

Knowledge and Attitude of Female Medical Students of Crimea State Medical University, Ukraine to Cervical Cancer and Examination

Ogunfowora Olumide
Taiwo,¹
Victory I Wilcox,²
Olajumoke Alice Ogunji³

¹BSc, Biochemistry, and 4th Year Medical Student in the International Medical Faculty, Crimea State Medical University, Ukraine, ²3rd Year Medical Student in the International Medical Faculty, Crimea State Medical University, Ukraine, ³4th Year Medical Student in the International Medical Faculty, Crimea State Medical University, Ukraine

Corresponding Author: Victory I Wilcox, International Medical Faculty, Crimea State Medical University, Ukraine. E-mail: vicwilcox@yahoo.com

Abstract

Background: There were no data on the knowledge and attitude of female undergraduate students in Ukraine about this cancer even though In Ukraine, about 21.22 million women are at a risk of having cervical cancer. Cervical cancer ranks as the 6th cause of female cancer deaths in Ukraine, and is the 2nd leading cause of cancer deaths among women aged 15-44 years.

Aim & Objectives: To assess the knowledge and attitude towards cervical cancer and its examination among female medical students of Crimea State Medical University, Ukraine.

Materials & Methods: Data collection was done using a self-administered questionnaire developed to capture the aim of this study. The questionnaire was translated into Russian language and then translated back to English by a different person to assess validity. We measured knowledge about cervical cancer: (risk factors, eligibility for screening and screening techniques), attitudes towards cervical cancer screening and government intervention. 268 questionnaires were administered, 217 were filled and returned, 31 questionnaires were not returned while 20 questionnaires were incorrectly filled (response rate: 81%).

Results: Response rate was 81% (217) with nationalities from Nigeria (41.0%), India (15.2%), Ukraine (13.8%), Russia (9.2%), Crimean Tatar (8.3%), Namibia (3.2%), Uzbekistan (2.8%), Sri Lanka (1.8%), Tanzania (1.4%), Liberia and Turkey (0.9%) each while Armenia, Azerbaijan, Cameroon, Germany and Nepal (0.5%) each. 38% of the respondents were not sure if they had received the HPV Vaccine while 16% did not know what is the HPV Vaccine. 80% of the respondents had heard of cervical cancer but only 58% had heard about cervical cancer screening. Of the screening tests, 17% of respondents knew about the HPV test while only 3% knew about the VIA testing. Even though 82% respondents thought that cervical cancer is a major concern, only 32% had ever done a pap smear.

Conclusion: More than half of the respondents knew about cervical cancer screening (58%), although only 32% of these had ever done a pap smear. This indicates a low level of utilization of Pap smear, probably due to low level of knowledge of the benefits of the test and prevention of cervical cancer. This shows that the females in our institution need to be more effectively educated and informed about cervical cancer and the authorities need to make an effort to put in place screening services that could help in early detection and prevention of the cancer and treatment at pre-malignant stage.

Keywords: Cervical cancer, Cervical cancer screening, HPV, Pap smear, Ukraine, VIA

INTRODUCTION

Cervical cancer is a malignant neoplasm arising from cells originating in the cervix uteri. Vaginal bleeding is a common symptom of cervical cancer, but in some cases it may remain asymptomatic until the cancer is in an advanced stage.¹

According to the World Health Organization, It is the 3rd most common cancer among women worldwide with approximately 83,195 new cases annually, and 35,673 deaths in 2012.² In Ukraine, about 21.22 million women are at a risk of having cervical cancer. Every year, 5,230 women are diagnosed with cervical cancer, and 2,271 women (almost 50%) actually die of this illness. Cervical cancer

ranks as the 6th cause of female cancer deaths in Ukraine, and is the 2nd leading cause of cancer deaths among women aged 15-44 years.³

Infection with some kind of Human Papillomavirus is known to cause cervical cancer (more commonly HPV type 16 and 18). It is estimated that about 50% of all sexually active women will contract this virus at least once in their lives, making HPV the most commonly sexually transmitted disease. Smoking and HIV infection are also known to be leading risk factors for this disease. Others include: Early onset of sexual activities, prolonged use of oral contraceptives, multiple sexual partners, history of STDs, and immunosuppresses, in most cases, cells infected with the Human Papilloma Virus heal on their own. However, in some cases, the virus continues to spread and become an invasive cancer.

Cervical cancer screening is typically recommended starting at age 21.⁴ How often a pap smear should be done varies from once a year to once every five years depending on the result of the smear. Well screened women with no abnormal smears can stop screening about 60-70 years old, although the guidelines on how long to continue screening vary.⁵ Pap-smear screening, every 2-5 years, with appropriate follow-up has been proven to reduce the incidence of cervical cancer by up to 80%.⁶ Also, vaccination against HPV has also proved to reduce the risk of cervical cancer by up to 90%. The cost of the vaccine is the major reason why not so many people have received it. Some governments are making plans towards funding the HPV vaccination. If these plans work, they will also go a long way in reducing the incidence of cervical cancer.

Until very recently, the only ways to cure cervical cancer was either surgically, or through radiation therapy (because cervical cancers are radiosensitive). The choice of treatment depended on the stage of the cervical cancer. A new drug has been discovered in Kenya, 'Cervarix'; Lopinavir which was originally used for HIV treatment. But to cure cervical cancer, it is required in high dosage, hence it is used topically by directly inserting it into the birth canal and it is known to destroy the Human Papillomavirus (HPV).⁷

Currently, there are two vaccines used against the HPV; Gardasil and Cervarix to reduce the risk of cancerous and pre-cancerous changes in the epithelium of the cervix and perineum by 93%,⁸ although it is only effective if administered before infection occurs. It is typically given to women between the ages 9 to 26, and the effect lasts up to 4-6 years. The high cost of these vaccines has been a major source of concern for ages. Some countries are considering

setting up programs to fund this vaccination while some other countries; e.g. South Africa, have developed policies and schemes for screening of cervical cancer,⁹ to reduce the incidence of this disease, and improve the health of the women in the nation.

