



Knowledge, Attitude and Preventive Practices among the Female Students Regarding Cervical Cancer Screening and HPV Vaccination in Jazan University

Hemalatha T^{1*}, Rehman W¹, Idrees S¹, Ghailan K¹, Azeez F¹, Othman R², Adnan R², Mohammed L²

Abstract

Background: Cancer is the dreadful disease in the world. Cervical cancer is the second most common cancer, which affects women. Cervical cancer (CC) can be prevented if one goes to regular screening and if it is diagnosed early. In western countries the women undergo for regular screening test for cervical cancer. In Saudi Arabia the campaign for breast cancer is more than the cervical cancer. Human papilloma virus is the main cause for cervical cancer. HPV 16 and HPV 18 is the major virus which causes Cervical cancer. PAP smear screening is the one of the important screening test which is used to prevent cervical cancer. Human papillomavirus vaccines (bivalent (BV) and quadrivalent (QV)) are the one of the very highly effective vaccine which is used in preventing cervical cancer. The objective of this research was to explore the knowledge, attitudes, and preventive practices among the female students of Jazan University, Kingdom of Saudi Arabia.

Materials and methods: This was a descriptive cross sectional study conducted among the female students of various colleges of Jazan University. All together 397 female students of Applied Medical College, Nursing College, Science College, Pharmacy college and Public Health college participated in this study. The objective of this research will be explained to the female students and through a questionnaire, knowledge and attitude about cervical cancer, screening, symptoms, risk factors, and vaccination will be assessed. Data was analyzed through SPSS and presented using graphs and tables.

Results: The research will identify the respondent's percentage of awareness about the cervical screening, symptoms, risk factors and knowledge of HPV vaccination. Students from Science College are comparatively having poor knowledge about cervical cancer. The students of science and public health are not having much awareness about HPV vaccination. About the Screening, 3% from Public Health College, 7% from Science College, 17% from nursing college, 10% from Pharmacy College, 13% from applying medical college have known. This research shows that Knowledge and attitude of females in Jazan University about Cervical Cancer and

its preventive measures were nearly adequate in medical oriented colleges than other college, but their practice was deficient in the entire group.

Keywords

Awareness; Cervical cancer; Human papilloma virus; Pap smear; Screening; Vaccination

Introduction

Cervical Cancer is the second most common cancer, which affects women. Cervical cancer is one of the leading causes of morbidity and mortality among women in developing countries. Cervical cancer (CC) can be prevented if one goes to regular screening and if it is diagnosed early. Cervical cancers are causally related to infections by HPV [1]. Approximately 70% of cervical cancers are caused by HPV types 16 or 18. Annually, 288 000 women die of cervical cancer and 80% of these deaths occur in developing countries (Table 1). Infection with HPV is predominantly sexually transmitted which infects the epithelial cells of the cervix uteri that can result in precancerous lesions and invasive cancer. It is a preventable disease; screening and early treatment reduce morbidity and mortality associated with cervical cancer. The Papanicolaou (Pap) smear is an efficient, affordable, and effective method of detecting psychological changes in the uterine cervix [2]. Factors related to the success of such a program include awareness about cervical cancer and its Screening (Figure 1). The WHO recommends that screening should start on women aged 30, a 3-year interval can be considered in the age group 25-49 years, and screening is not necessary for women over 65 years. Saudi Arabia has a population of 6.51 million women ages 15 years and above who are at risk of developing cervical cancer. About 241 new cervical cancer cases are diagnosed annually in Saudi Arabia. Annual number of cervical cancer deaths 84. In Saudi Arabia the campaign for cervical cancer is not adequate. It is anticipated that in Saudi Arabia, as the population ages, there will be a dramatic increase in the incidence of cervical cancer. Thus screening and treatment of these precancerous lesions may be beneficial for preventing cervical cancer and related outcome [3-6].

Aims and objectives

1. To assess the Knowledge, Attitude and Preventive Practices Among the Female Students Regarding Cervical Cancer Screening and HPV Vaccination in Jazan University.
2. To assess the knowledge of students regarding symptoms and risk factors of cervical cancer.
3. To identify the attitude about screening and preventive practice of cervical cancer.
4. To identify the source of information.

