EVALUATION OF CERVICAL CANCER PREVENTION PROGRAM IN HIV/AIDS CARE AND TREATMENT CLINICS IN DAR ES SALAAM, TANZANIA

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October, 2021

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
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DEPARTMENT OF DEVELOPMENTAL STUDIES

EVALUATION OF CERVICAL CANCER PREVENTION PROGRAM IN HIV/AIDS CARE AND TREATMENT CLINICS IN DAR ES SALAAM, TANZANIA

By

Nyakaji Etanga

A dissertation report submitted in (partial) fulfilment of the requirements for the degree award of Master of Project Management, Monitoring and Evaluation Health of the Muhimbili University of Health and Allied Sciences

October, 2021

CERTIFICATION

The undersigned certifies that she has read and hereby recommends for examination by Muhimbili University of Health and Allied Sciences a dissertation entitled: "Evaluation of Cervical Cancer Prevention Program in HIV Care and Treatment Clinics in Dar es Salaam, Tanzania" in (partial) fulfilment of the requirements for the Degree of Master of Science Project Management Monitoring and Evaluation in Health of Muhimbili University of Health and Allied Sciences.

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Dr. Linda Mlunde

(Supervisor)

_____

Date

DECLARATION AND COPYRIGHT

I, **Nyakaji Etanga,** declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

Signature: …… Date: ……...…….....

ACKNOWLEDGEMENTS

This dissertation for partial fulfilment of my studies is the result of support from my supervisor Dr. Linda Mlunde who has been reviewing and guiding me since the beginning of this study. I am thankful to my University Lecturers for their tireless work of impacting knowledge to me. Furthermore, I appreciate support from my employer "The Aga Khan Hospital Dar es Salaam" for granting time to me to attend my studies.

I cordially convey my gratitude to field supervisors, working mates, and students whom their warm support created a friendly learning environment. To the research assistants and participants thank you for taking your time to make this study achieved. Many thanks to ethical clearance board and other relevant authorities in Dar es Salaam health offices for providing permit for my study to be conducted successful.

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Acronyms

AIDS	Acquired Immunodeficiency Virus
CECAP	Cervical Cancer Program
CTC	Care and Treatment Centre
HPV	Human Papilloma Virus
PEPFAR	President's Emergency Plan for AIDS Relief
SPSS	Statistical Package for Social Science
VIA	Visual Inspection with Acetic Acid
WHO	World Health Organization
WLIHV	Women Living with HIV

Table 1: Definition of terms

Cervical cancer	A type of cancer that occurs in the cells of the cervix
Utilization of cervical cancer screening services	WLHIV attended the health facility and being screened for cervical cancer at least once in a year 2019
Barriers	Obstacles that prevent utilization of cervical cancer screening services
Cervical cancer screening	Finding of changes in the cells of the cervix that could lead to cancer
Cervical cancer prevention program	Comprehensive activities implemented to reduce the burden of cervical cancer

ABSTRACT

Background: Cervical cancer is the most common cancer among women worldwide. According to WHO, globally cervical cancer is the fourth most common cancer in women. In 2018, an estimated 570 000 women were diagnosed with cervical cancer worldwide and about 311 000 women died from the disease(1). It is the most commonly diagnosed cancer in 28 countries and the leading cause of cancer-related deaths in 42 countries, the majority of which are in Sub-Saharan Africa(2). In Dar es salaam, Tanzania there is an ongoing cervical cancer prevention program. The cervical cancer prevention program is on its 3rd year of implementation and an evaluation is needed to document its progress towards achieving the objectives. Therefore, the aim of this study is to evaluate the achievement of the objectives of cervical cancer prevention program in Dar es Salaam, Tanzania

Materials and Methods: A cross- sectional study design was used to collect data in Dar es Salaam. Participants were 427 women age of (25-49years) who attended HIV care and treatment clinics. Structured questionnaire was used to gather information and data were analysed using Statistical Package for Social Science (SPSS) version 20 software package. Chi-square test was used to find out the differences between variables and p-value of less than 0.05 was considered significant in this analysis.

Results: Two hundred and forty-three (58.6%) of the beneficiaries were found to have utilized cervical cancer screening services among the evaluated 33 health facilities which are implementing CECAP in Dar es Salaam. Majority of clients found in clinics during evaluation were married women 188(45.3%), women who have primary education 181 (43.6%) who are doing their own business 131 (31.6%) and aged between 35-39 years (31.69%) Three hundred and fifty-four women (88.67 %) among the studied population. Awareness of cancer screening services aPR 1.65 95% CI=1.43-1.90 p-Value <0.001, business occupation aPR 1.75 95% CI -1.31-2.33 p-Value <0.001 were significantly associated with utilization of cervical cancer screening services. Barriers to utilization included human resource, infrastructures and cost barriers

Conclusion and recommendations: This process evaluation found cervical cancer screening services utilization to be 58.6% among beneficiaries found in the clinics at the evaluation time. This achievement is higher than expected target by PEPFAR COP 20 which requires at least 50% of the eligible to be utilize services. The project is at its middle implementation time (3rd of five years) thus giving the expectations of covering all eligible women at its end.

Capacity building to staff and client's sensitization including involvement of community, improvement of infrastructure and strengthening of referral and linkage services is highly recommended

CHAPTER ONE

1. INTRODUCTION

1.1. Background

Cervical cancer develops in a woman's cervix. Cervical cancer is linked to infection with human papillomaviruses (HPV) commonly transmitted through sexual contact. According to WHO, globally cervical cancer is the fourth most common cancer in women. In 2018, an estimated 570000 women were diagnosed with cervical cancer worldwide and about 311000 women died from the disease(1). It is the most commonly diagnosed cancer in 28 countries and the leading cause of cancer-related deaths in 42 countries, the majority of which are in Sub-Saharan Africa(2).

Sexual intercourse at an early age, multiple sexual partners, tobacco smoking, long-term oral contraceptive use, low socioeconomic status, immunosuppressive therapy, and micronutrient deficiency(3) as well as family history of cervical cancer(4) are significant risk factors for cervical cancer. Moreover age, marital status, education level, employment status, and income level are associated with accessing cervical cancer services which include screening, diagnosis and treatment(4).

In Tanzania, cervical cancer is among the three common cancers including, Kaposi's sarcoma and breast cancer (5). The cervical cancer age-standardized incidence is 59.1 per 100,000 women and an age-standardized mortality of 42.7 per 100,000 women per year (2). Women with cervical cancer are presenting at advanced stage due to lack of awareness of and insufficient preparations for screening programs(6).

Early detection of cervical cancer (Screening and Diagnosis) is goal number two of the National Cancer Control Strategy (2013-2022). Listed strategies include development of programmes for early screening and diagnosis, expand the programs and collaboration with stakeholders in promoting early detection, screening and cancer diagnosis (5). In Tanzania the President's Emergency Plan for AIDS Relief (PEPFAR) is collaborating with the

Government of Tanzania to implement a Cervical Cancer Prevention Program, integrated in the 5 years comprehensive HIV/AIDS Care and Treatment Project. This program is focusing on cervical cancer screening services to women living with HIV (WLHIV) in HIV care and treatment clinics. Eligible clients are WLHIV aged 25 to 49 years who are currently on HIV/AIDS care and treatment. The goal of this program is to screen at least 50% of the eligible clients in the high-volume health facilities and provide them with appropriate services. The program's objectives include awareness creation to WLHIV on the importance of cervical cancer screening and its close association with HIV. Also to screen cervical cancer using "screen-and-treat" approach which is being implemented for the management of precancerous lesions to maximize opportunities for immediate cryotherapy treatment and refer and link them with appropriate services for those who will be identified to have the need using the existing national referral and feedback mechanism (7). This evaluation assessed the implementation of the program objectives to determine the extent if Women Living with HIV/Aids (WLIHV) are aware of cervical cancer screening services and they are utilizing cervical cancer screening services. It also determined factors related to the utilization of the interventions. The area of the study were HIV/AIDS care and treatment facilities in Dar es Salaam region.

1.2. Research questions

1.2.1. Broad research question

- To what extent has cervical cancer prevention program achieved its objectives of creating awareness, screening cervical cancer and providing referral and linkage for cervical cancer services to WLHIV in Dar es Salaam?

1.2.2. Specific research questions

1. To what extent are WLHIV aware of cervical cancer screening?
2. What is the utilization status of cervical cancer screening services among WLHIV?
3. What factor are associated with utilization of cervical cancer screening services among WLHIV?

4. What are barriers for utilization of cervical cancer prevention services among women living with HIV in HIV care and treatment in Dar es Salaam?

1.3. Objectives of the study

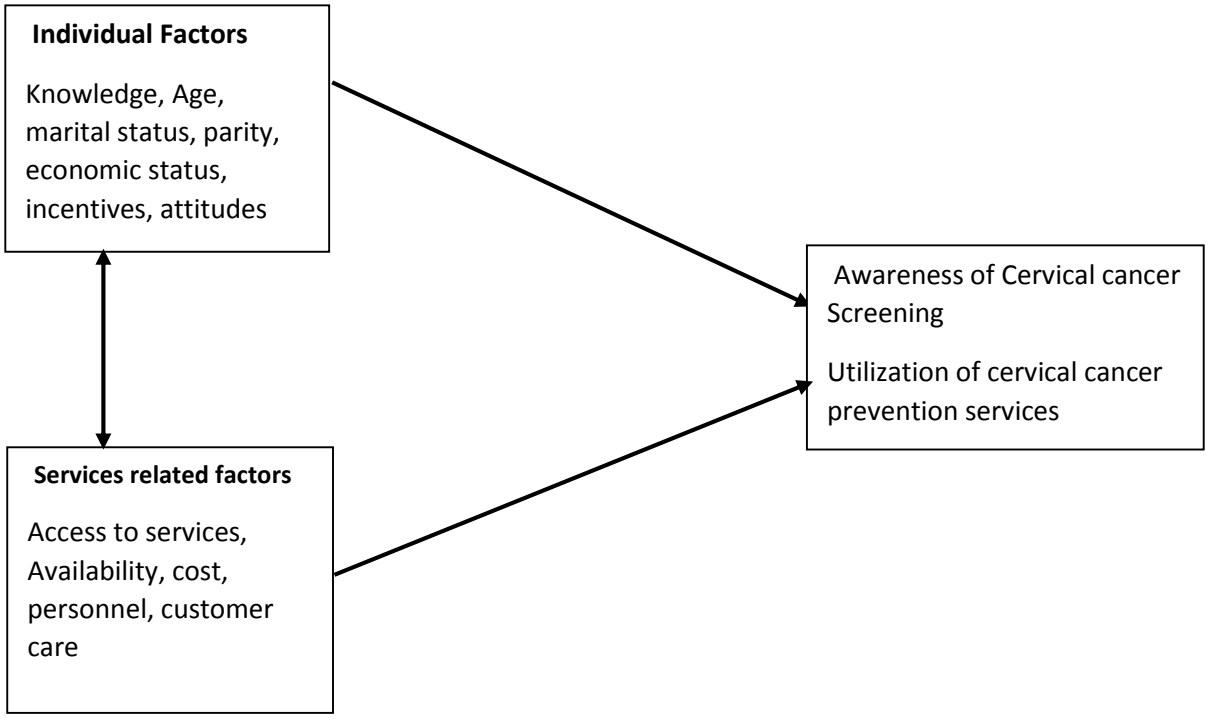
1.3.1. Broad Objective

- To evaluate the **implementation** of cervical cancer prevention program in achieving project outcome of screening cervical cancer to 50% of eligible PLHIV in HIV care and treatment clinics in Dar es Salaam

