



# Barriers and Facilitators to Cervical Cancer Prevention in Mbuji-Mayi, Democratic Republic of Congo: A Qualitative Study

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## Abstract

**Background:** Cervical cancer is undoubtedly a worrying public health problem, the heaviest burden of which is borne by developing countries such as the Democratic Republic of Congo. These countries are still struggling to put in place coherent programs capable of reducing the incidence of the disease because of the many challenges they face. The present study aims to document the knowledge, attitudes and practices of women and healthcare workers in Mbuji-Mayi on cervical cancer in order to plan educational needs.

**Methods:** We opted for a descriptive qualitative approach by focus groups around the three main themes (knowledge, attitudes and practices) and by individual interviews with a semi-structured questionnaire around the same themes.

**Results:** Knowledge of cervical cancer was poor in the community (women interviewed). The nurses were mainly informed on a few aspects of the disease. The practitioners had acceptable theoretical knowledge, but the practice remained very rudimentary.

An attitude of resignation with sometimes superstitious and supernatural considerations was observed regarding the disease by the community (women interviewed).

**Conclusion:** The practice of prevention, whether primary or secondary, against cervical cancer was almost nonexistent in Mbuji-Mayi.

**Keywords:** Cervical cancer; Prevention; Women's perception; Barriers

## Introduction

Cervical cancer is a major public health problem with nearly 266,000 deaths worldwide each year, 80% of which are in developing countries [1]. Estimates show that this number could increase to 90% by 2030 [2]. Cervical cancer is the first killer of women by cancer followed by breast cancer. In Democratic Republic of the Congo (DRC), the age-standardized death rate was estimated at 27.8 per 100,000 women in 2013 [3]. However, it is a preventable disease. Indeed, its main causative agent, the Human Papillomavirus (HPV) has been well identified as well as the many factors acting in synergy with it to determine cancer [4-9].

In addition, the natural history of cervical cancer, which ranges from infection of cervical cells with oncogenic strains of HPV to precancerous states (NIC or cervical dysplasia) before Getting to invasive cancer has been well understood [10-12]. The long asymptomatic period between HPV infection and the development of cancer, which is 10 to 20 years, is a great opportunity for preventive actions to detect and treat precancerous lesions [13].

Upstream of these interventions, the prevention of cervical cancer lies in the adoption of behaviors likely to avoid exposure to the virus such as sexual abstinence, real monogamy and the use of condoms [14,15]. All of these strategies are only effective in the context of coherent programs such as those that have enabled countries like France to significantly reduce the incidence of the disease [16]. However, Africa is still struggling to put them in place because of many challenges [3].

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Randal and Ghebre [17] note that demographic changes, deficiencies in terms of human skills as well as financial constraints constitute major obstacles on the path to the development of a health system capable of solving the problem of the increasing incidence of cancer in Sub-Saharan Africa. This criticized situation is explained by insufficient screening, late diagnosis and late treatment [13,18]. In addition, statistics on the prevalence of cervical cancer and deaths related to this disease are not available in sub-Saharan Africa [19]. Likewise, there are few countries in this African region that have a national cervical cancer prevention program with sufficient coverage of high-risk women [20].

This situation does not escape the Democratic Republic of the Congo, where health statistics in this area are only an extrapolation of estimates made in other countries [21].

There is not much work on the prevalence of HPV and/or precancerous cervical lesions [22-24]. Even rarer are studies of knowledge, attitudes and practices on cervical cancer [25].

This is what justifies the interest of this work which aims to document the knowledge, attitudes and practices of women and health personnel in Mbuji-Mayi, a city located in the center of the country and where the realities of the urban world rub shoulders with those of rural areas, to identify the educational needs of the targeted actors.

The objective of this study is to document the knowledge, attitudes and practices of the main factors involved in the management of cervical cancer in Mbuji-Mayi.

## Methods

### Study setting and population

According to the Development Indicators Analysis Cell (CAID) which cites as source the Mbuji-Mayi city council (December 2015), the city of Mbuji-Mayi, located in the center of the Democratic Republic of Congo, has an area of 135 km<sup>2</sup> with an estimated population of 3,367,582 inhabitants.

Its natural geographic boundaries are known: the Muya River to the north, the Kanshi River to the south, the Mbuji-Mayi River to the east and west the line joining the Kanshi-Nzeba confluence to that of the Muya and Bipemba.

