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RESEARCH ARTICLE

AWARENESS AND ATTITUDE TOWARDS CERVICAL CANCER SIGN SYMPTOMS, RISK FACTORS AND ITS PREVENTION AMONG FEMALE MEDICAL AND NON-MEDICAL STUDENTS' IN JEDDAH, SAUDI ARABIA

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ABSTRACT

Aim: The aim of this study was to assess awareness and attitude towards cervical cancer sign symptoms, risk factors and its prevention among female medical and non-medical students' in Jeddah, Saudi Arabia.

Subjects and Method: This cross sectional study conducted at King AbdulAziz University (KAU), Jeddah. The SPSS 21 was used to analyze data.

Results: Majority of students (87.8%) have heard about cervical cancer and most of the participants knew that it is a preventable disease (70.4%). More than half of students (57.4%) heard of Pap smear test, while only (9.5%) participants have got done the Pap smear test. Question about the awareness regarding vaccine against cervical cancer only 30.5% of participants were aware that vaccine is available against cervical cancer and 37.8% of students have heard about HPV infection. Many participants (52.1%) were in the view that vaginal bleeding after menopause is the symptom of cervical cancer followed by vaginal bleeding between periods (35.5%) and fever and weight loss (33.5%) and others. When we compared the knowledge of medical students with non-medical students, there was significant difference in several aspects of knowledge regarding cervical cancer, HPV, vaccine, and Pap smear test. The barriers against seeking cervical examination were variable, as (25.6%) of students believed that shyness is a barrier for them, other barriers were, too busy, fear form the expected results and others. About the source of information, 28% stated that the curriculum was the major source followed by the other sources like, awareness campaigns, family members and others.

Conclusion: Results of present study propose that the knowledge of the majority of the female students is not adequate about the sign symptoms, risk factors, and preventive measures.

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INTRODUCTION

The cancer of the cervix, is the main health problem internationally and leading cause of death among women of reproductive age. The cervical cancer is one of the very dangerous diseases causing or capable of causing death but most easily avoidable forms of cancer for women, responsible for more than 270000 deaths every, 85% of these occur in underdeveloped countries (WHO, 2015). Each year there is diagnosis of half a million new cases of cervical cancer (Arbyn *et al.,* 2011). It also shows inadequate measures in such countries to control and early diagnosis of cervical cancer (WHO, 2015). Women are the significant proportion of the population of Saudi Arabia. It is estimated that there are 6.51 million women of more than 15 years old and these are exposed to cervical cancer risk (Makoha and Raheem, 2008). They also reported that in Saudi Arabia, the prevalence of cervical cancer is 33.5% of all genital cancers. Each year, cervical cancer is diagnosed in 152 females and 36% passes away from this cancer and it is the eighth common cancer in 15-44 years of women in the Kingdom (Al-Darwish *et al.,* 2014). In developed countries, there is noteworthy decline in

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incidence of cervical cancer and rate of deaths by systematic cytological smear screening programmes (Elovainio *et al.,* 1997). The cervical cancer detection is possible even several years before the actual cancer growth. Ideal age for screening of cervical cancer is 30-40 year, because at this age women are susceptible to have precancerous lesions (Laikangbam *et al.,* 2007; Januszek-Michalecka *et al*., 2013). Pap smear is identified as an important measure for preventing cervical malignancy that causes a high cure rate among patients (Shah *et al.,* 2012). Therefore, population based screening may play pivotal role. In Saudi Arabia, incidence rate of cervical cancer is lowest in the world at 1.9 per 100,000 women (Bazerbashi, 2007). It is suggested that awareness and attitude toward cervical cancer is a key factor that determines the stage at which the cancer patient presents to the health facility. Several studies have reported that there is lack of the awareness regarding cervical cancer, its screening and availability of vaccine, among health professionals and in general public (Ali *et al.,* 2010; McCarey *et al.,* 2011; Khan *et al.,* 2014; Koc, 2015). Literature indicates that efficient screening programs and early diagnosis can help in preventing this lethal disease. Therefore, it is very important to have knowledge regarding sign and symptoms, risk factors and preventive measures of cervical cancer. Even though it is curable and preventable but most of the women reach to the hospital at an advanced phase that needs extensive treatment with more failure rates (Alhamlan *et al.,* 2015). The aim of this study was to assess awareness and attitude towards cervical cancer sign symptoms, risk factors and its prevention among female medical and non-medical students' in Jeddah, Saudi Arabia.

