

Knowledge and Acceptance of Papanicolaou Smear Screening among Women in a Nigerian Health Institution

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ABSTRACT

Pap smear screening remains a diagnostic and preventable measure for cervical cancer. This study investigated Knowledge and Acceptance of Papanicolaou Smear Screening among Women in a Nigerian Public Hospital. A descriptive-cross sectional design was used for the study. The sample of 200 was made from 376 using Krejcie & Morgan (1970) and 10% non response rate. Simple random sampling was used to select the participants. Instrument used for data collection was Knowledge and Acceptance of Pap Smear Screening (KAPSS) questionnaire. Pilot test was carried out to assess its reliability. Data analysis was done using SPSS version 21. Majority of the respondents (98%) was married and 71% of the respondents had tertiary education. Majority 72% have heard about Pap smear test. Majority of the respondents 95.5% stated that knowledge about Pap smear could be obtained through Health workers. Majority of the respondents 86% have submitted themselves for Pap smear test before, all the respondents who submitted themselves for Pap smear test never did a follow up test. Majority 87% stated that Public enlightenment on Pap smear is not a factor to influence the use of Pap smear, while 75% of the respondents stated that Pap smear test to be free and be made mandatory for all women will influence the use of Pap smear test. The study suggests that Pap smear fees should be made free or be subsidized.

Keywords: Knowledge, papanicolaou smear, cervical cancer.

INTRODUCTION

The cases of cancer related to women reproductive organs are being reported on the notice of a change in body system which could come in diverse ways. According to Bahrami, Mohamadirizi, Mohamadirizi & Hosseini [1], body image in cancer patients comes with an alteration in the patients' anatomical and physiological states which take a toll on the individual sustenance. The most prevalent cancer-related death among women is cancer of the cervix which poses a great risk for health and it is ranked number four among the global cancer death [2]. The report to the hospitals or health professionals are based on the knowledge of the individuals involved. The knowledge and awareness of impending danger of cervical cancer make an individual to develop a positive health seeking behaviour towards the prevention of the condition [3]. There are different means of seeking for solutions when cervical cancer is noticed, some could result into consulting the orthodox medical practitioners while others engage the services of the traditionalists.

In the hospital setting, there are different investigations that could be used to detect cases of cancer growth and one of those tests is Papanicolaou (Pap) smear test. It is used in diagnostic and screening of cervical cancer. Its use has been of tremendous help in screening women for cancers of the cervix. Awareness of Pap smear test is a predictor of the individual seeking the acceptance of the test to be administered on their cervical tissue, while the potential danger envisaged is considered an integral part of cancer education [4], hence a need for mass communication in that regards and health professionals could also do a lot in making sure that people are educated on the need for Pap smear test. The presentation of information within the reach of women is important as it brings about

willingness to undertake the procedure. In an earlier study [5], it was revealed that despite the fact that no charges are attached to the screening service of cervical cancer, there is still a low turnout among women in response to the screening.

The influence of some socio-demographic variables are reported to be associated with cervical screening test as individuals' opinion is related to the potential threat preempted from the anxiety of cervical related death [6]. There are other possible factors linked to cervical cancer screening among women which include financial standing, husband agreement with the screening, while other obstacles to the screening in some could be service-related issues like lack of access and nature of the service [6].

Cervical cancer among women could be avoided and the focal effort to its avoidance is the early recognition of the potential cervical neoplasm cell at its earlier stage [5]. The detection would go a long way in the management to forestall any impending danger associated with cervical cancer among which could be death. In the western world, where there is rigorous and organised Pap smear screening test to detect cervical cancer, the rate of death due to cervical cancer has been stemmed down by 70-80% [7].

The record from the sub-Saharan Africa showed that 34.8 incidence of cervical tumor are detected per 100,000 women on yearly basis as 22.5 per 100,000 victims lose their lives on this condition [8]. Utilizing Pap smear screening resulted grossly in the reduction of women death over cervical cancer in the past 50 years [9]. Nigeria is ranked number Five (5) in the contribution of cervical cancer associated death aside other countries like India, China, Brazil and Bangladesh and statistics from a record obtained from Ibadan Population Based Cancer Registry (IBCR) between 2009 to 2010 revealed death rate of 36 per 100,000 which is greater than it is obtainable in the western world [8].

