients and societal demands overwhelming the female gender due to their multiple roles.

A nurse who is overwhelmed by a busy schedule will automatically perform the duties they consider urgent or important. In such instances a cervical cancer screening service may not seem important when there is a patient who has presented with complaints of pain after a road traffic accident. In normal circumstances, clients would want quick services so that they may attend to other needs and also avoid being in a hospital environment considering that they themselves are not sick but going for a check-up. These delays in service delivery points may put off the clients coming to seek services and this is not uncommon in most public hospitals.

The key informants were asked for recommendations on how to improve cervical cancer screening services and the responses included; improved infrastructure, campaigns and outreach programs so as to reach those in the grassroots, improved referral system so that the clients can be followed up and a monitoring and evaluation system for the program. Morema

et al. (2014) felt that the main challenges to increasing access to cervical cancer screening services include; inadequate equipment and supplies; lack of treatment facilities when there is pre-cancer or cancer diagnosis; inadequate monitoring and evaluation especially data collection and management. The HPV vaccine that could be used in primary prevention is also not provided as part of the national vaccine and immunization program in the Kenyan health facilities [27].

During their training period, nurses learn how to perform cervical cancer screening but not in great detail. With the periodic new updates by the MOH due to emerging disease trends and advancement in technology, there is a need for refresher courses which are conducted in form of seminars and workshops. It's upon the administration of the various County Governments to make sure that the service providers are kept abreast with the current practices. The nurse respondents were asked if they would confidently screen a client and interpret the results correctly if given an opportunity to perform the screening test. The results were recorded in the Table 8.

Table 8: Nurses Capability of Screening for Cervical Cancer and Interpretation of the Findings Comfortably

Are you able to perform the cervical cancer screening test and interpret results comfortably	Percent
Yes	31.0
Yes if I'm trained	64.0
Not interested	5.0

Table 8, shows that 64% of the nurse respondents were not confident that they would perform a cervical cancer screening test comfortably and interpret results, 31% were confident that they would perform the procedure confidently and interpret the results since they were trained, 5% were not interested in being trained or performing the procedure. This evidently shows that there is a knowledge gap in Isiolo County and in agreement with the strategic plan of 2012 that reports that main challenges to increasing access and improving the quality of cervical cancer screening services include: low level of community awareness on the importance of screening coupled with

low knowledge of common symptoms of cervical cancer and inadequate skills among service providers [13]. Inadequate skills among service providers can be a major hindrance to the uptake of screening services. In normal circumstances, one cannot encourage clients to get screened while they very well know that they are not conversant with how the procedure is performed and how to interpret results. This calls for mass training of the nurses so that service delivery is enhanced in regard to cervical cancer screening. A strategy needs to be developed in a bid to increase awareness on cervical cancer screening so that health personnel, other relevant

government staff, community leaders and eligible women and their male partners understand the need for cervical cancer prevention services and support utilization of available services [2].

The key informants also felt that security issues needed to be addressed so that frequent cattle rustling activities can be reduced as this directly affects the uptake of health services. Because of the insecurity, the clients and their families migrate to safer areas forcing the closure of facilities and also disruption of services. This mostly happens in the far-flung areas where the practice is rampant in the communities practicing cattle rustling among themselves or with outside communities. Boundary issues have also been a major issue that cause conflicts periodically resulting in insecurity. These cattle rustling and land wrangles are targeted areas for improvement by the County Governments in terms of health provision according to the key informants in the quest for achieving the SDGs, Vision 2030.

Integration of Cervical Cancer Screening Services in the Routine Examinations

The nurse respondents and the key informants were asked to outline to what extent the integration of cervical cancer screening services in the routine examinations can improve the uptake of the service. All the nurse respondents agreed that the move would greatly improve the service (100%) and also the 3 key informants felt the same. In their study, Carla *et al.* (2014) found out that whenever individuals visit health facilities and health education given on a regular basis; the individual leaves the health facility empowered and knowledgeable. The study reiterated that if cervical cancer screening services were to be improved, then integration of the service in the routine examinations was necessary and especially on the preventive and treatment approaches [26].

Screening services need to be integrated with other routine examinations

like blood sugar testing, HIV testing, blood pressure checking, breast examination, and other examinations. Once the integration is done, it becomes easier for the WRA since they will not need a separate visit to the facility on another day for the cervical cancer screening service. In the end it becomes cost-effective in terms of time and money thereby enhancing the uptake of the service. In the health care facilities, the clients who seek services at the outpatient, child welfare clinics and reproductive health clinics are supposed to receive health messages every day at the waiting bay. An inclusion of cervical cancer disease would suffice among the topics given during the health talk.

