

Access and Use of Information on Cervical Cancer Prevention among Rural Women in Mtwara, Tanzania

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Abstract

This study was designed to assess access to and use of information for the prevention of cervical cancer among rural women in Tanzania with specific reference to Mtwara Region. The study used a mixed method research involving quantitative and qualitative methods in collecting data from women in different villages and health facilities within Mtwara Rural District. A total of 310 women of the reproductive ages were recruited conveniently. Quantitative data was collected through self-administered questionnaires and analysed by the SPSS software, while qualitative data from doctors and nurses was collected through in-depth interviews which were audio recorded, transcribed verbatim, translated and analysed using thematic analysis. The findings showed that the majority of women have heard about cervical cancer. The majority of women acknowledged the fact that pap smear / visual inspection of the cervix with acetic acid were common methods used to screen for cervical cancer. It has been noted that the radio and televisions are the main sources of information used by rural women. Furthermore, health workers and the radio were the most useful sources of information about the prevention of cervical cancer among rural women. It was further revealed that women of the reproductive ages experience challenges that include language, illiteracy and delay of information about prevention of cervical cancer. The study recommends that the government and health professionals should continue creating awareness, establish health information resource centres, train health professionals and establish mass campaigns and educational programmes. Rural women should continue visiting health facilities, use various sources of health information and participate in mass campaigns about prevention of cervical cancer.

Keywords: Information, Cervical Cancer, Rural Women, Tanzania

Introduction and Background Information

Prevention of cervical cancer among women is one of the priority health measures undertaken worldwide and in Africa, in particular. As a result, the provision of information on the prevention of cervical cancer among women is one of the measures taken seriously by many agencies (Osuchukwu & Ukachi, 2019). The information required may include, but not limited to, lifestyle, risk factors, treatment options, prognosis and patient-doctor communication (Boakye et al., 2018). Prevention is about tackling the upstream causes of ill health by promotion of healthy lifestyles (Royal College of Nursing - RCN, 2022). RCN (2022) further emphasizes that “prevention is cure”, thus women with access to information on the prevention of cervical cancer are more likely to take appropriate measures to prevent the disease. These measures may include early consultation with health professionals. The cervical cancer diagnostic programme helps health professionals to detect abnormal cells before they turn into cancer. Studies on cervical cancer (Mabelele, et al., 2018) have shown

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that women lack sufficient information about prevention, screening and treatment of cervical cancer.

Worldwide, more than 85% of women have been diagnosed to have cervical cancer and it is estimated that there were 570,000 new cases and 311,000 deaths of women (particularly middle-aged women) from cervical cancer globally in 2018 (Arbyn et al., 2020). Nascimento et al. (2018) have shown that over 85% of deaths occur in Low and Middle Income Countries (LMICs) where over 90% of the highest incidence rates of cervical cancer occur in sub-Saharan Africa (Brisson et al., 2020). However, cervical cancer is relatively low in high-income countries due to the introduction of the Human Papilloma Virus (HPV) vaccine and screening programmes i.e. Papanicolaou (Pap) test which has reduced the incidence of cervical cancer by 70% (Lopez et al., 2017). The incidence of cervical cancer is high in LMICs because little attention is given to early detection through screening; and where early detection screening is available, it is not effective due to limited access to information, low coverage, incapable laboratory and advanced treatment including vaccination (De Sanjose &Tsu, 2019).

Sadoh et al. (2018) contend that even when the vaccine is provided free of charge by national programmes, mass campaigns and educational information should be provided to the general public especially to women in order to optimise coverage, hence prevent cervical cancer among women. In this state of affairs, provision of health information to women aiming to promote knowledge on cervical cancer prevention is vital. This is expected to improve awareness and uptake of the available interventions among women (Osuchukwu &Ukachi, 2019).

In the year 2011, the Tanzanian Ministry of Health and Social Welfare introduced Visual Inspection of the cervix with Acetic acid (VIA) and Cryotherapy in over 300 sites, nationally. Despite launching these screening methods, women were not sufficiently informed about specific risk factors, prevention options of cervical cancer. Therefore, many did not see themselves as being at risk (Mabelele et al., 2018). This has greatly affected the uptake of the cervical cancer screening services as observed in a cross-sectional survey with women carried out by Runge and others which revealed that 82.7% of women did not have information of cervical cancer prevention (Runge et al., 2019). In order to mobilise global efforts to prevent cervical cancer, Tanzania introduced HPV vaccination to girls aged 9 to 14 years in 2018, being the seventh country in Africa after Uganda, Rwanda, Botswana, Mauritius, Seychelles and South Africa (Moshi et al., 2018). Further, a study by Cunningham et al. (2015) also showed that few girls and women had information about HPV vaccine, with major differences in percentage between rural and urban areas.

Furthermore, a study by Lopez et al.(2017) shows that each year cervical cancer contributes into approximately 270,000 women deaths globally. A significant number of deaths are from low and middle income countries including Tanzania (Finocchiaro-kessler et al., 2016). Globally, it is projected that by the next decade about 500,000 deaths will occur due to cervical cancer each year with the majority of deaths occurring in sub-Sahara Africa (New-Aaron et al., 2020). In order to reduce this alarming rates of morbidity and mortality associated with cervical cancer, provision of health information on the prevention of this disease among women is of great importance (Osuchukwu & Ukachi, 2019).

In Tanzania, as in other many developing countries, access to health information among rural residents is a big challenge due to ignorance, cultural constraints, economic factors, male

dominance and unfriendly health care services (Lim & Ojo, 2017). In Tanzania, about 75% of women between 15– 49 years of age live in rural areas where information on prevention of cervical cancer is not easily accessible (Bateman et al., 2019). Several initiatives have been taken by the Ministry of Health Community Development, Gender, Elderly and Children, in collaboration with Non-Governmental Organizations and associations like the Johns Hopkins Programme for International Education in Gynaecology and Obstetrics and the Medical Women Association of Tanzania, to ensure access to information on cervical cancer prevention among women (Moshi et al., 2018).