Rationality from community perspective

Students represent an important section of the society and are the future of any country. This research aids in creating knowledge of cervical cancer screening, symptoms, risk factors, HPV (Figures 2-4) vaccination among the female students of Jazan University which di-

*Corresponding author: Hemalatha T, Department of Health Informatics, Faculty of Public Health and Tropical Medicine, Jazan University, Jazan, Saudi Arabia, Tel: +966 532160636; E-mail: hthanganadar@jazanu.edu.sa

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Table 1: Knowledge about Cervical Cancer among the female students of Jazan University.

Items	Applied Medical College N=78	Pharmacy College N=57	Nursing College N=82	Science College N=41	Public Health and Tropical Medicine College N=139
Knowledge about Cervical Cancer					
General awareness about Cervical Cancer	58%	57%	60%	43%	55%
No of cases in KSA	12%	16%	17%	7%	14%
Early marriage	36%	36%	34%	45%	42%
Sexually related	51%	31%	36%	26%	25%
Smoking	53%	28%	41%	43%	31%
Most likely age of having CC	45%	65%	78%	47%	51%
About HPV	33%	25%	40%	12%	25%
Symptoms	33%	34%	42%	19%	24%
Risk $(x) = a_0 + \sum_{n=1}^{\infty} \left(a_n \cos \frac{n\pi x}{L} + b_n \sin \frac{n\pi x}{L} \right)$ actors	53%	42%	38%	31%	38%

Note: Shows that respondents are not much aware of HPV and the symptoms of Cervical Cancer.

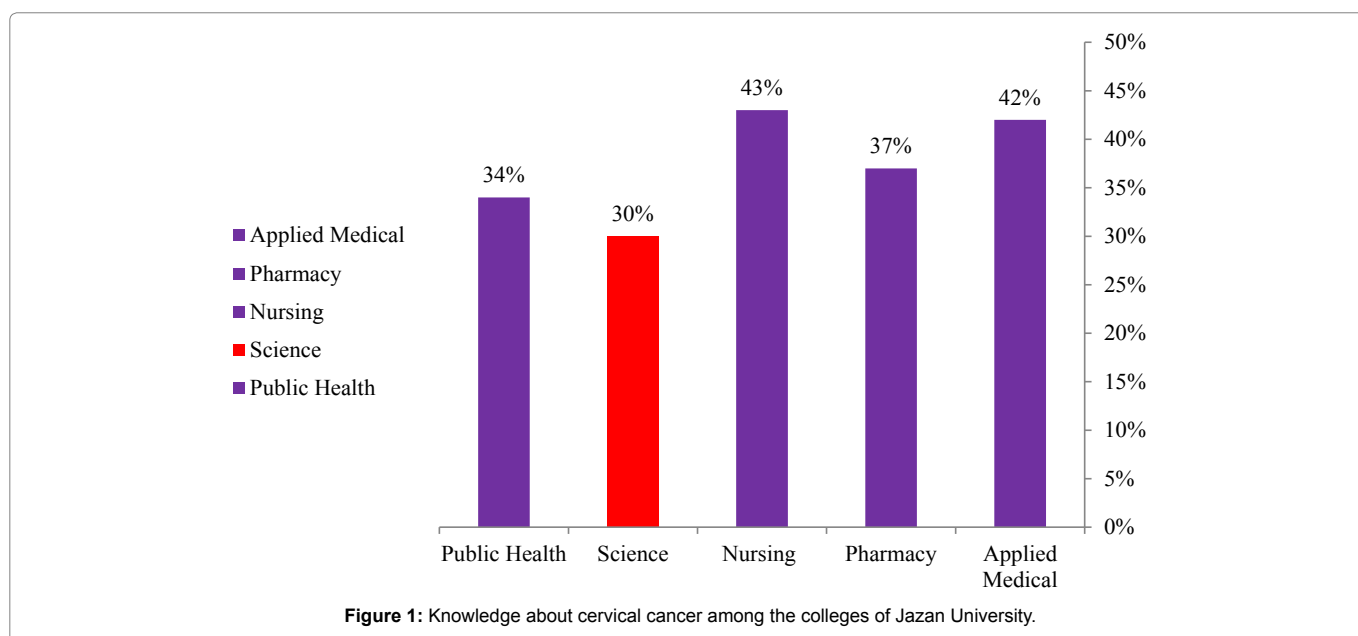


Figure 1: Knowledge about cervical cancer among the colleges of Jazan University.

