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Research Article

Knowledge Cervical Cancer and Associated Factors among Female Students in Addis Ababa University College Health Science in Addis Ababa, Ethiopia

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Abstract

Background: Cervical cancer is the most frequent form and leading cause of cancer mortality among Ethiopian women, because cancer is often at its advanced stage by the time patients seek health care services. However, Knowledge towards to cervical cancer screening tests are unknown among female students mostly because of lack of awareness on the diseases and the screening tests.

Objective: This study was aimed at assessing Knowledge cervical cancer and associated factors among female students in Addis Ababa University College Health Science in Addis Ababa, Ethiopia based on the Health Belief Model.

Methods: A cross sectional survey was carried out at Addis Ababa University Health Science College among 202 female students selected by simple random sampling technique. After the data was coded, entered and cleaned using Epi Info; SPSS was used for analysis. Association between dependent and independent variables was tested by Cross tabulating the variables and Binary logistic regression test was performed to identify associated factors with Knowledge cervical cancer screening test.

Result: The knowledge level of most respondents concerning cervical cancer was identified to be low, in which, 48 (23.8%) and 12 (5.9%) were with poor and excellent knowledge respectively. Year of study [$x^2 = 64.907$; $p < 0.001$] and sexual activity of the respondents [$x^2 = 8.021$; $P = 0.046$] were among factors affecting their knowledge level. Most of the students knew less about cervical cancer and its screening tests, from which the sexually active and those attending 3rd year and 4th year classes were with better understanding.

Therefore, concerned bodies are recommended to design and implement effective strategies to improve females' awareness on cervical cancer.

Keywords: *Knowledge; Cervical Cancer; Female Students*

Abbreviations

AAU: Addis Ababa University; ACOG: American College of Obstetrics and Gynecology; ETB: Ethiopian Birr; HIV/AIDS: Human Immuno Deficiency Virus/Acquired Immuno Deficiency Syndrome; VIA: Visual Inspection with Acetic Acid; HPV: Human Papilloma Virus; IARC: International Agency for Research on Cancer; PPS: Probability Proportional to Size; STD: Sexually Transmitted Disease; STI: Sexually Transmitted Infection; SRS: Simple Random Sampling

Background

Cervical cancer is a common cancer of female's reproductive system and it is a global public health problem accounting for almost 300,000 deaths annually however, the routine use of Pap smear screening has made it far less common in developed countries like United

State [1]. In the same reference it is also identified that cervical cancer is the 7th of all cancer cases and second most common cancer among women worldwide especially with those at age of 22 - 40 years and represents 13% of cancer cases among females of developing countries.

Cervical cancer is most often caused by an infection of human Papilloma virus (HPV) which can also cause genital warts. HPV is the most common sexually transmitted disease (STD) among college students today. It is estimated that up to 50 - 60% of sexually active female college students are infected with HPV at some point during their college years [2]. In the same source it was put forward that there are more than 100 different types of the virus. Some types of HPV cause warts on hands or feet, others cause genital warts and some can have no visible symptoms at all. HPV 16 and 18 subtypes are known common causes of cervical cancer in developing countries like Africa. This virus is usually contracted through vaginal and/or anal sex with same sex or opposite sex partners, direct skin-to-skin contact. There is at least a 64% chance of contracting HPV with each act of unprotected sex with an infected partner [2]. Although cervical screening affords women with the opportunity to take control of their cervical health, they may not be aware of issues in relation to cervical cancer. Studies also revealed that the knowledge concerning cervical cancer most women have was so poor and there was strong association between their knowledge and their screening status, wherein women who had received a Pap test were more knowledgeable about cervical health than those who had not [3,4]. In general cervical cancer which is common females' reproductive cancer problem is commonly caused by HPV through unprotected sexual intercourse and worsened depending on different socio-demographic characteristics and behavioral practices. However, it can easily be prevented through healthy behavioral practice and early detection using screening tests like Pap smear test which is recommended for all sexually active women and starting with age of 21 years with yearly or 2 - 3 years based regular test.

Methods and Materials

Study setting and period

This study was conducted at Addis Ababa University College of Health Science. Addis Ababa is the capital city of Ethiopia and seat of African Union and Economic Commission for Africa. The population size of Addis Ababa is over 3 million with annual growth rate of 2.1. The city is divided into ten sub cities and 99 Kebeles (Lowest level administrative unit in the city).