It is noted that in Tanzania little is documented on the extent in which rural women have access to information on cervical cancer prevention. Therefore, this study was designed to examine the extent rural women access and use of information on cervical cancer prevention in Tanzania. Specifically, the study aimed to:

- i) Examine the extent rural women are aware about cervical cancer and its prevention;
- ii) Determine the sources of information used by rural women for the cervical cancer prevention and;
- iii) Find out challenges of accessing information for the cervical cancer prevention among rural women in Tanzania.

Review of Related Literature

Women’s Awareness on the Prevention of Cervical Cancer

It has been established that lack of awareness among women on the prevention of cervical cancer affects cervical cancer screening and HPV vaccine uptake in different countries, which is the major prevention strategy for cervical cancer. A study by Wakwoya et al. (2020) showed that women who were aware about cervical cancer were likely to utilize the preventive service more than women who had less awareness. Cervical cancer is the fourth most common cancer in women worldwide, and which costs lives of more than 270,000 women yearly (Lopez et al., 2017; Nascimento et al., 2018). In addition, 85% of these deaths occur in LMICs including Tanzania (Dahiya et al, 2019). A study conducted in New Delhi, India by Dahiya et al. (2019) to assess awareness among women regarding risk factors, prevention, and early diagnosis of cervical cancer and to assess the attitude and practice of women toward cervical cancer revealed that women’s awareness influences their health-information seeking behaviour among them. Moreover, when they are aware and have a positive attitude towards cervical cancer vaccine, the risk of getting HPV infection may be further reduced hence prevent cervical cancer.

Furthermore, a study conducted at the University of South Florida by Christopher (2016), on women’s awareness about the link between HPV and cervical cancer, found out that women are not aware about the link between HPV and cervical cancer. A woman’s positive HPV status puts her at high risk of developing cervical cancer if treatment is not provided. Additionally, patients should be aware of their HPV status as it may influence future sexual health decisions for themselves and their families, including conversation with current sexual partners (Christopher, 2016).

According to the World Health Organization (WHO, 2021), women of the reproductive age in the developing world are partially aware about the prevention of cervical cancer. This affects the uptake of screening services toward preventing the disease (Simmons et al., 2017). More studies (Mugassa & Frumence, 2020) have revealed established factors that affect the utilization of cervical cancer screening and treatment services that include ignorance, lack of

health facilities that provide screening services, fear, religious belief and taboos that claim that cervical cancer cannot be prevented. A study conducted by Gottschlich et al. (2020) in Guatemala showed that 49 women were aware of cervical cancer before undergoing cervical cancer screening. In this study, it was reported that only a few of them were aware of the possible causes of cervical cancer.

In an effort to improve women's awareness about prevention of cervical cancer among women in Japan, a study by Fujiwara et al. (2015) indicates that eligible women were provided with adequate information on possible benefits of cervical cancer screening to improve their level of awareness on cervical cancer screening. Another study by Tapera et al. (2017) which was carried out in Botswana among university students confirmed that, in order for women to use cervical cancer screening services, they need to be aware about the service because lack of awareness and negative attitude of women towards cervical cancer screening services may extremely affect the uptake.

As mentioned earlier, awareness of women on the prevention of cervical cancer in sub-Saharan African countries is low compared to other parts of the world. Various studies conducted in different countries have also revealed that awareness of women about prevention of cervical cancer is very low (Wakwoya et al., 2020). In a study done in Morocco to assess awareness of cervical cancer among the general population revealed that 20.9% and 19.1% had heard of cervical cancer and cervical cancer screening, respectively. Approximately four percent of women knew someone who had cervical cancer and 13.0% reported that they had been screened for cervical cancer (Belglaiaa et al., 2018).

The absence of awareness on cervical cancer prevention strategies is the main obstacle to cervical cancer prevention and control in developing countries including Tanzania. Women's awareness on the prevention of cervical cancer influences the use of prevention interventions. However, it has been demonstrated that rural women are in sufficiently aware about prevention of cervical cancer (Ifediora & Azuike, 2018). In Ghana, most women had little awareness about cervical cancer in which the majority (69.7%) scored between 1-39% and only 9.7% scored between 65-100%.

Ethiopia is one of the SSA countries with high incidences of cervical cancer. According to a study done in the north-east part of the country, 51.9% of respondents were sufficiently aware about the disease. However, only 11% had undergone cervical cancer screening at least once in their lifetime. In Mekelle, in the north part of Ethiopia, among eligible women, only 14.7% of women who were aware of cervical cancer screening had undergone cervical cancer screening (Ifemelumma et al., 2019).

Sources of Information on the Prevention of Cervical Cancer

Regarding access to information about cervical cancer, rural women get most of the information from healthcare professionals through the television and internet. To increase the knowledge among women, it is important to motivate healthcare professionals to be active in educating women about cervical cancer. Although the internet is a powerful source of information, it does not always provide the most accurate information as some of the websites are not reliable sources. So, people should access information from reliable sources like the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDEC) website, health facilities and resource centres (Kurzewska-Michalak & Kardas, 2017).

In many African and Asian countries, cervical cancer screening services are inadequate despite bearing the highest cervical cancer burdens in the world (Ifediora & Azuike, 2018). Health workers, especially nurses, play a significant role in educating the public on health related issues including prevention of cervical cancer (Ifemelumma et al., 2019).

A study by Dawson et al. (2020) found out that the most common sources of information on cervical cancer were health workers (41.2%) and friends/family members (26.5%) whereby only (29.4%) had received proper information on prevention of cervical cancer. Many studies which have been done among women in the past (Nelson et al. 2018) have proved that nurses play a major role in enlightening the public on cervical cancer screening; so their awareness and attitude toward cervical cancer is very crucial for promoting women's uptake. A study conducted in Dar es Salaam at Amana Hospital, in Tanzania, by Bateman et al. (2019) shows that the majority of respondents had heard about cervical cancer from physicians or other health care providers, at the time of screening. This shows that rural women access information about cervical cancer from various sources including health care providers, radio, television, and social media.