The understanding of women regarding cervical screening is important as it is concluded that if there is no fear of determining self to be predisposed to cervical cancer there would not be a positive health seeking behavior geared at engaging in cervical screening exercises [5]. Cases of cervical cancers are linked to women who are residing in an area with without some basic social amenities and this is due to their high level of poverty and ignorance which intricately affect their access to health information and facilities [8].

OBJECTIVES OF THE STUDY

1. To access the knowledge of Pap smear among the women
2. To determine the women's acceptance of Pap smear test
3. To identify the factor influencing the use of Pap smear among the women

METHOD AND MATERIALS

This is a descriptive-cross sectional design conducted at the antenatal clinic of Ekiti State University Teaching Hospital, (EKSUTH), Ado Ekiti, Nigeria. The population used for this study was 376 women, in their reproductive age (18-45years), who were attendees of antenatal clinic, post natal clinic and family planning clinic. Sample size for the study was computed to be 200, using Krejcie & Morgan[10] and 10% non response rate. Simple random sampling was used to participants (from those booking and those on antenatal clinic days). Instrument used for data collection was a Self-structured questionnaire tagged Knowledge and Acceptance of Pap Smear Screening (KAPSS) questionnaire. Pilot test was carried out to assess its reliability. The instruments were administered on consenting women every Tuesdays, Wednesdays and Fridays and data collection span for period of four weeks. Data analysis was done using SPSS version 21 and presentation was done with Frequency tables and Simple percentages. Ethical clearance was obtained from the Ethics and Research Committee of Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria.

RESULTS

The socio-demographic characteristics of the respondents show that more than half of the respondents (58%) were between 26-35 years. Majority of the respondents (98%) were married, majority (88%)

were Yoruba, 65% majority of the respondents were civil servants while 71% of the respondents had tertiary education (**Table 1**).

93% majority of the respondents have heard about cancer of the cervix and majority 72% have heard about Pap smear test. Majority of the respondents 95.5% stated that knowledge about Pap smear could be obtained through Health workers. Majority of the respondents (62.5%) stated that Pap smear test could be carried out at the Teaching hospital. Majority of the respondents (66%) do not know the interval of Pap smear test (**Table 2**).

Majority of the respondents 86% have submitted themselves for Pap smear test before, while majority 85% of those who submitted themselves for Pap smear test had it as part of free screening. Majority (87%) of the respondents who do not submit themselves to Pap smear test claimed the reason is that they are not having the symptoms of cancer of cervix. 100% majority of those who submitted themselves for Pap smear test do not do a follow up test after undergone the test and 86% majority stated that it is not necessary to do a follow up test(**Table 3**).

Majority of the respondents 87% rated Public enlightenment on Pap smear poorly as a factor to influence the use of Pap smear, while 75% of the respondents stated that Pap smear test to be free and be made mandatory for all women will influence the use of Pap smear test (**Table 4**).

Table 1: Socio-demographic data of the respondents

	Variable	Frequency(N = 200)	Percentage (%)
Age	18-25	48	24
	26-35	116	58
	36-45	36	18
Marital status	Married	196	98
	Single	4	2
Ethnicity	Yoruba	176	88
	Igbo	16	8
	Hausa	4	2
	Efik	2	1
	Urhobo	2	1
Occupation	Civil servants	130	65
	Trading	46	23
	Artisan	24	12
Level of Education	Primary	14	7
	Secondary	44	22
	Diploma	34	17
	HND/Degree	86	43
	Post graduate	22	11

Table 2: Knowledge of Pap smear among the women

Items	Variables	Frequency(N= 200)	Percentage (%)
Have you heard about cancer of the cervix?	Yes	186	93
	No	14	7
Have you heard about pap smear test?	Yes	56	28
	No	144	72
Knowledge of Pap smear are obtained through	Friends and Relations	2	1
	Health Workers	191	95.5
	Television/ Radio	2	1