1.3.2. Specific Objectives.

1. To determine awareness of cervical cancer screening services among WLHIV
2. To assess the utilization status of cervical cancer screening services among WLHIV
3. To determine factors associated with utilization of cervical cancer screening services among WLHIV
4. To assess barriers for utilization of cervical cancer prevention services among women living with HIV in HIV care and treatment in Dar es Salaam.

1.4. Conceptual framework



Utilization of cervical cancer prevention services is dependent on various factors which are interrelated. Example individuals' economic status can determine a visit to clinic for cancer screening(8). However, cost of services and can influence screening seeking habit of an individual (9). Availability and accessibility of services can determine utilization. This study assessed association of these factors with utilization of cervical cancer prevention services.

1.5. Problem statement

Cervical cancer is the most commonest cancer with high incidence and mortality in the globe (2,5). Cancer control strategy requires interventions for early detection of cervical cancer to reduce cervical cancer incidence and mortality in Tanzania (10). Program for cervical cancer prevention is currently being implemented to women living with HIV in HIV care and treatment clinics in Dar es Salaam Tanzania(7). Across the globe and in Sub-Saharan Africa

utilization of cervical cancer screening among women in general population and among specific groups has known to be low(3,4,11). In Tanzania, utilization is known to be low among women attending RCH clinics and to female teachers(12,13). Various factors are known to influence services uptake individual and health systems(7,12,14). The cervical cancer prevention program is in its 3rd year of implementation; a process evaluation was therefore useful to tell program the status of the progress towards achieving the 50% eligible Women Living with HIV (WLHIV). It would establish a status of the utilization of this service including factors associated with it.

1.6. Rationale of the study

Women living with human immunodeficiency virus (WLHIV) have a higher prevalence of HPV with multiple high-risk HPV types thus increasing their risk to cervical cancer(9). The cervical cancer prevention program is at the middle of its implementation. The utilization of services provided by the intervention among WLHIV is important to be established to inform progress towards achieving the goal. The targeted group are women aged 25 to 49 years. This evaluation will also identify utilization status and facilitators associated with utilization among the beneficiaries to recommend appropriate actions to meeting the program goal and bring the desired results. The result and recommendation will be used for improvement of the current implemented program.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Introduction

The goal of Tanzania cancer control strategy is to strengthen and accelerate the translation of cancer control knowledge into public health with focus on reduction of cancer cases and death as well as improvement of quality of life of patients and their families(10).

2.2. Awareness of cervical cancer screening services

Knowledge on cervical cancer screening among women is important step to the identification of the risk factors and utilization of the prevention services however there is still a knowledge gap including low awareness on cervical cancer screening. Studies in Kenya have shown that awareness of cervical cancer screening services among surveyed women who attended for reproductive health services was low about 29% and most heard from health care worker(15).

The same in Ethiopia, a study among women Aged 15–49 years in Adigrat Town, shown there is low knowledge about cervical cancer and poor attitude towards its screening and information about knowledge and attitude towards screening of cervical cancer was also limited(16).

In Tanzania, literatures suggested majority of women in the lake zone are lacking comprehensive knowledge of cervical cancer thus few utilize screening services and strategy to create awareness about cervical cancer may help to improve knowledge and utilization of cancer screening practices(13)

In central Tanzania, studies reported extremely low knowledge about cervical cancer, mostly among women with less education, especially those living in rural areas, and those without children(17). Low knowledge was also seen among health care providers specifically in regional hospitals (18) and among teachers in most urban area Dar es Salaam. However, knowledge of cervical cancer among women contributes to the utilization of the prevention cancer services.

2.3. Utilization and factors of cervical cancer screening services

Utilization of cervical cancer prevention services are related to various factors entailed by various studies. In Jordan utilization of cervical cancer screening services was associated with encouragement from the healthcare provider whereby those who were regularly encouraged had screened more frequently compared to those who were less encouraged, same to the number of years of marriage where by the longer women stayed in marriage more frequently utilized services. Increased use was also observed in private facilities as compared to public facilities (4). Thus, providers' encouragement and marriage linked to the utilization of services.

Peer review study on the interventions to increase uptake of cervical screening in Sub-Saharan Africa by Lott BE, 2020 et al in reported less than 20% utilization of cervical cancer screening practices among women in Sub-Saharan Africa despite education interventions and economic incentivization and actions on the participants attitudes (19). Innovative service delivery to improve environmental constraints, making services more available, accessible, and appropriate to women, reported to be effective measure to increase coverage(19).

Literatures in Nigeria reported poor utilization of cervical cancer screening services at 20.6%. The commonest reason being lack of awareness (20). Other reasons included not being sexually active, no time, and the fear of the result. The findings reported a significant association between some sociodemographic factors like the age of respondents, marital status, parity, and duration of practice with the utilization of cervical cancer screening services. This is similar to the finding in Ethiopia (3) .

In Ethiopia, utilization of cervical cancer screening reported to be low. However among users utilization was higher among women who are educated and those who have frequently reported STIs(3). That is educational status, history of multiple sexual partners, history of sexually transmitted diseases, and knowing methods of prevention (awareness) are associated with utilization of cervical cancer screening services.

Similar findings have been observed on the low utilization of cervical cancer prevention methods among women living with HIV. A study conducted in Ethiopia revealed utilization of cervical cancer screening service was low among HIV positive women. Educational status, duration of HIV diagnosis, partner support, knowledge status about risk factor, attitude towards cervical cancer and its screening were associated with cervical cancer screening utilization (9).

Studies on the utilization of cervical cancers screening services among women of different groups reported similar findings. A study conducted in Magu, Mwanza showed low utilization 14.3% among women attended RCHs services regardless of high level of awareness on cervical cancer screening (13); 10.7% among female nurses in Ethiopia (3), similar among teachers in Ilala municipal was 21%, whereby it was significantly higher in multiparous of the group (12). This resembled to findings in other parts of Sub-Saharan Africa which range 6% to 21%(15,21).

Health system factors at national and district levels influence utilization. Poor flow of information from national to lower level and inadequate availability of tools and instruments and shortage of skilled and competent staff are some of reported system factors(14). While utilization of cervical cancer screening services reported to be higher in Jordan (4), poor collaboration with private sectors was found to be a district system factor for uptake of cervical cancer prevention services in Tanzania(14).

2.4. Barriers for utilization of cervical cancer

A systematic review on the barriers to utilization of cervical cancer screening services in Sub Saharan Africa reported common barriers such as fear of screening procedure and negative outcome and low level of awareness of services. Others include embarrassment and possible violation of privacy, lack of spousal support and societal stigmatisation. Access barriers due cost of health services, proximity to facility and facility navigation were also appeared in the study(22).

Similarly, studies in Ghana found barriers to cervical cancer screening and grouped in the individual, community, institutional, and policy levels. The individual-level factors include

low awareness of screening, personal factors, screening procedure, and low income while institutional factors include privacy issues, health worker attitude, and perceived misdiagnosis. Community-level factors comprise the belief system use of traditional medicine and gender relations, whereas policy factors have to do with low education on cervical cancer screening, lack of government funding, and screening facilities.

Reports showed challenges facing cervical cancer screening services in Tanzania include lower number of HCWs trained on cervical cancer screening and pre-invasive lesions management, shortage of supplies, data management issues (inadequate data accuracy), and few numbers of mentors to improve the quality screening and pre-invasive lesions management(7).

CHAPTER TWO

3. METHODOLOGY

3.1. Method

3.1.1. Study design

This is a process evaluation in which a cross sectional study design was conducted using both qualitative and quantitative methods.

3.1.2. Study area

The study was conducted at the 33 selected HIV care and treatment clinics where cervical cancer prevention program has been implemented in Dar es Salaam Tanzania. Facilities involved included Amana Hospital, Buguruni Health Center, Cardinal Rugambwa , Chanika Health Center, Infectious Disease Center Clinic, Kitunda Dispensary, Mnazi Mmoja Hospital, Pugu Kajiungeni Health Center, Tabata A Dispensary, Vingunguti Dispensary, Kigamboni Health Center, Vijibweni Hospital, Bunju Dispensary, Kawe Dispensary ,Magomeni Health Center, Mwananyamala Hospital. Hospital, Mwenge Dispensary, Tandale Health Center, Tegeta Mission Dispensary, Consolata Sisters Dispensary. Mbagala Kizuiani Dispensary, Mbagala Rangi Tatu Hospital - District Hospital,Mbagala Round Table Health Center,Mbande Dispensary, Tambukareli Dispensary, Temeke Hospital. Upendano Dispensary, Yombo Vituka Health Center, Kimara Central Dispensary. Makurumla Health Center. Mbezi Health Center and Sinza Hospital

The regional has five administrative districts and it is located at Eastern Cost of Tanzania with 1,590 km². A highest populated region in Tanzania of about 4.365 million people with 4.7 HIV prevalence among adults according to HIV Impact Survey 2016-17. This area was conveniently accessible to researcher and feasible to obtain the estimated representative sample.

3.1.3. Study population

The study population included women living with HIV who have been attending HIV care and treatment clinic for past three years at the time of the study.