Use of Information for the Prevention of Cervical Cancer among Rural Women

Although technology has simplified access to cervical cancer information, rural women rarely use the information partly because they cannot have access. The Social Learning Theory believes that health information seeking behaviour is influenced by individual knowledge, disease perception, socio-demographic factors and the availability and accessibility of health services. People seek and utilize health information when they perceive themselves as potentially vulnerable to the disease (Habtu et al., 2018). In Iran, all women aged between 35-54 years are educated about cervical cancer screening and must undergo the Pap smear test immediately after marriage and after every three years. Although the Pap smear test is performed free of charge in most health facilities, only a small proportion of eligible Iranian women have taken the Pap smear test, with percentages ranging from 14.8 to 28.3%. Several reasons account for such poor response; these include, not knowing the importance of the test, the difficulty involved in accessing the test, some people are scared about the results of the test, while others are embarrassed to undergo the test (Khazae-Pool et al., 2018). Furthermore, cervical cancer survivors are more keenly interested in receiving information about cancer, despite having undergone or finished active therapy, than those who have not yet experienced the disease (Shea-Budgell et al., 2014). Moreover, there is paucity of literature regarding the use of information on cervical cancer among rural women.

Challenges of Access of Information on the Prevention of Cervical Cancer

Women in rural and low-income settings face various challenges in accessing information on prevention of cervical cancer. These may relate to education, geography, cost, access to healthcare and family acceptance to seek care that may not exist in high income areas. Nepal has a patriarchal social structure, in which women's health is influenced by existing socio-ecological conditions. Only 57.4% of women are literate compared with 75.1% of men (Darj et al., 2019). A qualitative study to acquire better insight into perceived barriers and challenges to access information on prevention of cervical cancer identified that development of a culturally adapted intervention to promote knowledge of prevention of cervical cancer for immigrant women from different communities increased their participation in cervical cancer screening (Darj et al., 2019).

In low-resource settings such as Cusco, Peru, and the surrounding rural communities in the Peruvian Andes, structural barriers to prevention of cervical cancer include lack of access to health care and shortage of quality facilities and laboratories (Freijomil-Vázquez et al., 2019). Although the media is considered the most reliable form of communicating information on prevention of cervical cancer, research shows that there are still some communication challenges during the process of disseminating information through the media. During the communication process various challenges may arise such as low levels of awareness, myths and misconceptions, fear, stigma, and language barriers which affect distribution of information about the prevention of cervical cancer among women (Kisiangani et al., 2019).

Theoretical Framework of the Study

Conceptually, the study was guided by the Hierarchical Model of Access. This model graphically represents four elements as essential elements for information access: physical access, instrumental skills, usage and information skills (Steyaert, 2002). Physical access is very significant in the access and use of information on prevention of cervical cancer among rural women. When health facilities or information centres are within the locality, this simplifies information access among rural women. Instrumental skills are competencies in using various sources and technologies in accessing and using information on prevention of cervical cancer, which a woman possesses. If a woman is competent in utilizing various sources or technology to access information, she will have more access to information on prevention of cervical cancer than the personal without instrumental skills. Usage denotes the ability of a woman to use information on prevention of cervical cancer. A woman may have access to information but when she does not use such information to better her health outcome, access is useless. Finally, information skills involve the ability of the rural woman to analyse reliable sources of information on prevention of cervical cancer because there is a lot of information that could be accessed, which is not reliable. All these elements are presented as a pyramid with physical access at the bottom and information skills on top (see Figure 1).



Figure 1: The Hierarchical Model of Access
Source: Adopted from Steyaert (2002)

Methodology

A mixed method study involving quantitative and qualitative methods of concurrent triangulation design was used. This design was selected because of its ability to develop a more complete understanding of the topic and provided well-validated and substantiated findings (Gupta et al., 2017). A descriptive design was selected because of its ability to describe the issues under study and to provide well-validated and substantiated findings (Omar, 2015). The study was conducted in Mtwara Rural District in different villages and

health facilities. Mtwara Rural District was chosen because it is one of the rural districts of Tanzania facing the same challenges of accessing information on prevention of cervical cancer.

This study involved women of the reproductive age (18-49 years), nurses and medical doctors. Women of the reproductive age group were enrolled as it is the most affected group of women because of being sexually active (Baussano et al., 2017). Furthermore, nurses and doctors were involved in this study because these are people involved in educating, screening and taking care of women with cervical cancer. In order to achieve the objectives of this study, the sample estimation for the quantitative study was 310 and for the qualitative study saturation point was achieved at 10 key informant interviews (KIIs).

Convenience sampling was used to select women respondents from villages and wards from Mtwara Rural District. Convenience sampling is a type of non-random sampling whereby members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study (Gravetter & Forzano, 2012). The method was selected because it was affordable, easy and the subjects were readily available.

A self-administered questionnaire with close-ended questions was used to collect data from women of the reproductive age. This method was chosen because it was cost-effective and enabled the researcher to generate huge data within a short period as questions were designed specifically to be completed by a respondent without intervention of the researchers (Rada, 2019). Quantitative data were compiled, numbered and checked for completeness and appropriateness before being subjected into Statistical Package for Social Science (SPSS) version 23 for Microsoft Windows. Descriptive statistics such as frequencies and proportions were generated for easy summarization of the data. Cross tabulation and chi-square test were used to assess the statistical significance of associations between variables. Thematic analysis (Erlingsson & Brysiewicz, 2017) was used to analyse all KIIs.