According to various research, the number of women who have this illness without being aware of it is very high. Apart from the fact that it is asymptomatic in the early stages, many of them are not enlightened about it. Lack of knowledge about the HPV infection and lack of preventive measures are also leading causes of cervical cancer. According to various studies, many women have never had a pap smear in their lives, and many more have not heard of cervical cancer screening. More attention and efforts should be paid to enlighten women about this illness as this will also go a long way in reducing the number of cases and deaths recorded annually.

In Ukraine, there is no scheme set aside for vaccination against the HPV or for cervical screening. If a female has any symptoms, she will have to consult with her doctor who will then direct her to the Oncology department. A lot of ladies admitted to feeling embarrassed, scared, or uncomfortable having to discuss their symptoms with the doctors. Some said they won't be able to make time to see the doctor while some others just would not be bothered.

MATERIALS & METHODS

Inclusion and Exclusion Criteria

The study population was comprised of female medical students of the Crimean State Medical University, Ukraine within the age range of 16-60 years. All female students who neither are medical students nor within the age range were excluded from the study.

Study Design and Data Collection Instrument

Data collection was done using a 37-item self-administered questionnaire developed to capture the aim of this study between January and March, 2014. The questionnaire was translated to Russian language and then translated back to English language by a different person to assess validity. We measured knowledge about cervical cancer, attitudes towards cervical cancer screening and government's role in reducing cervical cancer incidence. 268 questionnaires were administered, 217 were filled and returned, 31 questionnaires were not returned while 20 questionnaires were incorrectly filled (response rate: 81%). Respondents were given a free hand in their responses to questions and were only guided when they voluntarily called

for assistance. They were also assured that the information provided would be kept confidential.

Data Analysis

Data was entered and analyzed using Statistical Package for Social Sciences 11.5 (SPSS 11.5). Descriptive statistics of socio-demographic information, knowledge, attitudes and practices of participants regarding cervical cancer were determined and reported in the forms of mean, standard deviation, proportions and percentages.

RESULT

Demography

Response rate was 81% (217) with nationalities from Nigeria (41.0%), India (15.2%), Ukraine (13.8%), Russia (9.2%), Crimean Tatar (8.3%), Namibia (3.2%), Uzbekistan (2.8%), Sri Lanka (1.8%), Tanzania (1.4%), Liberia and Turkey (0.9%) each while Armenia, Azerbaijan, Cameroon, Germany and Nepal (0.5%) each. Of the remaining 51 questionnaires, 31 questionnaires were not returned

while 20 questionnaires were incorrectly filled. Majority of the respondents were in the age range of 16-25, 33% of the respondents were in the 3rd year of medical education and 93% were single (Figures 1-3, Table 1). Even though 80% of respondents had heard of cervical cancer (Figure 6), only 13% had received the HPV vaccine (Figure 5) while 9% had a family history of cancer (Figure 4).

Knowledge of Cervical Cancer and Risk Factors

16% of respondents indicated that they knew a lot about cervical cancer while 55% indicated they knew not so much about the cancer (Figure 8). Majority of the respondents (46%) wrongly believed that blood test is used for cervical cancer screening while only 3% knew of the VIA method of screening (Figure 7). The main source of information

Table 1: Age range

Socio-demographic variable	Frequency	Percentage (%)
Age range		
16-25	188	87
26-40	28	13
Above 40	1	0

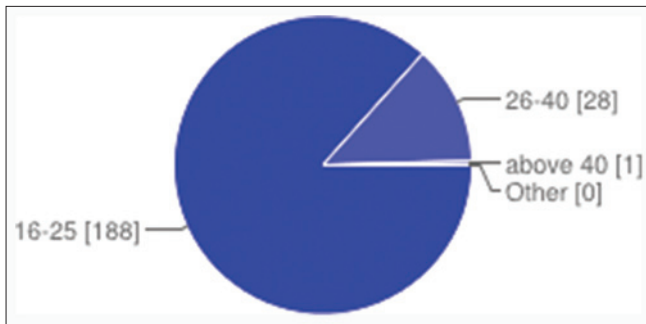


Figure 1: Age range

1 st	36	17%
2 nd	26	12%
3 rd	71	33%
4 th	50	23%
5 th	15	7%
6 th	15	7%

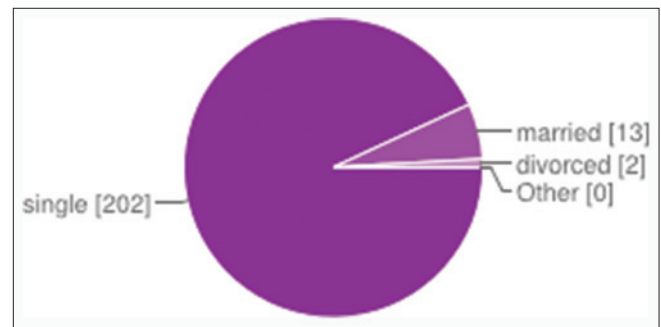


Figure 3: Marital status

Single	202	93%
Married	13	6%
Divorced	2	1%
Other	0	0%

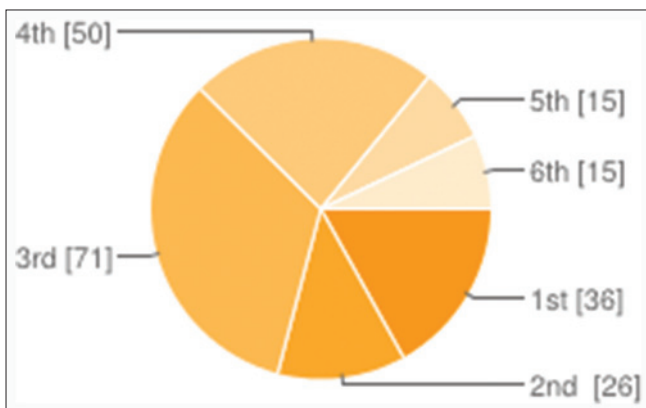


Figure 2: Course (Student)