3.1.4. Inclusion criteria

Women living with HIV aged 25 to 49 years and have been attending to the care and treatment clinics at least for past three years

3.1.5. Exclusion criteria

Respondents who will not consent to participate in the study, and those who will not be able to communicate.

3.1.6. Sample size estimation.

Quantitative sample:

The sample size was determined using a formula for sample size using a critical value of the standard normal distribution for the 95% confidence interval around the true proportion, which is 1.96 for 95% confidence level and 5% margin of error and 50% Proportion.(23)

Therefore, minimum sample size was calculated as follows;

For a large population:

$$n = \frac{z^2 p(1-p)}{\varepsilon^2} \quad \text{or} \quad n = \frac{z^2 p(100-p)}{\varepsilon^2}$$

Where

n= required sample size

Z= Critical value of the standard normal distribution for the 95% confidence interval around he true proportion which is 1.96

P= Proportion=50%

ε^2= Marginal error =5%

Substituting in the above formula;

$n = 1.96^2 \times 50 (100-50) = 384.16 \approx 384$

N = 334

None response rate of 10% N=n/ (1-0.1)

384/0.9 = 426.66 ≈427

Therefore, the minimum required sample size was to be 427 participants.

Qualitative sample:

This study will involve 10 participants who will be selected from study sites

3.2. Measurements

3.2.1. Dependent variables

Utilization of cervical cancer screening services is the dependent variable. This was measured by asking HIV positive women attended in the clinics if they have ever been screened for premalignant cervical lesions at least in 2019. Upon fit to eligibility criteria, women provide consent before they are screened. This question was adopted from studies to assess utilization of cervical cancer screening services(24) (9).

3.2.2. Independent variables

Concepts referred to as independent variables in this study has been studied by other researchers in the cervical cancer prevention studies in Tanzania and in Ethiopia (3, 6, 9, 12, 25). These will be measured using a set of modified questions adopted from various similar studies summarized in a questionnaire and provided to participants to fill in their responses.

1. Demographic characteristics include age, marital status, level of education and occupation as well as other risks like history of STIs, multiple sexual partners and past ‘cervical cancer disease history, they provide a general indication of group in the population on the utilization of cervical cancer screening services.

Demographic data was collected using demographic questions in the data collection tools adopted from Cervical Cancer studies (12)(6) and Tanzania Demographic and Health Survey and Malaria Indicator Survey (26).

2. Knowledge of cervical cancer is important for individuals to utilize services. Studies have shown importance of knowledge to the use of cervical cancer prevention services. This was measured using data collected through a adopted tools from cervical cancer KAP studies(12)(28)(6)(15) ….

3. Cost of services is referred in this study as monetary cost incurred by clients for receiving cervical cancer screening services. They were asked about cost in relation to the utilization of services(30,31)

3.3. Sampling procedure

3.3.1. Quantitative sample:

Random sampling method were used to select participant. Lottery sampling was applied where by a ballot of piece of papers with "Yes" or "No" were prepared. Only those who picked yes were included in the study. Only 33 CTCs which had been providing CECAP services at time of study were visited. The list was obtained from the respective Regional Medical Office of Health.

3.3.2. Qualitative sample:

Purposive sampling technique were used to select 20 study participants. Sampling were WLHIV aged 25 to 49 years, being a beneficiary of the study facility for more than three years and they were consented and voluntarily requested to participate in the study.

3.4. Data collection

A questionnaire adopted from other similar studies was used to obtain information from women living with HIV who have been attending at the selected HIV care and treatment clinic for past three years. It was in English and translated to Kiswahili for easy communication and results were translated back to English language. Data entry was done using mobile phone through KOBO Collection, software application in which questionnaire where integrated.

An interview guide was used to interview participants on the barriers for the utilization of cervical cancer screening services. Data were collected through Focus Group Discussion (FDG). It gave room for more depth during information gathering. The group size was averaged to 10 participants and two sessions. The researcher was a note taker, recorder and lead moderator.

Two research assistants were selected from five interviewed graduates of medical discipline of social science with prior experience of research. They were oriented for two days on study objectives how to get consent from respondents. They were provided with knowledge what to do before providing a questionnaire provided to the respondent including what research was about, purpose of the study, benefits, risks and rights to withdrawals.

3.5. Data Management

Data obtained from data base were cross checked cleaned to ensure completeness and accuracy. Data were then extracted in to excel, cleaned, coded and stored for safety.

3.6. Data analysis

Descriptive statistics were used to describe socio – demographic and behaviour characteristics. Frequencies and percentages were used to summarize categorical data. For continuous data, mean and standard deviation were computed. The results were presented as tables and figures. Statistical Package for Social Sciences (SPSS) was used to analyse data. The analysed data for utilized services included number and percentage of WLHIV who were aware of the program, those who have ever received screening services.

Poisson regression model was used to identify associating factors using univariate and multivariate analysis. In this poison analysis a variable was interpreted significant when the P-Value is <0.05 at 95% CI. The obtained prevalence ratio (PR) and adjusted prevalence ratios (aPR) obtained from this analysis was used to explain the factors associated with utilization of cervical cancer screening services.

For qualitative data; recorded FDG were transcribed verbatim and translated to English. The transcripts were analysed into themes. The transcripts were read and re-read to ensure all

information were captured without losing meaning and for familiarization with the transcripts then thematic framework was developed with themes and organized.

3.7. Ethical clearance

Ethical clearance was sought from Institutional Review Board of Muhimbili University of Health and Allied Science (MUHAS). Permission to conduct research were obtained from Dar es Salaam Regional Medical Officer of Health and respective Councils Medical Officers of Health as well as to the health facilities where clinics are run. Respondents were informed about the objective and importance of the study and assured confidentiality. Before providing a written consent, they were informed on their right to participate and withdraw from the study. Completed questionnaire were kept locked kept safe for confidentiality. Respondents did not write their names on questionnaire forms to maintain confidentiality.

3.8. Limitation of the study

The study relied on the information provided by the respondents who are living with HIV. They may fear to freely provide information during the interview due to stigma. Respondents might not readily respond to sensitive questions adequately thus might lead into information bias. Actions like using neutral questions, self-administered questionnaires to reduce respondents' discomfort when answering sensitive questions, were included in the data collection protocol to mitigate the expected limitations.

CHAPTER FOUR

4. RESULTS

4.1. Demographic characteristics of participants

Table 1. Shows characteristics of the 415 recruited participants from 33 HIV Care and Treatment facilities in Dar es Salaam region. The age group 36 to 49 years were 250 (60.2%), median 36. Respondents 384 (92.5%) started menarche at age of 15 and 16, median 15 and it happened that 242 (58.3%) had their first sexual intercourse at age of above 18 years, median 18. The Christians were 214 (51.6%) married respondents were 188 (45.3%), 181 (43.6%) primary educated and 137 (33%) went to secondary schools. Many 131 (31.6%) were doing business while the following majority 98 (23.6) were housewives.

Table 2: Socio-demographic characteristics of the study participants

Variable		Frequency (n)	Percent (%)
Age group (years)			
	25 - 35	165	39.8
	36 - 49	250	60.2
Median age in years (Range)		36 (25, 49)	
Age of menarche			
	12 - 14	31	7.5
	15 - 16	384	92.5
Median age of menarche in years (Range)		15 (12, 16)	
Age of starting sexual intercourse (years)			
	< 18	173	41.7
	≥ 18	242	58.3
Median age of starting sexual intercourse (Range)		18 (13, 26)	
Religion			
	Christian	214	51.6
	Muslim	201	48.4
Marital status			
	Single	88	21.2
	Widow	31	7.5
	Divorced	43	10.4
	Married	188	45.3
	Cohabiting	65	15.7
Level of Education			
	University / College	65	15.7
	Secondary	137	33.0
	Primary	181	43.6
	No formal education	32	7.7
Occupation			
	Business woman	131	31.6
	House wife	98	23.6
	Peasant	36	8.7
	Employed	61	14.7
	Self employed	89	21.4

4.2. Cervical Cancer Screening awareness

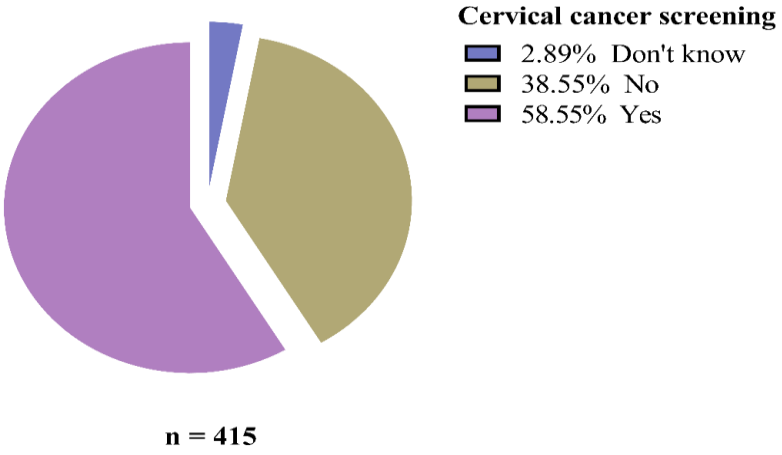
Three hundred and sixty-eight (88.67%) WLHIV in the evaluated facilities were found to have heard about cervical cancer screening and majority were able to list risk factors for cervical cancer including unprotected sexual intercourse 49 (15.7%) Infection STIs 56

(15.17%), Infection with HPV (17.34%). Common cervical cancer symptoms explained by 103 WLHIV was virginal bleeding in between menstruations 60 18.58%) and during/after sex 43 (13.31%). Other symptoms were persistence abdominal pain 36 (11.15%) per-virginal discharge 38 (11.76%) and persistence lower back pain (11.15%). Almost all WLHIV 99.1% of knew the purpose of cervical cancer screening.

4.3. Utilization of Cervical Cancer screening services

In the evaluated HIV care and treatment clinics, 243 WLHIV had been screened for cervical cancer making utilization 58.55%. Despite of this utilization 12 (2.89%) did not know if they have ever screened.

Figure 1: 4.2. Utilization of Cervical Cancer screening services



4.4. Factors associated with cervical cancer screening services

The table 2 shows socio-demographic factors associated with cervical cancer screening services. Occupation and parity of WLHIV were significantly identified to have association with cervical cancer screening services

4.4.1. Demographic characteristics and cervical cancer screening services

The table 3 shows the socio-demographic findings and cervical cancer screening services.