Addis Ababa University is the oldest higher education comprising different colleges with number of faculties and departments. Health Science College is one of colleges of the university comprising total of 382 during the study period. Therefore, this study was conducted on female students of Health Science College of the University. These students mainly use most of the governmental hospitals in the city for practical attachments. Some of the hospitals used for practical attachments are main referral hospitals of the country providing sophisticated health services accordingly. Addis Ababa University Health science students are anticipated to be knowledgeable concerning cervical and Pap smear screening test and even to utilize the service than Health Science students at other Universities. So, any gap identified based on this study was a good indicative for guesstimating Pap smear knowledge level and service utilization status among this domain of population segment. Therefore, this study was conducted on Addis Ababa University Health Science College female students.

Study design and population

The study employed a cross-sectional quantitative design from June 2012 to December 2012 among Undergraduate regular female students in Addis Ababa University Health Science College female students.

Sample size determination and sampling techniques

Sample size was determined by using single population proportion formula by considered 50% of proportion (P) of Good level of knowledge with 95% confidence interval and 5% marginal error. The corrected sample size was 193. By considering 10% non-response rate, the final sample size was 213.

A list of regular undergraduate students of Addis Ababa University Health Science College female students were prepared and entered into computer SPSS window 20.0 version from office of registrar then, selected by simple random sampling technique by proportionally allocated to each faculty. Five day (5 day) before data collection started the list of randomly selected students ID number was posted on notice boards and cafeteria for calling students for data collection at great hall and facilitators cross-check students' ID number with sampled ID number.

The questionnaire was adopted from previous studies reviewing literatures relevant to problems under the study and to include all the variables that address objectives of the study. Before conducting the actual study, the questionnaire was pre-tested among 20 Addis Ababa University School of Medicine female students (5 female students from each year of study, i.e. year I to year IV), to revise its clarity, order of question, skip patterns and its consistency. Based on the pretested feedback, some questions were rephrased, amended and the final questionnaire was prepared. One B.sc and three diploma nurses were recruited and trained to serve as supervisor and data collectors respectively. Finally, facilitator guided self-administered data collection was held on the study subjects using this anonymous questionnaire.

Questions designed to assess the students' knowledge level and perception (perceive susceptibility, perceived severity, perceived benefit and perceived barriers; the constituents of health belief model) were scored to be "1" for correct and "0" for incorrect answers. The students' knowledge level was scaled based on quartile scaling method and categorized as poor (0 - 5 or ≤ 25%), fair (6 - 10 or 26 - 50%), good (11 - 15 or 51 - 75%) and excellent (16 - 20 or 76 - 100%). The respondents' perception (using Health Belief Model constituents) was rated as "low" for those who had given correct answer to < 75% and "high" for those who had given correct answer to ≥ 75% of questions constructed to assess each constituent.

Operational definition for variables

- Poor level of knowledge: If student's knowledge score 0 - 5 (0 - 25%) for questions about cervical cancer and Pap smear.
- Fair level of knowledge: If student's knowledge score 6 - 10 (26 - 50%) for questions about cervical cancer and Pap smear.
- Good level of knowledge: If student's knowledge score 11 - 15 (51 - 75%) for questions about cervical cancer and Pap smear.
- Excellent level of knowledge: If student's knowledge score 16 - 20 (76 - 100%) for questions about cervical cancer and Pap smear.

Data processing and analysis

The data were collected under day to day supervision of trained supervisor and with technical assistance of the principal investigator; so that each questionnaire was checked for completeness and consistency. In this order, eleven questionnaires were excluded for incompleteness. On top of this double data entry was performed. Collected data was edited and checked manually for missing. After entering to Epi Info version 3.5.1 the data was cleaned and coded using Microsoft Excel spreadsheet and transported to SPSS version 16 for analysis. The relationship between selected independent variables and the respondents' knowledge level and Pap smear uptake were explored using bivariate and multivariate analysis. Chi-square (χ^2) was used to explore factors associated with knowledge level and Pap smear uptake as well as behavioral practice under the intermediate variables; while Binary logistic regression was used to investigate the major predictors for Pap smear uptake to provide odds ratio [OR] and 95% confidence intervals [CI]. Health Belief Model constituents and Knowledge level were used in binary logistic regression analysis. The crude and adjusted analyses were employed using bivariate logistic and multivariate logistic regression respectively. The level of statistical significance was set at 95% CI and p-value < 0.05.

