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Research Article

Assessment of the Knowledge and Utilization of Cervical Cancer Screening Services Amongst Women in Maseru District Lesotho

Lehlohonolo Paul Potjo*, Mahlomola Kutoane, Isabel Nyangu

Department of Nursing, National University of Lesotho, Maseru, Lesotho

Abstract

Cancer of the cervix can be prevented and cured, can be circumvented using vaccines and screening and can be cured when recognised earlier before progress. It is imperceptibly becoming a rare disease in many developed countries; while countries in sub-Saharan Africa remain negatively impacted. Universally, cervical cancer is the third most generic cancer ranking after breast and colorectal cancer and the fourth most pervasive cause of cancer death ranking below breast, lung, and colorectal cancer. Cervical cancer incidence in Africa is high though it varies considerably by region. The predominant incidence is found in Lesotho and eSwatini, two countries that have neither controlled screening orderings nor any anticancer treatment facilities. In Lesotho by 2020 there were 451(44.9%) cases of cervical cancer from a total of 1206 of all other cancers from women of all ages and this percentage is very high. There are various strategies to regulate and prevent cervical cancer which include conventional cytology (smear), liquid-based cytology, human papillomavirus (HPV) screening, and vaccination against HPV. Cytology-based and HPV screening procedures are not easy to be implemented in developing nations like Lesotho. Therefore there are elevated interests in the use of visual screening by use of acetic acid (VIA) test to identify cervical cancer in Lesotho as a developing country.

Keywords

Knowledge, Cervix, Cancer of the Cervix, Cervical Testing and Circumvention, HPV

1. Introduction

Cancer screening is the secondary and sometimes tertiary level of circumvention and aims to detect, as early as possible, and in the absence of symptoms, lesions (skin, polyps) that could or be a cancerous lesion or could materialize towards cancer [6]. Screening is the possible identification of the disease or defects by the use of specific procedures (tests, examinations) [5].

But screening programmes have to take into account the potential psychological and economic consequences of false positive or false negative results and avoid over-diagnosis and treatment [7].

1.1. Cervical Cancer Burden Globally

Gultekin *et al.*, [9] assert that; Cervical cancer is the fourth most common cancer among women globally, with an estimated 570 000 new cases and 311 000 deaths worldwide in

*Corresponding author: lehlohonolopotjo@gmail.com (Lehlohonolo Paul Potjo)

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2018. The highest regional incidence and mortality rates are seen in Africa, where the rates are 7–10 times higher than in the western world [15]. Recently, nearly 90% of deaths occur in low and middle income countries [2]. Cervical cancer is a disease which reflects inequities among different populations depending on the availability of a national vaccination program and population-based cervical cancer screening, and access to quality treatment [9].

1.2. Burden of Cervical Cancer in Africa

Despite rising incidence and mortality rates in Africa, cancer has been given low priority in the research field and in healthcare services [3]. Indeed, 57% of all new cancer cases around the world occur in low income countries exacerbated by lack of awareness, lack of preventive strategies, and increased life expectancies. Despite recent efforts devoted to cancer epidemiology, statistics on cancer rates in Africa are often dispersed across different registries [3].

1.3. The Burden of Cervical Cancer in Southern Africa

Whilst cervical cancer is the sixth most common cancer in developed countries, in sub-Saharan countries it accounts for approximately 15% of all cancers [12]. The true estimate of the prevalence of cervical cancer in Southern Africa is difficult to establish as cancer registries are non-existent and or, unaffordable. About 83% of all cases of cervical cancer occur in developing countries such as in Southern Africa [1]. Cervical cancer usually affects women in the fifth and sixth decades of life, but has been found to be more prevalent in the fourth decade of life for human immunodeficiency-virus (HIV)-infected women. This is the time of their lives when they are most productive and when they play a pivotal role in their families and society [12].

2. Methodology

Population

In this study, the population entails all women who acquire health services at facilities around Maseru district. Women around the Maseru district can play a vital role in the screening and influence cervical cancer screening adherence and health activities among most women by campaigns they are involved on during cancer awareness in the country. This population is chosen due to the influence they have to the general population.

Target Population

In this regard, the target population comprises of women above 18 years of age who acquire health services at these selected health facilities which are in Maseru.

