Research Article

SATISFACTION OF WOMEN WHO BENEFITED FROM CERVICAL CANCER SCREENING IN YAOUNDÉ AND BRAZZAVILLE

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ARTICLE INFO

ABSTRACT

Objective: The objective of this study was to determine the satisfaction of women who benefited from cervical cancer screening in Yaoundé and Brazzaville.

Methods: A descriptive cross-sectional study was conducted from February to December 2020 in Brazzaville and Yaoundé. The study population consisted of women receiving cervical cancer screening at the screening units in Yaoundé and Brazzaville.

Results: A total of 300 women were interviewed, 150 of them in Brazzaville. The mean age of the participants was 44 ± 7.25 years. More than half (65.33%) of the respondents were not satisfied with the waiting time at the cervical cancer screening units in Brazzaville. In contrast, in Yaoundé only 4.67% of participants were not satisfied. The health care personnel were considered friendly by 99% of the respondents in Yaoundé and by 87.33% of those in Brazzaville. More than half were very satisfied with the respect of their privacy by the health care staff (66% in Yaoundé and 68% in Brazzaville). In Yaoundé the participants were all in favour of recommending screening to their relatives, compared to 98% in Brazzaville.

Conclusion: Most respondents were not satisfied with the organizational aspect of screening. Corrective measures are needed.

INTRODUCTION

Participants' satisfaction with cervical cancer screening is a key element in the quality of cervical cancer screening units (Donabedian *et al*, 1988), (Labarere *et al*, 1999). Cervical cancer is a malignant neoformation that alters the epithelium of the cervix, most commonly the exocervix (OMS, 2017). The condition begins with the precancerous lesion of the cervix, an epithelial abnormality that is asymptomatic and benign, but which can develop into an invasive cancer if not timely and properly managed. Cervical cancer is the fourth most common cancer in women worldwide (in terms of mortality) after breast, colorectal and lung cancer (Bhatla *et al*, 2018). This sexually transmitted disease develops very slowly, taking between 10 and 20 years to reach the stage of invasive cancer. It therefore offers a long time interval for screening (OMS, 2017). In 2018, Globocan estimated that there were approximately 570,000 new cases of cervical cancer per year worldwide, resulting in approximately 311,000 (54.6%) deaths in the same year.

In low-income countries, cervical cancer is the second leading cause of cancer death in women, after breast cancer (Bray *et al*, 2018).. In central Africa, according to the same source, more than 12,000 new cases of cervical cancer, resulting in 9,400 (78.3%) deaths, were recorded at the end of 2018(Bray *et al*, 2018). During the same period, in Cameroon, cervical cancer was the second most common cancer in women, after breast cancer (25.2% versus 35.1%) (Bray *et al*, 2018).. The number of cervical cancers was estimated at 2,350, of which 1,540 were deaths (65.53%) of which 1,540 died (65.53%). However, in some Cameroonian series, cervical cancer is in first place before breast cancer (Tebeu *et al*, 2009), (Sando *et al*, 2014). Cervical cancer screening is a major public health need. However, few women benefit from it. Low levels of knowledge and attitudes have been reported as factors contributing to women's non-participation in cervical cancer screening (Antaon *et al*, 2021). In Cameroon, about 8% of women aged 25-65 were screened for cervical cancer, compared to 10% in Congo Brazzaville(Tebeu *et al*, 2020)(Tebeu *et al*, 2008); whereas the World Health Organization (WHO) recommends screening coverage of at

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least 80% of the population(OMS,2017). To our knowledge, scientific data on the satisfaction of women who had received cervical cancer screening in Cameroon and Congo are not available. We therefore considered it useful to carry out this study, the objective of which was to determine the satisfaction of women who benefited from the cervical cancer screening we Yaoundé and Brazzaville.

METHODS

Type-Study area-period

This was a descriptive cross-sectional study of the opinions of women who received cervical cancer screening at the cervical cancer screening units in Brazzaville (University teaching hospital, Makélékélé Referral Hospital and Talangaï Referral Hospital) and Yaoundé (university teaching hospital andGynaeco-Obstetric and Paediatric Hospital). Data collection took place from 1stof May to 10th of August 2020 in Yaoundé (Capital of the Republic of Cameroon) and from 19th of October to 20th of December of the same year in Brazzaville (Capital of the Republic of Congo).