Ethical consideration

Ethical clearance was obtained from the Faculty of Medicine Research and Publication Institution and Review Board Committee, Addis Ababa University. A formal letter was written from department of Nursing and Midwifery to respective departments for cooperation. Verbal and written consents was obtained from the study subjects after explaining the study objectives, procedures and their right to refuse to participate in the study any time they want. To assure confidentiality of the data the students did not write their name and ID number.

Result

Socio-demographic characteristic

Most of the respondents were Nursing students 59 (29.9%) and the least were Radiology students 22 (10.9%). Majority of them 73 (36.14%) were selected from 1st year and the least number 19 (4.9%) of students were from 4th year. The mean age of participants was 21.08 years with standard deviation of 1.94. Age of the majority students was in the range of 20 - 25 years with mode of 20 years. The youngest and oldest of the participants were 17 and 28 years old respectively. Majority of the participants were single 187 (92.6%) and none of them reported that they were widowed or separated. Large number of the respondents were ethnically Amhara 98 (48.5%) followed by Oromo 38 (18.8%) and Tigre (See table 1). More than half of the respondents were reported to be Orthodox Christian 132 (65.3%) followed by Protestant 39 (19.3%) and Muslim 26 (12.87%). One hundred fifty seven (77.7%) were residing at urban area before joining this University and only 45 (22.3%) were originated from rural area.

Variable	Frequency (n = 202)	Percentage (%)
Age in year		
< 20	38	18.81
20 - 25	159	78.71
26 - 30	5	2.48
Marital status		
Single	187	92.60
Married	15	7.40
Ethnicity		
Oromo	38	18.83
Amhara	98	48.51
Tigre	29	14.40
Gurage	25	12.42
Adere	1	0.54
Others*	11	5.43
Religion		
Orthodox	132	65.3
Protestant	39	19.3
Muslim	26	12.9
Catholic	2	1.0
Others**	3	1.5
Previous residence		
Urban	157	77.7
Rural	45	22.3
Department		
Nursing	59	29.2
Midwifery	54	26.7
Medical laboratory	34	16.8
Anesthiology	33	16.3
Radiology	22	10.9
Year of study		
1st year	73	36.1
2nd year	51	25.2
3rd year	59	29.2
4th year	19	9.4

Table 1: *Socio-demographic characteristic of Addis Ababa University Health Science College Female Students, June 2012 (n = 202). Others*: Gamo, Hadiya, Kembata, Silte, Welayita; Others**: Jehova.*

Knowledge level of the respondents on cervical cancer and Pap smear screening test

A total of 20 questions were asked to assess knowledge level of the participants. The proportion of correct responses shows that certain questions were answered better than the others. One hundred ten respondents (54.5%) had correctly defined cervical cancer as cancer of opening of the uterus, followed by 30 (14.5%) students who defined that it is a cancer of ovary, 10 (5%) respondents reported that they don't the definition; while the rest defined as cancer of vagina or fallopian tube. Hundred sixteen (57.4%) were familiar with the name of the virus associated with cervical precancerous cell (HPV), of which 84 (72.4%) reported that it can be transmitted through sexual intercourse. However, 117 (57.9%) of the total respondents were aware that the virus associated with cervical cancer (HPV) most commonly transmitted through sexual intercourse and the rest reported maternal to child transmission, blood transfusion, inanimate objects as common modes of transmission for HPV. Less than half 81 (40%) respond that cervical cancer can be prevented by condom utilization and 79 (39%) reported that regular Pap smear test contributes on cervical cancer prevention and control. More than half of the students 118 (58.4%) were aware that cervical cancer is screened using Pap smear test, whereas the rest answered that cervical cancer is screened by other methods like x-ray, blood test and urine test 84 (41.58%). Out of the total 118, eighty nine (75.4%) were aware that any sexually active female is entitled for the test while 20 (16.9%) respond that pap smear test is necessary only for women over age of 30 years and the rest 9 (7.6%) suggested that only mothers with many children are entitled for the test. Regarding the recommended frequency of Pap smear test 40 (34%) reported a woman have to be tested at least every 3 - 5 years from age 20 years. The respondents' knowledge concerning risk factors predisposing to cervical cancer is shown in the figure 1.