MATERIALS AND METHODS

This exploratory cross sectional survey was conducted at King AbdulAziz University (KAU), Jeddah, from February to March 2014. Seven hundred female students were invited to participate in this study but 547 female students took interest and filled the questionnaire completely. The questionnaire was adapted from relevant literatures and questionnaire was pretested for face validity in a pilot study on 25 medical and non-medical students to confirm that questions were well understood by our students.

The approval from ethical committee of Faculty of Medicine, Rabigh, King Abdulaziz University, Jeddah, was obtained, objective of the survey was explained and consent was taken for participating in this study. The survey was carried out by an anonymous questionnaire with no identifying information about the participants, and the confidentiality of the participants was maintained. The medical educationist also reviewed questionnaire. The questionnaire was divided into several parts; first part was related with the demographic data like age, marital status and year of study. The second part was related with the knowledge regarding cervical cancer and its preventive measures. Third part was comprised of questions regarding risk factors and sign symptoms and fourth part was related with the source of the information and barriers against seeking medical examination. Only completely filled questionnaires were included in the data analysis. For the better understanding of the participants, the questionnaire was translated from English to Arabic language.

Data analysis

The analysis of data was done by using Statistical Package for Social Sciences 21.0. Numerical variables were reported as mean ± standard deviation. The chi square test was used to compare the knowledge between medical and non-medical students. The p-value <0.05 was taken statistically significant.

RESULTS

Five hundred forty seven (547) female students participated in this study with mean age 21.81±1.31 years. Out of the total participants there were 248 (45.3%) medical students and 299 (54.7%) were non-medical students. Majority of the students were unmarried (76.6%), while (23.3%) were married. Majority of students (87.8%) have heard about cervical cancer and most of the participants knew that it is a preventable disease (70.4%). More than half of students (57.4%) heard of Pap smear test, while only (9.5%) participants have got done the Pap smear test. There was variable response of the participants regarding several other questions.

Table 1. Knowledge regarding cervical cancer its sign Symptomsand risk factors

Knowledge regarding cervical cancer	Yes N (%)	No N (%)	I don't know
Have you ever heard about cervical cancer	480(87.8)	67(12.2)	-
Have u heard about human papilloma virus	207(37.8)	340(62.2)	-
Have you heard about vaccine prevent cervical cancer	167(30.5)	380(69.5)	-
Have you heard about Pap Smear	314(57.4)	233(42.6)	-
Have you got done Pap Smear	52(9.5)	495(90.5)	-
Do we need Awareness Campaigns	541(98.9)	6(1.1)	-
Cervical cancer is a preventable disease	385(70.4)	24(4.4)	138(25.2)
Do you think family history of cervical cancer increase the risk of cervical cancer	246(45)	117(21.4)	184(33.6)
There are tests may help in early detection of cervical cancer	467(85.4)	13(2.4)	67(12.2)
Do you think that cervical cancer is treatable in early detection	488(89.2)	9(1.6)	50(9.1)
Knowledge regarding sign symptoms			
Vaginal Bleeding	285(52.1)	41(7.5)	221(40.4)
Vaginal Discharge	165(30.2)	141(25.8)	241(44.1)
Fever and weight Loss	183(33.5)	115(21.0)	249(45.5)
Bleeding between cycle	194(35.5)	91(16.6)	262(47.9)
Painful intercourse	176(32.2)	97(17.7)	274(50.1)
Blood in stool or urine	152(27.8)	98(17.9)	297(54.3)
Persistence pelvic pain	142(26)	108(19.7)	297(54.3)
Knowledge regarding risk factors			
Do you think that smoking is a risk factor	297(54.3)	88(16.1)	162(29.6)
Do you think early marriage is a risk factor	107(19.6)	215(39.3)	225(41.1)
Do you think repetitive pregnancy is a risk factor	105(19.2)	239(43.7)	203(37.1)
Do you think oral contraceptives are risk factors	262(47.9)	96(17.6)	189(34.6)