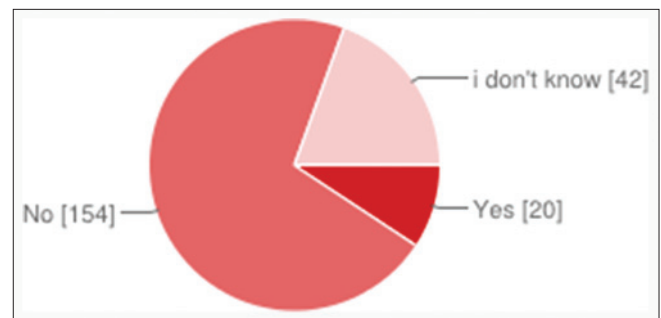


Figure 4: Family history of cancer

Yes	20	9%
No	154	71%
I don't know	42	19%

indicated by the respondents was the internet (37%) while only 2% had read about it in a medical textbook (Figure 9). 4% had relatives who had cervical cancer (Table 3), 25% did not know if it is preventable and 5% thought it can't

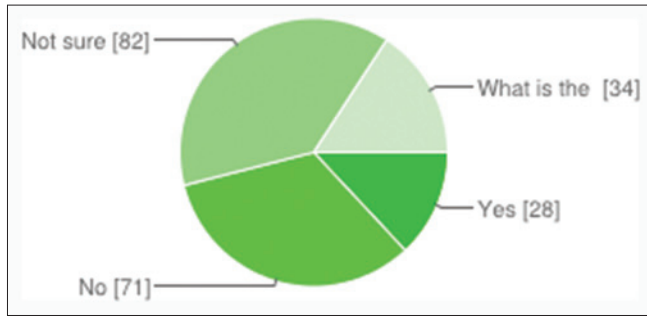


Figure 5: Did you receive the HPV vaccine

Yes	28	13%
No	71	33%
Not sure	82	38%
What is the HPV vaccine	34	16%

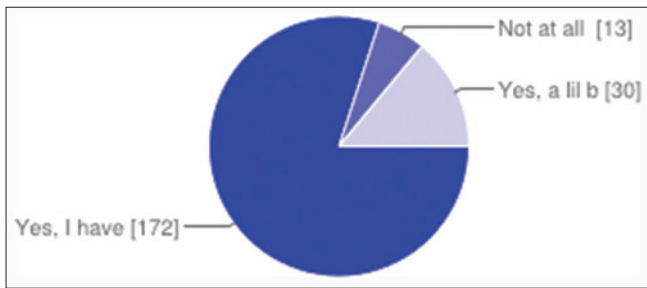


Figure 6: Have you heard of cervical cancer?

Yes, I have	172	80%
Not at all	13	6%
Yes, a lil bit	30	14%

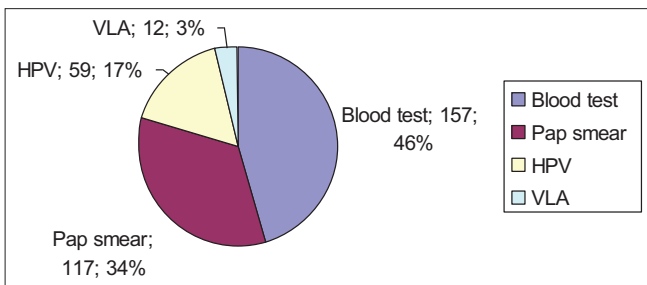


Figure 7: Types of screening tests you know

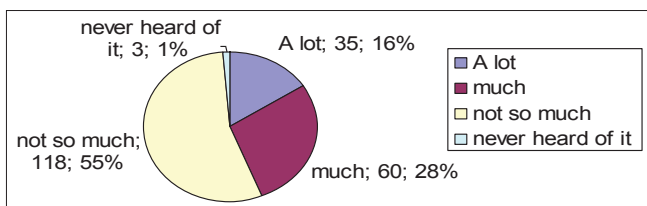


Figure 8: How much do you know about cancer

be treated (Figures 15 and 16). Unusual vaginal discharge (27%) was the most common symptom indicated while 4% and 6% wrongfully thought that rash and swelling in the pubic area respectively were symptoms of cervical cancer (Table 2, Figure 14). Even though HPV is the main risk factor for cervical cancer, only 9% of respondents had indicated it. Only 2% of respondents knew that social status plays a role in cervical cancer, as poor women do

Table 2: Symptoms of cervical cancer

Variable	Frequency	Percentage (%)
Symptoms of cervical cancer		
Vaginal bleeding between periods	123	26
Bleeding after intercourse	75	16
Pain during intercourse	99	21
Unusual vaginal discharge	127	27
Rash in supra-pubic region	18	4
Swelling in supra-pubic region	28	6

Table 3: Have you, your family or close friends ever had cervical cancer

Variable	Frequency	Percentage (%)
Have you, your family or close friend ever had cervical cancer		
Me	3	1
Close family member	5	2
Other relative	9	4
Close friend	4	2
Other	1	0
Neither me, family nor close friend	183	89

Table 4: Risk factors

Variable	Frequency	Percentage (%)
Genetics	145	19%
Alcohol	45	6%
Smoking	71	9%
Multiple partners	95	12%
Unprotected sex	70	9%
contraceptives	57	7%
IUDs	30	4%
Multiple pregnancies	40	5%
Social status	15	2%
Young age at first pregnancy	29	4%
HPV	67	9%
vulvular warts	42	5%
Diet	12	2%
Other types of cancer	60	8%

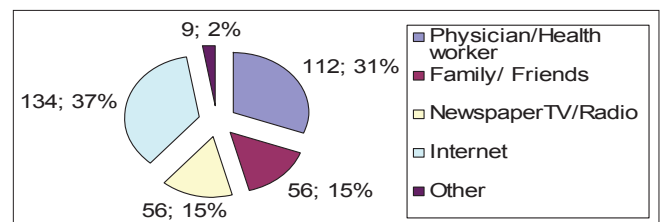


Figure 9: Source of information about cervical cancer

not access to adequate health care services including pap tests (Table 4).