The results showed factors such as age of starting sexual intercourse and age of starting menarche (p-Value 0.60) and (0.954) were not identified to have significantly associated

with screening services. That is the same as the averaged ages among screened population where by 60.8% were between 36-49 years (P-Value 0.253) education (P-Value 0.77) and marital status (P-Value 0.88). Only Occupation (P- Value 0.001) and parity (P-Value 0.049)

Table 2: Demographic characteristics with cervical cancer screening

		Cervical cancer screening		
Variable		**Yes n (%)**	**No n (%)**	**P - value**
Age of starting sexual (years)				
	< 18	92 (53.2)	81 (46.8)	0.060
	≥ 18	151 (62.4)	91 (37.6)	
Age of menarche (years)				
	12 – 14	18 (58.1)	13 (41.9)	0.954
	15 – 16	225 (58.6)	159 (41.4)	
Age group (years)				
	25 – 35	91 (55.2)	74 (44.8)	0.253
	36 – 49	152 (60.8)	98 (39.2)	
Religion				
	Christian	117 (54.7)	97 (45.3)	0.098
	Muslim	126 (62.7)	75 (37.3)	
Marital status				
	Single	56 (63.6)	32 (36.4)	0.080
	Widow	20 (64.5)	11 (35.5)	
	Divorced	22 (51.2)	21 (48.8)	
	Married	116 (61.7)	72 (38.3)	
	Cohabiting	29 (44.6)	36 (55.4)	
Education level				
	University	37 (56.9)	28 (43.1)	0.770
	Secondary	85 (62.0)	52 (38.0)	
	Primary	102 (56.4)	79 (43.6)	
	No formal education	19 (59.4)	13 (40.6)	
Occupation				
	Business woman	83 (63.4)	48 (36.6)	**0.001**
	House wife	64 (65.3)	34 (34.7)	
	Peasant	22 (61.1)	14 (38.9)	
	Employed	40 (65.6)	21 (34.4)	
	Self employed	34 (38.2)	55 (61.8)	
Parity				
	Null parity	16 (40.0)	24 (60.0)	**0.043**
	1 - 3	180 (60.6)	117 (39.4)	
	>3	47 (60.3)	31 (39.7)	

The table 3 shows the univariate and multivariate analysis of factors associated with cervical cancer screening services. In the univariate analysis marital status (single 95% CI = 1.04-1.95 p-value 0.023, married at 95% CI=1.03-1.85 p-Value 0.030) Occupation (business at 95% CI= 1.24-2.23 p-Value 0.001, house wife p-Value 0.001 at 95%CI =1.27-2.31, peasant p-Value 0.013, at 95% CI=1.10 – 2.32 , parity (1-3) at 95% CI= 1.03 -2.24 p-Value 0.037 and awareness among WLHIV at 95% CI=1.38-1.83, p-Value 0.001 were associated with cervical cancer screening.

In the multivariate analysis the chances for cervical cancer screening was more associated with occupation of WLHIV aPR 1.75, p-Vale <0.001 at 95% 1.31 – 2.33 for business women, aPR 1.69, p-Value <0.001 at 95% CI =1.26 to 2.26 for housewife and 95% CI=1.09 – 2.23 p-Value 0.014, aPR 1.56 and 95% CI= 1.16 – 2.14, p-Value 0.004, aPR 11.57 for employed. Moreover, those who were aware of the screening services seen to have 1.65 times chances of screening cervical cancer (95% CI- 1.43 – 1.90 p-Value <0.001 aPR 1.65).

Table 3: Univariate and multivariate analysis of the factors associated with utilization of cervical cancer screening services

		Univariate analysis			Multivariate analysis		
Variable	**Category**	**cPR**	**95% CI**	**P - value**	**aPR**	**95% CI**	**P - value**
Age of starting sex	≥ 18	1.17	0.99 – 1.39	0.066	1.16	0.99 – 1.36	0.076
	< 18	ref					
Religion	Muslim	1.15	0.98 – 1.35	0.098	1.16	0.99 – 1.36	0.056
	Christian	ref					
Marital status	Single	1.43	1.04 – 1.95	**0.026**	1.31	0.97 – 1.77	0.083
	Widow	1.45	0.99 – 2.11	0.055	1.18	0.82 – 1.68	0.375
	Divorced	1.15	0.77 – 1.71	0.500	0.95	0.65 – 1.37	0.779
	Married	1.38	1.03 – 1.85	**0.030**	1.13	0.85 – 1.51	0.399
	Cohabiting	ref					
Occupation	Business	1.66	1.24 – 2.23	**0.001**	1.75	1.31 – 2.33	< **0.001**
	House wife	1.71	1.27 – 2.31	< **0.001**	1.69	1.26 – 2.26	< **0.001**
	Peasant	1.60	1.10 – 2.32	**0.013**	1.56	1.09 – 2.23	**0.014**
	Employed	1.72	1.25 – 2.37	**0.001**	1.57	1.16 – 2.14	**0.004**
	Self employed	ref					
Parity	>3	1.51	0.99 – 2.29	0.056	1.34	0.88 – 2.04	0.175
	1 - 3	1.52	1.03 – 2.24	**0.037**	1.42	0.97 – 2.09	0.070
	0	ref					
Awareness	Yes	1.59	1.38 – 1.83	< **0.001**	1.65	1.43 – 1.90	< **0.001**
	No	ref					
Key: cPR: Crude prevalence Ratio, aPR: Adjusted prevalence Ratio							

4.5. Facilitators and Barriers for utilization of cervical cancer screening services

Twenty participants in group of ten were involved in the focused group discussion on the facilitators and barriers for cervical cancer screening services. Twenty WLHIV from two different clinics were involved in the discussion. A mixed of 8 young women aged between

25 to 34 years, 8 ladies aged between 35 and 44 years and 4 older women aged between 45 to 49 years were involved in the discussion.

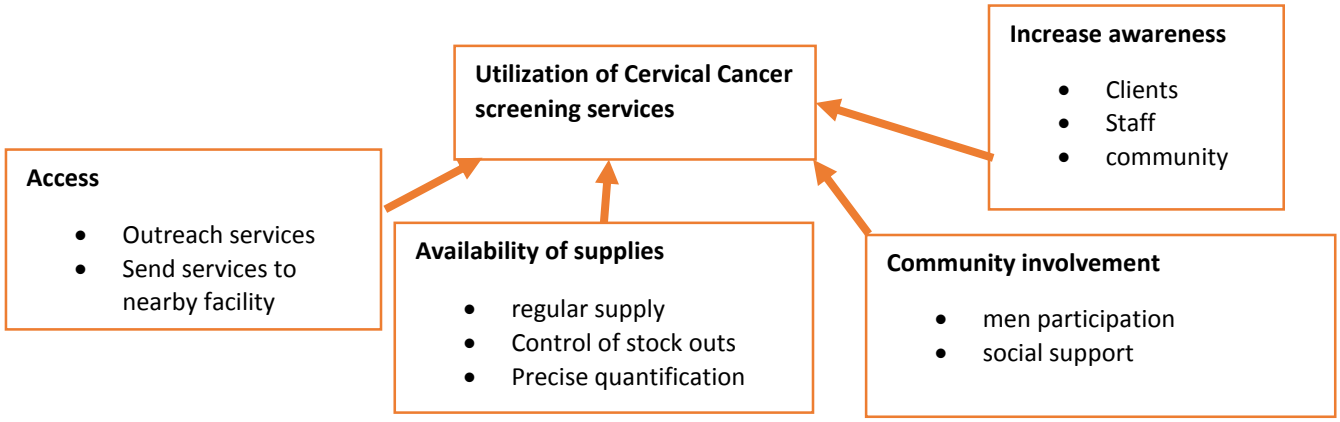
4.5.1. Facilitators for utilization of cervical cancer screening services

Qualitatively, four themes were evolved from the discussion on the factors which would increase uptake of cervical cancer screening services. These include access to services, awareness, community involvement, availability of supplies. Access to cervical cancer screening services was explained in terms of increasing a reach to beneficiaries using outreach services, school health programs, and make the services available even to small facilities so that even those who can afford to travel far can get sensitized to use services because it would be nearby available. Bringing services near to people were explained as among the facilitator which will influenced utilization of cervical cancer screening services. This study identified that measures such as outreach services in both community and to small facilities would make clients access services easily hence motivated to use and increase uptake. *"This service is not everywhere… imagine I came from Chanika more than 40 km to here, others are come may be far than me, if the services were there nearby my home I would have been screened. Also, there are people who are busy with business, so the services should follow them also; make it as the way vaccines are following children"* Awareness was basically explained among beneficiaries, that making them aware would increase demand and influence utilization. It was explained by participants that majority of clients are sometimes have mixed information due to informal messages regarding services like this, and become dominated by myths which hinder them from screening "*some of clients have not screened because they don't know the importance, the education about screening has not reached them, other have bad belief and fear, so if they will be educated it will help them to understand and get screened, also there is a say that knowledge is power"*. Due to stigma on HIV/AIDS and associated illness clients would need support to be motivated to screening for cervical cancer. Involving community (especially male) was said to important aspect for motivating eligible women to have test because it would reduce fear of stigma when test is positive. Men involvement was strongly explained during focused group discussion as point of entry in the community involvement. This would address fear among women due to

feelings of stigma when results are positive. *"In our culture men have power over women and if they are involved they will support their wives for screening and therefore whatever the results women will accept because their men are there, otherwise we have fear if at all results come out positive some might get divorce" ".... The whole community should be sensitized to support use of this service"*

Availability of supply was among the identified themes as factor for utilization of cervical cancer screening services, where by it assures availability of services and reduces chance of clients to miss it due to stock outs.

Figure 2: Facilitators of utilization of cervical cancer screening services



4.5.2. Barriers for Utilization Cervical cancer screening Services.

Four themes emerged from the discussion which are knowledge, Infrastructures, human resources, and cost. Knowledge were related to low awareness among beneficiaries, provider's ability to orient clients, and lack of audio-visual learning materials at waiting areas for clients *"We are just told every morning that cancer services are available at our CTC, we are not told what was it, and what was going to be done so that we are screened, and what would be next after screening. So, among us some were screened just because of respect to providers and some have not because they don't know really what it is and its benefit"*. Similarly, it was also explained in the provider's perspective on their ability to deliver messages which client will clearly understood. *"nurses themselves cannot say clearly about*

this service, and at the waiting area people discuss many things they even say it is against religious believers and traditions, some says it is western control method on our births" That has provided a chance for sharing of myths and bad beliefs about cervical cancer screening among clients at the waiting areas.