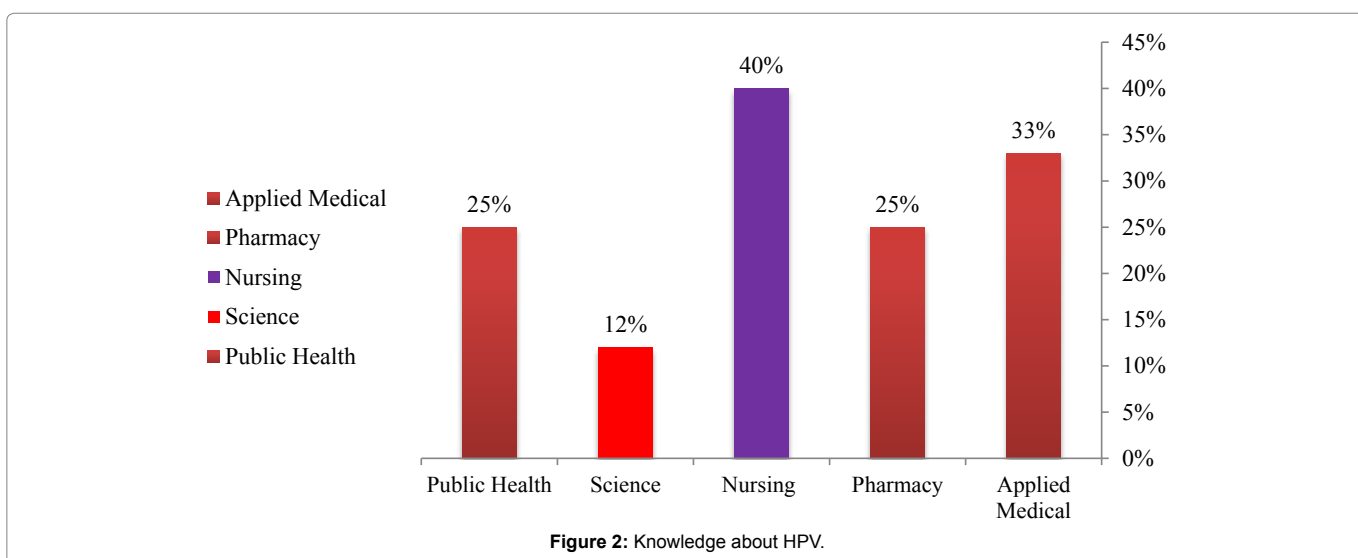
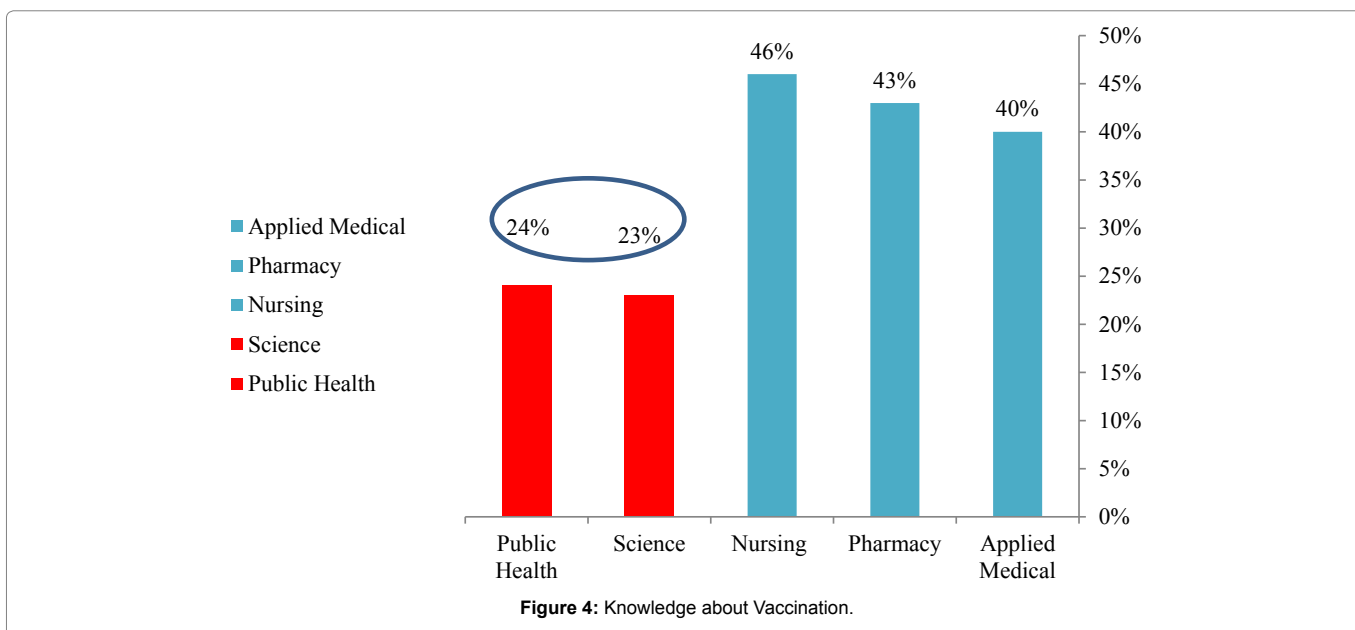
