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Malanville Women's Knowledge, Attitudes and Practices in Cervical Cancer Prevention in 2023

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Abstract: Background: Cervical cancer (CC) is the second most common cancer in women in the world after breast cancer. Objective: To assess the level of knowledge, attitude and practice related to cervical cancer prevention and associated factors among women of childbearing age in the commune of Malanville. Method: Analytical, cross-sectional observational study with prospective data collection among women in Malanville from February 1 to July 31, 2023. Result: three hundred women were surveyed. The mean age of the women surveyed was 28.13 years ±11.02 years with the extremes of 15 and 63 years. In general, 5% of respondents had an average level of knowledge about cervical cancer. 5.3% of the women surveyed had a fair level of attitude. 2.7% of them had an acceptable level of practice. Age (p=0.001), marital status (p=0.032), and family history of cervical cancer (p=0.00; PR=8.76; 95% CI [1.98-38.5]) were significantly associated with the adequate level of cervical cancer practice of the women surveyed. Conclusion: The level of knowledge, attitude and practice related to cervical cancer prevention was low in Malanville. Awareness-raising actions on cervical cancer prevention must be implemented, taking into account the factors associated with an adequate level of practice.

Keywords: Cancer, Cervix, Knowledge

1. Introduction

Cervical cancer (CC) is the second most common cancer in women worldwide after breast cancer, with 528,000 new cases each year [1]. It is the fourth most common cause of cancer death (266.000 deaths in 2012) among women worldwide [2]. The lowest incidence rates (15/100,000) are observed in Europe, North America and Japan [2]. CC is ranked first in Africa with an intermediate incidence in the Maghreb countries [3]. In developing countries such as Benin, CC screening is poorly practiced and these cancers are often seen at advanced stages (65%) [4]. This study aimed to assess the level of knowledge of CC screening attitude and practice and associated factors among women of childbearing age in the commune of Malanville.

2. Method

2.1. Type and Period of Study

This was a cross-sectional observational study with an analytical purpose with prospective data collection in the population of Malanville. The study took place over a period of 06 months (February 1 to July 31, 2023).

2.2. Study Population

It was made up of women aged between 15 and 70 living in the neighbourhoods of the commune of Malanville during the collection period. Included in our study were all women: aged 15 to 70 years who had lived in Malanville for at least 6

months; who have given their free and informed consent. Excluded from our study were all women with a mental or psychological condition and/or an inability to understand or answer the questions asked, who had not completed the questionnaire.

2.3. Sampling

The sample size was determined by the Schwartz formula. $N= ez^2pq/i^2$, N: sample size, e: cluster effect=2, $z=\sum\alpha$ (α = accepted risk of error of 5%); $\sum\alpha$= reduced deviation at risk α: 1.96; I: Accuracy (4.5%) p: prevalence in Benin is 7.82% or 0.0782 [5]; q: 1-P= 0.9218; N=273. It was increased by 10%, the final size was N=300 women.

Sampling was conducted using the random cluster sampling technique. The sampling frame was made up of all the neighbourhoods of the five districts of the municipality of Malanville as well as their combined population. In total, we have 31 neighbourhoods in the commune of Malanville, with a total of 84,960 women. A number N of clusters or 15 clusters were chosen, so we had a cluster step k which is equal to the cumulative population over the desired number of clusters. With k=84,960 /15 or 5.664. The size of each cluster was determined by making the sample size over the cluster number, 190/15≃ 13. For each cluster drawn, the investigator positioned himself in the center of the neighborhood and drew a direction using the bottle method. He went concession by concession in the chosen direction by selecting all eligible subjects per household.

2.4. Data Collection

The data was collected over a one-month period from April 1 to May 31, 2023. The collection technique used was a structured individual interview with the women to be interviewed. Data were collected using a semi-structured questionnaire designed to include the different information related to the different study variables and made on the KobotoolBox server of the KoBoCollect application Version 1.30.1; Thus, the data was collected with the help of smartphones. The collection team was made up of 5 people including ourselves, including 4 community relays including the different main local languages of the municipality of Malanville.