The population speaks two languages, French which is the official language and Tshiluba which is the local language.

The health organization is based on the primary health care strategy with 10 Health Zones (HZ) operational in 167 health areas. The city has 10 hospitals including 4 states and 6 private. The fight against cervical cancer is not yet organized within the framework of the national health policy.

### Study design and study period

This is a qualitative descriptive study using the focus group method combined with individual interviews to document the knowledge, attitudes and practices of health service providers involved in the management of cervical cancer and beneficiaries (women).

This approach made it possible to triangulate on the data collection procedure (individual and group interviews). Data collection was carried out during the period from June 20 to 26, 2017.

**Focus groups discussion (FGD):** With regard to focus groups, an interview guide was drawn up comprising open-ended questions

relating to the main themes of the study, namely knowledge of the disease, attitudes and existing practices concerning its prevention.

Six focus groups were carried out until the content of the study was saturated (Table 1). Each FGD consisted of 6 participants which is the minimum required to have a better group dynamic [26]. Participation in the FGDs was free and consented. Consent was given in two phases: First oral before starting the FGD and then written at the end of the FGD to make the participants comfortable. Written consent is frowned upon in the community and can have a negative influence on the development of the FGD. The FGDs with the women took place in a quiet place in the community and with the providers in a room inside the hospital. These interviews were conducted in French and were facilitated by the principal investigator himself with an assistant trained in qualitative approaches to data collection. These FGDs were recorded on a digital support.

**Individual interviews:** We carried out individual interviews with four medical chiefs of health zones who are key people in the management and organization of the health system at the peripheral level (operational units). A semi-structured questionnaire addressing the themes of knowledge, attitudes and practices was used for these interviews. These interviews were conducted in French, recorded on digital support and each lasted 30 min on average. Participation was free, depending on the participant's availability and at the place chosen by the participant himself.

### Data analysis

All group discussions and individual interviews were recorded, literally transcribed and entered in Word format. These transcripts were imported into ATLAS.ti software which served as an analysis support.

Coding was carried out on the basis of a list of codes already developed according to major themes supplemented by other codes which were developed during the coding process. Meaningful quotes have been selected to support our matrices.

### Ethical aspects

This study explores behavioral aspects with a qualitative approach using the methods used in social sciences (FGDs and individual interviews) which do not present any major risk. There is no collection of biological samples or administration of a drug product. Participation was voluntary. Anonymity and confidentiality were guaranteed. Only members of the research team had access to the tapes and transcripts. The study protocol was not submitted to the structured ethics committee, but received a favorable opinion from the medical authorities of the province.

## Results

### Cervical cancer's knowledge

**Etiological factors:** The etiological factors of cervical cancer are

**Table 1:** Number of FGDs and interviews by category of respondent.

Category	FGD	Interviews
Women	2	-
Titular nurses	2	-
General practitioner	1	-
Gynecology practitioner	1	-
Doctor Chief of Health Area	-	4
Total	6	4

not known the same way by women in the community and by health care providers. For some women, the main etiological factors are repeat infections and repeat abortions as seen in this quote "I know about cervical cancer. Its causes, it can also be repeat abortions and that the woman comes to do the curettage and if it is badly done, it can lead someone to cervical cancer or it can also be infections to repetition" (FGD\_woman\_1).

Other women talk about witchcraft, a curse that can be cast by another woman "It has been said that this was done to her by her rival so that she would keep the husband alone as here in Mbuji-Mayi many men are polygamous. Some women don't like it and go to fetishes, it can do that" (FGD\_woman\_2).

Women talk about infections generally without specifying the type of infection "During the sensitization, I remembered that it is a microbe there eh... I forgot the name, but there is also poor hygiene, indigenous products and eh ... we talked about the pill" (FGD\_woman\_2).

Health care providers present aetiological factors differently depending on whether they are nurses or doctors. For Titular Nurses (TN) in health centers, in general, they evoke the multi-causal nature of the disease and infections are the most cited "Cervical cancer has several causes; we said of multiple causes: We have infections as the mom said; we have polytrauma of the cervix in case of eh... of exaggerated coitus, there are more efforts which are combined; there is the predisposition of women" (FGD\_nurse\_1). Some nurses specified the viral nature of the main causative agent and associated other known etiological factors such as Sexually Transmitted Infections (STIs) including HIV, smoking, multiparity, early marriage, the pill, the number high sexual partners and the use of certain traditional products in intimate baths.