Cervical Cancer Screening

58% of respondents had heard about cervical cancer screening mainly through the internet (Figure 18). 67%

had not done cervical cancer screening (Figure 20) and when asked why they had not been screened, 46% said they were healthy while 38% said the doctor did not request (Table 8, Figure 26). When asked for a reason why they would not visit the doctor even if they had a symptom related to cervical cancer, 29% said they would be worried what the doctor might find while 10% said they would feel uncomfortable talking about their symptoms with their

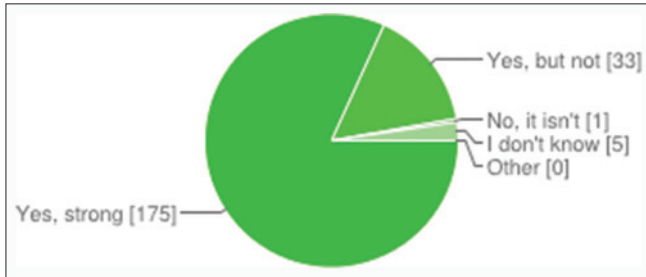


Figure 10: Do you think it is a major concern

Yes, strongly	175	82%
Yes, but not that really serious	33	15%
No, it isn't	1	0%
I don't know	5	2%
Other	0	0%

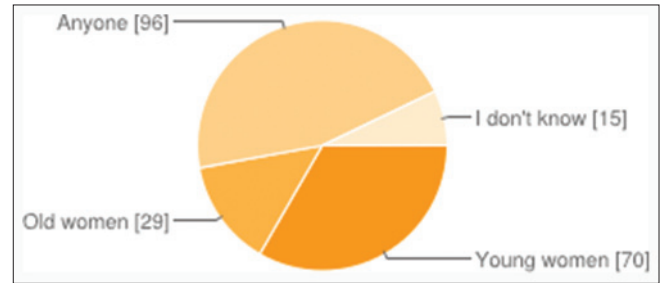


Figure 13: Who is at more risk

Young women	70	33%
Old women	29	14%
Anyone	96	46%
I don't know	15	7%

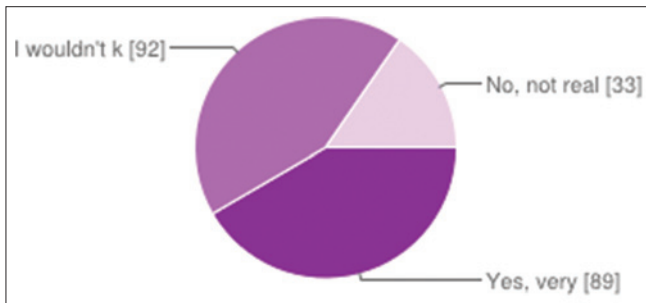


Figure 11: Is it widespread

Yes, very	89	42%
I wouldn't know	92	43%
No, not really	33	15%

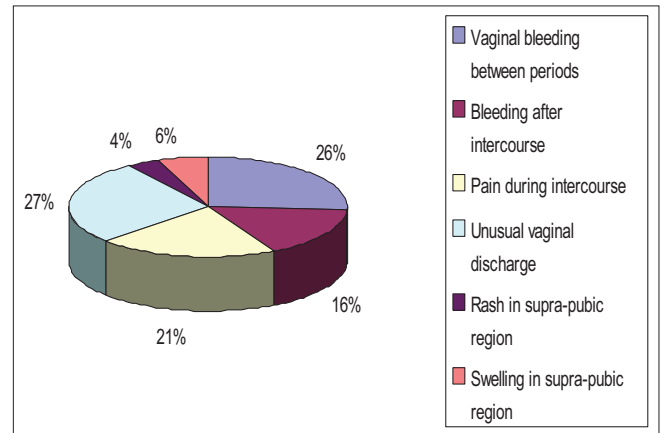


Figure 14: Symptoms of cervical cancer

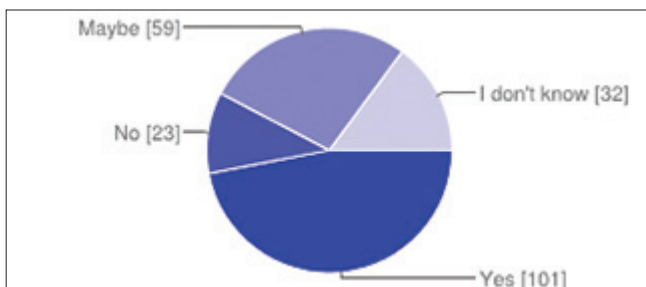


Figure 12: Can it be caught in early stages

Yes	101	47%
No	23	11%
Maybe	59	27%
I don't know	32	15%

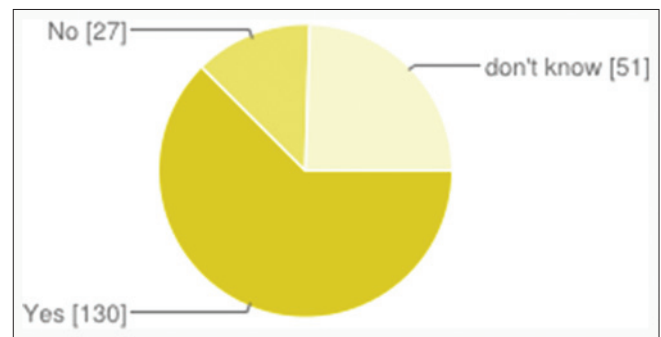


Figure 15: Can cervical cancer be prevented

Yes	130	63%
No	27	13%
Don't know	51	25%

doctor (Table 7). 28% of respondents did not know at what age the first screening should be done while 9% thought that smoking 24 hours before the screening will affect the test result (Table 9, Figure 22).