	Internet, Newspapers, and Fliers	5	2.5
Where pap smear test can be carried out	In the Health Centres	20	10
	In the General Hospitals	10	5
	In the Teaching Hospitals	125	62.5
	I don't know	45	22.5
Interval of pap smear test	Yearly	20	10
	Once in every three years	10	5
	Every 10 years	38	19
	I don't know	132	66

Table 3: Acceptance of pap smear test

Items	Variables	Frequency	Percentage (%)
Have you ever submitted yourself for pap smear test in any health facility	Yes	28	14
	No	172	86
If yes, Why?	Personal interest	1	4
	Ordered by my doctor	3	11
	As part of free screening	24	85
If no why?	Not having the symptoms of cancer of cervix	150	87
	Fear of result	20	12
	Too expensive	2	1
Is pap smear test painful?	Yes	24	12
	No	4	2
	I don't know	172	86
Have you done a follow up test after you undergone pap smear test?	Yes	-	-
	No	28	100
If no why	It is not necessary	24	86
	Forgetting when the next pap text is due	2	7
	Not yet due for a repeat	2	7

Table 4. Factors influencing the use of Pap smear test

Items	Variable	Frequency(N=200)	Percentage (%)
Public enlightenment on pap smear	Yes	26	13
	No	174	87
Pap smear test to be free and mandatory for all women	Yes	150	75
	No	40	20
	I don't know	10	5

DISCUSSION

More than half of the respondents (58%) were between 26-35 years. Majority of the respondents (98%) were married. In a study by Al Khudairi, Abu-Zaid, Alomar, & Salem[7], 88% of the respondents were between ages 20-40 while 94.1% were married. In another study by Olubodun, Odukoya & Balogun[8], the mean age of the participants was 33.5 ± 9.0 years and 73.1% were married. 71% majority of the respondents had tertiary education. This is in line with the study by Nwabichie, Manaf & Ismail et al[11] where 85% of the respondents had tertiary education.

KNOWLEDGE OF PAP SMEAR AMONG THE WOMEN

93% majority of the respondents have heard about cancer of the cervix and majority 72% have heard about Pap smear test. In a study by Assoumou, Mabika, Mbiguino, Mouallif, Khattabi & Ennaji et al[12], 91.6% of the respondents have heard about cervical cancer while 27.9% were aware of screening test for cervical cancer. This is not in line with the study by Olubodun, Odukoya & Balogun[8] which revealed a low knowledge of cervical cancer and Pap smear test as the statistics from the study showed that 12.8% of the respondents heard about cervical cancer and 7.9% had the knowledge of cervical cancer screening. In a similar study in India by Naik et al [13], the results revealed 37.7% and 3.6% for knowledge about cervical cancer and pap smear test respectively. In a study on Knowledge, attitudes and Practices regarding cervical cancer and screening among women visiting Primary Health Care centres in Bahrain by Jassim, Obeid & Al Nasheet[9], 64% of the respondents had no knowledge of Pap smear test. Majority of the respondents 95.5% stated that knowledge about Pap smear could be obtained through Health workers. This is not similar with the study by Assoumou, Mabika, Mbiguino, Mouallif, Khattabi & Ennaji et. al., [12] where 27.1% respondents had the knowledge through Health workers. Majority of the respondents (62.5%) stated that Pap smear test could be carried out at the Teaching hospital. This is not in line with the study by Jassim, Obeid & Al Nasheet[9] where 16.4% of the respondents were willing to have Pap screening done in a Primary Health Care Centre. In another study, majority of the respondents (66%) do not know the interval of Pap smear test. In a study by Al Khudairi, Abu-Zaid, Alomar, & Salem[7], 92.9% of the participants had no knowledge on the space of time for the performance of Pap smear test. This is in contrast to the study by Grigore, Popovici & Pristavu[2] where 83.4% participants stated that Pap smear test should be carried out on yearly basis.