Table 2. Comparison of Knowledge regarding cervical cancer among medical and non-medical students

Knowledge regarding cervical cancer	Medical students Yes N (%)	Non-medical students Yes N (%)	p-value
Have you ever heard about cervical cancer	226(91.1)	254(84.9)	0.02
Have u heard about human papilloma virus	162(65.3)	45(15.1)	<0.001
Have you heard about vaccine prevent cervical cancer	112(45.2)	55(18.4)	<0.001
Have you heard about Pap Smear	171(69)	143(47.8)	<0.001
Have you got done Pap Smear	24(9.7)	28(9.4)	0.90
Do we need Awareness Campaigns	244(98.39)	297(99.33)	0.29

The majority of the respondent knew about the test for early detection (85.4%) and it is curable by early detection (89.2%). Question regarding vaccine against cervical cancer, only 30.5% of participants were aware that vaccine is available against cervical cancer and 37.8% of students have heard about HPV infection (Table 1). Questions regarding the risk factors many students' identified smoking (54.3%) as a risk for cervical cancer followed by oral contraceptives (47.9%) and others (Table 1). Many participants (52.1%) were in the view that vaginal bleeding after menopause is the symptom of cervical cancer followed by vaginal bleeding between periods (35.5%) and fever & weight loss (33.5%) and others (Table 2). When we compared the knowledge of medical students with non-medical students, there was significant difference in several aspects of knowledge regarding cervical cancer, HPV, vaccine, and Pap smear test (Table 3).

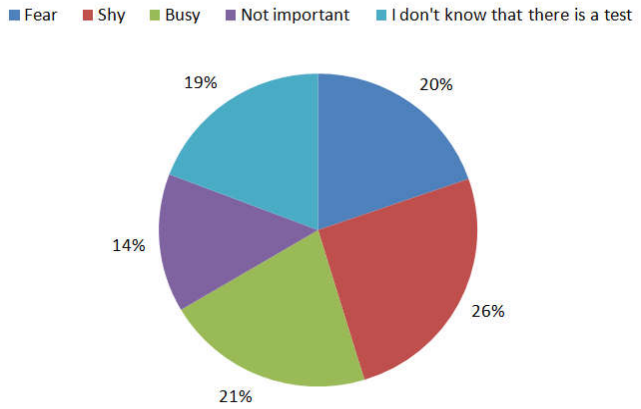

Figure 1. Barriers against seeking cervical examination

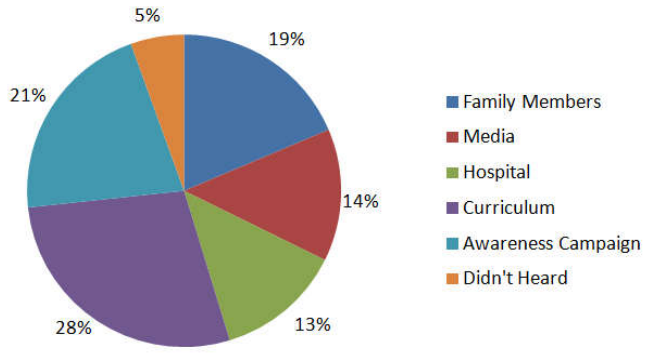

Figure 2. Particpants source of information

The barriers against seeking cervical examination were variable, as 25.6% of students believed that shyness is a barrier for them, other barriers were, too busy (21.2%), fear form the expected results (19.7%) and others (Figure 1). About the source of information, 28% stated that the curriculum was the major source followed by the other sources like, awareness campaigns (21.2%), family members (19%) and others (Figure 2). Almost all of the participants (98.9%) were agreed that there is need for public awareness campaigns.