"..., I found that cervical cancer is caused by a virus there; his name I forgot, but it is sexually transmitted, but other causes are numerous in addition like smoking, there eh... multi parity, STIs, poor intimate hygiene with traditional products eh... also reports and many sexual partners" (FGD\_nurse\_2). Some nurses cited the use of the intrauterine device and abortions as the etiological factors of cervical cancer.

In general, practitioners (generalists or gynecologists) speak of a virus, the human papillomavirus, as the main cause of the disease which is associated with certain risk factors such as smoking, early sexual intercourse, sexual partners multiple, AIDS "Cervical cancer is a pathology which is caused by a virus, the human papillomavirus which is more eh... which lives in patients who have risk factors, among others we have those who practice smoking, there to those who had sex before age; therefore the precocity of sexual intercourse; there are those who have a lot of sexual partners eh..." (FGD\_doctor\_1). Some doctors have spoken of late pregnancies beyond 35 years, the practice of genital mutilation and the hereditary nature of the disease as risk factors "..., pregnancy before age, especially before age 18 years, we also mentioned smoking, late pregnancies, that is to say seen beyond 35 years, we also have STDs which remain a boulevard for this papillomavirus; we also have a multiplicity of partners; there is a significant aspect is inheritance" (FGD\_doctor\_2).

Doctors in charge of health areas also speak of the human papillomavirus, as the main cause of the disease: "HPV which will cause precancerous states which eh... can progress to cancer; However, it must be combined with many factors such as smoking,

multiparity, other STIs including HIV" (Interview\_Doctor).

**Clinical manifestations:** Regarding the clinical manifestations of the disease, women mention one or other non-specific physical symptom or sign that can be found in invasive cervical cancer in advanced stages. The most cited signs are weight loss, lower abdominal pain, foul-smelling genital discharge and abnormal genital bleeding "She felt pain and the ..., she acted like she was unwell. There were liquids out there which is not good" (FGD\_woman).

A participant noted without clarification that there were no signs and that only by screening could one discover the disease "You can't know like that, the woman has to go to the hospital to do what is called, I'm not in the business, if it's screening" (FGD\_woman). One participant interviewed had no idea about the clinical manifestations of "I don't know anything" (FGD\_woman).

In general, health professionals talk about clear clinical notions about cervical cancer "It's genital contact bleeding, either from intimate baths or every time she has sex, she perceives blood in the genital area eh... she will also have pain in the eh... pelvic level, lower back pain, but generally unexplained lower abdominal pain; we can have leucorrhea with streaks of blood in it, which is not a nice appearance with streaks of blood in eh... There are also eh ... lesions, if there are also metastases and that we consulted late, we can eh... come to the hospital not only with bleeding as a complaint, but also with dysuria because this too can indicate metastases to the level of the bladder eh... one can have problems of defecation if the rectum is already concerned also" (FGD\_doctor). Doctors explain clinical signs in more detail than nurses "I can find a sore on the cervix and it can make me think of uterine cancer" (FGD\_doctor).

**Cervical cancer screening:** The notion of testing and its importance was well understood by the majority of women referring to the HIV testing to which they were accustomed "You would think that we are in good eh... in good health when there is already a disease which eats you inside your body. By doing an exam, you can find out. This is screening. Many people are sick without knowing it. If the doctor does not do an exam, you remain in the dark and it can lead to death when you could know him in time and treat you" (FGD\_woman).

Nurses talk about cervical cancer screening tests. They theoretically know the visual method and especially the Schiller test "we place a speculum and then we take a swab, we put the lugol, we brush the neck; after a minute or two like that, there will be a change in the color of the cervix, but I forgot the color that the cervix will take and afterwards we will say that if someone is reached or not" (FGD\_nurse).

Doctors talk about visual and cytological methods using Pap smears. "Visual methods and cytological methods. The visual methods, the ones that we practice most simply are eh... screening with acetic acid and lugol, but lugol, it is said that it is not specific enough; the most specific is acetic acid; there are cytological methods, there is the smear we do" (FGD\_doctor).

**Barriers to screening:** Several obstacles to cervical cancer screening have been identified, the most cited are:

(1) The financial barrier, the majority of women say that screening for cervical cancer is costly and the lack of money is perceived as a great obstacle to screening "... for lack of financial means. Cervical cancer screening is not free" (FGD\_woman). Women consult late;

they are more concerned about activities that allow them to earn money to support their household. They only consult when they are very sick "In Mbuji-Mayi, everyone is doing well, there is no job. Men do nothing and we are the ones who sell at the market. You have to be very sick to go eh... go to the hospital; sometimes we buy drugs ourselves for lack of means. Health is neglected" (FGD\_woman).