Population

Selection

For participants who received cervical cancer screening in Yaoundé, we included those who participated in cervical cancer screening between 2nd of January to 1st of May, 2020, in the cervical cancer screening unit of two hospitals in Yaoundé (University Teaching Hospital [YUTH];Gynaeco-Obstetric and Paediatric Hospital YGOPH). For participants in Brazzaville, we included those who participated in cervical cancer screening during the period of our study in Brazzaville (19th October to 20thof December 2020) in three cervical cancer screening units in that city (UTH; Referral hospitals of Talangaï andMakélékélé). Women who were unable to answer the questions and those who could not be reached in the case of Yaoundé despite the telephone contact details provided were excluded from the study.

Sample size

The required number of participants in the study was determined by the following formula $\frac{Z^2 /2(p)(1-p)}{d^2}$, where the centred reduced distribution (Z /2) of 1.96 was taken. In the absence of research on the topic in our context, a proportion of 32% of cervical cancer screening beneficiaries was taken in a study conducted in Malawi in 2014.(Maseko *et al*, 2014)., and(d)deviation the accepted error margin (5%). The minimum size of 334 participants was found. As the estimated number needed was more than 10% to the number of women who participated in cervical cancer screening from 2ndof January to 1st of May 2020 in Yaoundé, the following : $n_r \geq \frac{n}{1+(\frac{n}{nt})}$ was then used to correct this sample size: , where, nr is the revised size, n is the initially estimated number needed(n=334) and nt is the number of women who participated in cancer screening during our study period in Yaoundé (nt=308). Thus, the minimum sample size of 150 women beneficiaries of cervical cancer screening was found.

Participants' sampling technique

For women who participated in cervical cancer screening in Yaoundé, we established the sampling frame using an Excel 2016 spreadsheet. 308 women in total participated in cervical

cancer screening at the University Teaching Hospital and the Gynaeco-Obstetric and Paediatric Hospital from 2nd January to1st May 2020, i.e. 252 women at the University Hospital, and 56 at the Gynaeco-Obstetric and Paediatric Hospital (identified in the screening and family planning register). Taking into account the cervical cancer screening attendance rate of each unit, the Yaounde Univesity Teaching Hospital (YUTH) represented82% (252/308) of the women we surveyed, i.e. 123 participants, and 28% (42 participants) from the Gynaeco-Obstetric and Paediatric Hospital in Yaoundé. The sampling step was calculated to identify the first woman to be surveyed. Thus, for the YUTH screening centre, the sampling step of two (K=252/123) was found. Therefore, by applying the Excel 2016 alea function, the first woman we surveyed was number 1, on the basis established for the survey. Then, we continued to survey the women who were numbered 2,3,4 .... 123, from the established sampling frame. When the telephone number could not be reached and/or [the sampled woman declined participation], the previous number was considered. This procedure was also applied to participants in cervical cancer screening at the Yaoundé Gynaeco-Obstetric Hospital (where the sampling frame was 1). The first number was contacted by telephone for an interview about cervical cancer screening. In the case of Brazzaville, sampling was by total inclusion for convenience.

Variables-Collection tools

Variables relating to socio-demographic characteristics, participants' satisfaction with the organization of screening, relationships with the personnel and Data was collected using a semi-structured questionnaire. The variables from this study were adapted based on some of the work on satisfaction(Donabedian *et al*,1988), (Maseko *et al*,2014), (Ware *et al*,1983), (Pittalis *et al*,2020), (Hermann *et al*,2018).

Data analysis

The collected data was analysed using SPSS version 20 software. Absolute and relative frequencies were determined for the qualitative variables. For quantitative variables, the parameters of central tendency and dispersion were reported. The significance level was set at 5%.

Research ethics

The protocol of this study was examined and approved by the institutional research ethics committee of the Faculty of Medicine and Biomedical Sciences of Yaounde I (N°016/UY1/FMSB/VDRC/CSD), then by the institutional research ethics committee for human health of the Gynaeco-Obstetric and Paediatric Hospital of Yaounde (N°1084/CIERSH/DM/2020). In addition, the Departmental Directorate of Health Care and Services of Brazzaville (N°949/MSPPIFD/DGSSa-B), the UniversityTeaching Hospital of Brazzaville (N°003/MSPPFIS/CHUB-DG/DER.20) and the Talangaï Reference Hospital (N°0970/MSPPIFD/DGSSa-B/HRT/SARH/BFCD.20), as well as the [Yaoundé University Teaching Hospital] (N°2030/AR/CHUY/DG/DGA/CAPRC) also gave their approval for this study.