DISCUSSION

Cervical cancer is a serious problem among females of reproductive age. It is considered as one of the most preventable cancers affecting female population (Akinyemiju, 2012). Our results show that the knowledge of the majority of the female students of university is not adequate about the sign symptoms, risk factors, and preventive measures. In our study majority of the respondents have heard of cervical cancer, while a study in South Africa found less than half (Hoque *et al.,* 2010) and another study at Ibeden found more than half (Ayinde *et al.,* 2004) of their students knew about cervical cancer. Cervical cancer prevention could be divided into two types; primary prevention (vaccine) and secondary prevention (screening test). In our study, more than half of the participants knew that it is a preventable disease while another study 41.8% of participants knew that it is preventable (Hoque *et al.,* 2010) and other study reported that majority of the participants (94.4%) did not know that vaccine against cervical cancer can prevent the disease (Koç, 2015). Several other studies have mentioned low knowledge level among young females (Hussain *et al.,* 2014, Turiho *et al.,* 2015; Khan *et al.,* 2014).

Our results indicate girl medical students had a better knowledge about the cervical cancer than non-medical. This could be due to medical curriculum that gives them more knowledge and awareness. Several risk factors have been recognized such as immunosuppressants, tobacco use, early first sexual intercourse, promiscuity, dietary habits and use of oral contraceptives for long time. It is important to comprehend causes and risk factors of the disease, because after that preventive measures could be taken. Human Papillomavirus is the most important risk factor for developing cancer of cervix. In present study, only 66.6% of students in the present study had knowledge that this form of cancer is caused by HPV infection. Our results are similar to results of a questionnaire-based study in educated youth from India, Sri Lanka and Nepal, which was (48.9%) in India (52.5%) in Nepal (48.5%) in Sri Lanka, in Saudi Arabia (45%) and in Uganda (17.6%) (Al-Darwish *et al.,* 2014; Turiho *et al*., 2015 Joy *et al.,* 2011). The respondents' lack of knowledge regarding HPV infection translated into lack of awareness regarding the availability of the vaccine. In our survey, one

third of the students knew about the availability of the vaccine, which is similar to Khan *et al.* (2014) and dissimilar to Pandey *et al.* (2012).

A South African study reported that about one quarter of the respondents had previous knowledge of the Pap smear test and 9.8% had got the test done. (Hoque, 2010), this result is similar to our results where only (9.5%) of the participants had got Pap smear test done while in a Turkish study, only 1% of the university students had got done Pap smear test (Koc, 2015). This could be due to lack of knowledge about screening of cervical cancer and unawareness about the advantages of Pap smear test, less number of the participants had had the test done. For our study population, the main source of information was curriculum followed by awareness campaign, hospital and social media. A Malaysian survey found out that main source of respondents information regarding cervical cancer, HPV infection and vaccination was education (Rashwan *et al.,* 2012). Another study from Saudi Arabia reported self-learning, curriculum, faculty hospital, and internet as the source of information for male and female students (Al-Darwish *et al*., 2014). Almost half of our participants were medical students because of this reason, for the majority of the study subjects curriculum, hospital and awareness campaigns were the major source of information. The questions regarding risk factors for developing cancer of cervix, more than half students responded positively regarding HPV infection as a cause for cervical cancer, which similar to (Al-Darwish *et al*., 2014) and higher than (Hoque, 2010). Half of our percipients identified that smoking is one of the risk factors for cervical cancer.

A similar finding was described by Al-Darwish *et al*. (2014) that 41.5% of their females students knew that smoking is one of the risk factors for cervical cancer, while in South African and Turkish studies, 18%, and 17% of their participants believed that smoking is one of the risk factors (Hoque and Hoque, 2009; Koc, 2015). In developed countries, their vaccination and screening programmes are very successful and because of screening cervical cancer is identifiable in early stages and this early diagnosis and then treatment caused 80% reduction in cervical cancer cases in these countries (WHO, 2015). Effective screening and treatment programmes could reduce the high mortality rate from cervical cancer particularly in underdeveloped countries.