Results

Socio-demographic Characteristics of the Respondents

The study involved various socio-demographic characteristics that include age, marital status, education level and religion of respondents. These characteristics may have a connection with access and use of information on prevention of cervical cancer. The findings show that 42.3%

Table 1: Demographic Characteristics of Respondents

Characteristic	Frequency	Percent
Residence		
Ikwama	100	32.3
Nangogoli	100	32.3
Mgao	110	35.5
Total	310	100.0
Age		
18-27	131	42.3
28-37	92	29.7
38-47	69	22.3

48 and above	18	5.8
Total	310	100.0
Marital status		
Married	171	55.2
Single	67	21.6
Divorced	50	16.1
Widowed	20	6.5
Separated	02	0.6
Total	310	100.0
Education		
Primary	241	77.7
Secondary	61	19.7
College	08	2.6
Total	310	100
Religion		
Muslim	242	78.1
Christian	66	21.3
Pagan	02	0.6
Total	310	100.0

Source: Field data, 2021

were aged between 18-27 years, 29.7% between 28-37 years, 22.3% between 38-47 years. Fifty-five percent of respondents were married and 21.6% were single. Also 77.7% had primary education, 19.1% had secondary education and 2.6% had college education. More details are presented in Table 1. These demographic characteristics information were taken into consideration and tested to find out if they had any connection with access and use of information on prevention of cervical cancer.

Awareness of Women about Cervical Cancer

Respondents were asked whether they had ever heard about cervical cancer. A total of 258(83.2%) women reported to have heard about cervical cancer, while 52(16.8%) had not had any information about cervical cancer (Table 2).

Table 2: Women who had Heard about Cervical Cancer

Response	Frequency	Percent
Yes	258	83.2
No	52	16.8
Total	310	100.0

Source: Field data, 2021

The findings in Table 2 show that most rural women were aware about cervical cancer and therefore, were likely to be key teachers of other rural women who were not aware. Also, a chi-square test was performed to examine the relation between awareness and educational level. The findings presented in Table 3 show that there was no significant association

between education level of the respondent and awareness about cervical cancer ($\chi^2 = 4.26$, $df = 2$ $p = .119$).

Table 3: Association between Level of Education and Awareness about Cervical Cancer

Educational level	Heard about cervical cancer		Total
	Yes	No	
Primary education	196 (63.2%)	45 (14.5%)	241 (77.7%)
Secondary education	56 (18.1%)	5 (1.6%)	61 (19.7%)
College	6 (1.9%)	2 (0.6%)	8 (2.5%)
Total	258 (83.2%)	52 (16.7%)	310 (100.0)

Source: Field data, 2021

The findings in Table 3 show that the education level of a particular woman does not make her aware of cervical cancer. However, a study conducted in Northern Uganda (Obol et al., 2021) show that there is a relationship between awareness of cervical cancer and practicing screening and having vaccinated the daughter as having awareness of cervical cancer and conducting these practices. Furthermore, their study findings show that there no associations between screening women for cervical cancer and staff qualifications. So, a woman may have a high level of education but she may be unaware about cervical cancer and vice versa.

Awareness on Screening Test Information for Cervical Cancer

Respondents were asked whether they were aware of any common screening test for cervical cancer. The findings show that out of 310 respondents, 218(70.3%) managed to point out the right screening test (Pap smear/VIA as the common screening method used), 50(16.1%) mentioned the X-ray and 42(13.5%) mentioned Biopsy (Figure 2).

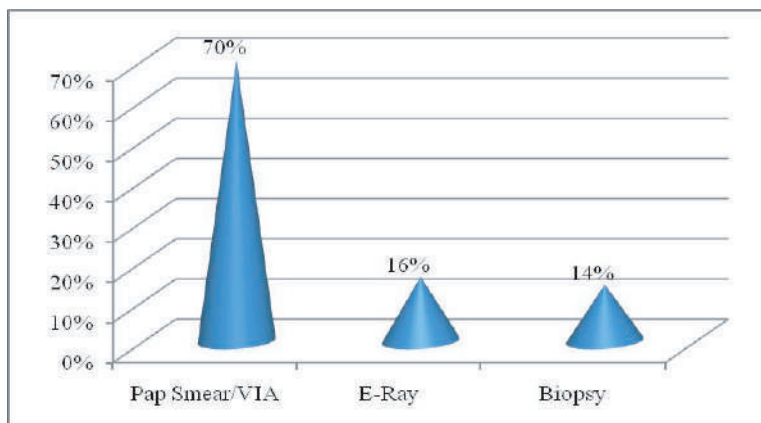


Figure 2: Women's Awareness on Cervical Cancer Screening Test

Source: Field Data, 2021

The findings above show that rural women were aware of the specific screening tests for cervical cancer such as the Pap test, VIA, X-ray and Biopsy. It should be noted that screening is used to detect precancerous changes or early cancers before signs or symptoms of cancer occur. The overall goals of cancer screening are to reduce the number of people who die from cervical cancer, or completely eliminate deaths caused by cervical cancer, and reduce the number of people who develop the cancer.

Sex Affected by Cervical Cancer

In order to ensure that women are aware about cervical cancer, participants were asked which gender is affected by cervical cancer. The findings show that 300(96.8%) respondents said that females were affected by the disease, and 10(3.2%) said males were affected by the disease (Figure 3).

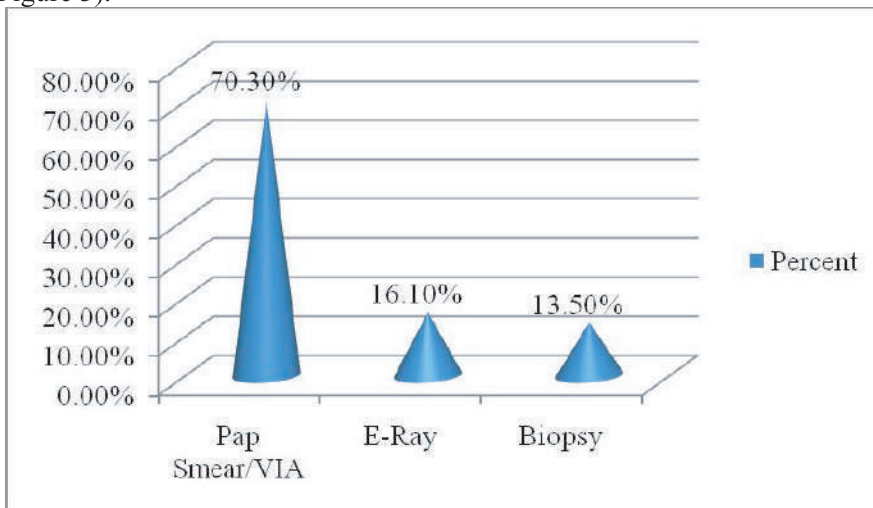


Figure 3: Sex Affected by Cervical Cancer

Source: Field Data, 2021

These findings show that respondents knew which sex is affected more by cervical cancer. Furthermore, the findings from the key informant interviews indicate that participants seemed to be aware of the information on prevention of cervical cancer. They were aware of the situation of cervical cancer in the area. Also participants were aware that Pap smear and VIA are common methods used for cervical cancer screening. For example, two respondents had this to say:

The situation of cervical cancer in this area is on the average; I have not experienced many women with signs of cervical, only few (Participant 4, Doctor).