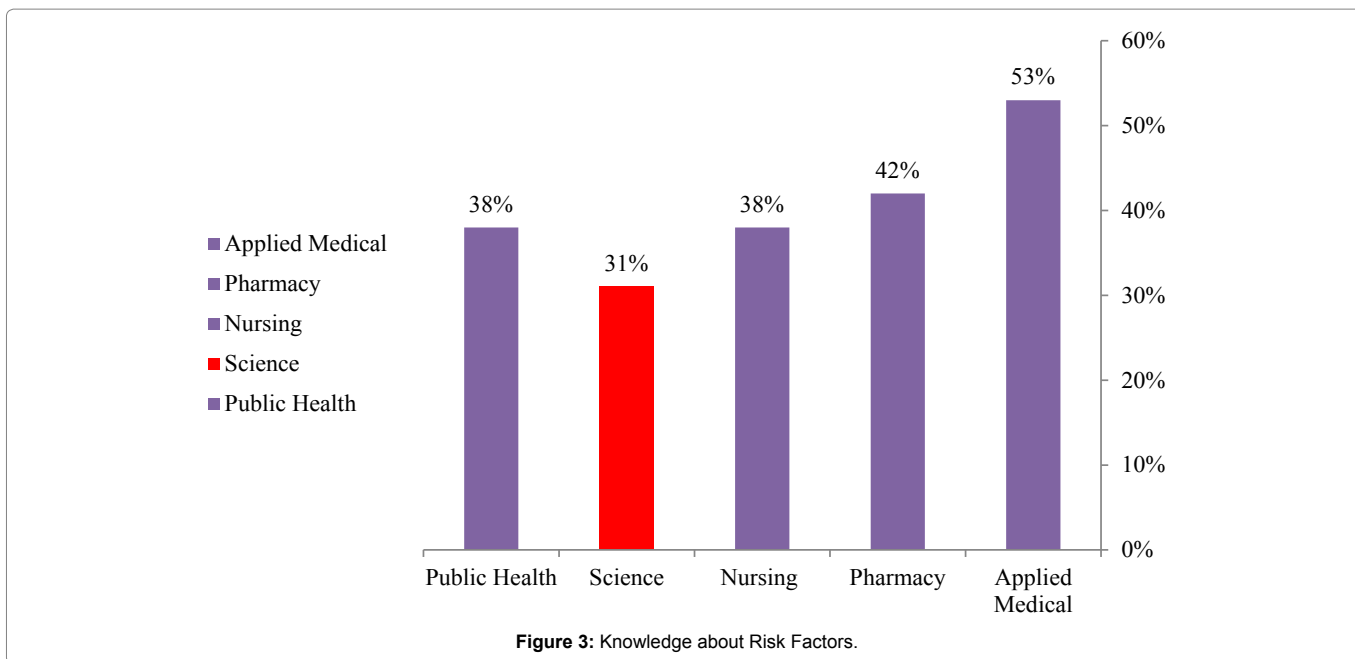