The health education provided by health care workers is very important because the dissemination of health messages is one way of preventing diseases and promotion of health [6]. Were *et al.*, (2011) [19] argues that strengthening the referral systems and linkages for cervical cancer program, improvement of facility and community health information system, strengthening of the communication system between the different levels and establishing a referral directory will enable access to the uptake of screening cervical cancer. In this regard, the study sought to know the number of client respondents who have ever been screened for cervical cancer and the responses is illustrated in Table 9.

Table 9: Cervical Cancer Screening among the Client Respondents

Been screened	Percent
Yes	33.7
No	66.3

This implies that almost 70% of the WRA have never been screened, if such a big number of the clients have never been screened, then this calls for urgent intervention so that WRA can be protected from this preventable disease. The national targets for the uptake of cervical cancer screening services are 70% [13] and those who have been screened are at 33.7%. This means that Isiolo County has a long way to

go in terms of uptake considering they are far below the 70% target.

In a national cancer strategy of 2018, the MOH recommends a three-step approach towards management of cervical cancer; improving awareness and access to care, building diagnostic capacity and improving referral mechanisms and improving access to timely cancer treatment by addressing the relevant barriers [28]. These approaches require the policy makers interventions so that their implementation can be realized else the low levels of service uptake will continue being a challenge.

Cost of Cervical Cancer Screening Services

The study examined the relationship between cervical cancer screening services and the cost implications on WRA in Isiolo County. Although the cervical cancer screening tests are free in the public hospitals, travelling to access the services in a county that has a distance of 49 kilometres apart between the health facilities, the WRA needs some means of transport to reach the facility. According to the Isiolo County health indicators report [25]. The County of Isiolo has a sparse population with 49 kilometres' distance between the facilities which far away from the recommended 5 kilometres by the WHO [28]. Notwithstanding that the most of the WRA are unemployed (39%) meaning that they have to rely upon their husbands for the fare to visit the health facilities.

The key informants reported that the VIA VILI which is performed by visually observing the changes in the cervix after application of vinegar or acetic acid is free of charge. If the client is to undergo further tests in case of suspected lesions, the cost implications are huge. Such clients require referral to other facilities with advanced diagnostic equipment's and specialized care e.g. major surgeries, pathological tests, radiation, and chemotherapy of which none is provided in Isiolo.

Pathological and histological services are not provided for at the ICRH,

but any specimens collected e.g. Pap smears and other biopsies are sent for examination and staging of the cancer in other places with the specialized services. The clients will bear the financial burden of taking the specimen for examination and also pay for any other management thereafter. This is not in tandem with the National Cancer Treatment Guidelines [29] which recommends that screening and treatment options should be financed through National Hospital Insurance Fund (NHIF), private insurance treatment because of the financial burden involved which makes some of the clients to default treatment.

The duration taken for specimen results to be availed is from two weeks to one month depending on the availability of funds for the same which is supposed to be paid by the client or the insurance for the few who are covered. The cancer strategic plan of 2017 by the MOH recommends that timely testing, timely provision of results, referral of abnormal lesions and appropriate level of care are very important in the patient outcomes [2]. The nurses and the key informants agreed that Isiolo lacks specialized histological, pathological tests and oncology clinic, which deals with the identification, staging and treatment of cancer cells. Diagnostic x-rays like Colposcopy and treatment options like chemotherapy and radiation are also unavailable.

These major services are found in hospitals like Kenyatta and Moi Teaching and referral hospitals among few others. A WHO report indicated that by 2015, only 35% of low-income countries reported having pathology services being available in the public sector. More than 90% of high-income countries reported treatment services are available compared to less than 30% of low-income countries [6]. Not unless the specialized tests, x-rays, diagnostic and treatment options are availed at the lower level facilities the morbidities and mortalities associated with cervical cancer will continue to increase.

CONCLUSION

The study revealed that the main structural determinants influencing cervical cancer screening included far distance between facilities with 42.7% living over the recommended 5Kms from the nearest health facility, shortage and lack of enough trained nurses whereby 68.7% were untrained on the cervical cancer screening services. Other factors included lack of diagnostic tests and equipment. High cost of the diagnosis, investigations, surgery and treatments after a diagnosis is made. Treatment options like major surgeries, radiation, and chemotherapy also were unavailable.

Recommendations

- i. Institute a follow-up program to establish why implementation of cervical cancer screening policies, strategic plans and guidelines at the various Counties as stipulated is not being done is highly recommended.
- ii. Improve infrastructure and security in Isiolo County such that the remote areas can be accessible thus reducing the distance between facilities and also reduce cases of cattle rustling which hinder service delivery.
- iii. Equip the ICRH with the modern diagnostic, treatment options of cervical cancer screening services so that sick WRA gets prompt management once a diagnosis is made.

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