The method which is used to screen for cervical cancer is applying acetic acid on the cervix and observing changes after application of that chemical. This is the method that help us to detect early signs of cervical cancer (Participant 1, Doctor).

The findings indicate that the majority of women 257(83.2%) have heard about cervical cancer. The findings further indicate that there is no any statistical significance between the level of education and cervical cancer awareness. Furthermore, 218(70.3%) respondents

indicated that that Pap smears and VIA are common methods used for cervical cancer screening. However, some study findings (Simmons et al., 2017; Tapera et al., 2017; Oluwole et al., 2017; Belglaiiaa et al., 2018; Mugassa & Frumence, 2020; Gottschlich et al., 2020) have reported lack of awareness about cervical cancer among women of the reproductive age. The findings of this study show that women of the reproductive age living in rural areas are aware about cervical cancer; however, this does not mean that they also have access to information on prevention of the disease. This relates to a study which was done in northern part of Ethiopia which showed that 51.9% of respondents were sufficiently aware about the disease (Ifemelumma et al., 2019).

Sources of Information on Prevention of Cervical Cancer

Figure 4 shows that the radio 306(99%) and television 286(92%) were main sources of information used by respondents to get information on prevention of cervical cancer which were followed by newspapers 263(85%), library 255(82%) and health workers 247(80%).

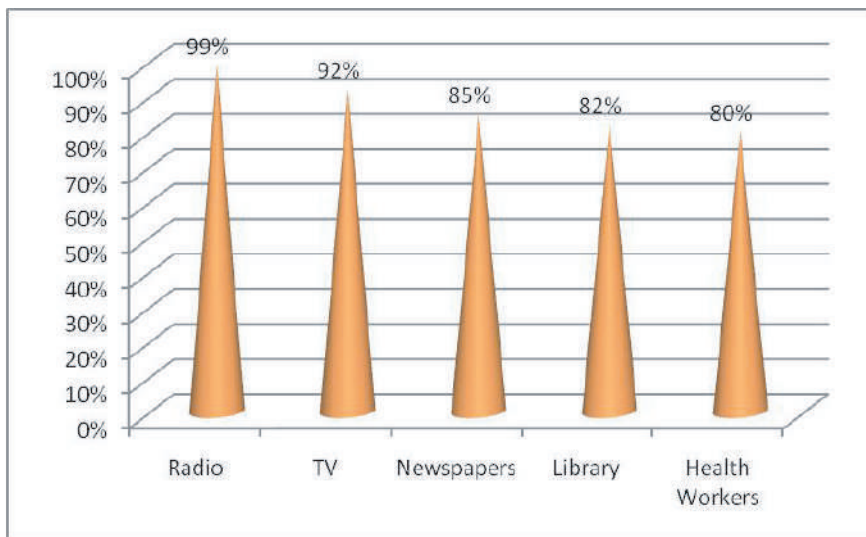


Figure 4: Source of Information on the Prevention of Cervical Cancer

Source: Field Data, 2021

The findings show that the source of information used to access information about cervical cancer are health workers along with television, social media, radio and NGOs. The findings of this study show that radios and television are the main sources of information on prevention of cervical cancer used by rural women. This calls for health workers to be active in providing education to women about cervical cancer. A study by Ifemelumma et al. (2019) shows that health worker especially nurses play a significant role in educating the public on health related issues including prevention of cervical cancer. Furthermore, Nelson et al. (2018) reveal that nurses play a major role in lightening the public about cervical cancer screening. It should be noted that women awareness and their attitude toward cervical cancer is very crucial on health-related issues and are therefore crucial for promoting women's uptake information related with the prevention of cervical cancer. This is because health workers are viewed as role models. Thus they should be engaged in provision health education about cervical cancer to the populations they serve.

Useful Sources of Information on Prevention of Cervical Cancer

Respondents were asked to identify the most useful sources of information on prevention of cervical cancer. The findings show that health workers 265(89.5%) and radio 277(76.7%) were the most useful sources of information on the prevention of cervical cancer used by rural women (Figure 5).