Figure 2: Knowledge about HPV.



rectly and indirectly creates awareness among the family members and also the population of Jazan (Table 2). Early detection of CC will help the prognosis and successful disease management and will help the people to protect themselves from the advanced stages. This research will also provide information to the healthcare professional, policy makers, and authorities so as to create awareness about cervical cancer among the community [7-10].

Materials and Methods

This was a descriptive cross sectional study conducted among the female students of various colleges of Jazan University. All together 397 female students of Applied Medical College, Nursing College, Science College, Pharmacy college and Public Health college participated in this study. The data was collected with the paper questionnaire

distributed among the colleges of Jazan University (Table 3). 423 students of Jazan University responded to the questionnaire. The study included 397 responses but 26 were excluded from the study because they did not complete the questionnaire. The questionnaire consists of 4 sections. The first sections consist of social demographic data such as age, marital status, no. of children etc. The second section consist of questions regarding the knowledge about cervical cancer, risk factors, symptoms, prevention, awareness about screening, source of knowledge. The third section consists of questions asking about the attitude about doing PAP Smear Test for herself and recommendation for others (Table 4) [11]. The last section consists of questions asking about their practice for a pap smear (Figure 5) and its frequency. The data provided by students will be maintained confidential.

Table 2: Knowledge about Cervical Cancer among the female students of Jazan University.

Items	Applied Medical College	Pharmacy College	Nursing College	Science College	Public Health and Tropical Medicine College
	N=78	N=57	N=82	N=41	N=139
Prevention of Cervical Cancer					
Cervical Cancer can be prevented	84%	51%	52%	37%	34%
Vaccination can prevent Cervical Cancer	40%	43%	46%	23%	24%
Early diagnosis is helpful for treatment	91%	84%	76%	71%	89%
Awareness about Pap Smear Test	34%	36%	32%	14%	16%

Note: 14% of Science College students having awareness about pap smear test and maximum of 36% from Pharmacy College.

Table 3: Attitude and preventive practice about Cervical Cancer among the female students of Jazan University.

Items	Applied Medical College	Pharmacy College	Nursing College	Science College	Public Health and Tropical Medicine College
	N=78	N=57	N=82	N=41	N=139
Attitude toward preventive measures of Cervical Cancer					
Willing to do Pap Smear Test	58%	66%	63%	54%	58%
Recommend to do Pap Smear Test	52%	41%	57%	67%	63%
Cost of Test- Expensive high -	47%	14%	38%	20%	27%
Screening accessibility	55%	32%	43%	20%	22%

Table 4: Attitude and preventive practice about Cervical Cancer among the female students of Jazan University.

Items	Applied Medical College	Pharmacy College	Nursing College	Science College	Public Health and Tropical Medicine College
	N=78	N=57	N=82	N=41	N=139
Practice towards screening of Cervical Cancer					
Preference to do the Test					
PHC	33%	30%	32%	38%	31%
Clinics for Female	32%	27%	31%	22%	32%
Private Hospital	23%	23%	26%	27%	27%
Others	12%	20%	11%	13%	10%
Vaccinated	21%	8%	23%	7%	2%
Done Pap Smear Test	4%	11%	11%	7%	3%
Reason for not doing the Pap Smear Test					
Not known about the Test					
Shy	66%	62%	68%	86%	78%
Painful					
	52%	43%	44%	22%	47%
	44%	42%	56%	68%	54%