The barriers of seeking cervical examination were variable, majority of the students believed that shyness is a barrier for them, others were: too busy, fear form the expected results, lack of knowledge, and considering it less important. A recent study, described that major barriers to cervical screening were emotional (shame, fear, embarrassment), cognitive (lack of symptoms, low perceived risk) and practical (lack of time) (Marlow *et al*., 2015). Another study found shyness is the major barrier others reasons were: too busy, fear, lack of knowledge and others (Akujobi *et al.,* 2008). A study in Pakistan, reported that illiteracy, busy routine, shy nature of the women, poverty unawareness about its dangerous and alarming effects, as major reasons behind ignorance about the knowledge of this deadly disease (Khan *et al*., 2014). Symptoms of cervical cancer tend to appear very late and may include irregular, intermenstrual (between periods) or abnormal vaginal bleeding after sexual intercourse, back, leg or pelvic pain; fatigue, loss of appetite, weight loss, vaginal discomfort or odourous discharge and a single swollen leg. Our participants knowledge about signs and symptoms was moderate. Our results are similar to anouthor study carried in Saudi Arabia (Al-Darwish *et al*., 2013) while a study reported that majority of the participants (83.2%) had lack of knowledge abour early signs and symptoms of cervical cancer (Koc, 2015).

Positive family history of cervical cancer increases the chance of incidence in the family responded by almost half of the students, this result is higher than an African study, that found one quarter of their female students knew that family history of cervical cancer could increase the chance of having cancer (Ali *et al.,* 2010). This could be because of the reason that in our study about half of the participants were medical students. We suggest that in every private and public sector hospitals in their gynecology and obstetrics outpatient department, there must be published literature in the form of pamphlet/and booklets or posters for patients information. Those patients who are waiting for their turns for the getting them checked would read that literature and get awareness regarding cervical cancer. That literature should focus on common risk factors about its diagnostic test and the population at risk. This strategy would not only help in educating females of all ages but also help in decreasing the incidence and consequences of this grave disease. Our results identified insufficient knowledge regarding cervical cancer risk factor, signs and symptoms, and the young students were not fully aware about availability of vaccine. It is suggested that students knowledge should be enhanced by including such important topics in their curriculum and mass media and social media can play important role in this regard. Our results may help to develop policy to enhance awareness among females regarding the cervical cancer and its screening and prevention.

Limitations

This is a cross sectional study and knowledge level was self reported and we did not have any tool to validate their statements. It is the perception of small number of King Abdulaziz University students, so results cannot be generalized.

Conclusion

Our findings propose that the knowledge of the majority of the female students of University is not adequate about the sign symptoms, risk factors, and preventive measures. Therefore, there is need to educate young females about this important issue, which can be prevented by regular screening and can be treated easily at an early stage.

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REFERENCES

Akinyemiju, T. F. 2012. Socio-economic and health access determinants of breast and cervical cancer screening in low-income countries: analysis of the World Health Survey. PloS One., 7:e48834.

Akujobi, C.N., Ikechebelu, J. I., Onunkwo, I.and Onyiaorah, I.V. 2008. Knowledge, attitude and practiceof screening for cervical cancer among female students of a tertiary institution in South Eastern Nigeria. *Niger. J. Clin. Pract*., 11:216-219.

Al-Darwish, A. A., Al-Naim, A. F., Al-Mulhim, K. S., Al-Otaibi, N. K., Morsi, M.S.and Aleem, A. M. 2013. 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. Pac. J. Cancer. Prev*., 15:2529-2532.

Alhamlan, F. S., Al-Qahtani, A. A., and Al-Ahdal, M. N. 2015. Current studies on human papillomavirus in *Saudi Arabia. J.Infn. Dev.Cntries*., 9: 571-576.

Ali, S. F., Ayub, S., Manzoor, N.F., Azim, S., Afif, M., Akhtar, N., *et al.* 2010. Knowledge and awareness about cervical cancer and its prevention amongst interns and nursing staff in tertiary care hospitals in Karachi, Pakistan. PLoS One., e11059.

Arbyn, M., Castellsague, X., De Sanjose, S., Bruni, L., Saraiya, M., Bray, F., *et al*. 2011. Worldwide burden of cervical cancer in 2008. *Annl, oncology*., 22:2675-2686.

Ayinde, O. A., Omigbodun, A. O., and Ilesanmi, A. O. 2004. Awareness of cervical cancer, Papanicolaou's smear and its utilisation among female undergraduates in Ibadan. *Afr. J. Reprod. Health,* 8: 68-80.

Bazerbashi, S. 2007. Cancer incidence for specific site. National Saudi Cancer Registry. Riyadh (KSA): Ministry of Health.

Elovainio, L., Nieminen, P. and Miller, A. B. 1997. Impact of cancer screening on women's health. *Int. J. Gynaecol. Obstet*., 58:137-147.