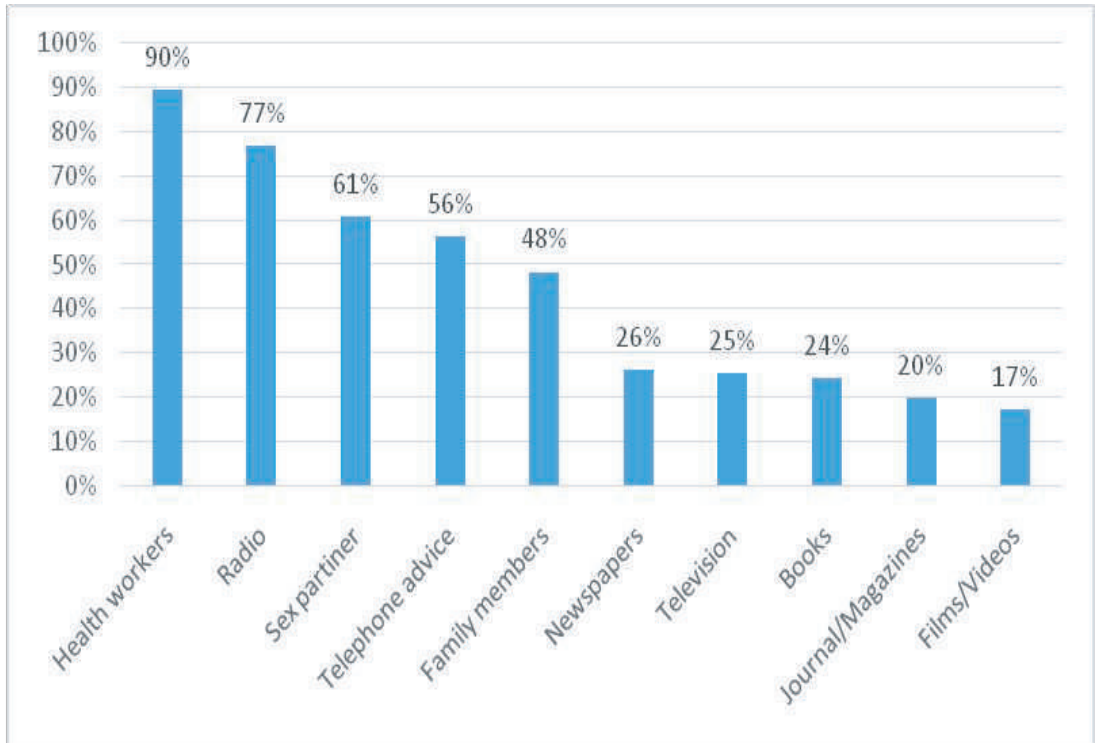


Figure 5: Sources of Information about Cervical Cancer Prevention

Source: Field Data, 2021

The findings show that health workers and the radio are the most useful sources of information on prevention of cervical cancer among rural women. Conversely, health workers whom seem to be among the useful sources of information, they need to be trained and well-versed in the use of various sources of information such as computer and internet to source for and expand their knowledge base in modern management of cervical cancer. Furthermore, listening to the radio frequently is among of the sources of information for prevention of cervical cancer. Radio programmes may be a better platform for disseminating cervical cancer awareness and education among women. Packaging of messages for cervical cancer could be targeting radio audience like rural women.

Social Media as a Source of Information for the Prevention of Cervical Cancer

Social media is another source of information used by women of the reproductive age. Despite the availability of many social media for use in the society, when respondents were asked which one was the relatively more useful social media, they mentioned WhatsApp and Facebook 257(89%) and 193(67%) respectively (Figure 6).

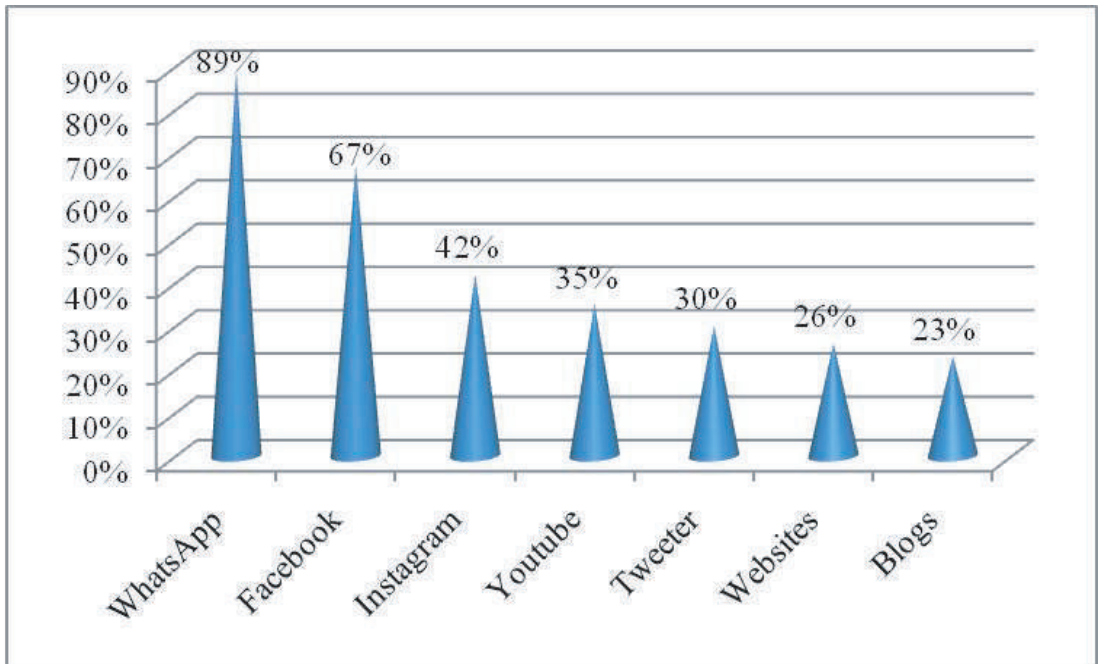


Figure 6: Social Media Used as Sources of Information for the Prevention of Cervical Cancer

Source: Field data, 2021

The finding shows that WhatsApp and Facebook are the most popular social media used by rural women for accessing information on prevention of cervical cancer. Moreover, during the individual in-depth interview, respondents reported that the mass media and publications are the main sources of information about prevention of cervical cancer in rural areas. In particular participants admitted that the television, radio, internet, magazines, books, newspapers and brochures were used as sources of information. Furthermore, seminars and health education were also reported as other sources of information about prevention of cervical cancer. This was narrated as follows:

The source of information which is mostly used to disseminate information on prevention of cervical cancer to women is health education but in rare occasions we use television particularly at waiting areas where there are many clients waiting for health services (Participant 3, Nurse).

Another participant added:

Women get this information to prevent cervical cancer from various sources; these include health education through brochures, magazines and other publications and local radios (Participant 1, Nurse).

The findings show that the television and radio, internet, magazines, books, newspapers and brochures were the main sources of information for the prevention of cervical cancer among rural women. The most common mass media that were used are the radio 306 (98.7%) and television 286 (92%). Seminars and health education were also reported as sources of

information for the prevention of cervical cancer. Moreover, the most useful sources of information reported were health workers 296 (95.5%) and the radio 275 (88.7%).

