

Exploring of Cervical Cancer's Knowledge among Female Nursing Students Based on Junior and Senior grades' information

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Abstract:

Background: Egypt has a population of 28.37 million women aged 15- 44 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 866 women are diagnosed with cervical cancer and 373 die from the disease. Cervical cancer in Egypt ranks as the 10th most frequent cancer among women between 15 and 44 years of age. The study aimed to assess knowledge of female nursing students regarding risk factors of cervical cancer and to explore the association between educational stage and knowledge level of the students about cervical cancer.

Subjects and Methods: Systematic sampling was used and self-administered questionnaires were given to 230 1st grade students (Junior) and 174 from 4th grade (senior), (100%) and (99%) respectively of whom responded.

Results: A total of Three hundred and eighty-nine (n=398) students completed the survey questionnaire for a 100% response rate. knowledge score (86.2%) of the participants had thought their knowledge about cervical cancer was inadequate according to their answers for question.

Conclusion: The low knowledge level of participants reflected the urgent need for modification of nurses curricula to include the cervical cancer prevention which increase female awareness based on improving female nursing students knowledge.

Keywords: Cervical cancer, knowledge, Senior, Junior, grades, students

I. Introduction

Egypt has a 28.37 million women aged 15 years and older who are at risk of developing cervical cancer. Current Egypt summary report indicates that every year 866 women are diagnosed with cervical cancer and 43% of them die from the disease. Cervical cancer in Egypt ranks as the 10th most frequent cancer among women between 15 and 44 years of age [1].

Cervical cancer is a deadly disease in its late stages. However, out of all the female genital tract cancers, it is the only preventable cancer if detected at its early stages. Population-based screening with Pap smear is an important secondary preventive measure for cervical cancer that leads to a high-cure rate among cervical cancer patients [2].

Studies conducted in foreign countries have indicated that knowledge of cervical cancer is necessary to improve screening coverage. Such knowledge includes an understanding of the causes of cervical cancer, the utility and purpose of cervical cancer screening, test methods, and information on "when" and "where" screening is conducted, and the associated risk factors for cervical cancer [3].

Nurses can provide health promotion counselling to the patients they serve in their day-to-day practice. They can fulfil a key role in health promotion and disease prevention, and they are in an ideal position to provide health education to young girls and women. It is necessary to make the nursing staff have knowledge about cervical cancer, and its prevention to the general public [2].

II. Aim Of The Study

To assess knowledge of female nursing students regarding risk factors of cervical cancer.

To explore the association between educational stage and knowledge level of the students about cervical cancer

III. Subjects & Methods

Design

A descriptive correlational design to examine relationships between students' educational stage and their knowledge level about cervical cancer,

Participants

The target groups were female nursing students from junior and Senior grades Nursing female students

Sample size

The total sample size was 398 respondents were enrolled voluntarily in the study as (210) from 300 junior students at 1st year and 188 from 200 senior students at 4th year

Setting:

The study was done in the Faculty of Nursing at Assiut University.

3.5. Study tools: A self-administered titled "Awareness of Cervical Cancer Questionnaire" in English language was distributed to the students and collected by the principal researchers during break time between their lectures. The researchers explained the aims of research to the female students before being asked for consent and to fill in the questionnaire. Through the use of systematic sampling, questionnaire which given to 312 students as 203 from Junior (first) and 108 from senior (fourth) grade whom voluntary agree to participate in the study. The questionnaire of this study was guided by cervical cancer awareness measure (CAM) toolkit version 2.1 (2011) [4] and we modified it according to our culture values.

4. Pilot study:

It was done to test the validity, feasibility, clarity and objectivity of the questionnaire before collection of data. It was conducted on 10% of total sample from both groups' junior and senior grades.

5. Ethical consideration:

The ethical approval for this study was obtained from Ethical committee at faculty of nursing at Assiut University Egypt. In addition to, oral consent which obtained from respondents.

IV. Results

Data were entered and analyzed by the researcher using the Statistical Package for Social Sciences (SPSS) version 20. The results were presented as means and frequency tables. T-test was used to find relation between dependent and independent variables with significance at <0.05

A total of Three hundred and eighty-nine ($n=398$) students completed the Survey questionnaire for a 100% response rate. The mean age of the participated juniors "1st grade" and seniors "4th grade" students was 19.5 years ($S.D \pm 0.89$) and 21.6 years ($S.D \pm 0.75$) respectively. Their ages were ranged between (18-25) years old so ≤ 20 years were 65.1% ($n= 182$) and >20 years were 41.7% ($n= 130$). The other demographic data as their college level was 65.1% ($n=203$) from junior students and 34.9% ($n=109$) were from senior students.