RESULTS

Socio-demographic characteristics

A total of 300 women were interviewed, including 150 in Brazzaville. The average age of participants in Brazzaville was

44.67±6.76 years and 41.48±9.51 years in Yaoundé. Nearly half of the participants in Yaoundé had a university education (49.33%), while in Brazzaville it was 44.67%. The majority of participants were employed, 69.33% in Yaoundé and 59.33% in Brazzaville. Married women were the most represented in Yaoundé (70.67%) and Brazzaville (65.33%) (Table 1).

Table 1 Socio-demographic characteristics of screening participants

Sociodemographic characteristics	Benefeciaries of cervical cancer Screening.				Total	
	Yaoundé(N=150)		Brazzaville(N=150)		N=300	
	n	%	n	%	n	%
Age						
Extreme	25-69		25-64		25-69	
Median	41.48±9.51		44.67±6.76		43±7.25	
Level of Education						
Primary	10	6.67	12	8.00	22	7.33
Secondary	66	44	71	47.33	137	45.67
University	74	49.33	67	44.67	141	47.00
Professional Status						
Employed	104	69.33	89	59.33	193	64.33
Unemployed	46	30.67	61	40.67	107	35.67
Religion						
Catholic	70	46.67	52	34.67	122	40.66
Protestant	57	38.00	59	39.33	116	38.67
Others*	23	15.33	39	26.00	62	20.67
Matrimonial Status						
Single	30	20	41	27.33	71	23.67
Divored	4	2.67	3	2.00	7	2.33
Married	106	70.67	98	65.33	204	68.00
Widow	10	6.67	8	5.34	18	6.00

Organisational Dimension (Organizational aspects)

Regarding the organisational dimension, 72% of the beneficiaries found the reception acceptable in Yaoundé and 52% in the Brazzaville screening units. More than half (65.33%) of the respondents were not satisfied with the *long* waiting time at the Brazzaville cervical cancer screening units, while at the Yaoundé cervical cancer screening units only 4.67% were not satisfied.

Table 2 Satisfaction of women who benefited from cervical cancer screening

Variables	Screened women				P -value
	Yaoundé		Brazzaville		
	n	%	n	%	
Reception at the unit					0.001
Very satisfactory	41	27.33	68	45.33	
Acceptable	108	72.00	78	52.00	
Not Satisfactory	1	0.67	4	2.67	
Waiting Time					0.0006
Very Satisfactory	68	45.33	6	4.00	
Acceptable	75	50.00	46	30.67	
Not satisfactory	7	4.67	98	65.33	
Respect of intimacy					0.118
Very satisfactory	99	66.00	102	68.00	
Acceptable	50	33.33	48	32.00	
Not satisfactory	1	0.67	0	0.00	
Informéd by staff					<0.001
Yes	124	82.67	79	52.67	
No	26	17.33	71	47.33	
Friendliness of screening operator					0.001
Yes	149	99.33	131	87.33	
No	1	0.67	19	12.67	
Information on Management					0.001
Yes	145	96.67	101	67.33	
No	5	3.33	49	32.67	
Informedon appointment					0.001
Yes	129	86.00	99	66.00	
No	21	14.00	51	34.00	
Price of cervical cancer screening					0.0289
Very satisfactory	49	32.66	12	8.00	
Acceptable	96	64.00	43	28.67	
Not satisfactory	5	26.67	95	63.33	
Do yourecommend screening to yourlovedone?					-
Yes	150	100	148	98.67	
No	0	0	2	1.33	

Nearly three quarters (63.33%) of participants in Brazzaville were not satisfied with the cost of cervical cancer screening (i.e., $10 at Makélékélé and $18 at the UTH and Talangai *Referral* Hospital) compared to only 3% of participants in Yaoundé ($7 at the YUTH and $10 YGOPH (Table 2).

Professional dimension (professional aspects)

Regarding the professional dimension, 82.67% (124/150) of the participants had received counseling in Yaoundé and 52.67% (79/150) in Brazzaville. Of these participants, 92.74% (115/124) were satisfied in Yaoundé and 93.67% (74/79) in Brazzaville (Table 2).