The findings are similar to those by Kurczewska-Michalak and Kardas (2017) who reported that healthcare professionals along with the television and internet provided most of the information for the prevention of cervical cancer. Furthermore, the findings of this study revealed that social media is another source of information for the prevention of cervical cancer used by rural women. Despite the many social media available, the most useful social media is WhatsApp, identified by 257(83%) respondents. This communicates the fact that health workers, mass media and social media are the most common sources of information used by rural women of reproductive age to access information on prevention of cervical cancer; however, although the internet is a powerful source of information, it does not always provide the most accurate information because some of the websites are not reliable sources (Nelson et al., 2018; Ifemelumma et al., 2019).

Use of Information on the Prevention of Cervical Cancer

The finding in this area showed that respondents reacted differently when it came to accessing information about the prevention of cervical cancer. About 248(80.0%) take precautions as instructed, 52(16.8%) share with others and 10(3.2%) don't do anything (see Figure 7).

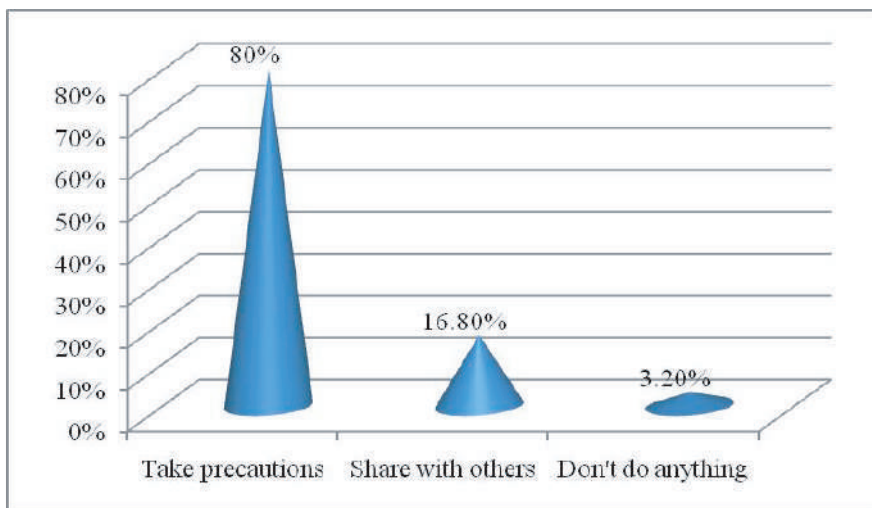


Figure 7 Action Taken after Receiving Information

Source: Field Data, 2021

The findings show that when the majority of rural women receive information about the prevention of cervical cancer, they take precautions by avoiding the risk factors. These findings are similar to findings from a study done in Uganda by Mukama et al. (2017) which revealed that women's attitudes towards the risks of cervical cancer are equally important in information access on the prevention of cervical cancer. Attitude regarding perceived risks to the disease have been suggested to influence the use of information on prevention of the disease and screening procedure (Mukama et al., 2017). Furthermore, a study done by Shea-Budgell (2014) revealed that cervical cancer survivors are keenly interested in receiving information about cancer, despite having undergone or finished active therapy than those who have not yet experienced the disease (Shea-Budgell et al., 2014).

Contrary to the findings of this study, Khazae-Pool et al. (2018) conducted a study in Iran with women of the reproductive age. Ideally all women in Iran age between 35-54 years are aware of cervical cancer screening. However, although the Pap smear test in Iran is free of charge in most health facilities, only a small proportion of eligible Iranian women undertake the Pap smear test, with percentages ranging from 14.8 to 28.3%.

Challenges of Access to Information on Prevention of Cervical Cancer

The findings show that about 221 (71.3%) women of the reproductive age experience challenges in accessing information on prevention of cervical cancer while 89 (28.7%) do not experience any challenges. The findings show that the majority of rural women experience various challenges in accessing information on the prevention of cervical cancer. Apart from experiencing challenges, respondents were asked to identify the types of challenges that they experienced. Findings show that inadequate health facilities 90(44%) and distance from the health facilities 85(85%) stood out as the most serious challenges experienced by rural women in accessing information on prevention of cervical cancer (Figure 8).

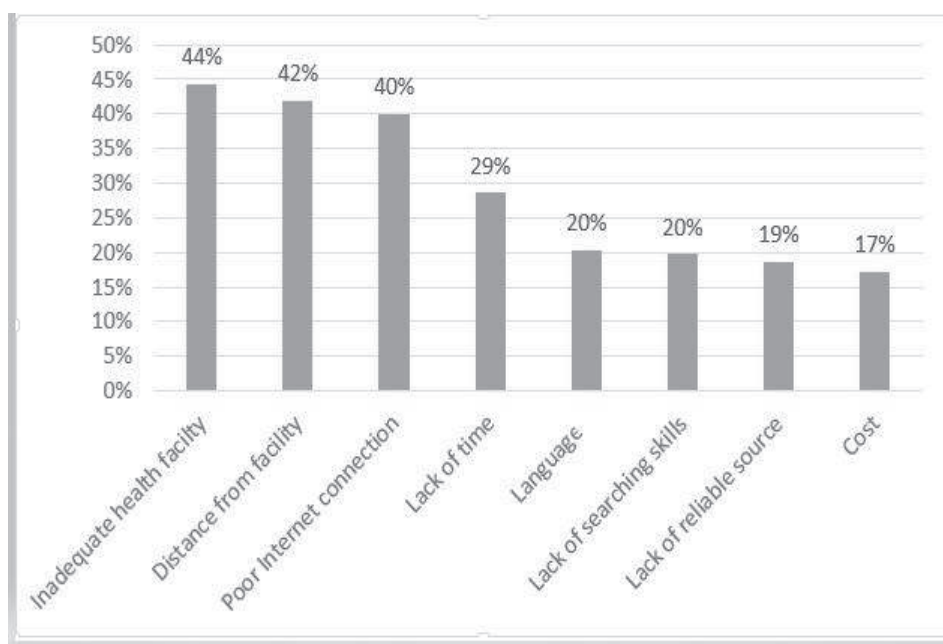


Figure 8: Challenges in Accessing Information on Cervical Cancer

Source: Field Data, 2021

The findings show that inadequate health facilities and distance from the health facilities were the most serious challenges experienced by rural women. Furthermore, during the interviews health workers mentioned several challenges experienced by rural women in the course of accessing and using information on prevention of cervical cancer. These included language, illiteracy and delay of information about the prevention of cervical cancer to rural women. Below are some of the submissions from participants:

The language used to give information on the prevention of cervical cancer is Kiswahili, when we get a client who cannot understand Kiswahili we struggle to speak their language (Participant 3, Doctor).