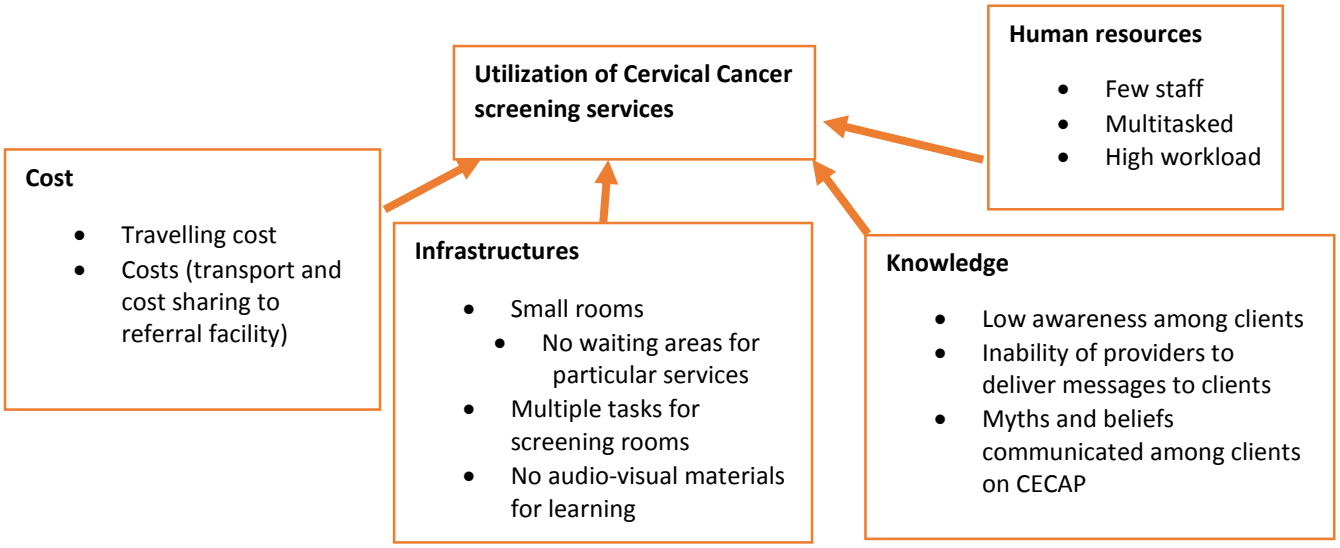
Infrastructure was related to small space for services which affect privacy sitting arrangements, human resources was associated with workload (multi-tasking) which most of the time causing delays and inconsistence availability of services. Clients who have been screening are experience pain they sometimes need place for resting which most clinic have only general waiting area *"rooms are very small, hot and they are sometimes used to see other clients and thereafter for screening at least if they would have put a separate room for this service"*. Some procedure room are used for more than one services disturbing client's privacy *"when you are undressed a nurse can come in talking to a doctor or inquire something you feel so bad, when another person is looking at you when undressed is very bad"*

Human resources was explained as lack of enough staff in the clinics whereby providers are performing more than one function (multi tasked) hence become overloaded which results in to delays and inconsistence availability of services *"sometimes when you are ready for services you need to wait because doctor is attending other clients, its until he finishes is when you get screened and until that time you are already tired"*. In most of the facilities clinicians are attending clients and also, he/she is called to conduct screening at the same time when a consented client is available. In other days clients are missing services if a designated provider for screening is not available on duty thus inconsistence services

Cost barriers were related transport from home to clinics, and to the referral services as well as investigation cost which are not free as it is for screening services the themes. Client could not attend nearby facilities due to stigma and other related discrimination from community due HIV/AIDS infection. Cost was also a barrier when they are provided with referral services to the cancer referral hospital where they have to use their own cost for transport as well as registration and investigation at the referred facilities *" I was given referral to Ocean Road for further screening, I thought it was going to be free as it was for screening but I was*

asked to pay for registration, investigation and I went there more than four times the fifth time I could not manage because I did not have money, here I am, I have not get treatment"

Figure 3: Summarize barriers to utilization



CHAPTER FIVE

5. DISCUSSION

5.1. Awareness of cervical cancer screening services

This study found that clients were aware about cervical cancer screening and they were even able to identify symptoms which could make them go for screening like vaginal bleeding between periods and before/after sexual intercourse Importantly they knew the purpose of the screening services. This was not similar to studies in other population in Tanzania, whereby studies reported extremely low knowledge (14), among health care providers specifically in regional hospitals (18) and among teachers in most urban area Dar es Salaam. It was also contrary to studies in Ethiopia where in Adigrat Town, shown there was low awareness about cervical cancer screening (16). However, all study participants did not know that having weak immunity was a risk to cervical cancer a specific area where the program need to work on.

5.2. Utilization of cervical cancer services

In the evaluated period, the study reported good utilization of cervical cancer screening services among beneficiaries among the evaluated33 health facilities which are implementing CECAP in Dar es Salaam. However for similar services in Tanzania this was higher than among women of different groups reported in Magu, Mwanza showed low utilization among women attended RCHs services (13) 21 % among teachers in Ilala(32). Moreover this was also higher among female nurses in Ethiopia; but lower compared to 79.1% in Vhembe District South Africa.(33). This is in line to the program objective of screening at least 50% of eligible clients according to Tanzania PEPFAR 2020 Country Operational Plan (PEPFAR/CDC COP 20) (34).

Majority of clients found in clinics during evaluation were married women aged between 35 and 39 women who have primary education and majority were doing their own business. Contrary to studies in Ethiopia where majority of respondent were employed and had post primary education(9)(16).The availability of this group in clinics had a reflection on the utilization where by primary educated women, those who are married (same findings as in

Jordan (4), doing business and aged between 35 and 39 years reported to have utilized services as compared to other demographic groups.

Access to cervical cancer screening services were fairly explained) however customer satisfaction was rated very good.

5.3. Factors associated with cervical cancer screening services

The cross sectional survey of factors influencing utilization of cervical cancer screening services among women by Jisa and colleagues identified high intake of cervical cancer screening among educated and employed women (35), similarly in Ethiopia increasing awareness were recommended as factor to increase uptake (36). In Tanzania, studies reported spouse or partners support as an important factor in the utilization of cervical cancer screening service (32)

Similarly, this study identified occupation among them women who were doing business showed more significantly association with cervical cancer Business is income generating activities is related to economy and therefore ability to manage cost related issues as well as freedom and hence accessing services.

Furthermore, awareness of cervical cancer screening services was similarly associated with utilization of cervical cancer screening services WLHIV who were aware of services were identified to have 1.65 times chances of utilizing screening services.

5.4. Barriers to utilization

Lack knowledge among clients attending HIV/AIDS care and treatment on cervical cancer screening services were expressed as barrier in terms of low awareness on the procedures for screening, and benefits of the services to them. These findings are similar to other studies where lack of knowledge was found to be challenge for utilization of cervical cancer screening services in sub-Saharan Africa (22). As well as in Tanzania where few HCWs are trained on cervical cancer screening services(7).

Infrastructure was related to small spaces for services which affect privacy of users, as well as sitting arrangements. Similar barriers was found in peer review studies in Uganda where

infrastructural barriers was associated with uptake of cervical cancer screening(38) and it was mentioned as a system barrier in the review study to identify barriers to utilization of cervical cancer prevention services in low- and middle-income countries(39)

Human resource for health has been pointed out by various scholars as factor which hindering utilization of cervical cancer screening services many countries including low middle income countries,(36), 5) as well as in Tanzania(7).

Cost of services were explained in terms of transport to clinics as beneficiaries are residing up to 25 kilometres from the clinics. This shown lack of continuum of care as the screening is free and continuous services would have to be free as well and provider supported with transport stipend. Cost due to long distance travelling was also explained by Chidyaonga-Maseko F. *et al* .(36), Black, E. *et al* (38)

CHAPTER SIX

6. CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

This process evaluation found WLHIV attended clinics are aware about cervical cancer screening services including symptoms and the purpose of screening. Beneficiaries who have utilized services were 58.6% which was 8.6% higher than expected 50% target by PEPFAR COP 20. The project is at its middle implementation time (3rd of five years) thus giving the expectations of covering all eligible women at it end. Married women, business women and those who are primary educated seems to have utilized services more than other groups.

Moreover, factors associated with utilization of cervical cancer screening services were awareness, and occupation. Knowledge on cervical cancer screening among WLHIV was identified as a power to increase utilization of the services. Interviewed WLHIV witnessed existence of health education sessions which include cervical cancer screening topic. Thus, the program objective on awareness creation is implemented regardless of some of presenters seems to lack skills on communicating the messages. In addition, increasing access, supplies and community involvement would facilitate utilization of services.

This study identified Lack of knowledge, human resource, infrastructures and cost shown as barriers to utilization of cervical cancer screening services. Despite of barriers seems to be common in similar projects as identified by cited authors from other studies they need to be addressed so that to efficient achievement of this project. However, clients were satisfied with services provided at the evaluated clinics.

6.2. Recommendations

This study recommends the following to increase cervical cancer screening uptake

- Capacity building

- The project to locate and training more staff to be able to offer services as well as communicate with client's clear messages on cervical cancer screening
- The project and regional health team to conduct frequent client's sensitization to raise awareness to remove myths and bad beliefs about services
- Project and regional health team to invest in community sensitization and involvement

- The regional health management team and project to improve infrastructure and supplies including space. This may include partitioning or using of screens to improve privacy and set places for resting in case of post screening problems. Forecasting and Quantification of supplies as well as supply chain should be improved to ensure enough supplies are available to increase screening uptake and improve quality of services
- The project to strengthen linkage to care to easy referral process which might reduce direct and indirect cost including supporting to referral services and related services.

Data collection tools

Questionnaire – English version

A QUESTIONNAIRE FOR COLLECTING INFORMATION FROM CLIENTS ON THE UTILIZATION OF CERVICAL CANCER SCREENING SERVICES

PART A: BACKGROUND INFORMATION

Religion

- ☐ Muslim
- ☐ Christian
- ☐ other

Education

- ☐ No formal
- ☐ Primary
- ☐ Secondary
- ☐ Tertiary

What is your occupation?