(2) The lack of information, for titular nurses in health centers, the lack of information on cervical cancer screening is the main obstacle. According to nurses, the lack of information on cancer concerns not only the nursing staff, but also the community (women) is not informed about cervical cancer screening "In my opinion, there are several obstacles: The lack of information of healthcare staff on cancer, this is a first obstacle; second obstacle lack of awareness; even women are under-informed, they know absolutely nothing about cancer; These are the big obstacles that make it impossible to get tested" (FGD\_Nurse).

(3) The lack of screening and diagnostic tools, the majority of doctors say that they do not screen and diagnose cervical cancer due to the lack of materials and reagents to do so. For doctors, there is no framework to allow them to screen for cervical cancer, there are no structures or even a policy for preventing cervical cancer "We don't practice. Why? Because there is no policy, there is no organization, there are no means, materials, reagents, and there are not those who can read the smears. In short, we don't practice" (FGD\_doctor). Some doctors believe that they do not have enough capacity to organize screening for cervical cancer "... we are not enough eh... intellectually and materially equipped to do so. Even city gynecologists hardly do it" (FGD\_doctor). Nurses do not have messages to give women in antenatal care due to lack of training on cervical cancer "We have not had training to be eh... able to talk to women about this disease and our health center does not raise awareness on that as we do eh ... for HIV and also family planning for example. We don't know the exact message to give to advise women" (FGD\_Nurse).

(4) The fear of discovering that one is sick, that one has cancer which is perceived as a serious and fatal disease, that one cannot cure, women prefer not to be aware of the diagnosis, "It is above all the fear of knowing that you have cancer as they say that there is no treatment. We will prefer not to be aware" (FGD\_Woman).

**Diagnosis:** The diagnosis of cervical cancer is made by histopathological examination of biopsies as recognized by most of the doctors interviewed "As for the diagnosis means, I will no longer talk about colposcopy even if we do not do it here at home due to lack of equipment and skills. But the diagnosis of certainty is with histopathology" (FGD\_doctor). The virological diagnosis was evoked by a doctor "it is necessary to know to recognize the signs of abnormal metrorrhagia and white discharge which changes odor and color, but before that eh... as there are no signs eh... that the virus is already there, it takes exams to know if this virus is there or not". Titular nurse has been limited to screening and clinical diagnosis of which they have some knowledge as described above.

### Attitudes towards cervical cancer

Cervical cancer is seen as an incurable disease "... it is an incurable disease, unless God intervenes" (FGD\_woman). For the majority of women, its outcome is always fatal; nothing to do is death "We cannot heal" (FGD\_woman). Some women say that only God can grant miraculous healing because nothing is impossible for him. "But as the other said, anything is possible for anyone who believes. God can heal

any disease" (FGD\_woman).

### Cervical cancer prevention practices

In general, preventive activities on cervical cancer are not organized. There is no framework to do it. Lack of qualified people, lack of screening tools and reagents are the main barriers to screening "... there is no policy, there is no organization, there are no means, materials, reagents, and there are not those who can read the smears. In short, we don't practice" (FGD\_doctor).

Nurses say they are not able to educate or inform women about cervical cancer screening because they themselves have no information; they are not trained "We have not had training to be eh... able to talk to women about this disease" (FGD\_Nurse).

The doctors in charge of the health zone say that they know some health facilities that occasionally organize screening for cervical cancer "there is a structure eh... that does it, it's Kayembe; he does it, not regularly, but he does it anyway" (Interview\_Doctor).

### Discussion

Although all of them have heard of cervical cancer, the different stakeholders interviewed not only have different knowledge of cervical cancer depending on whether they are women, nurses at health centers or doctors, but also such different prevention practices. Cervical cancer screening is practically not done in Mbuji-Mayi. An attitude of resilience and superstition is generally observed when talking about cancer in the community. The challenges documented in the context of secondary prevention (screening and early treatment) are enormous, structurally and organizationally as well as in the community.