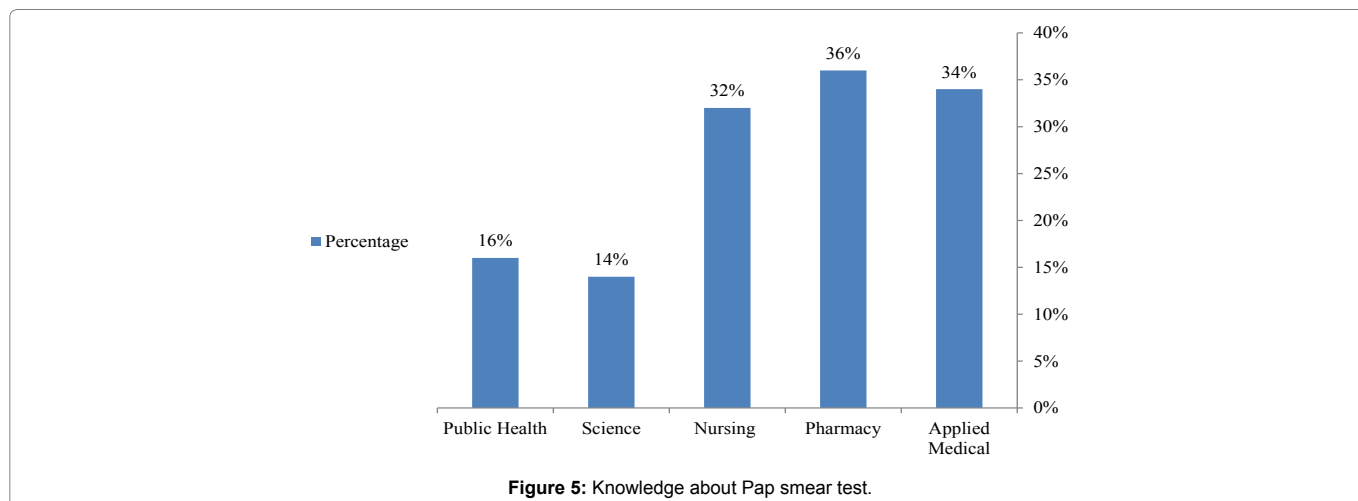


Figure 5: Knowledge about Pap smear test.

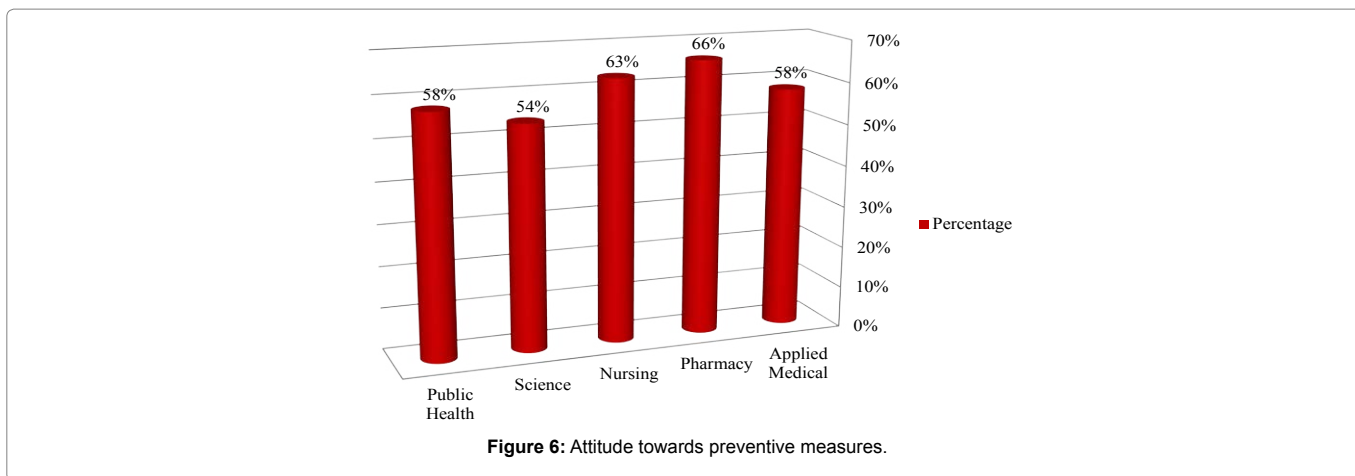


Figure 6: Attitude towards preventive measures.

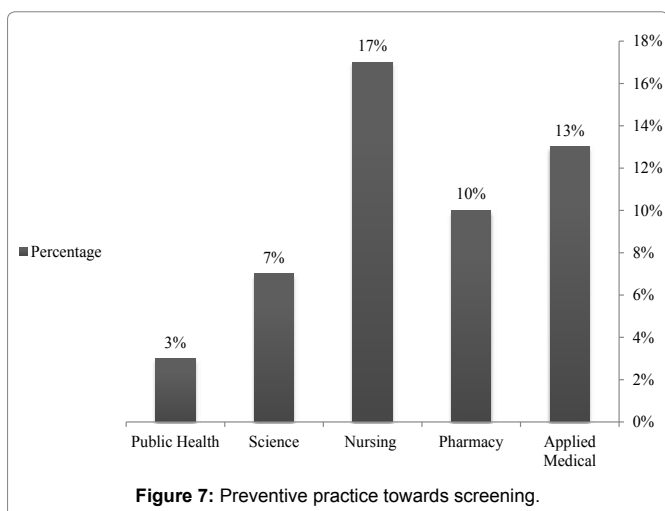


Figure 7: Preventive practice towards screening.