2.5. Study Variables

2.5.1. Dependent Variable

The dependent variables were levels of knowledge, attitude, and practice towards cervical cancer (CC) prevention. Questions were asked to assess these levels. One point was awarded for each correct answer. The levels were determined according to the recommendations of Essy et al [6] based on the proportion of correct answers of the respondent:

1) Knowledge about cervical cancer (CC) prevention

Cervical situation, Knowledge of signs, risk factors, methods of prevention, methods of screening, age of onset and periodicity of CC screening.

Assessment of the level of knowledge: poor < 50% ≤ insufficient < 65% ≤average < 85% ≤ good

2) Attitudes towards cervical cancer (CC) prevention. We studied women's perceptions of:

Annual gynaecological examination with cervical examination, the severity of CC, adherence to the implementation of a CC screening program

Assessment of the level of attitude: Harmful < 50%< Wrong< 65%< Approximate < 85% < Fair

3) Women's practices with regard to cervical cancer (CC):

Screening, preventive Behaviours

Level of practice assessment: harmful < 50% < inadequate < 85% < adequate

2.5.2. Independent Variables

Sociodemographic characteristics (age, place of residence, occupation, level of education, marital status, monthly income) and reproductive characteristics (age of menarche, age of first sexual intercourse, parity).

2.6. Data Processing and Analysis

The data entry was done through the KoBoCollect app. At the end of the collection, the data was exported from the KobotoolBox server as an EXCEL file for data analysis using the Epi-info software version 7.2.2.6. The text processing was done using the Microsoft WORD version 2016 application software and the creation of the graphs and tables using the Microsoft EXCEL version 2016 application software.

Central tendency and dispersion parameters were used for the quantitative variables and the proportions associated with their 95% confidence interval (CI) for the qualitative variables. The means were represented by their standard deviation when the distribution is normal, and if the distribution is not, we calculated the medians with their respective interquartile ranges. Comparisons of proportions were made using the Chi2 test or the exact Fisher test, as appropriate. The difference was statistically significant for a p-value value less than 0.05 ($p<0.05$).

2.7. Ethical and Professional Considerations

The research protocol of our work has been submitted to the Biomedical Research Ethics Board of the University of Parakou. The free and informed consent of all respondents had been obtained before any data collection and after explaining the purpose of the survey to them through an information note. In addition, the subjects to be investigated were reassured about the anonymity and confidentiality of the data to be collected.

3. Result

During this study, 300 women were asked about their Knowledge, Attitude and Practice towards Cervical Cancer (CC) in the municipality of Malanville in 2023.

3.1. Socio-Demographic, Economic Characteristics

In our study, the mean age of the women surveyed was 28.1 years ±11.0 years with the extremes of 15 and 63 years. The 15 to 25 years age group was the most represented, 46.3%. The majority of respondents (62.3%) lived in rural areas. 46.3% of them were married. The majority of them (60.7%) had a secondary education. A proportion of 52.7% of these respondents had a monthly income of less than 52000 CFA francs. Table 1 presents the socio-demographic characteristics of the women surveyed on their knowledge, Attitude and Practice towards CC in Malanville in 2023.

Table 1. *Socio-demographic characteristics of respondents on Knowledge, Attitude and Practice related to cervical cancer (CC) in Malanville in 2023.*

	Frequency	
	Absolute (N=300)	**Relative (%)**
Age (years old)		
15-25	139	46.3
25-35	76	25.3
35-45	58	19.3
≥45	27	9.0
Place of residence		
Rural	187	62.3
Urban	113	37.7
Occupation/ Occupation		
Artisan/Worker	56	18.7
Trader/Reseller	55	18.3
Student	110	36.7
Private/Public Servant	46	15.3
Housewife	33	11.0
Monthly income		
< 52 000 FCFA		52.7
52 000-100 000 FCFA	134	44.7
≥ 100 000 FCFA	8	02.7
Marital status		
Single/ Widowed/ Divorced/ Cohabiting	123	41.0
Married	139	46.3
Free union	38	12.7
Educational attainment		
Out-of-school/ Literate	32	10.7
Primary	65	21.7
Secondary	182	60.7
Upper	21	07.0

3.2. Reproductive Characteristics of Women (Table 2)

The mean age at first sexual intercourse was 17.80 ± 2.27 years with extremes of 12 and 26 years.