- ☐ Housewife
- ☐ Peasant
- ☐ Self employed
- ☐ Employed
- ☐ Business

☐ Age (Yrs.)

Marriage

- ☐ Married
- ☐ single
- ☐ cohabiting
- ☐ Divorced
- ☐ widowed

Menarche(y)

- ☐ <12
- ☐ Dec-15
- ☐ 16-19
- ☐ ≥20
- ☐ Other

Menstruation

- ☐ Normal
- ☐ Hypomenorrhea
- ☐ Dysmenorrhea
- ☐ Excessive
- ☐ Irregular
- ☐ Men stasis

☐ First sex age (yrs.）

PART B: AWARENESS OF CERVICAL CANCER SCREENING

1 Have you heard of cervical cancer?

☐ Yes

- [ ] No
- [ ] Don't know

2 What are risk factors for cervical cancer?

- [ ] Having many sexual partners
- [ ] Smoking
- [ ] Not going for regular smear tests
- [ ] Unprotected sex
- [ ] Infection, STI/STD or virus
- [ ] Starting to have sex at a young age
- [ ] Infection with Human papillomavirus
- [ ] Long term use of the contraceptive pill
- [ ] Having many children
- [ ] Having a weakened immune system

3 What are symptoms of cervical cancer?

- [ ] Vaginal bleeding between periods
- [ ] Abnormal discharge
- [ ] Persistent pelvic/abdominal pain
- [ ] Pain/discomfort during sex
- [ ] Vaginal bleeding during/after sex
- [ ] Persistent lower back pain
- [ ] Blood in stool/urine
- [ ] Unexplained weight loss
- [ ] Heavier/longer periods than normal
- [ ] Vaginal bleeding after the menopause

4 Methods for Screening cervical cancer

- [ ] Pap smear

- [ ] Pelvic ultrasound None
- [ ] Cervix /endometrial biopsy
- [ ] Other
- [ ] Don't know

5 How often do you think women should screen for cervical cancer?

- [ ] After 6 months
- [ ] Every year
- [ ] After 3 years
- [ ] In a week
- [ ] In a month
- [ ] In 6 months
- [ ] In one year
- [ ] More than one year
- [ ] Never
- [ ] Don't know

6 Women at which age is most likely to suffer from cervical cancer?

- [ ] 20-29
- [ ] 50-69
- [ ] 30-49
- [ ] 70 or above
- [ ] unrelated to age
- [ ] None of them
- [ ] Don't know

7 Willing for free screening

- [ ] Yes
- [ ] No

- [ ] Don't know

8 If it is not free, would you do?

- [ ] Yes
- [ ] No
- [ ] Don't know

9 Do you know the main purpose of cervical screening?

- [ ] Yes
- [ ] No
- [ ] Don't know

10 At which age do you think is appropriate for the female to start cervical screening?

- [ ] <18
- [ ] 18-20
- [ ] 21-29
- [ ] 30-39
- [ ] 40-49
- [ ] 50-59
- [ ] 60 or above
- [ ] Don't know

11 Is screening of cervical cancer helpful for the health of woman?

- [ ] Yes
- [ ] No
- [ ] Don’t know

12 What do they do for you when you have cervical cancer

- [ ] Treat if minor lesion

- [ ] Refer if major lesion
- [ ] Just let you go back home
- [ ] I don't know

PART C: UTILIZATION OF CERVICAL CANCER SCREENING SERVICES

1 How long have you been attending this clinic

- [ ] Less than six months
- [ ] One year
- [ ] Two years
- [ ] Three year and above

2 Have you heard about cervical cancer screening

- [ ] Yes
- [ ] No
- [ ] Don't know

3 Have you been screened for cervical cancer?

- [ ] Yes
- [ ] No
- [ ] Don't Know

4 When were you screened

- [ ] last year
- [ ] within six months
- [ ] last two years

5 Where did you get cervical cancer screening services?

- [ ] In this facility
- [ ] Other facility within the region
- [ ] Other facility outside the region

6 How many times have been screened for cervical cancer?

- [ ] Once
- [ ] Twice
- [ ] More than thrice

7 How many times have been screened for cervical cancer?

- [ ] Once
- [ ] Twice
- [ ] More than thrice

8 Thinking of access to this service overall, how difficult or easy was it to obtain the healthcare services you needed within the past 12 months?

- [ ] Very difficult
- [ ] Difficult
- [ ] Moderate
- [ ] Easy
- [ ] Very easy

9 Do you experience financial difficulties when access this service?

- [ ] Never

- [ ] Rarely
- [ ] Sometimes
- [ ] Regularly

10 Over the past 12 months, have you experienced a significant delay in accessing this service?

- [ ] Yes
- [ ] No

11 How would you rate satisfaction of the cancer screening services you received from health providers?

- [ ] Fair
- [ ] Good
- [ ] Very good
- [ ] Excellent

12 How do you perceive cervical cancer screening services

- [ ] Good
- [ ] Bad
- [ ] against my religion
- [ ] Against my culture
- [ ] It just normal
- [ ] I can’t say

PART D: UTILIZATION OF CERVICAL CANCER SCREENING

1 What are things that facilitate utilization of cervical cancer

	Increase awareness among WLHIV
	Male involvement
	provision of transport support
	Reduced cost. Make service free
	availability of commodities and supplies
	incentivize providers
	Improved privacy
	reduced procedural pain
	Follow the beneficiaries (outreach)
	improved reminder mechanisms
	Increased trained staff

Questionnaire – Kiswahili version

FOMU YA KUKUSANYA TAARIFA KUTOKA KWA WATEJA KUHUSU MATUMIZI YA UHUDUMA YA CHUNGUZI WA SARATANI YA SHINGO YA KIZAZI

SEHEMU A: TAARIFA ZA MSINGI

Dini

- ☐ Muislam
- ☐ Mkristo
- ☐ Nyinginezo

☐ Umri (miaka)

Elimu

- ☐ Siyo ya Darasani
- ☐ Ya msingi
- ☐ Ya sekondari
- ☐ Chuo

Unafanya kazi gani?

- ☐ Mama wa nyumbani?
- ☐ Mkulima
- ☐ Umejiajiri
- ☐ Umeajiriwa
- ☐ Biashara

Ndoa

- ☐ Umeolewa
- ☐ Hujaolewa
- ☐ Unampenzi
- ☐ talaka
- ☐ Mjane

Umri wa kuvunja ugo

- ☐ <12
- ☐ Dec-15
- ☐ 16-19
- ☐ ≥20
- ☐ mingine

Hali ya hedhi

- ☐ Kawaida
- ☐ Chini ya siku tatu
- ☐ Huja na maumivu
- ☐ Hutoka nyingi
- ☐ zaidi ya siku 7

	Umri wa kuanza ngono (miaka)		Idadi ya watoto

SEHEMU B: UELEWA KUHUSU UCHUNGUZI W SARATANI YA SHINGO YA KIZAZI?

1 Uliwahi kusikia kuhusu kansa ya shingo ya kizazi?

- Ndio
- Hapana
- Sijui

2 Ni mambo gani yanahatarisha kansa ya shingo ya kizazi?

- Kuwa na wapenzi wengi
- Kuvuta sigara
- Kutofanya uchungui kila mara
- Kufanya ngono isiyo salama /bila kutumia kinga
- Kuwa na maambikizi ya zinaa/magonjwa ya zinaa
- Kuanza kufanya ngono mapema
- Kupata uambukizi wa virusi vya human papiloma
- Kutumia vidonge vya uzazi wa mpango
- Kuwa na watoto wengi
- Kuwa na kinga dhaifu

3 Dalili za kansa ya mlango wa kikzazi ni zipi?

- Kutokwa damu wakati ambao sio wa hedhi
- Kutokwa na uchafu ukeni
- Maumivu yasiyokwisha ya chini ya tumbo/kinena
- Maumivu/ kutojisikia vizuri wakati wa kufanya ngono
- Kuvuja damu wakati au baada ya ngono

- [ ] Maumivu ya muda mrefu ya kiuno
- [ ] Haja ndogo iliyochanganyika na damu au choo
- [ ] Kupungua uzito kusiko kwa kawaida
- [ ] Kuvuja damu nyingi isivyo kawaida wakati wa hedhi
- [ ] Kuvuja damu hata baada ya kukoma hedhi

4 Njia za uchunguzi wa saratani ya shingo ya kizazi

- [ ] Uchunguzi wa shingo ya kizazi
- [ ] Kufanya ultra sound ya tumbo None
- [ ] Kuchukuliwa kipmo cha nyama kwenye shingo ya kizazi
- [ ] Nyingine
- [ ] Sijui

5 Ni mara ngapi unadhani mwanamke anaakiwa kufanyiwa uchunguzi wa saratani ya shingo ya kizazi?

- [ ] Kila baada ya miezi 6
- [ ] Kila mwaka
- [ ] Baada ya miaka 3
- [ ] Ndani ya wiki
- [ ] Ndani ya mwenzi
- [ ] Ndani ya miezi 6
- [ ] Ndani ya mwaka
- [ ] Zaidi ya mwaka
- [ ] Hapana kabisa
- [ ] Sijui

6 Ni katika umri gani mwanamke anaweza kupata saratani ya shingo kizazi?

- [ ] 20-29
- [ ] 50-69
- [ ] 30-49
- [ ] 70 au zaidi
- [ ] Haihusiani na umri
- [ ] Hamna
- [ ] Sijui

7 Una utayari wa kufanyiwa uchunguzi

- [ ] Ndio
- [ ] Hapana
- [ ] Sijui

8 Kama ni bila malipo utakuwa tayari?

- [ ] Ndio
- [ ] Hapana
- [ ] Sijui

9 Unjua madhumuni ya kufanyiwa uchunguzi wa saratani ya kizazi?

- [ ] Ndio
- [ ] Hapana
- [ ] Sijui

10 Ni umri gani unadhani ni sahihi kufanyiwa uchunguzi wa saratan ya kizazi?

- [ ] <18
- [ ] 18-20
- [ ] 21-29
- [ ] 30-39

- [ ] 40-49
- [ ] 50-59
- [ ] 60 au zaidi
- [ ] Sijui

11 Uchunguzi wa daratani ya shingo ya kizazi ni muhimu kwa afya ya mwanamke?

- [ ] Ndio
- [ ] Hapana
- [ ] Sijui

12 Ni huwanyika kama utakuwa na saratani ya kizazi?

- [ ] Utatibiwa kama bado ni dalili za awali
- [ ] Utapewa rufaa kama dalili ni timilifu
- [ ] Utaruhisiwa tu kurudi nyumbani
- [ ] Sijui