... for women who cannot read, they must be given information on prevention of cervical cancer through seminars because they cannot read brochures and leaflets (Participant 6, Nurse).

In our area, not all people get this information at the right time; there is also fear about the nature of cervical cancer screening procedure. Lack of education about cervical cancer among the community members is also a challenge (Participant 1, Doctor).

The findings are similar to findings of a study conducted in Peru, which identified lack of access to health care, shortage of quality facilities and laboratories as challenges facing access to information on prevention of cervical cancer (Freijomil-Vázquez et al., 2019). Another study identified low levels of awareness, myths and misconceptions, fear, stigma, and language barriers as challenges which affect distribution of information about prevention of cervical cancer among women (Kisiangani et al., 2019). Furthermore, a qualitative study conducted in Pakistan and Somalia found out there were several challenges for accessing and using information on prevention of cervical cancer. These include cultural norms and beliefs, individual perceptions, existential considerations, language barriers and limited knowledge about HPV and cervical cancer (Gele, 2017). Another study reported that personal barriers such as a lack of knowledge, low self-perceived risk and personal beliefs associated with religion and language issues are challenges in accessing information on prevention of cervical cancer (Grandahl et al., 2015).

Discussion

The findings of this study indicate that the majority of women (83.2%) have heard about cervical cancer and therefore, are likely to be key teachers to other rural women who have not been aware of the disease. There is a need to provide education and awareness campaign to rural women about cervical cancer. Furthermore, respondents acknowledged that Pap smear and VIA are common methods used for cervical cancer screening. Although such information is available, this does not guarantee that all the women have access to information on prevention of cervical cancer, as 16.8% of the respondents indicated that they were unaware of cervical cancer. This relates to the study which was done in the northern part of Ethiopia which showed that 51.9% of the respondents were sufficiently aware about the disease (Ifemelumma et al., 2019).

Moreover, the findings show that the mass media and publications are the main sources of information for the prevention of cervical cancer among rural women. The most common mass media used are the radio and television. Seminars and health education were also reported as sources of information for the prevention of cervical cancer. Moreover, the most useful sources of information reported were health workers and the radio. Kurczewska-Michalak and Kardas (2017) reported that healthcare professionals along with the television and internet provided most of the information for the prevention of cervical cancer. Furthermore, the findings of this study revealed that social media is another source of information for the prevention of cervical cancer by rural women. Despite the many social media available, the findings show that the most useful social media is WhatsApp. This communicates the fact that health workers, mass media and social media are the most common sources of information used by rural women of the reproductive age to access information on prevention of cervical cancer. However, although the internet is a powerful source of information, it does not always provide the most accurate information because some of the websites are not reliable sources (Nelson et al., 2018; Ifemelumma et al., 2019).

The findings further show that when the majority of rural women receive information about the prevention of cervical cancer, they take precautions by avoiding the risk factors that cause cervical cancer. These findings are similar to findings of a study the done in Uganda by Mukama et al. (2017), which reveal that women's attitudes towards the risks of cervical cancer is equally important in information access on the prevention of cervical cancer. Attitude regarding perceived risks to the disease have been suggested to influence the use of information on prevention of cervical cancer and the cervical cancer screening procedure (Mukama et al., 2017). Furthermore, a study done by Shea-Budgell et al. (2014) pointed out that cervical cancer survivors are keenly interested in receiving information about cancer, despite having undergone or finished active therapy than those who have not yet experienced the disease (Shea-Budgell et al., 2014).

Conclusion

This study has provided additional evidence on access and use of information on the prevention of cervical cancer among rural women in Tanzania. From the findings we can conclude that rural women are aware of cervical cancer. The most frequently used sources of information are health workers, social media and mass media (radio and television). Despite the improvement in awareness creation about cervical cancer among women of the reproductive age, particularly rural women, some still experience challenges in accessing information on the prevention of cervical cancer. Furthermore, rural women react differently to received information on prevention of cervical cancer. Some take precautions, some share with others and some don't take any action.

Recommendation

Based on the findings of this study, the following recommendations need to be considered.

- a) More awareness on the prevention measures on cervical cancer should be conducted to women as the findings of the study show that there is a relationship between awareness of cervical cancer and practicing screening and having vaccinated. This should aim to reduce the number of people who die from cervical cancer, or completely eliminate deaths caused by cervical cancer, and reduce the number of women who develop the cancer.
- b) The District Health Management Team (DHMT) in collaboration with the District Councils should expand accessibility of information on cervical cancer prevention through establishment of health information resource centres, training of health personnel, establishing more health facilities that provide information on prevention of cervical cancer and screening services.
- c) The District Council in collaboration with District Health Management Teams should hold educational programmes in order to sensitize and improve access to information on cervical cancer prevention among rural women of the reproductive age.
- d) Seminars with rural women who cannot read should be regularly conducted in order to enable them to access information on prevention of cervical cancer because they cannot read brochures and leaflets.
- e) Radio programmes have been found to be useful sources of information for rural women. Therefore, radio should be emphasized for disseminating cervical cancer education among women. Packaging of messages for cervical cancer should be prepared targeting radio audience like rural women and for sharing information through social media like Whats App.
- f) Rural women of the reproductive age should visit health facilities in order to access reliable and sufficient information on the prevention of cervical cancer. They should

also use reliable sources of health information particularly on cervical cancer. This is because not all women get reliable source information at the right time. Furthermore, some of the women fear about the nature of cervical cancer screening procedures.

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