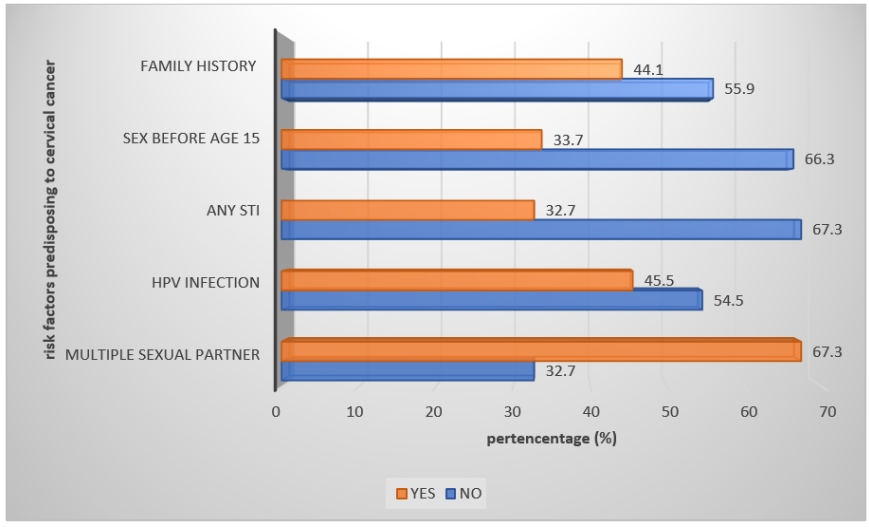

Figure 1: *Awareness about risk factors that predispose to cervical cancer among Addis Ababa university health science college female students, June 2012 (n = 202).*

Source of information about cervical cancer and pap smear

Mass media was reported as source of information by majority of the students 95 (47%) followed by class lecture 81 (40.1%) and only about one fourth of the students reported self-study 60 (29%), and internet 58 (28%) as their source of information concerning cervical cancer and pap smear test. The source of information for the majorities of 1st and 2nd year students was mass media, whereas that of 3rd and 4th year students was class lecture.

Knowledge assessing variables were scored to be "1" for correct and "0" for incorrect answers. The students' knowledge level was scaled based on quartile scaling method and categorized as poor (0 - 5/20 or ≤ 25%), fair (6 - 10/20 or 26 - 50%), good (11 - 15/20 or 51 - 75%) and excellent (16 - 20/20 or 76 - 100%). Based on this aggregate numerical scoring applied to the 20 knowledge assessing questions; two (1%) students were alright and 11 (5.4%) did answer none of the question correctly. The mean knowledge score was 9.01 with standard deviation 4.71. The range of scores went zero (none right) to 20 (all right) with mode of 13. The result of assessment of the students' knowledge level based on the category is shown in figure 2.