Table 2. *Reproductive characteristics of women on cervical cancer (CC) in Malanville in 2023.*

	Frequency	
	Absolute (N=300)	**Relative (%)**
Having had sexual intercourse		
No	102	34.0
Yes	198	66.0
Parity		
Nulliparous	133	44.3
Primiparous	20	06.6
Pauciparous	141	47.0
Multiparous	6	02.0
Age at first sexual intercourse (years)		
<17	58	29.3
≥ 17	140	70.7
Age of first pregnancy (years)		
< 20	69	47.6
≥ 20	76	52.4
Family history of CC		
No	289	96.3
Yes	11	03.7

3.3. Knowledge of Cervical Cancer (CC)

A proportion of 79.3% of respondents did not know that the cause of cervical cancer (CC) was a Sexually Transmitted Infection. Twenty one percent of them knew at least one sign of CC and 15 % knew at least one risk factors for CC. A proportion of 59.4% of the respondents had recognized metrorrhagia as a sign of CC. High multiparity, multiple sexual partners and unprotected sex were identified as factors promoting the occurrence of CC in respectively 44.4%, 75.6%, and 84.4% of these women surveyed. The most identified method of screening CC by them was Visual inspection of the cervix after application of acetic acid and then Lugol (89.4%). The most important source of information reported by the respondents was the media (50%). Table 3 presents the knowledge on the signs, risk factors for CC and sources of informations from the respondents in Malanville.

Table 3. *Signs, predisposing factors, methods of cervical cancer (CC) screening identified by respondents and their sources of information in Malanville in 2023.*

	Frequency	
	Absolute	**Relative (%)**
Have heard of the CC		
No	102	34.0
Yes	198	66.0
Cause of CC		
Sexually Transmitted Infection	60	20
Signs of CC		
Metrorrhagia	38	12.7
Leucorrhoea	24	8.0
Pelvic pain	49	16.4
Dysuria	9	3.0
Rectal signs	4	1.3
Predisposing Factors of CC		
More than 5 children, the first of whom is before 20 years old	23	7.6
Sexual intercourse before the age of 17	23	7.6
Low socio-economic status	10	3.3
Tobacco use	2	0.6
Multiple sexual partners	34	11.3
Unprotected sex	38	12.7
Has no risk factors	255	85
Methods of screening for CC		
Cervical smear	7	2.3
Visual inspection after application of acetic acid/ Lugol	42	14
Doesn't know how to screen	253	84.3
Sources of information on CC		
Media	149	50
Internet	4	1.3
Health Worker	72	24
Relatives/ Friends	77	25.7

After evaluation, it appears that 90% of the women surveyed had a poor level of knowledge, 5% an insufficient level and 5% an average level with regard to CC.

3.4. Women's Attitudes Towards Cervical Cancer (CC) Prevention

The set of results on attitudinal characteristics related to cervical prevention is presented in Table 4.

Table 4. *Distribution of Malanville respondents according to good attitudes towards cervical cancer (CC) in 2023.*

	Frequency	
	Absolute (N=300)	**Relative (%)**
Have advised CC screening to those around them	23	07.7
Be in the habit of performing an annual gynaecological examination	14	04.7
Be ready for paid screening	246	82.0
Be prepared to join a CC screening program	242	80.7
CC can be fatal	258	86.0

After evaluation, it emerged that 5.3% of the women surveyed had a correct level of attitudes, 58.3% a negative level of attitudes, 27.7% an erroneous level of attitudes and 8.7% an approximate level of attitudes related to the prevention of CC.

3.5. Women's Practice on Cervical Cancer (CC)

A proportion of 3.3% of respondents said they had already been screened for CC. All of these women had stated that the means of screening they had received was the Visual Inspection of the cervix after the application of acetic acid and then lugol (VIA/VIL). These data are presented in table 5.