Almost all (95.5%) of the sample students were single ($n = 298$), while 4.5% were married ($n = 14$). This study realized that two hundred and sixty nine (86.2%) of the participants had thought their knowledge about cervical cancer was inadequate according to their answers for question of adequacy knowledge of cervical cancer. In addition to the family history of cervical cancer, the results reflected that 96.6% answered no ($n=301$) while 3.5% answered yes ($n= 11$) (See table1).

Demographic data

As shown in table 1, Demographic characteristics for the whole sample ($n = 312$)

Knowledge of cervical cancer risk factors

An analysis of the questions on risk factors of cervical cancer provided a knowledge profile of the junior compared with senior student participants. Based on knowledge level, a mean knowledge score was 16.7 ± 18.7 and 30 ± 20.2 for junior and senior respectively and probability value was significant whereas ($P.value < 0.001$)

As shown in Table 2, Knowledge of cervical cancer risk factors between Junior and senior students according to their correct answers reflected statistical significance ($P. Value < 0.001$) in the following items: the transmission of associated virus with cervical cancer was 14.3% ($n= 29$) of junior versus 34.9% ($n= 38$) of senior. Using Pap smear for diagnosis of cervical cancer reflected 11.3% ($n= 23$) versus 35.8% ($n=39$). The answers of required precautions for prevention of cervical cancer were 19.2% ($n= 39$) versus 42.2% ($n= 46$) for junior & senior respectively. The respondents knew that HPV can live in the skin without causing growths or changes 4.4% ($n= 9$) versus 15.6% ($n=17$). Multiple sex partners one of cervical cancer risk factors and students' answers reflected 19.2% ($n=39$) versus 49.5% ($n= 54$). In addition to poor nutrition as a risk factor was showed 24.6% ($n=50$) versus 42.2% ($n=46$) with statistical significance ($P. value < 0.002$).

The sources of knowledge on cervical cancer as shown in Fig.1, Source of knowledge on cervical cancer

Different sources of knowledge on cervical cancer were also identified. The most common and important source of information mentioned by junior and senior students was 40% and 74.7% for educational materials followed by independent readings were cited by 25.9% for juniors while media (TV and Women's magazine) were the next source of knowledge for seniors and the least source of knowledge was health care providers 12.9%. For junior while the independent reading 6.9% was the least for seniors Student's opinion in the female chances to contract cervical cancer

When the total participant (312) students asked about their opinion of female chances to contract cervical cancer, they respond based on degrees of agreement ranged from 1 for strongly agree to 5 for strongly disagree.) one hundred thirteen (36.2%) of students were disagree that "all women have an equal chance of developing cervical cancer" while 5.1% (n=16) were strongly agree. One hundred and eight (34.6%) cited their natural agreement for "their chances of getting cervical cancer are high" while 5.1% (n=16) were strongly agree. More than third 37.8% of them cited their neutral agreement for their chances of contracting HPV are low while 10.6% (n=34) were strongly agree.

In their ability to avoid cervical cancer, more than third of them 37.8% were agree while 3.2% (n=10) were strongly disagree. However 41% (n=128) of them said agree that they have ability to avoid HPV infection while 3.5% (n=11) were strongly disagree. When asked if women who develop cervical cancer must have their uterus removed, more than third 39.4% were cited neutral respond while 8% (n=25) were strongly agree. The cervical cancer is the most serious among other diseases cited by 33.7% (n=104) for neutral agreement followed by 31.7% for agree while strongly disagree cited by 4.5% (n=14). The students' believed that HPV is curable with proper medical treatment reflected by 38.5% (n=120) were agree followed by 37.8% (n=118) for neutral respond. Also students' opinion about cervical cancer is often curable with early detection and proper medical treatment was cited by 35.9% (n=112) for agree followed by 33.3% (n=104) for neutral and 3.8% (n=12) for strongly disagree. In addition, they were agree that HPV is a life-threatening disease and their respond cited 39.4% (n=123) while 3.2% (n=10) were strongly disagree. The last question "no one dies anymore from cervical cancer" their respond were neutral and cited by 37.2% (n=116) while 6.1% (n=19) were strongly agree.

V. Discussion

This study was focused on female undergraduate students from two different stages (1st and 4th) grades at faculty of Nursing, Assiut University. In this study we pursued to explore knowledge' level of female nursing students, regarding risk factors of cervical cancer and find the association between Students' educational stage and their knowledge level.

Knowledge level.