Differences in knowledge of the disease which show that women are more ignorant than titular nurses and that the latter do not master the issue as well as the doctors are justified in my opinion by the fact of the different level of education and continuing education which is often lacking. Unlike us, Mitiku and Tefera [27], in a quantitative study carried out in Ethiopia; found that the women studied had a sub-optimal level of knowledge on cervical cancer concerning its etiological factors, its objective and subjective signs, its prevention as well than his treatment. In Tanzania, similar results were found by Lyimo and Beran [28]. However, our study presents the limit of not being generalizable compared to the other two. Regarding health professionals, some of the titular nurses had acceptable knowledge of certain risk factors for the disease and some even knew its viral infectious origin; however, others had some misconceptions about it.

As for the signs of the disease, prevention as well as treatment, there has been fragmentary knowledge among titular nurses. This is broadly in line with the results of the study by Urasa and Darj [29] in Tanzania where the majority of nurses presented incorrect knowledge of the transmission of HPV, risk factors, symptoms, treatment and prevention however, taking into account their level of education.

Other work has obtained similar results [30-32]. Unsurprisingly, doctors were much more informed about this pathology whatever their sphere of activity in our study. This contrasts somewhat with the results of a quantitative study carried out in Pakistan by Ali et al. [33] who found that the majority of health professionals (nurses and interns) were not adequately equipped in terms of knowledge about cervical cancer and its prevention. In terms of obstacles to screening, as we have discovered, there are many challenges to overcome, the main ones being the financial barrier, the lack of information and

training and the problem of equipment and inputs for screening. These problems are real and fit into the overall context of a country with a very low budget that does not allow people to access basic needs and tackle all public health problems. According to a report by experts from the African Development Bank, more than 85% of the Congolese population lives below the poverty line with 1.25 US per day [34]. They add that in 2018, the Human Development Index (HDI) was 0.435, placing the DRC among the countries at the bottom of the scale (41 stout of 54 African countries).

The fear of being exposed to a disease "cancer" perceived as dangerous and fatal by the community is a real psychological barrier which can be justified among other things by the lack of knowledge of the therapeutic possibilities and by the fact that people are generally superstitious.

They prefer not to be told anything until they complain about it. As for the attitude towards cervical cancer of the women interviewed, it is generally considered to be fatal. This is explained by the fact that the disease is detected very late with symptoms of general malnutrition, a bad odor and pelvic pain which create rejection of the sick person by those around him. This is explained by the fact that the disease is detected very late with symptoms of general malnutrition, a bad odor and pelvic pain which create rejection of the sick person by those around him. It is often in the terminal stage that sometimes the moribund is brought to the hospital. Otherwise, she is left to die at home speculating on the cause of the illness. Some authors have found that negative religious adjustment (for example, considering health problems as a punishment from God) was associated with a lower probability of accepting a Pap smear screening test [35].

Preventive activities such as early detection and treatment of the disease are practically not organized in Mbuji-Mayi. And as we have found, only IVL is practiced in local medical training which has benefited from capacity building on screening by visual methods (IVA and IVL). The 'See and Treat' method recommended by WHO for resource-limited settings is not feasible due to the lack of equipment for cryosurgery.

This situation is practically the same for the whole country, where there is no national cervical cancer control program despite the fact that this problem is recognized as a major public health issue for which a national control strategy has already been developed; but its implementation on the ground is slow in coming for lack of political will in our opinion. The most numerous barriers to cervical cancer screening described are structural and organizational, as noted by other authors in the African context [36].

Personal obstacles such as the fear of discovering that one is sick, shame (fear of stigma), neglect and lack of information have been found in several other studies [17,37,38]. This situation is not exceptional in Sub-Saharan Africa. Indeed, according to authors, it is the region of the world where the incidence of the disease was highest with the highest mortality related to the latter [39]. They found that there was no proper screening program and that most screening activities were done only as pilot projects or unsustainable research projects like ours except for South Africa which had a National program based on cytology since 2001; but the impact of which on invasive cancer was not yet known.

## Limitations

In our study, we did not specifically include men in the community. Men often have a positive or negative influence on seeking care in a

household by the fact that it is they who make the financial means available. This could also be captured in the male healthcare providers included in the study.

## Conclusion

This study shows that the population has already heard of cervical cancer and health professionals have only theoretical knowledge on certain aspects of the disease. This study has edified us as well on the existing strengths in the study environment and, on the difficulties that will have to be faced in implementing cervical cancer prevention in Mbuji-Mayi as part of a program integrating into the existing health system in the Democratic Republic of Congo.

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