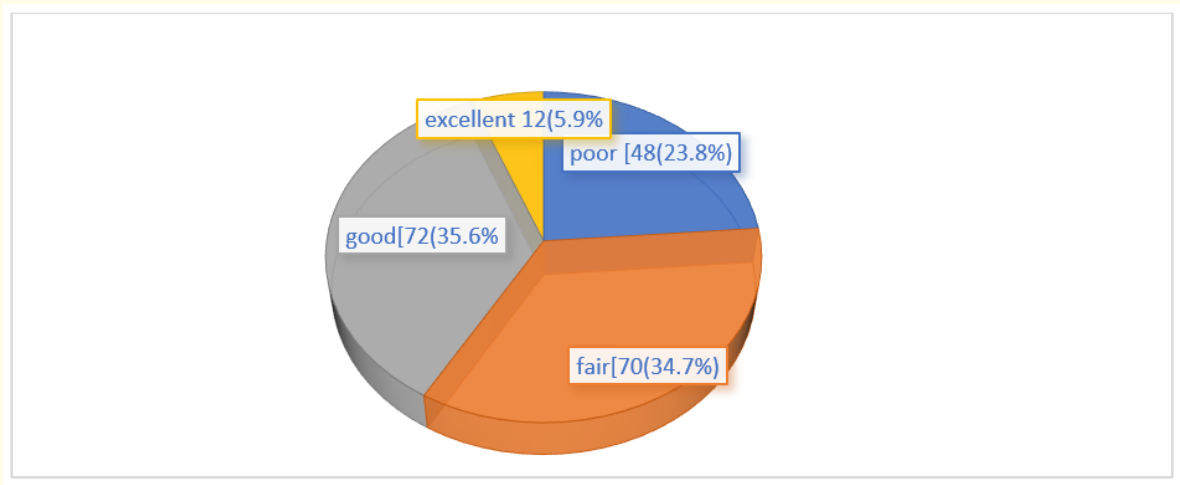

Figure 2: *Distribution of knowledge level on cervical cancer and pap smear among AAU Health Science College female students, June 2012 (n = 202).*

Generally, more than half of the students 118 (58.41%) were with poor and fair knowledge in that they had given correct answer to 50% of knowledge assessing questions; when compared with those who had good or excellent knowledge 84 (41.58%) concerning cervical cancer and pap smear. Very few of the respondents 12 (5.9%) correctly answered, ≥ 75% of the questions.

Level of knowledge was cross-tabulated with some of the socio demographic characteristics and behavioral practice of the respondents. Based on this analysis, knowledge level was significantly associated with year of study [$x^2 = 64.907$; $P < 0.001$] and sexual activity of the students [$x^2 = 8.021$; $P = 0.046$]; at ($P < 0.05$ and CI = 95%).The students' knowledge level concerning cervical cancer and Pap smear screening test increased in line with their year of study. Likewise, sexually active students were with better knowledge 31 (53.45%) compared to those who did not have sex with any one 53 (36.81%).

Characteristic	Level of knowledge on cervical cancer and pap smear				x^2	df	P-value
	Poor n (%)	Fair n (%)	Good n (%)	Excellent n (%)			
Marital status							
Single	46 (24.6)	67 (35.8)	65 (34.8)	9 (4.8)			
Married	2 (13.3)	3 (20.0)	7 (46.7)	3 (20.0)	7.69	3	0.053
Place of origin							
Urban	34 (21.7)	53 (33.8)	62 (39.5)	8 (5.1)	5.25	3	0.154
Rural	14 (31.1)	17 (37.8)	10 (22.2)	4 (8.9)			
Department							
Nursing	17 (28.8)	19 (32.2)	19 (32.2)	4 (6.8)			
Midwifery	16 (29.6)	12 (22.2)	19 (35.2)	7 (13.0)			
Medical laboratory	8 (23.5)	13 (38.2)	13 (38.2)	0	18.68	12	0.096
Anesthesiology	5 (15.2)	15 (45.5)	13 (39.4)	0			
Radiology	2 (9.1)	11 (50)	8 (36.4)	1 (4.5)			
Year of study							
1st year	31 (42.5)	32 (43.8)	8 (11.0)	2 (2.7)	64.91		
2nd year	14 (27.5)	19 (37.3)	18 (35.3)	0 (0)		9	0.000**
3rd year	3 (5.1)	16 (27.1)	33 (55.9)	7 (11.9)			
4th year	0 (0)	3 (15.8)	13 (68.4)	3 (15.8)			
Had sexual intercourse							
No	38 (26.4)	53 (36.8)	48 (33.3)	5 (3.5)			
Yes	10 (17.2)	17 (29.3)	24 (41.4)	7 (12.1)	8.02	3	0.046*

Table 2: *Knowledge level on cervical cancer, with socio demographic characteristic and sexual behavior of AAU Health Science College female students, June 2012 (n = 202).*