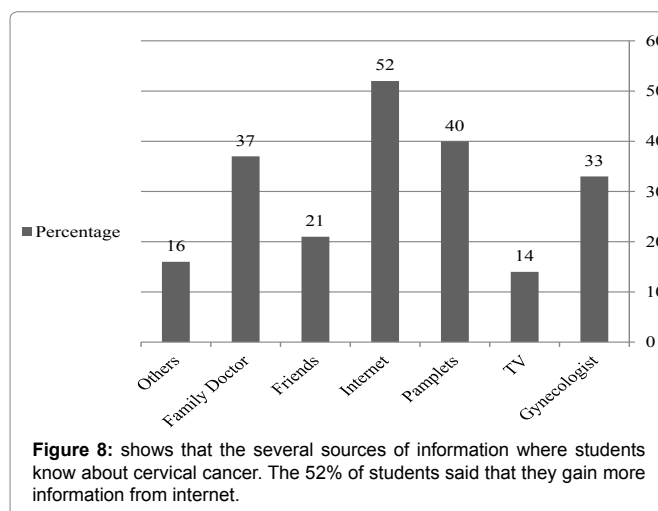


Figure 8: shows that the several sources of information where students know about cervical cancer. The 52% of students said that they gain more information from internet.

20. Have you ever heard about screening test for cervical cancer?
 - Yes
 - No
21. Have you ever heard about Pap smear is used for detecting cervical cancer?
 - Yes
 - No
22. Have you ever gone through Pap smear?
 - Yes
 - No
23. If yes, do you embarrassed during the Pap smear test?
 - Yes
 - No
24. Do you feel comfortable during the Pap smear test?
 - Yes
 - No
25. Is it possible to detect cervical cancer with the Pap smear test before symptoms appear?
 - Yes
 - No

Figure 9: Sample questions from the questionnaire.

Data analysis

The data were cleaned and checked for consistency and completeness and entered in MS-Excel and exported to SPSS for descriptive analysis (Figures 6-9). Descriptive analysis was used to describe the knowledge, attitude and preventive practices of cervical cancer [12].

Results and Discussion

Cervical cancer is considered as a preventable disease as vaccine and detected early. A cross sectional study was conducted out in the female section of Jazan University, KSA, to assess the level of knowledge, attitude and practice toward cervical cancer and its preventive and screening measures. Our results show that students from other than medical oriented college have less awareness about cervical cancer. Attitude and preventive practices of cervical cancer is significantly higher among the medical oriented college. Although the attitude toward Pap smear was considered satisfactory, but their practice of it wasn't the same in all of them [13-15].

Conclusion and Recommendation

Knowledge and attitude of females in Jazan University about Cervical Cancer and its preventive measures were nearly adequate in medical oriented colleges than other college, but their practice was deficient in the entire group [16,17]. Hence awareness workshops must be held. Awareness campaign should be intensified. Need to further educate the females [18-22]. The physician can make more efforts to increase the awareness of their patients about Pap smear and HPV vaccine and their role in preventing cervical cancer. Every year a national cervical cancer screening program needs to be implemented.