Table 5. *Cervical cancer (CC) practices in Malanville in 2023.*

	Frequency	
	Absolute (N=300)	**Relative (%)**
Having been screened for CC	10	3.3
Period of last screening (years)		
< 5	2	20
<1	5	50
< 1/2	3	30
Reason for not testing		
Ignorance of importance	15	05.2
Lack of time	26	09
Lack of information	244	84.1
Geographic accessibility issue	2	0.7
Financial problem	3	01
Wearing a condom		
Never	15	51.7
Sometimes	123	41
Always	22	07.3

After evaluation, it appears that 2.7% of the women had an acceptable level of practices overall and 97.3% a level of practices that were harmful to the prevention of CC.

3.6. Factors Associated with Adequate Level of Practice for Cervical Cancer (CC)

The results of the bivariate analysis show that CCU's age (p=0.001), marital status (p=0.032) and family history (p=0.00; PR=8.76; 95% CI [1.98-38.5]) were significantly associated with the respondents' adequate level of practice for CC in Malanville. These data are described in Table 6.

Table 6. *Factors associated with women's adequate level of cervical cancer (CC) practice in Malanville in 2023.*

	Adequate level of practice					
	N	**n**	**%**	**RP**	**[IC $_{95\%}$RP]**	**p**
Age group (years)						0.001
≥45	27	3	11.1	1	-	
[15-25]	139	0	00.0	0	-	0.003
[25-35]	76	5	06.6	0.59	[0.15-2.31]	0.429
[35-45]	58	0	00.0	0	-	0.029
Family history of CC						0.001
No	289	6	02.8	1	-	
Yes	11	2	18.2	8.76	[1.98-38.5]	
Parity						0.007
Nulliparous	133	1	0.7	1	-	
Primiparous	20	2	10.0	13.3	[1.26-140.0]	0.045
Pauciparous	141	4	02.8	3.77	[0.42-33.3]	0.371
Multiparous	6	1	16.7	22.9	[1.56-313.2]	0.001
Place of residence						0.480
Rural	187	4	02.1	1	-	
Urban	113	4	03.5	1.68	[0.42-6.50]	
Occupation						0.904
Artisan/Worker	56	2	03.6	1	-	
Trader/reseller	55	3	05.4	1.53	[0.27-8.79]	0.678
Pupil/Student	110	0	00.0	0.00	-	0.112
Private/ public official	46	2	04.3	1.21	[0.18-8.31]	1.000
Household	33	1	03.0	0.85	[0.08-9.00]	1.000
Marital status						0.032
Married	139	7	05.0	1	-	
Single/ widowed/ divorced	123	1	00.8	0.16	[0.02-0.99]	0.047

	Adequate level of practice					
	N	n	%	RP	[IC 95%RP]	p
free Union	38	0	00.0	0	-	0.348
Educational level						0.769
Primary	65	2	03.1	1	-	
Out of school/ Literated	32	0	00.0	0	-	1.000
Secondary	182	4	02.2	0.71	[0.13-3.81]	0.655
Superior	21	2	09.5	3.09	[0.46-20.6]	0.249
Monthly income						0.224
< 52 000 FCFA	158	2	01.3	1	-	
52 000-100 000 FCFA	134	6	04.5	03.5	[0.73-17.2]	0.148
≥ 100 000 FCFA	8	0	00.0	0	-	1.000

4. Discussion

The objective of this study was to study the knowledge, attitudes and practices of women in Malanville regarding cervical cancer (CC) prevention. After data collection and analysis:

1) 5% women's level of knowledge about CC screening was average.
2) 5,3% women's attitudes towards CC screening were fair.
3) 2.7% women's practice of CC screening was acceptable.
4) Factors associated with Malanville women's adequate practices in CC prevention were age, marital status, and family history of CC.

To achieve the objectives of the study, we opted for a descriptive and analytical study with prospective data collection. The choice of this type of study is justified by the fact that it is best suited to the context of this research. Random cluster sampling was used for the selection of subjects. The main bias of this work relates to the fact that part of the data collected was obtained in a declarative manner. In spite of this, we believe that we have arrived at results that are not lacking in interest and the validity of the results of our study is not compromised.