Sampling

Convenient sampling was used for all study sites [11]. Most of these facilities are located within 10 kilometres from Maseru town with few other health centres under their supervision which are outskirts [10]. Financing of these institutions is directly and indirectly done by the government of Lesotho [8]. These facilities are mostly used by high populations in Maseru, therefore generalization can be made. There 732,612 women in Lesotho of ages 15 years and older who have high chances of developing cervical cancer [4]. Therefore based on statistics, the population in Maseru city is 8.17% of the total population. Meaning women in Maseru at risk of developing cervical cancer is an estimate of 59 854. The sample size ranging from 120 to 170 was convenient on this study, and this was reached by approaching these women as they access services to the facilities and out of the facilities for those known to be using these health facilities [4].

Sample size calculation:

With Confidence level of 80% = Z-score of 1.28, standard deviation of 0.5 and confidence interval (margin error) 0f ±5%.

$$\text{Sample size} = \frac{(Z\text{-}score)^2 \times Std\ \ Dev(1-Std\ \ Dev)}{(Confidence\ \ interval)^2}$$

$$= \frac{(1.28)^2 \times 0.5(1-0.5)}{(5\%)^2} = 164$$

Research Instruments

For this study in particular, questionnaires were utilized as instruments for data collection. The researcher adopted a structured method of data collection; there was a use of self-administering questionnaire as a data collection tool using research questions and objectives for guidance [14].

Data collection Process

The process was utilized hence thusly:

a) A talk and explaining the purpose of the study, including the criteria for electing participants.
b) Those interested in participating were supplied with questionnaires for data collection.
c) Participants were emboldened to ask questions to ensure translucency of the study.
d) Participants were asked whether they can complete the questionnaire on their own or if they need assistance.
e) Informed consent form was reanalysed with each participant and signed.

Data Analysis

Data was analysed using Statistical Package for Social Sciences (SPSS) version 28, where data collected was transformed into numerical data. The participants' responses or data was inserted into SPSS sheet and analysed based on research objectives.

Results Dissemination

The author had an ethical responsibility to make the study findings accessible to stakeholders, participants, facilities staff, the hospitals management and the community at large. The researcher used feed-back systems in community meetings, formal meetings with the hospitals/institutions board and facilities. A copy of final report was made available to all institutions involved and will be accessible online post pub-

lication.

Ethical Considerations

Ethical Clearance was obtained from National University of Lesotho Institution Research Committee and Ministry of Health Research and Ethic committee.

3. Results

Findings

A total of 125 questionnaires were distributed to women around Maseru and 111 were completed leading to 88.8% return rate.

Socio-demographic Characteristics

Table 1. *Shows age, marital status and education level of the participants.*

Characteristic	Number (n)	Percent
Age (years)		
18−24	11	9.9
25−30	21	19
31−34	32	29
35−39	14	13
40−44	14	13
45−50	14	13
51−54	5	5
Marriage		
With spouses	72	64
Stay-together	7	6
Single	32	29
Widow/widower	1	0.9
Level of Education		
Primary	3	2.7%
High School	57	51%
Certificate	9	8%
Diploma	21	19%
First degree	21	19%
Masters and above	0	0%

3.1. Age

Their age ranged at 18–53. Pinnacle age difference of the participants was 31–34 justifying for 29% (n=32) of the participants. About 58% (n=64) of the participants were less than 35 years of age, while 42% (n=47) were aged 35 years old or more. Most participants were within age range of 18–39.

Table 2 below shows age categories of the participants in relation to whether Pap smear test was done (yes) or not (no) and percentage.

Table 2. *Shows Age versus Pap smear test comparison.*

Age in Years	Pap Smear Test	
	Yes, n (%)	No, n (%)
18−23	2 (9%)	5 (36%)
24−31	8 (33%)	8 (33%)
32−33	5 (13%)	6 (22%)
34−38	6 (35%)	2 (7%)
39−45	5 (28%)	2 (6%)
45−50	3 (21%)	3 (21%)
51−54	1(5%)	1 (5%)

3.2. Level of Education

Education accomplishment within the participants was middle as most achieved at least high school education; 3% (n=3) had primary level, 51% (n=57) were High School certificate holders, 8% (n=9) Certificate holders, 19% (n=21) Diploma holders, 19% (n=21) First degree holders and none of the participants had Masters level and above qualifications. The level of education the participants had can allow them dispense information effectively to their colleagues and friends leading to an increase on knowledge about cervical cancer around the country.