PART C: MATUMIZI YA HUDUMA YA UCHUNGUZI WA SARAANI YA SHINGO YA KIZAZI

1 Ni muda gani umepita tangu ulipoanza kupata huduma katika kituo hiki?

- [ ] Chini ya miezi sita
- [ ] Mwaka mmoja
- [ ] Miaka miwili
- [ ] Miaka mitatu au zaidi

2 Uliwahi kusikia kuhusu uchunguzi wa saratani ya kizazi?

- [ ] Ndio
- [ ] Hapana
- [ ] Sijui

3 Umeahi kufanyiwa uchunguzi wa saratani ya kizazi?

- [ ] Ndio
- [ ] Hapana
- [ ] Sijui

4 Lini ulifanyiwa uchunguzi huo?

- [ ] Mwaka jana
- [ ] Ndani ya miezi sita
- [ ] Miaka miwili iliyopita

5 Ulipata wapi huduma ya uchunguzi wa saratani ya shingo ya kizazi?

- [ ] Kwenye kituo hiki
- [ ] Kituo kingine ndani ya mkoa huu
- [ ] Kituo kingine nje ya mkoa huu

6 Ni mara ngapi umewahi kufanya uchunguzi wa saratani ya shingo ya kizazi?

- [ ] Mara moja
- [ ] Mara mbili
- [ ] Zaidi ya mara mbili

Kuhusu huduma hii kwa ujumla, unawezaje kuelezea ugumu au wepesi wa kupata huduma
8 kwenye kituo hiki kwa miezi 12 iliyopita?

- [ ] Kuna ugumu sana
- [ ] Kuna ugumu sana
- [ ] Kawaida
- [ ] Rahisi
- [ ] Rahis sana

9 Umewahi kupaa changamoto za kifedha wakati unahitaji kupata huduma hii?

- [ ] Hapana
- [ ] mara chache sana
- [ ] wakati fulani
- [ ] kila mara

Kwa kipindi cha miezi 12 iliyopita umewahi kuchelewa kupata huduma
10 hii?

- [ ] Ndio
- [ ] Hapana

Unaweza kuelezeaje kuridihswa kwako na huduma ya uchunguzi wa saratani ya shingo ya
11 kizazi katika kituo hiki

- [ ] Wasatani
- [ ] Kawaida
- [ ] Nzuri
- [ ] Nzuri sana

12 Unaelezeaje mapokeo yako kuhusu huduma hii ya uchunguzi wa saratani ya kizazi?

- [ ] Nzuri
- [ ] Mbaya
- [ ] kawaida
- [ ] haiendani na utamaduni wangu
- [ ] haiendani na dini yangu
- [ ] Sina la kusema

PART D: MAMBO YANAYOSAIDIA UTUMIAJI WA HUDUMA YA UCHUNGUZI WA SARATANI YA SHINGO YA KIZAZI

1 Ni mambo gani yanasaidia utumiaji wa huduma ya uchunguzi wa saratani ya shingo ya kizazi?

- [ ] Kuongeza uelewa miongoni mwa Wanawake WAVIU
- [ ] Kuhusisha wanaume
- [ ] Kusaidia usafiri
- [ ] Kupunguza gharama za huduma/ au huduma bila malipo
- [ ] Uwepo wa vifaa tiba na dawa
- [ ] Motisha wa watoa huduma
- [ ] Kuboresha usiri wa eneo la kutolea huduma
- [ ] Kupunguza maumivu kwa mteja wakati wa uchunguzi
- [ ] Kuwafuata wahitaji/ huduma za mkoba
- [ ] Kuboresha namna ya kuwakumbusha wateja
- [ ] Kuongeza idadi ya watoa huduma

Informed consent (English version)

CONSENT TO PARTICIPATE IN A STUDY TITLED; UTILIZATION OF CERVICAL CANCER SCREENING SERVICES IN CARE AND TREATMENT CENTERS IN DAR ES SALAAM, TANZANIA

Greetings! My name is Nyakaji Etanga, Currently, I am a student at Muhimbili University of Health & Allied Sciences pursuing MSc Project Management Monitoring and Evaluation in Health. I am conducting a research on the title *"Evaluation of Cervical Cancer Prevention Program in HIV care and treatment clinics in Dar es Salaam, Tanzania"*

The study will help to identify utilization status of Cervical Cancer Prevention Program in HIV care and treatment clinics. It also wants to address that factors associated with the utilization of the services.

Involved Participation

This study will involve women who are living with HIV and are receiving care in this health facility. I ask your permission to participate in my study and you are free to decide either to participate in this study or not. If you are agreeing to participate in this study, I will request you to read careful the research questions then answer all questions.

Confidentiality

The information that you will provide in this study will be treated as strictly confidential and will be used for research purpose only and not for other reasons. Your name will not be used for identification during data analysis and report development, instead the number will be used.

Risks

The researcher expects no harm will happen to you when you participate in this study

Benefits

There will be no direct financial benefits to you; however; participation in this research has the potential for improving your knowledge on cervical cancer screening through recommendations that will be made for the improvement.

Rights to Withdraw and Alternatives

To participate in the study is voluntary. You are free to choose whether to participate or not. Refusals to participate, or withdrawal from the study, will not entail punishment. However, we would like you to participate in this study since your views are extremely essential.

Whom to Contact

In case of any emergence concern you may contact the researcher through the following address: Nyakaji Etanga,

School of Public Health and Social Studies,

MUHAS. P. O. BOX 65004, Dar es Salaam.

Email address: nyakajietanga435@gmail.com

Mobile 0711362056

If you have a serious matter about this research related to violation of your rights, and you feel that the researcher has not been able to help you are free to contact, The Director, Directorate of Research and Publications Committee, MUHAS, P.O. Box 65001, Dar es Salaam, Telephone number 2150302-6.

Agreement of participation I_____, Identification number _____, Age _____ years old. I am willing to participate in this study Informant's Signature_____ Researcher's Signature_____

Date _____ Date _____

Fomu ya kuomba ridhaa

KUSHIRIKI KWENYE UTAFITI WA MATUMIZI YA HUDUMA YA UCHUNGUZI WA SARATANI YA SHINGO YA KIZAZI KATIKA KLINIKI ZA KUTOLEA HUDUMA NA TIBA ZA VVU/UKIMWI MKOA WA DAR ES SALAAM

Habari mimi ni naitwa Nyakaji Etanga ni mwanafunzi wa shahada ya pili ya Usimamizi, Ufuatiliaji na Tathimini za Miradi ya Afya katika Chuo cha Kikuu cha Afya na Sayansi Shirikishi Muhimbili (MUHAS).
Ninafanya utafiti wa matumizi ya huduma za uchunguzi wa saratani ya shingo ya kiazi katika kliniki za huduma an tiba kwa WAVIU. Dhumuni la utafiti Utafiti huu utasaidia kuboresha huduma za uchunguzi na kufahamu mambo yanayoweza kuhusiana na huduma hii.

Watu watakaoshiriki
Utafiti huu unawahusu akina mama wanaoishi na VVU wanapata huduma katika kliniki hii

Usiri
Taarifa ambazo utazitoa katika utafiti huu zitahifadhiwa vizuri na hakuna mtu yeyote atakayeweza kuzitoa kwa mtu mwingine, usiri utazingatiwa. Hizi taarifa ni kwa matumizi ya ofisi tu na si vinginevyo. Jina lako halitaandikwa katika karatasi hizi, badala yake tutatumia namba tu wakati wote wa utafiti.

Madhara
Hakutakuwa na madhara yeyote yale kwa kushiriki kwako katika utafiti huu.

Faida
Hakuna faida yeyote utakayoipata kwa kushiriki kwako katika utafiti huu. Kushiriki kwako kutakuongezea elimu ya kuhusu umuhimu wa uchunguzi wa saratani ya shingo ya kizazi kupitia mapendekezo yaliyopatikana kwa ajili ya uboreshaji w ahuduma.

Haki ya kujitoa katika utafiti

Ushiriki katika utafiti huu ni hiari yako ya msingi ya kushiriki au kutoshiriki katika utafiti na pia unaweza ukajitoa muda wowote ule wakati wa zoezi la utafiti likiendelea. Hakuna mtu yeyote atakayeweza kukupatia adhabu kwa kutoshiriki kwako. Vinginevyo ningependa sana ushiriki wako katika utafiti huu ili nipate na mchango wako.

Watu wa kuwasilianana o

Kama kutakuwa na tatizo lolote lile unaweza kuwasiliana na Nyakaji Etanga kwa simu namba 0711362056 Chuo Kikuu cha Afya ya Sayansi Shirikishi Muhimbili. P. O. BOX 65004, Dares Salaam. Barua pepe: nyakajietanga435@gmail.com.

Kama utakuwa na tatizo lolote linaloweza kuhatarisha usalama wako na umeona mtafiti hawezi kulitatua uwe huru kumtafuta Mkurugenzi, Kurugenzi ya Utafiti na Uchapishaji, MUHAS, P.O. Box 65001, Dar es Salaam, kwa simu namba 2150302-6.

Makubaliano ya Ushiriki

Namba ya ushiriki…….Umri……. Mimi _____ nathibitisha kuelewa maelezo yaliyoandikwa hapo juu na kuridhika na maelezo niliyopewa kwa maswali yangu yote. Nami, kwa hiari yangu mwenyewe, bila kushurutishwa na mtu, ninakubali kushiriki kwenye utafiti huu. Sahihi ya Mshiriki…….Tarehe…… Sahihi ya MtafitiMsaidizi……Tarehe…….. Sahihi ya Mtafiti……..Tarehe……..

Interview Guide for focus group discussion (English version)

Key Components: • Thank you • Your name • Purpose • Confidentiality • Duration •How interview will be conducted •Opportunity for questions •Signature of consent	I want to thank you for taking the time to meet with me today. My name is _____ and I would like to talk to cervical cancer screening services. Specifically, we are evaluating utilization of cervical cancer prevention program in order to capture lessons that can be used in future interventions. The interview should take less than an hour. I will be taping the session because I don't want to miss any of your comments. Although I will be taking some notes during the session, I can't possibly write fast enough to get it all down. Because we're on tape, please be sure to speak up so that we don't miss your comments. All responses will be kept confidential. This means that your interview responses will only be shared with research team members and we will ensure that any information we include in our report does not identify you as the respondent. Remember, you don't have to talk about anything you don't want to and you may end the interview at any time. Are there any questions about what I have just explained? Are you willing to participate in this interview? _____ _____ _____ Interviewee Witness Date _____ Legal guardian (if interviewee is under 18)
Questions • No more than	1. What have heard about cervical cancer? 2. What can you say about cervical cancer screening services in this facility?