Government Intervention

29% of respondents knew of at least a government programme set at curbing cervical cancer while 45% were not sure they knew any (Figure 30). Majority of

respondents thought that the government placed a 40-59% priority on health care (Figure 32) and that most people can not afford the cost of the diagnostic tests (Figure 33). However, majority of the respondents (65%) agreed that

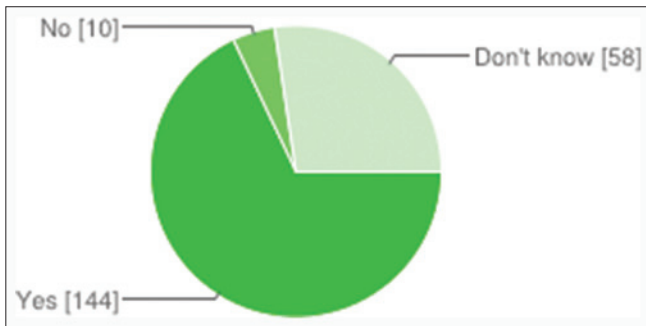


Figure 16: Can cervical cancer be treated

Response	Frequency	Percentage (%)
Yes	144	68%
No	10	5%
Don't know	58	27%

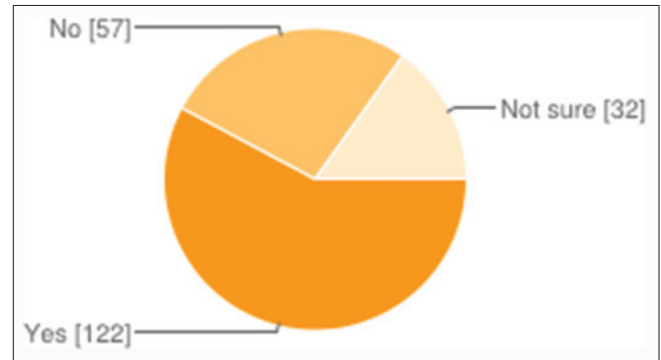


Figure 18: Have you heard of cervical cancer screening

Response	Frequency	Percentage (%)
Yes	122	58%
No	57	27%
Not sure	32	15%

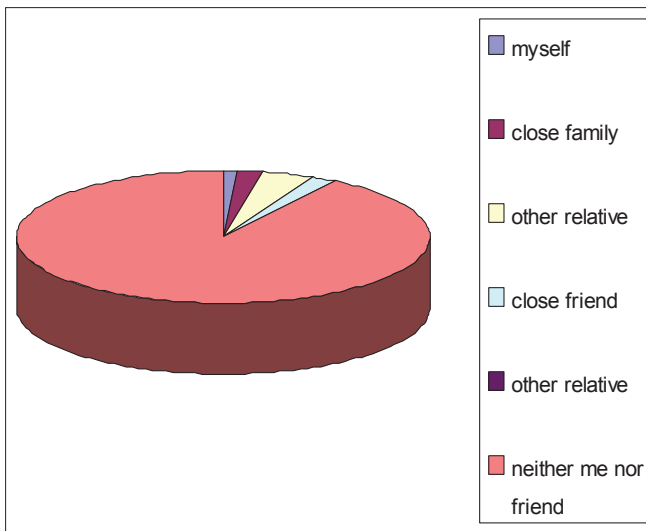


Figure 17: Have you, your family or close friends ever had cervical cancer?

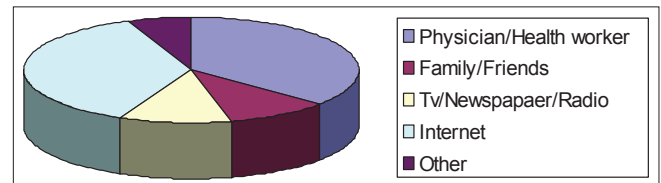


Figure 19: Source of information for Cervical Cancer Screening

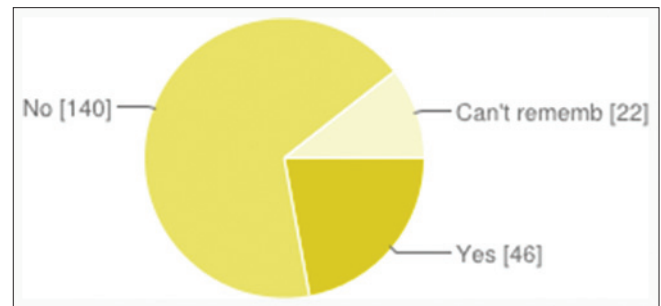


Figure 20: Had cervical cancer screening

Response	Frequency	Percentage (%)
Yes	46	22%
No	140	67%
Can't remember	22	11%

Table 5: Source of information for cervical cancer screening

Variable	Frequency	Percentage (%)
Source of information		
Physician/health worker	95	36
Family/friends	26	10
Tv/newspaper/radio	30	11
Internet	99	37
Other	17	6

Table 6: Reasons for uptake of cervical screening test

Variable	Frequency	Percentage (%)
Reasons for uptake of cervical cancer screening		
Doctor's request	36	33
Free / Subsidized	16	15
Self-conviction	28	26
Part of a general screening program	29	27