Our analysis showed that the students from the senior (4th grade) versus those from junior (1st grade) had significantly better knowledge level about cervical cancer. The majority of the nurses in this study had inadequate knowledge on cervical cancer similar findings to Tanzania study which reported by Urasa and Darj[5] also similar with Uganda study by Mutyaba, Mmiro and Weiderpass [6].

Our study revealed a low level of knowledge of the junior and senior students on cervical cancer. Most of the risk factors for cervical cancer were recognized by 16.7% for junior of and 30% for senior and both of them less than 50% which is similar to India study by Saha, et al [7].

Out of all our student respondents almost one forth (24%) and more than one third (37.5%) respectively could identify early sexual intercourse through early marriage cigarette smoking are risk factors of cervical cancer which reflected better knowledge than percentage reported in India study by Saha, et al [7]. Which cited 13% and 29% respectively for the same risk and both of studies in contrast with the Ghana study by Peter and Navkiran [8] which reflected that college students had very low (1%) awareness smoking as a risk factor of cervical cancer. Also our study in contrast with Malaysian study by Wong et al. [9] which reflected that women aged 21 years and more could not identify any of these risk factors.

However, when we exploring the knowledge, it was revealed a very few of the participants (11.3%) in our study had knowledge of "Pap smear test", it was interesting to note that the students from juniors where their science background is very limited, this finding is in agreement with Saha, et al [7] which reported the similar findings with students from non-science background. While the senior students respondents 35.8% could identified pap test for diagnosis for cervical cancer which is contrast with reported findings in same study Saha et al.[7] which had a large number of the students have neither heard of Pap test.

The virus associated with cervical cancer is sexually transmitted virus. For further confirmation in our study, this information identified by 35% from senior students which is similar to a Korean survey by Oh et al. [10] who found that 31.5% of females know that sexually transmitted infections (STIs) can cause cervical cancer. However, these findings in contrast with Indian findings by Saha, et al [7] which reported a very few (4%) of their students aged 17-24 years had such knowledge. In addition to studies in Asian countries which reported by Dinh et al.[11] and Lee et al.[12] also reflected low knowledge levels among participants on association between STIs and HPV in cervical cancer.

Other risk factors of cervical cancer and pre-cancer cells are the presence of HPV virus. This factor identified by low percentage of students in our study as 11% and 16.5% respectively for juniors & seniors this finding was similar with Ghana study by Peter and Navkiran,[8] done among college students aged 18-35 years and reported very low awareness (7.9%) of the link between HPV and cervical cancer. Also our study findings

in agreement with both different Korean studies on female high school and university students reported that HPV infection was a risk factor for cervical cancer which is identified by low percentage 19.0% and 9.5% respectively by Oh et al. [10] and Han et al.[13]. However, study done in US by Lopez and McMahan [14] found little more percentage as 21.5% of the college females to have never heard of HPV.

Source of information:

The results of this study also revealed that three fourth of senior students versus forty percentage of junior student got their knowledge from educational/ study materials and this was in agreement with Tanzania study by Urasa and Darj [5] which reported Nursing school was a major source of information for many nurses in spite of the lack information given in faculty of nursing.

The media acts as another source of information which reflected an interesting results in our study explored higher percentages of junior students than seniors and this in agreement with Tanzania study which reported that, the media has played an important role in increasing cancer awareness. However, media has presented more than one fifth 21% share in publishing information on cervical cancer to the women and this finding in contrast with India study by Aswathy et al [15] which reported that major (more than half) of information share by media.

VI. Tables And Figures

Table 1.

Variable	Frequency	%
Age (Years)		
Mean ± S.D		
≤20 years old	182	58.3
>20 years old	130	41.7
College level		
1 st grade	203	65.1
4 th grade	109	34.9
Marriage status		
Single	298	95.5
Married	14	4.5
Knowledge adequacy		
Yes	43	13.8
No	269	86.2
Family history of CC		
Yes	11	3.5
No	301	96.5