**: Statistically significant at P < 0.05; CI of 95%.*

***: Statistically significant at P < 0.01; CI of 95%.*

Discussion

Knowledge Level on cervical cancer and pap smear test

Cervical cancer was correctly defined merely by 110 (54.5%) of the total participants. This finding is by far different from previous study at Durban in which (91.3%) medical and 88.0% nursing students were being informed about cervical cancer [5]. Moreover, only about 116 (57.4%) respondents were familiar with name of the virus associated with cervical cancer and similar number of students knew the link between sexual activity and cervical cancer. This finding is somewhat comparable with study conducted at Tanzania of which (60.6%) correctly identified sexual intercourse as a mode of transmission for HPV [6] but is much better awareness when compared with Ghana university students in which only 38% believe that being sexually active puts a woman in greater risk of contracting cervical cancer [7]. Other study at Pakistan had shown that 89% knew the mode of transmission of HPV [8]. Awareness concerning the influence of number of partners on cervical cancer was identified to be good in, which 136 (67.3%) believe that having many sexual partners is risk factor for contracting HPV. This finding indicates better awareness when compared to similar studies at Colombia, Ghana and Pakistan [7-9] in which less than half of the students believe having more than one sex partner is risk factor for cervical cancer. Having any sexually transmitted infection and commencing intercourse before age of 15 years were mentioned as risk factors for cervical cancer by 66 (32.7%) and 68 (33.7%) of respondents respectively. Similar studies at Colombia and Botswana suggested that early onset of sexual activity (28.7%), having other sexual transmitted diseases and lack of pap smear screening (84%) were mentioned as risk factors for cervical cancer [9,10]. Just 81 (40%) and 79 (39%) of the respondents agreed that condom utilization and regular Pap smear test respectively contribute to cervical cancer prevention and control. In the light of the facts that cervical cancer is the leading cancer death among Ethiopian women, 70% of Cervical cancer in developing countries is associated with Human Papilloma virus and 50 - 60% of sexually active female college students acquire HPV [1,2]; it was unexpected result that Health Science female students were with such low awareness concerning cervical cancer. This might be related with the fact that cervical cancer could have received low priority because of other pressing communicable diseases like TB, HIV and Malaria.

Slightly more than half of the respondents 118 (58%) had correctly answered that Pap Smear test is used to screen cervical cancer at precancerous stage. However, the majority of those who were aware of pap smear screening test knew that any sexually active female is entitled for the test 89 (75.4%), while very few were familiar with the recommended frequency for pap smear test 20 (16.9%). Generally, the students' awareness on Pap smear test was found to be unsatisfactory when compared with previous studies [8,11,12]. The finding enables to judge that there might be information gap amongst adolescents of our country concerning Pap smear test when compared to some other African countries. It was also evidenced that cancer deaths in developing countries were attributable to delayed diagnosis as a result of limited awareness and resources [13]. Hence, this finding pointed out that more awareness programs should be directed to make health science students knowledgeable concerning cervical cancer and Pap smear test as they are expected to revolutionize the society's practice on early detection and treatment of cervical cancer. There by, it will be easy to reduce maternal mortality attributable to delayed diagnosis of cervical cancer.

In spite of the field of study of the respondents and cervical cancer's leading cancer mortality among Ethiopian women [1]; the overall respondents' level of knowledge concerning cervical cancer and pap smear test was found to be low, in which less than half 84 (41.58%) of the students were with good or excellent knowledge. In view of such knowledge gap among health science students, it can be estimated that very few of the rest population segments have an awareness concerning cervical cancer and its screening test. On top of the disease burden in the country [1,3,14,15], this study finding signals that much has to be done to fill knowledge gap concerning cervical cancer, its preventions and treatments. Factors in support of knowing well about the disease and its screening method were; year of study [x^2 = 64.907; $p < 0.001$] and sexual activity of the respondents [x^2 = 8.021; P = 0.046]. Students attending in 3rd and 4th year classes were with better knowledge 56 (73.7%) compared to those attending in 1st year and 2nd year classes 28 (22.6%), similarly sexually active students were with better knowledge 31 (53.45%) compared to those who did not have sex with any one 53 (36.81%). In previous study sexual activity and marital status of the respondents were identified to be determinant factors for awareness of the respondents about cervical

cancer and Pap smear test [11]. Overall; the commonest source of information about cervical cancer and Pap smear test for majority of them was mass media 95 (47%) followed by class lecture 81 (40.1%), whereas health institution was mentioned as a source of information by very few respondents 38 (18%). This was in contrary to previous study in which the major source of information was hospitals [11]; which could be suggestive that health institutions in our settings might not give due attention on cervical cancer while disseminating health information about other STIs. However, great majority of 3rd year and 4th year as well as married respondents reported class lecture as their source of information. This is possibly explained by the fact that the greatest means of awareness about cervical cancer and Pap smear for undergraduate health science students is class lecture, which was predominantly limited to 3rd and 4th year students. Therefore, since more than half of sexually active female college students have chance of acquire HPV; students would better get training on STIs; starting at high school level and at practical sessions for health science students in addition to class lectures.