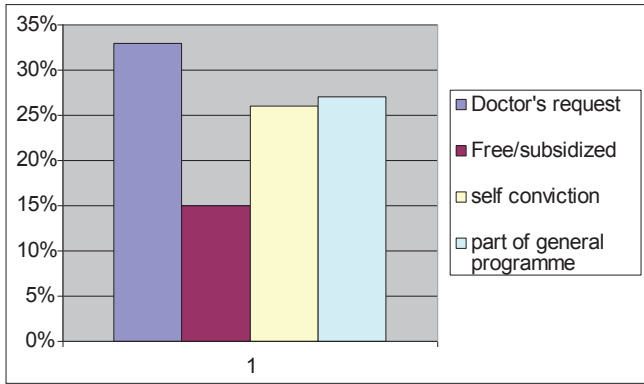


Figure 21: Reasons for uptake of cervical screening test

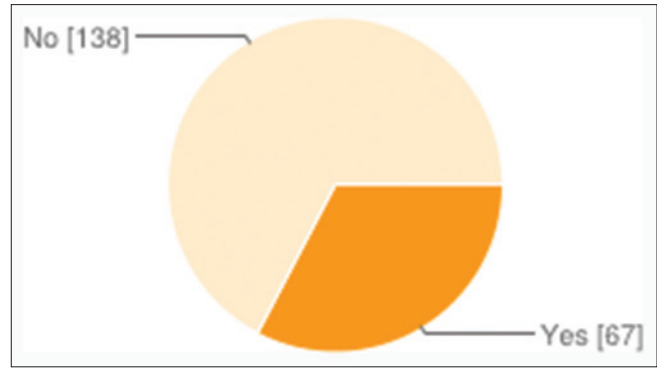


Figure 24: Have you done a pap smear in the last 3 years

Yes	67	33%
No	138	67%

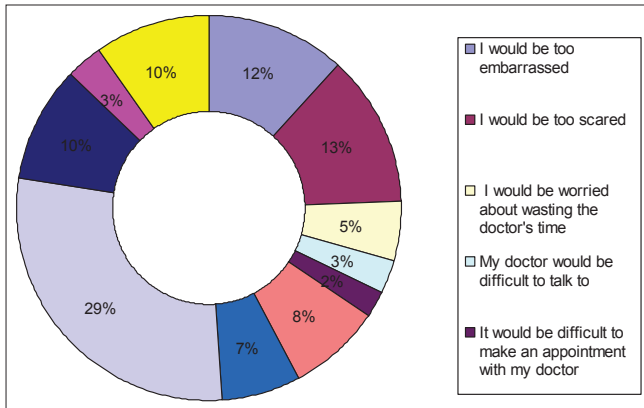


Figure 22: Could you say if this reason might put you off going to the doctor if you had a symptom that you thought might be a sign of cervical cancer?

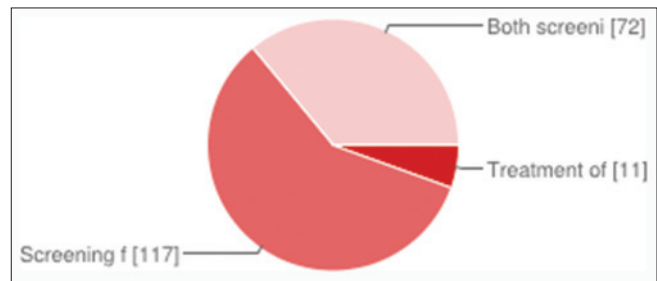


Figure 25: Cervical cancer screening is used for

Treatment of cancer	11	6%
Screening for cancer or pre-cancer	117	59%
Both screening and treatment	72	36%

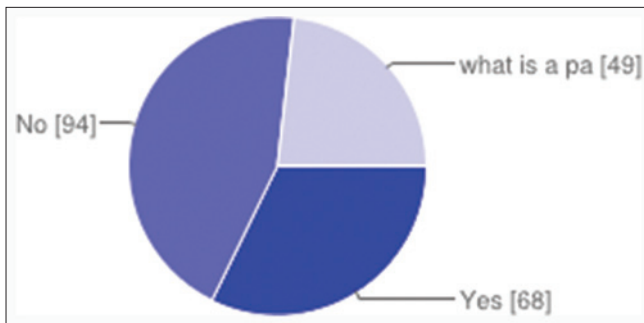


Figure 23: Have you ever had a Pap smear

Yes	68	32%
No	94	45%
What is a pap smear	49	23%

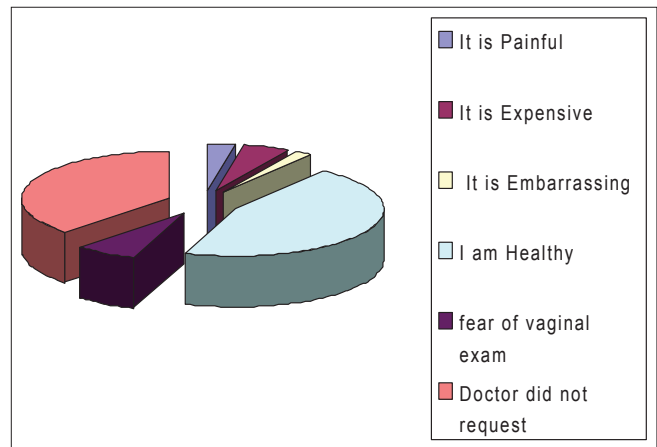


Figure 26: Reasons for non-uptake of cervical screening test

the government has an important role to play in reducing the spread of the cancer (Figure 34).

DISCUSSION

The study was restricted to female undergraduate students in Crimea state medical university. Cervical

cancer will remain one of the commonest female genital cancer in Ukraine for decades to come if concerted and sustained efforts are not geared towards preventive measures. In this study, we sought to establish the level of knowledge about cervical cancer and its screening, risk factors and government intervention. Most of the respondents were aware of cervical cancer (80% of students) (Figure 6), although this is low when compared

with a similar study done at the Faculty of Medicine, University of Porto where all the respondents had heard about cervical cancer.¹⁰ We found out that students in 5th and 6th years of study knew more about cervical cancer than students in the 1st and 2nd year, this may however be a sign of their education level rather than solely their experience.