ACCEPTANCE OF PAP SMEAR TEST

Majority of the respondents 86% have submitted themselves for Pap smear test before. In a study by Wright et al[14], only 5% of the respondents have had Pap smear screening. In another study conducted at the South eastern part of Nigeria, it was revealed that 1.8% of participant undergone Pap smear test[8]. Majority 85% of those who submitted themselves for Pap smear test had it as part of free screening. In a study by Assoumou, Mabika, Mbiguino, Mouallif, Khattabi & Ennaji et al[12], it showed that 68.3% of the respondents stated that 'the demand of their doctor' is the focal reason for having Pap smear done. Majority (87%) of the respondents who do not submit themselves to Pap smear test claimed the reason is that they are not having the symptoms of cancer of cervix. This is not in line with the study by Olubodun, Odukoya & Balogun[8] which showed that 15.9% of the respondents associated lack of acceptance of Pap smear to lack of features of cervical cancer. In a study by Assoumou, Mabika, Mbiguino, Mouallif, Khattabi & Ennaji et al[12] half of the respondents (50%) made reference to lack of concern as the reason for not doing the test. All the participants who submitted themselves for Pap smear test do not do a follow up test after undergone the test and 86% majority stated that it is not necessary to do a follow up test. This is not in consonant with a study by Jassim, Obeid & Al Nasheet[9] where 40.7% of the respondents had Pap smear test once and 44.3% opined that the test should be carried out every 3 years. In another study by Grigore, Popovici & Pristavu[2], 59.9% of the study participants only had Pap smear screening once.

FACTOR INFLUENCING THE USE OF PAP SMEAR AMONG THE WOMEN

Majority of the respondents 87% stated that Public enlightenment on Pap smear would not influence the use of Pap smear. A study on knowledge of cervical cancer and uptake of Pap smear testing and the factors influencing it by Okunowo, Daramola & Soibi-Harry[15] showed that 53.8% associated

lack of enlightenment to the use of Pap smear as the reason for not undertaking the test. In another study on Cervical cancer screening among African Women in Klang Valley in Malaysia by Nwabichie, Manaf & Ismail[11], 72.5% had never done Pap smear before and 86.3% of the respondents were aware of the facility where it is being carried out. 75% of the respondents stated that Pap smear test to be free and be made mandatory for all women will influence the use of Pap smear test. The study is similar to a study on Awareness and Utilization of Papanicolaou smear among health care workers in Maiduguri by Bakari, Takai & Bubar[16] which showed that 70.6% of the respondents had the intention of carrying out Pap smear test if it were to be free of charge. In a study by Ashtarian, Mirzabeigi., Mahmoodi, & Khezeli[17], the outcome of the investigation revealed that accessibility of the women to do Pap smear do not count as a factor to influence undertaking the Pap smear test.

CONCLUSION

The study concluded that majority of the respondents heard about cancer of the cervix and Pap smear test. Majority of the respondents submitted themselves to the test and most of them had it as part of free screening. Most of the respondents do not think Public enlightenment would be a factor influencing the use of Pap smear. However, most respondents stated that Pap smear should be made mandatory for all women to foster an acceptance of the screening. Therefore the role of government and other non government organization is crucial in making Pap smear cost to be free or at most be subsidized to aid the use among women. The future study could explore the cost analysis on Pap smear and the willingness to pay among the women.