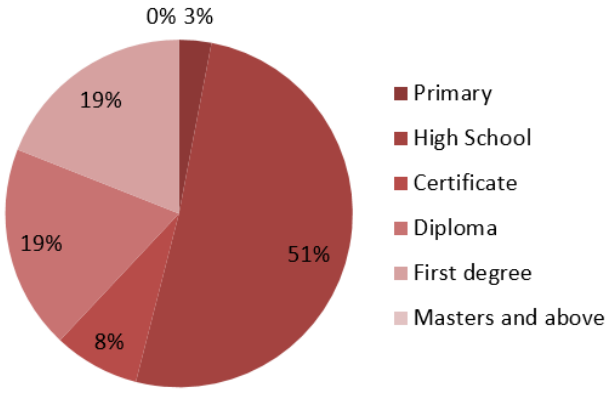

Figure 1. *Level of education.*

3.3. Knowledge in Relation to Cervical Cancer Screening

Above half of the participants, 78.4% (n=87) had good

knowledge, 10.8% (n=12) very good knowledge while only 10.8% (n=12) had deprived knowledge in relation to cancer screening. These data indicated increased observance of screening amongst women around Maseru.

Table 3. Knowledge related to screening.

Knowledge about Cervical Cancer Screening	Frequency	Percentage
Very poor	2	1.8
Poor	10	9.01
Good	87	78.4
Very good	12	10.8
Total	111	100.00

Observance of Cervical Cancer Prevention

Further, the study revealed an awareness of prevention among the study population with 78% (n=89) having good knowledge and 16% (n=18) very good knowledge. Only 6.3% (n=7) had poor knowledge and 0.9% (n=1) very poor knowledge.

Table 4. Knowledge related to cervical cancer circumvention.

Knowledge related to cervical cancer circumvention	Occurrence	%
Very poor	1	0.9
Poor	7	6.3
Good	87	78.4
Extremely good	16	14.4
Overall	111	100

3.4. Cervical Cancer Screening Intervals

Cancer of the cervix is predominantly avoidable by efficient regular tests and smear as the effectual test [16]. Participants were demanded to give the return frequentness to smear test. Feedback are shown in Figure 2 where most of the participants, 73 (66%), indicated that Pap smear should be done yearly, 29 (26%) after every two years, 3 (3%) after every five years while there were no participants indicating that it should only be done if there are symptoms.

Most of the women did not have a clue that smear test must be performed every 2 years for people living with HIV and every five years for any other.

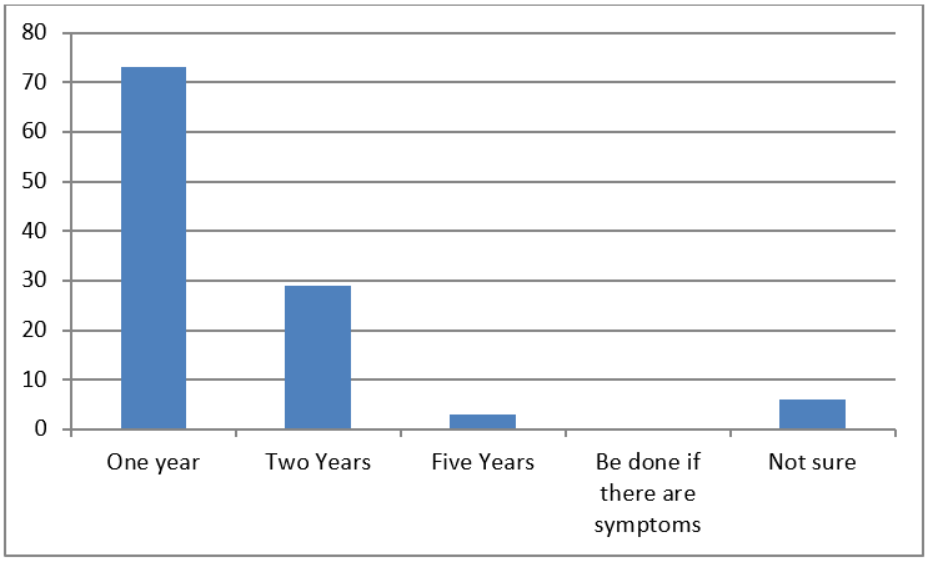

Figure 2. Cervical cancer screening intervals.

3.5. Socio-demographic Factors, Knowledge and Use of Cervical Cancer Screening Relations

The initial study objective was determining women's knowledge regarding screening services while objective four was to describe the utilization of available screening facilities. Chi-Square correlation analysis was used between socio-demographic factors, level of knowledge and use of screening services as illustrated by tables below.

Table 5. Age against smear test.