More than half of the respondents knew about cervical cancer screening (58%) (Figure 18), although only 32% of these had ever done a pap smear (Figure 20). This indicates a low level of utilization of Pap smear, probably due to low level of knowledge of the benefits of the test and

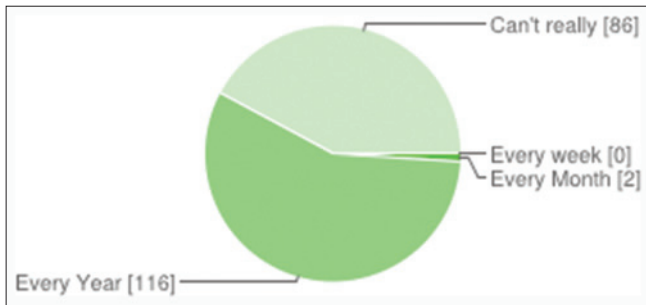


Figure 27: How frequently do you go for check-up

Frequency	Count	Percentage
Every week	0	0%
Every Month	2	1%
Every Year	116	57%
Can't really say	86	42%

Table 7: Could you say if this reason might put you off going to the doctor if you had a symptom that you thought might be a sign of cervical cancer

Variable	Frequency	Percentage (%)
Could you say if this reason might put you off going to the doctor if you had a symptom that you thought might be a sign of cervical cancer?		
I would be too embarrassed	24	12
I would be too scared	26	13
I would be worried about wasting the doctor's time	10	5
My doctor would be difficult to talk to	6	3
It would be difficult to make an appointment with my doctor	4	2
I would be too busy to make time to go to the doctor	15	8
I have too many other things to worry about	13	7
I would be worried about what the doctor might find	57	29
I would not feel comfortable talking about my symptoms with the doctor	20	10
I might not be able to see a female doctor	5	3
I would worry about not being taken seriously	20	10

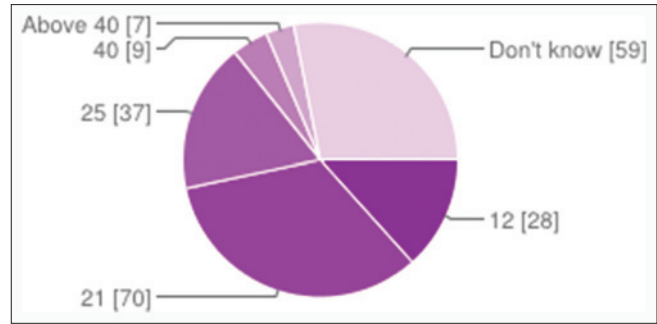


Figure 28: At what age should cervical screening start

Age	Count	Percentage
12	28	13
21	70	33%
25	37	18%
40	9	4
Above 40	7	3
Don't know	59	28

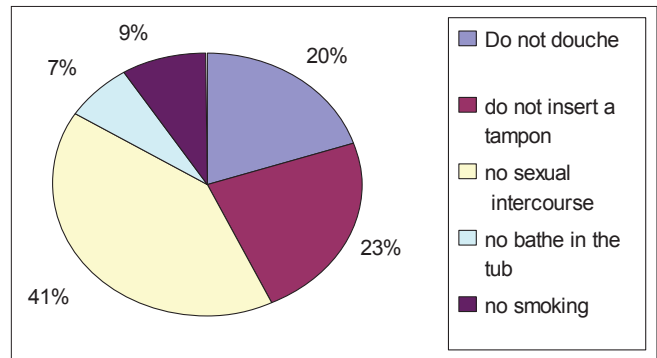


Figure 29: What not to do 24 hours prior to screening

Table 8: Reasons for non-uptake of cervical screening test

Variable	Frequency	Percentage (%)
Reasons for non-uptake of cervical cancer screening		
It is painful	5	3
It is expensive	9	5
It is embarrassing	3	2
I am healthy	88	46
Fear of vaginal exam	14	7
Doctor did not request	74	38

Table 9: What not to do 24 hours prior to screening

Variable	Frequency	Percentage (%)
What not to do 24 hours before screening		
Do not douche	63	20
Do not insert a tampon	75	23
No sexual intercourse	131	41
No bathe in the tub	22	7
No smoking	20	9