REFERENCES

1. Bahrami, M., Mohamadirizi, M., Mohamadirizi, S & Hosseini, SA. Evaluation of body image in cancer patients and its association with clinical variables. *Journal of Education and Health Promotion*. 2017; 6, 81. doi:10.4103/jehp.jehp_4_15
2. Grigore M, Popovici R, Pristavu A, Grigore AM, Matei M & Gafitanu D). Perception and use of Pap smear screening among rural and urban women in Romania, *European Journal of Public Health*. 2017; Volume 27, Issue 6, Pages 1084–1088, <https://doi.org/10.1093/eurpub/ckx112>
3. Vidrine JJ, Stewart DW, Stuyck SC, Ward JA, Brown AK, Smith C & Wetter DW. Lifestyle and Cancer Prevention in Women: Knowledge, Perceptions, and Compliance with Recommended Guidelines, *J Womens Health (Larchmt)*. 2013; 22(6): 487–493. doi: 10.1089/jwh.2012.4015
4. Richards, R., McNoe, B., Iosua, E., Reeder, A. I., Egan, R., Marsh, L., Petersen, A. C. . Knowledge of Evidence-Based Cancer Risk Factors Remains Low Among New Zealand Adults: Findings from Two Cross-Sectional Studies, 2001 and 2015. *Asian Pacific journal of cancer prevention*. 2017; 18(11), 2931–2936. doi:10.22034/APJCP.2017.18.11.2931
5. Tapera, R., Manyala, E., Erick, P., Maswabi, T. M., Tumoyagae, T., Letsholo, B., & Mbongwe, B. (2017). Knowledge and Attitudes towards Cervical Cancer Screening amongst University of Botswana Female Students. *Asian Pacific journal of cancer prevention*: 2017; 18(9), 2445–2450. doi:10.22034/APJCP.2017.18.9.2445
6. Kabalika, C., Mulenga, D., Mazaba, M. L., & Siziya, S. (2018). Acceptance of Cervical Cancer Screening and its Correlates Among Women of a Peri-Urban High-Density Residential Area in Ndola, Zambia. *International journal of MCH and AIDS*. 2018; 7(1), 17–27. doi:10.21106/ijma.223
7. Al Khudairi, H., Abu-Zaid, A., Alomar, O., & Salem, H. Public Awareness and Knowledge of Pap smear as a Screening Test for Cervical Cancer among Saudi Population in Riyadh City. *Cureus*, 2017; 9(1), e984. doi:10.7759/cureus.984
8. Olubodun T, Odukoya OO & Balogun MR. Knowledge, Attitude and Practice of Cervical Cancer Prevention, among women residing in an urban slum in Lagos, South West, Nigeria. *The Pan African Medical. Journal*. 2019;32:130. doi:10.11604/pamj.2019.32.130.14432
9. Jassim G, Obeid A & Al Nasheet HA. Knowledge, Attitudes and Practices regarding cervical

cancer and screening among women visiting Primary Health Care Centres in Bahrain, BMC Public Health. 2018; Volume 18, Article number: 128.

10. Krejcie, R.V., & Morgan, D.W.,. Determining Sample Size for Research Activities. 1970; Educational and Psychological Measurement.
11. Nwabichie CC, Manaf RA & Ismail SB. Factors Affecting Uptake of Cervical Cancer Screening Among African Women in Klang Valley, Malaysia. Asian Pac J Cancer Prev. 2018; 19(3): 825–831.doi: [10.22034/APJCP.2018.19.3.825](https://doi.org/10.22034/APJCP.2018.19.3.825)
12. Assoumou SZ, Mabika BM, Mbiguino AN, Mouallif M, Khattabi A& Ennaji MM. Awareness and knowledge regarding of cervical cancer, Pap smear screening and human papillomavirus infection in Gabonese women. BMC Women's Health 2015; Volume 15, Article number: 37
13. Naik DD, Balaiah D, Saritha N, Mali BN. Awareness of sexually transmitted infections and cervical cancer among women in urban slums of Mumbai, Maharashtra, India. Int J Community Med Public Health. 2017; 4(2):400-404.
14. Wright KO, Faseru B, Kuyinu YA, Faduyile FA. Awareness and uptake of the Pap smear among market women in Lagos, Nigeria. J Public Health Afr. 2011;2(1):e14. doi:10.4081/jphia.2011.e14
15. Okunowo AA, Daramola ES, Soibi-Harry AP, Ezenwankwo FC, Kuku JO, Okunade KS & Anorlu RI. Women's knowledge of cervical cancer and uptake of Pap smear testing and the factors influencing it in a Nigerian tertiary hospital. Journal of Cancer Research and Practice. 2018; Volume 5, Issue 3, Pages 105-111
16. Bakari M, Takai IU, Bubar M. Awareness and Utilization of Papanicolaou smear among health care workers in Maiduguri, Nigeria. Niger J Basic Clin Sci. 2015; 12:34-8
17. Ashtarian H, Mirzabeigi E., Mahmoodi, E., & Khezeli, M. Knowledge about Cervical Cancer and Pap Smear and the Factors Influencing the Pap test Screening among Women. International journal of community based nursing and midwifery. 2017; 5(2), 188–195.