Relational dimension

Regarding the relational dimension among cervical cancer screening participants, the health care personnel were considered friendly by 99% of the respondents in Yaoundé and by 87.33% of those in Brazzaville. More than half were satisfied with the privacy [provided by] the health care staff in Yaoundé (66%) and 68% in Brazzaville (Table 2)

DISCUSSION

This survey of participants' satisfaction with cervical cancer screening is the first to be conducted in Yaoundé and Brazzaville to our knowledge. However, this study had some *limits.* Firstly, the data collection in Yaoundé was retrospective that could introduce a memory bias]. Secondly, this was a survey based on simple self-reports by the participants. Nevertheless, the data was collected by an interviewer trained and experienced in public health surveys. In addition, the collection tool was standardised based on work *(similar studies)* assessing patient satisfaction with health services received (Donabedian *et al* ,1988), (Maseko *et al*,2014), (Ware *et al*,1983), (Pittalis *et al*,2020), (Hermann *et al*,2018).

This study reported that more than half (65.33%) of the respondents were not satisfied with the waiting time at cervical cancer screening units in Brazzaville. In contrast, at the Yaoundé cervical cancer screening units only 4.67% of participants were not satisfied. This observation of high dissatisfaction with cervical cancer screening in Brazzaville can be explained by the fact that screening is not systematic in Brazzaville, but *(it is however)* is conducted in some cervical cancer screening units two days a week. Moreso, cervical cancer screening is considered an aspect of specialized care, because in these units, it is performed either by a gynecologist, as in the case of Talangai [Referral] Hospital, or by an oncologist, as in the case of the screening units at Makélékélé [Referral Hospital] and Brazzaville University Teaching Hospital. This particular involvement of specialists is explained by the use of a colposcope during cervical cancer screening after application of acetic acid and Lugol's iodine. However, the World Health Organization recommends that both doctors and midwives perform cervical cancer screening, as the use of visual inspections with acetic acid can also be performed by a trained midwife or nurse (OMS,2017). However, this recommendation is applied in the Yaoundé-Cameroon cervical cancer screening units (YUTH, Gynaeco-Obstetric Hospital and Paediatric Screening Unit) where participation figures are much higher. The involvement of paramedics in screening is an asset as medical staff are often busy with medical procedures requiring their expertise and have little time to carry out cervical cancer screening. As mentioned above, only 4.67% of participants in Yaoundé were

dissatisfied with the waiting time. This low rate of dissatisfaction among beneficiaries in Yaoundé could be explained by the involvement of paramedics (midwives and nurses) trained in screening for precancerous lesions using visual inspection with acetic acid and Lugol's solution. In view of the above, the heavy workload of the specialised doctors (gynaecologist and oncologist) would be a factor explaining the long duration, sometimes estimated at more than 3 hours.

Concerning the cost of cervical cancer screening, our study reports that more than half (63.33%) of the participants in Brazzaville were not satisfied with the cost of cervical cancer screening (i.e., $10 francs in Makélékélé and $18 francs at the UTH and TalangaiReferral Hospital). In contrast, only 3% of the participants were in Yaoundé ($7 at the CHUY and $10 at YGOPH). The costs, described as exorbitant by the respondents, can be explained by the use of colposcopy during cervical cancer screening in the Brazzaville units, a practice not used in the Yaoundé screening units (YUTH and YGOPH). In terms of the cost/benefit of screening, we estimate the benefits to be greater, but the cost of screening should be harmonised in the nomenclature of hospital procedures.

Regarding the relational dimension between participants in cervical cancer screening, the health care staff was considered friendly by 99% of the respondents in Yaoundé and by 87.33% of those in Brazzaville. The high satisfaction rate, which is a sign of a good relationship between the health worker and the patient, is a significant factor in the quality of the services provided to the women screened. The latter can therefore convey messages of participation to their relatives in cervical cancer screening. Moreover, almost all participants in cervical cancer screening said they would recommend screening to their relatives (target of cervical cancer screening) (100% in Yaoundé and 98.67% in Brazzaville).This result corroborates that of the Moroccan study on the satisfaction of cancer patients (Maseko *et al*, 2014).

CONCLUSION

This study shows that the majority of the aspects were satisfactory concerning the professional dimension. On the other hand, necessary actions should be taken for the aspects considered less acceptable by the women who participated in cervical cancer screening in Brazzaville and Yaoundé. This will involve taking the necessary actions on reception and waiting time. This could consist of involving paramedics in carrying out screening activities in the Brazzaville screening units.

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