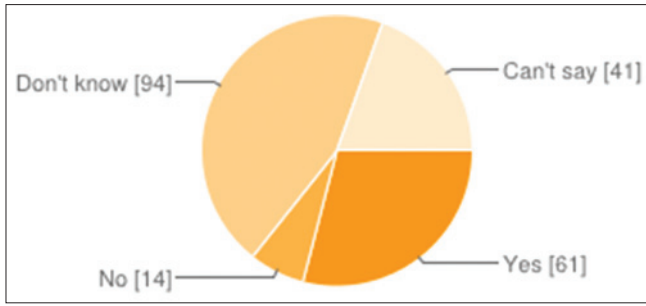


Figure 30: Are there any programs set at curbing cervical cancer

Yes	61	29%
No	14	7%
Don't know	94	45%
Can't say	41	20

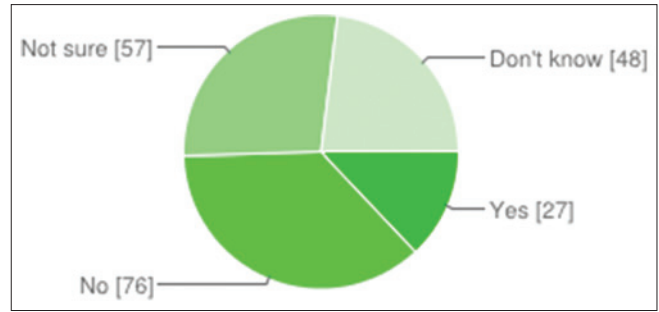


Figure 33: Can most people afford the cost of diagnostic tests

Yes	27	13%
No	76	37%
Not sure	57	27%
Don't know	48	23%

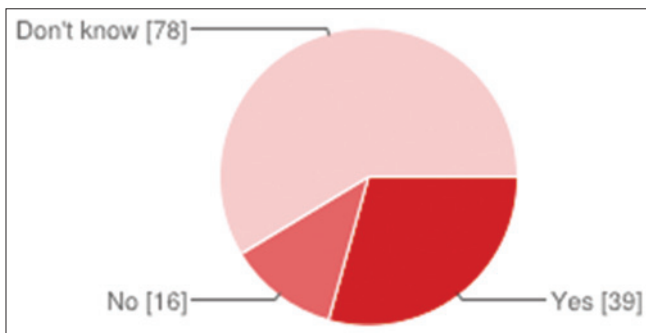


Figure 31: If yes, are they effective

Yes	39	29%
No	16	12%
Don't know	78	59%

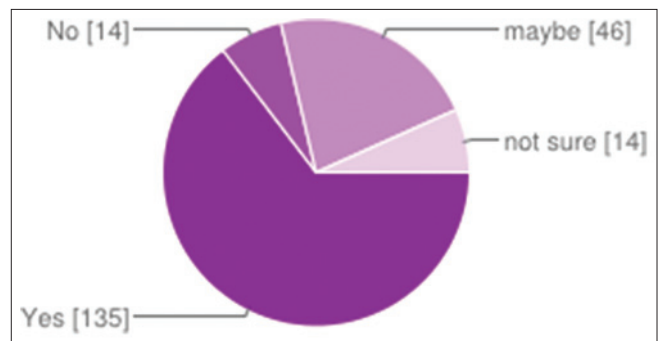


Figure 34: Do you think the government could have an important role to play in reducing the spread of cervical cancer?

Yes	135	65%
No	14	7%
May be	46	22%
Not sure	14	7%

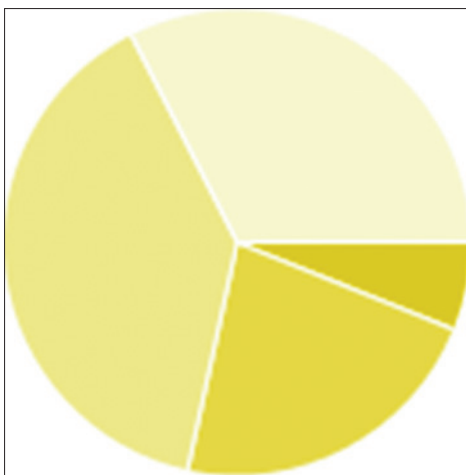


Figure 32: How much priority does government place on health care

100-90%	12	6%
89-60%	44	22%
59-40%	77	39%
<39%	64	32

prevention of cervical cancer. Majority of the respondents indicated the media as their source of information (Table 5, Figure 19), further supporting the view that the role of media campaigns should be considered as these are known to work best in promoting knowledge about cervical cancer and screening when multiple media are used. There should be provisions made available for female students when attending health clinics at the university for any condition. Health care workers at the clinic can educate female students during the annual medical check-up, and motivate them to have a Pap smear performed, targeting the risk population on risk factors for cervical cancer. This can improve the university community's knowledge of cervical cancer and practices on the Pap smear test when they seek medical care. The success of the screening programme in reaching its aim is dependent on achieving adequate coverage and thus could reduce morbidity and mortality from cervical cancer (Table 6).

LIMITATIONS OF THE STUDY

Prior to administering the questionnaire, it is possible that some students had studied cervical cancer as a portion of their course by reading recommended materials and had thus acquired a greater knowledge of the subject prior to questioning. Some homogenization of answers could have occurred through comparing answers in class. A restricted time period was given for filling in the questionnaire, this was designed to avoid this. This may also have introduced another limitation because the short time given may have led the students to provide fast, poorly considered responses.

CONCLUSION

The study shows that the level of awareness among female students is fairly low, and most ladies don't know so much about cervical cancer. There is a good knowledge about cancer screening, but practice of cervical cancer screening is low and majority of the respondents wrongly believed that blood test is used for cervical cancer screening and very few know about the VIA method of screening. There is a fair knowledge of the risk factors but knowledge about the associated signs and symptoms is moderately low. This shows that the females in our institution need to be more effectively educated and informed about cervical cancer and the authorities need to make an effort to put in place screening services that could help in early detection and prevention of the cancer and treatment at pre-malignant stage.

AKNOWLEDGEMENT

The authors are grateful to Efunnuga Henrietta, student of International Medical Faculty, Crimea State Medical University, Ukraine for her valued contributions. The authors are also grateful to all the participants who took part in the study.

REFERENCES

1. Kumar V, Abbas AK, Fausto N, Mitchell RN. *Robbins Basic Pathology* 8th ed. Saunders Elsevier. 2007;718-721.
2. Bruni L, Barrionuevo-Rosas L, Sorzano B, Brotons M, Cosano R, Munoz J, Bosch FZ, de Sanjose S, Castellsague X. ICO information centre on HPV and cancer (HPV information centre). Human Papillomavirus and related diseases in India. Summary report, 2014-03-17.
3. International Agency for Research on Cancer. Cervical Cancer. Estimated Incidence, Mortality and Prevalence 2012.
4. Karjane N, Chelmow D. New cervical cancer screening guidelines, again. *Obstetrics and gynecology clinics of North America* 2013;40(2):211-23.
5. U.S. Preventive Services Task Force (2003). "Screening for Cervical Cancer: Recommendations and Rationale. AHRQ Publication No. 03-515A". Rockville, MD.: Agency for Healthcare Research and Quality. Retrieved June 5, 2010.
6. Arbyn M, Anttila A, Jordan J, Ronco G, Schenck U, Segnan N, Wiener H, Herbert A, von Karsa L. European Guidelines for Quality Assurance in Cervical Cancer Screening. Second Edition-Summary Document. *Annals of Oncology* 2010;21(3):448-458.
7. Science daily, HIV drug used to reverse effects of virus that causes cervical cancer. February 17, 2014 <http://www.sciencedaily.com/releases/2014/02/140217085248.htm>.
8. http://en.wikipedia.org/wiki/Cervical_cancer.
9. (<http://www.kznhealth.gov.za/cervicalcancer.pdf>).
10. Ezem BU. Awareness and uptake of cervical cancer screening in Owerri, South-Eastern Nigeria. *Ann Afr Med.* 2007;6:94-8.

How to cite this article: Ogunfowora Olumide Taiwo, Victory I. Wilcox, Olajumoke Alice Ogunji. "Knowledge and Attitude of Female Medical Students of Crimea State Medical University, Ukraine to Cervical Cancer and Examination". *Int J Sci Stud.* 2014;2(3):15-24.

Source of Support: Nil, **Conflict of Interest:** None declared.