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References

1. Al-Darwish AA, Al-Naim AF, Al-Mulhim FS, Al-Otaibi NK, Morsi MS, et al. (2014) Knowledge about cervical cancer early warning signs and symptoms, risk factors and vaccination among students at a medical school in Al-Ahsa, Kingdom of Saudi Arabia. *Asian Pacific Journal of Cancer Prevention* 15: 2529-2532.
2. Makoha FW, Raheem MA (2008) Gynecological cancer incidence in a hospital population in Saudi Arabia: the effect of foreign immigration over two decades. *J Obstet Gynaecol Res* 34: 538-542.
3. Future II Study Group (2007) Quadrivalent vaccine against human papillomavirus to prevent high-grade cervical lesions. *N Engl J Med* 356: 1915-1927.
4. Paavonen J, Naud P, Salmeron J, Wheeler CM, Chow SN, et al. (2009) Efficacy of human papillomavirus (HPV)-16/18 AS04-adjuvanted vaccine against cervical infection and precancer caused by oncogenic HPV types (PATRICIA): Final analysis of a double-blind, randomised study in young women. *Lancet* 374: 301-314.
5. Ezat SWP, Norin R, Akmal SNSH (2009) Prevalence of human papillomavirus in cervical cancer. *Med and Hlth J*.
6. Jhingran A, Russel AH, Seiden MV, Duska LR, Kathryn A, et al. (2008) Abeloff's clinical oncology. (4th edtn). *Cancers of the cervix, vulva, and vagina*, Churchill Livingstone, Edinburgh, United Kingdom.
7. Dosoky M, Ismail N, Dagastani M (1995) Preinvasive cervical carcinoma in Saudi Arabia. *Lancet* 345: 650.
8. Manji M (2000) Cervical cancer screening program in Saudi Arabia: Action is overdue. *Ann Saudi Med* 20: 355-357.

9. Kamzol W, Jaglarz K, Tomaszewski KA, Puskulluoglu M, Krzysztof K (2013) Assessment of knowledge about cervical cancer and its prevention among female students aged 17-26 years. *Eur J Obstet Gynecol Reprod Biol* 166: 196-203.
10. Kietpeerakool C, Phianmongkhon Y, Jitvacharanun K, Siriratwatakul U, Srisomboon J (2009) Knowledge, awareness, and attitudes of female sex workers toward HPV infection, cervical cancer, and cervical smears in Thailand. *Int J Gynaecol Obstet* 107: 216-219.
11. Adefuye PO (2006) Knowledge and practice of cervical screening among professional health workers in a suburban district in Nigeria. *Nigerian Medical Practitioner* 50: 19-22.
12. Kumar V, Abbas AK, Fausto N, Mitchell RN (2007) *Robbins basic pathology*. (8th edtn). Elsevier Saunders, Amsterdam, The Netherlands.
13. Canavan TP, Doshi NR (2000) Cervical cancer. *Am Fam Physician* 61: 1369-76.
14. Walboomers JM, Jacobs MV, Manos MM, Kummer JA, Shah KV, et al. (1999) Human papillomavirus is a necessary cause of invasive cervical cancer worldwide. *J Pathol* 189: 129.
15. Lowy DR, Schiller JT (2006) Prophylactic human papillomavirus vaccines. *J Clin Invest* 116: 1167-73.
16. Khan S, Jaffer NN, Khan MN, Ali SH, Aziz A, et al. (2007) Human papillomavirus subtype 16 is common in Pakistani women with cervical carcinoma. *Int J Infect Dis* 11: 313-317.
17. Nieminen P, Kallio M, Hakama M (1995) The effect of mass screening on incidence and mortality of squamous adenocarcinoma of the cervix uteri. *Obstet Gynecol* 85: 1017-1021.
18. Bazerbashi S (2002) Cancer incidence for specific site. National Saudi Cancer Registry. Ministry of Health Riyadh, Kingdom of Saudi Arabia.
19. Jhingran A, Russel AH, Seiden MV, Duska LR, Kathryn A, et al. (2008) *Abeloff's clinical oncology*. (4th edtn). *Cancers of the cervix, vulva and vagina*, Churchill Livingstone, Edinburgh, United Kingdom.
20. Ezat SW, Aljunid S (2010) Comparative cost-effectiveness of HPV vaccines in the prevention of cervical cancer in Malaysia Asian Pacific. *Journal of Cancer Prevention* 11: 1-9.
21. Koutsky L (1997) Epidemiology of genital human papillomavirus infection. *Am J Med* 102: 3-8.
22. Taira AV, Neukermans CP, Sanders GD (2004) Evaluating human papillomavirus vaccination programs. *Emerg Infect Dis* 10: 1915-1923.

Author Affiliations

Top

Department of Health Informatics, Faculty of Public Health and Tropical Medicine, Jazan University, Jazan, Saudi Arabia

²Department of Health informatics, Faculty of Public Health and Tropical Medicine, Jazan University

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