It was identified that Pap smear uptake was significantly associated with good knowledge level [Adjusted OR = 10.326 (95%CI; 1.290, 82.638)]. This indicates that students with good knowledge concerning cervical cancer and Pap smear test are 10 times more likely to had Pap smears screened for cervical cancer compared to those with poor knowledge. Knowledge level was found to be the major predictor [Adjusted OR = 10.326 (95%CI; 1.290, 82.638)] for pap screening uptake followed by perceived susceptibility [Adjusted OR = 3.522 (95%CI; 1.260, 9.850)]; both of which were affected by year of study and sexual activity of the respondents. From this, assumption can be made that by improving understanding on cervical cancer and Pap smear test; as well as increasing perceived susceptibility to cervical cancer through awareness campaigns for all health science female students; Pap smear screening test can be significantly improved amongst the youngest group.

Conclusion

This study sought to explore risky sexual behavior, knowledge on cervical cancer and predictors for Pap smear uptake among undergraduate Health Science students, in the context of cervical cancer burden in Ethiopia. The finding had shown that behavioral practices including; early initiation of sexual intercourse, having multiple sexual partner and unprotected sex were prevalent among female undergraduates, which enable to conclude that some students were at high risk of contracting HPV and cervical cancer. The knowledge level among this group was found to be low, as less than half of the students were with good or excellent knowledge concerning cervical cancer and Pap smear test. The most senior or third year and fourth year students tend to be better informed, possibly because they were more likely to hear about cervical cancer and Pap smear test during class lectures, which was source of information for majority of students in these study years in addition to other sources of information. Sexually active respondents were also found to have better knowledge than those who did not have sexual intercourse. Pap smear uptake rate was still very low comparable to previous studies conducted on similar segment of the population. The Pap smear test uptake was better among married, third year and fourth year as well as sexually active students. This could be related with the better knowledge they had compared to the rest group. Majority of the respondents were aware of their susceptibility to cervical cancer, severity of cervical cancer, benefits of having Pap smear and had some barriers to seeking Pap smear screening test. But when seen generally, enormous numbers of the students were with low perceived susceptibility to cervical cancer, low perceived severity of cervical cancer, low perceived benefit of Pap smear test and low perceived barriers for having Pap smear test. The results of binary logistic regression, keeping other health belief model constituents constant; had proved that Pap smear uptake status of the students were influenced by perceived susceptibility and knowledge level. Students with high perceived susceptibility and good knowledge level were more likely to had Pap smear test compared to those with low perceived susceptibility and poor knowledge.

Recommendation

- Cognizant of these facts would better deal with increasing females' awareness and their perceived susceptibility on cervical cancer. This study indicated the need to design and implement effective strategies to improve awareness on cervical cancer and Pap smear with its utilization.

- The reliance on increasing awareness about cervical cancer with special emphasis on risk factors, preventive mechanisms and the need for regular cervical screenings; would do very much by bringing up good understanding and behavioral change.
- Perceived susceptibility should be emphasized through education and awareness campaigns as it was found to improve uptake of Pap smear.
- Reproductive health education about cervical cancer, sexually transmitted diseases and their prevention should be intensified in high schools and higher institutions.
- Health education at health institutions should also give due attention on reproductive health with special attention on STIs and cervical cancer.
- Finally, it is highly recommended that related studies would better be conducted on factors affecting knowledge, attitude and practice of available cervical cancer screening tests at other universities and colleges on large sample of students.

Competing Interests

The author (s) declare that they have no competing interests

Authors' Contributions

- Eriste Nugusa Gamshe conceptualized the study, designed the study instrument and conducted the data analysis and wrote the first draft and final draft of the manuscript.
- Dereje Bayissa Demissie approved the research proposal with some revisions, participated in data analysis, revised subsequent drafts of the paper and involve in critical review of the manuscript. All authors read and approved the final manuscript.

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