Age	Smear Test					
	Yes (n)	No (n)	Total	Chi- Squire (x^2)	df	P value
20−34	28 E=35.081	38 E=30.919	66	12.684	2	0.0018
35−44	21 E=13.288	4 E=11.712	25			
45−54	10 E=10.631	10 E=9.370	20			
Total	59	52	111			

E= Expected frequency df= degree of freedom p=0.0018

In Table 5, 56% (n=38) of 66 participants who are at child bearing age (20-34years) have not gone under cervical cancer screening. The p value < 0.05 and it was concluded that there was a statistically significance relationship between the age of the participants and whether the women had cervical cancer screening done before, [$\varkappa^2$ (2, N= 111) = 12.684, p=0.0018] at 95% confidence level.

Table 6. Shows marital status versus knowledge on Cervical cancer Screening.

Marriage	Knowledge on Prevention					
	Adequate knowledge	Inadequate Knowledge	Total	Chi-squire(x^2)	Df	P value
Married	66 E=65.883	5 E=5.117	71	0.850	3	0.837
Stay-Together	7 E=6.495	0 E=0.505	7			
Single	29 E=29.694	3 E=2.306	32			
Widow	1 E=0.928	0 E=0.072	1			
Total	103	8	111			

In Table 6, with the p value >0.05 the results shows no statistical meaningful relationship between marriage and the knowledge categories of the participants, $\varkappa^2$ (3, N= 111) = 0.850, p=0.837.

Of the 103 who had adequate knowledge, 64% (n=66) were married and the expected frequency was 65.883 if the knowledge was independent of whether the participant is married, single, cohabiting or widowed.

Table 7. Marriage versus Smear test.

Marital status	Pap Smear Test					
	Yes, n	No, n	Total	Chi-Squire(x^2)	Df	P value
Married	53 E=37.739	18 E=33.261	71	39.541	3	0.00001
Co-habiting	1 E=3.721	6 E=3.279	7			
Single	4 E=17.009	28 E=14.991	32			
Widow	1 E=0.532	0 E=0.468	1			

Marital status	Pap Smear Test					
	Yes, n	No, n	Total	Chi-Squire(x^2)	Df	P value
Total	59	52	111			

In Table 7, 90% (n=53) of the 53% (n=59) of partakers who screened before were in marriages. The researcher studied the correlation between the marital status of partakers and cervical screening usage, $\varkappa^2$ (3, N=111) = 39.541, p=0.00001. The p value<0.05 indicates a statistically significant association between the marital status of the participants and their use of cervical cancer screening. Participants who were married are more likely to be screened than those who were single or cohabiting.

4. Discussion

The study revealed that majority of the participants was of age range 25-34 years with percentage coverage of 48% in total. The findings indicated that women at child bearing age trended to acquire health services more frequently than older women.

The findings also revealed that majority, 71 (64%) of 111 of females in search of healthcare services in Maseru health facilities were married. This finding is the opposite of the study conducted by [13] where majority were not married.

Overall, the study revealed that females seeking healthcare services in Maseru Health facilities were mostly married and young in age. The study disclosed that significantly decreased numbers of women attending health services in Maseru were single and older.

4.1. Knowledge About Cervical Cancer Screening

Most of participants had expertise on screening. The results indicated an increased understanding of screening and high awareness but screening rate is low.

4.2. Factors that Increase the Risk of Cervical Cancer

High numbers of participants comprehend the cervical cancer risks inclusive of HPV. These women knowledge on the risk factors that predispose one to cervical cancer and the symptoms of cervical cancer is very high, as indicated by the statistics. Therefore, awareness level on risk factors and smear test was also high.

In support of these findings, the study made by Keiti (2016) in Kenya concluded that the participants' knowledge on the symptoms of cervical and the risk factors that predispose one to cervical cancer is high.

For this study, majority of the participants had not screened for cervical cancer yet there is increased knowledge on risk factors, and those who had done it frequency are not periodic.

5. Conclusions

Findings disclosed that knowledge on screening, risk factors and circumvention within the participants is increased. Despite high awareness of cervical cancer and the importance of cervical cancer screening, the participation in screening programs was low. This shows a disseverment in association with the participants' knowledge and the screening tendencies. The main factors to decreased screening were anxiety about the exam and not feeling at risk. Another reason might be shortage of screening personnel or equipment.

Abbreviations

HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
IRB	Institution Review Board
MOH	Ministry of Health
R&EC	Research and Ethics Committee
STI	Sexual Transmitted Infection
VIA	Visual Inspection with Acetic Acid
WHO	World Health Organization

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Conflicts of Interest

The authors declare no conflicts of interest.

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