Women in the 15-25 age groups were the most represented, at 46.3%. In the study by Chali et al [7], it was rather the age group of 25-34 years (46.8%) that was the most represented.

The mean age of the females was 28.13 years ±11.02. This result is similar to that of Chali et al [7], where the average age of the respondents was 29.08 ±7.352.

In our study, almost all of the respondents (90%) had a poor level of knowledge about CC prevention. This result is similar to that of John-Akinola et al [8] in Nigeria and Ghosh et al [9] in India, who respectively had 77% and 77.2% poor knowledge regarding CC prevention. In contrast to our study, Daka et al [10] in Zambia reported 77.6% of women who had a good knowledge about CC. This difference could be explained by the implementation and implementation of the See and Treat programme for CC screening throughout the country, the training of health workers. Women's lack of knowledge about CC and its prevention is certainly due to the lack of organized screening programs, socio-cultural barriers in which women feel shy to discuss diseases affecting the sexual organs.

CC was known by 66% of women. This result is similar to that of Alnafisah et al [11] in Saudi Arabia, where 70% of women had knowledge of CC. On the other hand, in their study Chali et al [7] in Ethiopia only 53.4% of participants had heard of CC, this difference could be due to the gap in the health education system regarding CC. Only 20% of the participants in our study know that an STI is the cause of CC. This result is similar to the study by Zibako et al [12] in Zimbabwe who found 23.7% of the women surveyed indicating that the cause of CC was an STI.

A proportion of 21.33% of the women in our series were aware of at least one telltale sign of CC. This result is lower than that of Getaneh et al [13] in Ethiopia (52.4%). This is because their study population consisted only of female health science students. However, if women do not know the symptoms of CC, they will not seek treatment for these symptoms and therefore CC will not be detected at an early stage.

Half of the women in our study (50%) had the media as their main source of information. This source of information is the same as that found by Amu et al [14] in Nigeria and Bouslah et al [15] in Tunisia.

A proportion of 58.3% of the respondents had a level of negative attitudes related to cervical prevention. This result is similar to that of Omkarappa et al [16] in India where 63% of respondents had an unfavourable attitude towards CC prevention. However, Thapa et al [17] in Nepal and Geremew et al [18] in Ethiopia had 72% and 58.1% favourable levels of attitudes, respectively. This difference could be explained by the difference in the socio-cultural characteristics of the study populations. In our study, more than three-quarters of participants, 80.67% were willing to join screening programs. Their positive attitude towards screening is similar to that observed in the study by Sampson et al [19] in Ghana, where almost all women (98.8%) showed interest in CC screening.

In our study, the level of CC prevention practice was not good for most of the women surveyed (97.3%): A small proportion of them (3.3%) reported having been screened for CC. This result is lower than that of Diallo et al [20] in Côte d'Ivoire where 10.6% of respondents had benefited from this screening. On the other hand, Omoyeni et al [21] in South Africa report in their study that 66.8% of women had already been screened for CC. This result is higher than that of the other authors. This discrepancy could be explained by the availability of free screening in the majority of health facilities and awareness programmes on CC screening in

South Africa. The lack of a screening programme, the lack of information for women about screening and the lack of access to health centres are said to be at the root of poor practices among women in relation to CC prevention.

In our survey, age, marital status, and family history of CC were factors associated with women's good practices in CC prevention. Tekle et al [22] in Ethiopia, also reported a family history of CC as factors associated with good preventive practices. But they had also noted monthly income as Amado et al [23] who had also reported information from health professionals on a history of sexually transmitted infections as factors associated with good CC prevention practices. These variations in the associated factors among the different authors in the literature could be attributed to the difference in the sociodemographic characteristics of these study populations.

5. Conclusion

The levels of knowledge, attitude and practice of cervical cancer (CC) prevention are not good in Malanville. There are certain factors associated with proper practices. Awareness-raising actions on CC prevention, taking into account these factors, must be implemented to avoid it.

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Conflicts of Interest

The authors declare no conflicts of interest.

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