15 open-ended questions • Ask factual before opinion • Use probes as needed	3. What is good about it? Please elaborate. 4. What is not good about it, Please explain why? 5. What are things that motivate utilization of cervical cancer screening services 6. What do you think are barriers that facing utilization of cervical cancer screening services? 7. What recommendations do you have for addressing barriers?
Closing Key Components: • Additional comments • Next steps • Thank you	Is there anything more you would like to add? I'll be analysing the information you and others gave me for my coursework report. I'll be happy to send you a copy to review at that time, if you are interested. Thank you for your time.

Mwongozo wa namna ya kufanya majadiliano

Mambo muhimu: • Shukrani • Jina lako •Lengo • Usiri • Muda • Namna majadiliano yatakavyofanyika •Nafasi ya kuuliza mawasi • Sahihi ya shahidi	Napenda kuwashukuru kwa kutenga muda wenu kukutana na mimi. Jina langu ni _____ na ningependa tuzungumzie kuhusu huduma ya uchunguzi wa saratani ya shingo ya kizazi. Kipekee tuna tathimini ya mpango wa kuzuia saratani ya shingo ya kizazi na tutakayoyapata yatatusaidia katika afua za mpango katika siku zijazo. Majadiliano yanatarajiwa kuwa si zaidi ya saa moja. Nitakuwa natumia kinasa sauti kunakili mazungumzo ili nisipoteze jambo lolote katika mazunguzo yetu. Ingawa nitakuwa naandika mazungumzo yetu sitaweza kuandika kwa haraka kupata majadiliano yetu yote, hivyo naomba tuongee kwa sauti ili nisikose hata moja katika maoni yenu. Maoni yote yatatunzwa kwa usiri. Yatashirikishwa tu miongoni mwa watafiti na hayatajumiuisha majina yenu Kumbuka, utazungumza yale unayoona unaweza kusema, hutashurutishwa kusema usiyopenda na unaweza kuahirisha mazungumzo muda wowote. Kuna swali katika yote niliyozungumza? Mko tayari kushiriki kwenye mazungumzo? _____ _____ _____ Shahidi tarehe
Questions • Tumia maswali ya kiuchunguzi	1. Umewahi kusikia nini kuhusu saratani ya mlango wa kizazi? 2. Unaweza kuelezeaje huduma ya uchunguzi wa saratani ya shingo ya kizazi katika kituo hiki? 3. Nini kizuri kuhusu huduma hii? Tafadhali elezea.

• Uliza kama kuna taarifa/maoni ya ziada • Elezea hatua inayofuata • Ahsanteni	4. Nini sio kizuri kuhusu huduma hii, tafadhali eleza kwa nini? 5. Ni mambo gani yanayohamasisha utumiaji wa huduma ya uchunguzi wa saratani ya shingo ya kizazi 6. Ni mambo gani yanayozuia /yanayokabili utumiaji wa huduma ya uchunguzi wa saratani ya shingo ya kizazi? 7. Unashauri nini kifanyike ili kutatua mambo hayo?

Kuna mambo mengine ungependa kuongeza?

Nitafanya uchanganuzi wa taarifa mlizonipatia na kuzijumisha kwenye taarifa ya utafiti wangu. Nitafurah kama nikipata nafasi ya kuwapatia nakala nanyi muipities kama mkihitaji

Ahsanteni kwa muda wenu

Results from focused group discuss

Knowledge come out as theme for barriers of utilization in the focused group discussion

When participants were asked to discuss on the barriers on the utilization of cervical cancer screening services, some of participants were seems to be not aware of the services regardless of being served at particular facility form more than three years. While it was expected that all of the participant should have been heard of the services even if some would have not use it.

"I was asking myself what we were asked to discuss because it is the first time I am hearing about this services despite of my stay here"

"Sometimes I heard nurse say something about it but when I paused to listen to her attentively I did not understood what she was trying to explained and I have not come across such session again"

Participants had feelings that lack of knowledge about what cervical cancer screening was, the procedure and the benefit was preventing clients from utilizing it.

"We think some of us (WLHIV) we fail to get this services because we are not knowledgeable of it, nurses and doctors have not teach and sensitize us enough for us to understand that's why you see only few have used it, I am suggesting even to use those who have got the services to give education about cancer so that many will know and use it"

Providers are expected to have skills for communicating and providing health education to clients on the cervical cancer prevention services, during the discussion participants explained lack of skills to deliver messages about cervical cancer screening among providers contributes much to the lack of knowledge among clients.

"We are just told every morning that cancer services are available at our CTC, we are not told what was it, and what was going to be done so that we are screened, and what would be next after screening. So among us some were screened just because of respect to providers and some have not because they don't know really what it is and it benefit"

"Some providers cannot tell properly to clients at waiting area about what she wants to explain, be it ARVs, CD4, Condom use of this cancer. I think if our nurses and doctors

fail to give us what they have in their head it is not possible for us to know anything so they should be trained on how to deliver message or use trained volunteers"

Infrastructure was among the themes for barriers of utilization of cervical cancer screening services

Participants discussed about small spaces for services which affected privacy of users, as well as sitting arrangements. Clients who have been screening are experience pain they sometimes need place for resting which most clinic have only general waiting area

"Rooms are very small, hot and they are sometimes used to see other clients and thereafter for screening at least if they would have put a separate room for this services". Some procedure room are used for more than one services disturbing clients privacy *"when you are undressed a nurse can come in talking to a doctor or inquire something you feel so bad, when another person is looking at you when undressed is very bad"* .

"We think there should be a separate room with big space or two rooms, for resting to those who are not feeling well after the procedure, you know it is not about pain, even fear can make you feel very unconformable and you might need to have a rest and get energy and peace before you are to go, but there is no such space otherwise you have to go and rest at the waiting are this is not good, probably that why others don't screen"

"One day I vomited, I missed fresh are and it was like I was exhausted due to fear of procedure called VIA and the positive results they gave me ooh..! .a room was so small no window closed"

Human resources

This theme was explained as lack of enough staff in the clinics whereby providers are performing more than one function (multi tasked) hence become overloaded which results in to delays and inconsistence availability of services. In most of the facilities clinicians are attending regular attending clients and also he/she called to conduct screening at the same time when a consented clients is made available. In other days client are missing services if a designated provider for screening is not available on duty thus inconsistence services. Participants had a thought of specialization of tasks whereby there should be a provider specific for cervical cancer screening services only

"Sometimes when you are ready for services you need to wait because doctor is attending other clients, it's until he finishes is when you got screened and until that time you are already tired".

"There are time you have been counselled and prepared for screening and a doctor is called to attend another patients or respond to his/her visit boss. You just keep quite but it is very painful because you have to stay and even the mood changes….I think there should be a special doctor for that service"

"Doctors are getting tired and some can tell you direct ...oh! I am tired I can't do it today come next week or on your visit date then I will do it for you so if you are not tolerable you will not come back to request it again"

Cost of services

Cost was among themes of barriers to utilization of cervical cancer services. Participants during discussion were eager to see this services is provided free from screening, linkage to treatment and treatment itself. They explained cost in terms of transport fees to clinics as beneficiaries are residing up to 25 kilometres from the clinics.

" Some of clients are living far outside the city, others from other regions so they might have used fare to clinics and they are told no services or they have to go to Ocean road, meaning you use extra money which is additional cost even though is for oneself health but it costs"

Cost was also a barrier when they are provided with referral services to the cancer referral hospital where they have to use their own cost for transport as well as registration and investigation at the referred facilities

"I was given referral to Ocean Road for further screening, I thought it was going to be free as it was for screening but I was asked to pay for registration, investigation and I went there more than four times the fifth time I could not manage because I did not have money, here I am, I have not get treatment"

"We think this services was supposed to be free of charge because it cannot be explained that you are screened for free and asked to pay while they know many of us WLHIV we are poor, widow discriminated we don't have money this is a big challenge for sure…."

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RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIERMENT FOR THE AWARD OF A DEGREE OF MASTER OF ARTS IN PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI 2012.

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MUHAS-REC-06-2021-668
Nyakaji Etanga
MSc. PMMEH, Shool of Public Health and Social Sciences
MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: EVALUATION OF CERVICAL CANCER PREVENTION PROGRAM IN HIV CARE AND TREATMENT CLINICS IN DAR ES SALAAM, TANZANIA

Reference is made to the above heading.

I am pleased to inform you that the Chairman has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 08/06/2021
EXPIRATION DATE OF APPROVAL: 07/06/2022

STUDY DESCRIPTION:
Purpose:
The aim of this cross sectional study is to evaluate the achievement of the objective of cervical cancer prevention program in Dar es Salaam

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided:
https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%20738.pdf and in the MUHAS archives.

The PI is required to:

1. Submit bi-annual progress reports and final report upon completion of the study.

2. Report to the IRB any unanticipated problem involving risks to subjects or others including adverse events where applicable.

3. Apply for renewal of approval of ethical clearance one (1) month prior its expiration if the study is not completed at the end of this ethical approval. You may not continue with any research activity beyond the expiration date without the approval of the IRB. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.

4. Obtain IRB amendment (s) approval for any changes to any aspect of this study before they can be implemented.

5. Data security is ultimately the responsibility of the investigator.

6. Apply for and obtain data transfer agreement (DTA) from NIMR if data will be transferred to a foreign country.

7. Apply for and obtain data transfer agreement (DTA) from NIMR if data will be transferred to a foreign country.

8. Apply for and obtain material transfer agreement (MTA) from NIMR, if research materials (samples) will be shipped to a foreign country,

9. Any researcher, who contravenes or fail to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III section 10 (2)

10. The PI is required to ensure that the findings of the study are disseminated to relevant stake holders.

11. PI is required to be versed with necessary laws and regulatory policies that govern research in Tanzania. Some guidance is available on our website https://drp.muhas.ac.tz/.

Dr. Bruno Sunguya

Chairman, MUHAS Research and Ethics Committee