Hoque, E. and Hoque, M. 2009. Knowledge of and attitude towards cervical cancer among female university students in South Africa. *South. Afr. J. Infect. Dis*. 24: 21-24.

Hoque, M. E. 2010. Cervical cancer awareness and preventive behaviour among female university students in South Africa. *Asian. Pac. J. Cancer*. Prev. 11:127-130. http://www.who.int/mediacentre/factsheets/fs380/en/.Key facts reviewed March 2015 [Accessed on August 25, 2015]

Hussain, S., Nasare, V., Kumari, M., Sharma, S., Khan, M. A., *et al*. 2014. Perception of Human Papillomavirus Infection, Cervical Cancer and HPV Vaccination in North Indian Population. PLoS, one., 9: e112861. doi:10.1371/journal. pone.0112861

Januszek-Michalecka, L., Nowak-Markwitz, E., Banach, P. and Spaczynski, M. 2013. Effectivene ss of the National Population-Based Cervical Cancer Screening Programme in Poland–outcomes, problems and possible solutions years after implementation. Ann. *Agric. Environ. Med*., 20;859-864.

Joy, T., Sathian, B., Bhattarai, C. and Chacko, J. 2011. Awareness of cervix cancer risk factors in educated youth: a cross-sectional, questionnaire based survey in India, Nepal, and Sri Lanka. *Asian. Pac. J. Cancer. Prev*., 12: 1707-1712.

Khan, G. J., Naeem, H. S., Khan, S., Jamshaid, T., Sajid, M. I., Bashir, I., andJamshaid, M. 2014. Understanding and Responsiveness Level about Cervical Cancer and its Avoidance among Young Women of Pakistan. *Asian.Pac. J. Cancer. Prev*., 15: 4877-4883.

Koc, Z. 2015. University Students' Knowledge and Attitudes Regarding Cervical Cancer, Human Papillomavirus, and Human Papillomavirus Vaccines in Turkey. *J. Am. Coll. Health*., 63:13-22.

Laikangbam, P., Sengupta, S., Bhattacharya, P., Duttagupta, C., Dhabali, T., Verma, Y., *et al*. 2007. A comparative profile of the prevalence and age distribution of human papillomavirus type 16/18 infections among three states of India with focus on northeast India. *Int. J. Gynecol. Cancer*., 17: 107-117.

Makoha, F. W. and Raheem, M. A. 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.

Marlow, L. A., Waller, J., and Wardle, J. 2015. Barriers to cervical cancer screening among ethnic minority women: a qualitative study. *J. Fam. Plann. Reprod. Health. Care*., 2015; 0:1–7. doi:10.1136/jfprhc-2014-101082.

McCarey, C., Pirek, D., Tebeu, P.M., Boulvain, M., Doh, A,S., Petignat, P. 2011. Awareness of HPVand cervical cancer prevention among Cameroonian healthcare workers. BMC. women's. health., 11: 45.

Pandey, D., Vanya, V., Bhagat, S. and Shetty, J. 2012. Awareness and attitude towards human papillomavirus (HPV) vaccine among medical students in a premier medical school in India. PloS.One., 7(7): e40619.

Rashwan, H.H., Saat, N.Z. and Manan, D.N.A. 2012. Knowledge, attitude and practice of Malaysian medical and pharmacy students towards human papillomavirus vaccination. *Asian. Pac. J. Cancer. Prev*. 13:2279-2283.

Shah, V., Vyas, S., Singh, A., Shrivastava, M. 2012. Awareness and knowledge of cervical cancer and its prevention among the nursing staff of a tertiary health institute in Ahmedabad, Gujarat, India. Ecancermedicalscience, 6.

Turiho, A. K., Muhwezi, W. W., Okello, E. S., Tumwesigye, N. M., Banura, C. and Katahoire, A. R. 2015. Human Papillomavirus (HPV) Vaccination and Adolescent Girls' Knowledge and sexuality in Western Uganda: A Comparative Cross-Sectional Study. PLoS. One., 10: e0137094. doi:10.1371/journal.pone.0137094

World Health Organization (WHO): Human papillomavirus and cervical Cancer. 2015.

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