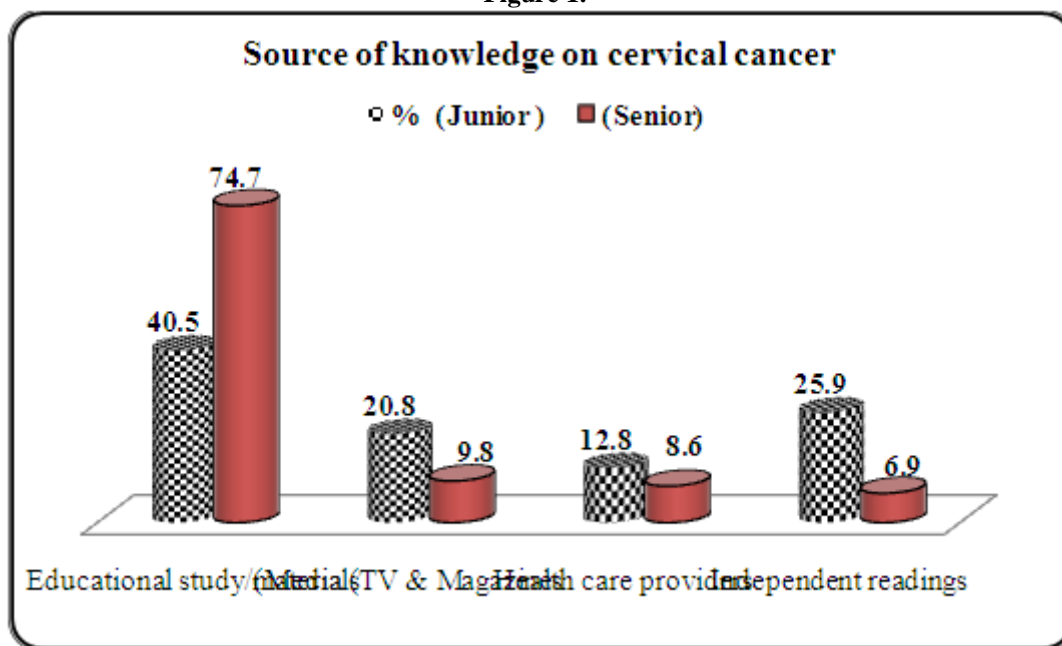
CC: Cervical cancer

Table 2:

Item	First (n=203)				Fourth (n=109)				P. value
	Correct		Incorrect		Correct		Incorrect		
	No.	%	No.	%	No.	%	No.	%	
1- the virus associated with cervical cancer is transmitted bysexual intercourse	29	14.3	174	85.7	38	34.9	71	65.1	<0.001**
2- Cervical cancer and pre-cancer cells are associated with the presence of Herpes simplex virus	22	10.8	181	89.2	18	16.5	91	83.5	0.159
3- Cervical cancer can be diagnosed byPap test	23	11.3	180	88.7	39	35.8	70	64.2	<0.001**
4- Prevention of cervical cancer may requiremany precautions	39	19.2	164	80.8	46	42.2	63	57.8	<0.001**
5- Human papillomavirus (HPV) can causegenital warts	12	5.9	191	94.1	2	1.8	10	9.2	0.150
6- HPV can live in the skin without causing growths or changes	9	4.4	194	95.6	17	15.6	92	84.4	0.001*
7- Multiple sex partners	39	19.2	164	80.8	54	49.5	55	50.5	<0.001**
8- Having genital warts	21	10.3	182	89.7	20	18.3	89	81.7	0.046*
9- marriage before age 18	37	18.2	166	81.8	32	29.4	77	70.6	0.031*
10- having contracted any sexually transmitted diseases	35	17.2	168	82.8	32	29.4	77	70.6	0.014*
11- Smoking cigarettes	72	35.5	131	64.5	43	39.4	66	60.6	0.539
12- poor diet or nutrition	50	24.6	153	75.4	46	42.2	63	57.8	0.002*
13- use of oral contraceptives	52	25.6	151	74.4	38	34.9	71	65.1	0.090

*statistically significant (P<0.001)

Figure 1.



VII. Conclusion

Through the findings of our study, we explored a very low level of knowledge about cervical cancer. In addition to the different educational stages were not reflected a weighty variance in the level of knowledge. Finally, there is an urgent need for modification of nursing curricula in our country especially the gynecology materials to include the cervical cancer prevention programs as an integral part to increase knowledge of nursing students and to improve female awareness in the community as a care providers

Recommendations

The need for educational materials or program regarding cervical cancer to improve nurses knowledge as they are acts as a source of information in the community.

Increase female awareness about cervical cancer through media channels (TV, Radio, and press).

Competing interests

There is no competing interests of the authors

VIII. Strengths

In this study, we provided female nursing students from both grades (1st & 4th) within an instructional brochure including the answers of the questionnaire questions and all items explained by researchers through data show presentation for more clarification. This simple source of information reflected a very useful and applicable tool for cervical cancer information

The impact of the instructional information tool measured through positive responses of students which reflected a majority of 4th grade students were respond correctly on the questions while three fourth of 1st grade were respond correctly.

IX. Limitations

The access of the whole students at the same time was difficult due to their busy schedule.

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