Effect of Educational Sessions on Enhancing Female Nursing Students Knowledge about Human Papillomavirus and its Vaccination

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Abstract

Background: Human papillomavirus infection is one of the most widespread sexually transmitted viral infection and considered to be a risk factor for cervical cancer development.

Aim of the study: to evaluate the effect of educational sessions on enhancing female nursing students’ knowledge about human papillomavirus and its vaccination.

Study design: A quasi-experimental design.

The setting of the study: was conducted in the Faculty of Nursing, Zagazig University, Egypt.

Sample: A purposive sample

Subjects: The study was conducted in one hundred eighty-two students.

The tool of Data collection: Females’ characteristic data and Females’ knowledge questionnaire.

Results: The findings of the study revealed that the mean age of the studied group was 19.95 ± 0.510 years old. There was an improvement with a highly statistically significant difference showed in the studied students’ knowledge regarding HPV infection and its vaccination at post-intervention compared with pre-intervention (p<0.001).

Conclusion: The study concluded that educational sessions were enhanced female student’s knowledge regarding human papillomavirus and its vaccination.

Recommendations: It was suggested to develop a planned education program for standard education by covering HPV subjects in courses more thoroughly in the curriculum before students’ graduation and to integrate missing subjects into the programs and to apply current course content using various educational methods.

Keywords: Human Papilloma Virus, Educational sessions, Human Papilloma Virus vaccine, knowledge.

Introduction

Human papillomavirus (HPV) infection causing benign and malignant lesions of the skin and mucosa of the anogenital and upper aero-digestive tract in both women and men [1,2]. The incidence rate of cervical cancer attributable to HPV who have already diagnosed about 569,847 new cases annually and 311,365 deaths worldwide. [3]. In Egypt, about 969 new cervical cancer cases are diagnosed with annually [4].
According to the relation with cancer, the virus can be classified to Low-risk HPV genotypes Infection (non-oncogenic type) which causing genital warts and High-risk HPV genotypes infection (oncogenic type) is a cause of certain morbidities, including cervical cancer [5,6].

HPV is usually transmitted through penetrative genital contact (anal or vaginal), non-genital contact methods without penetration or from infected mother to her fetus during pregnancy through the placenta or at the time of vaginal birth via vertical and perinatal transmission [7,8].

There is no HPV infection treatment, but only for its clinical manifestations [9]. Currently, there are three licensed HPV vaccines worldwide. The recommended age for vaccination is 11-12 years [10]. Gardasil® (Tetravalent) prevents against types 6, 11, 16 and 18 [11]. Cervarix® (Bivalent) is effective against types 16 and 18 [12]. Gardasil 9® prevents against types (6, 11, 16, 18, 31, 33, 45, 52, 58), showing potential coverage of approximately 90% of vulvar, vaginal, cervical and anal cancers [13].

Significance of the study: Globally, Human Papillomavirus (HPV) infection is the most commonly sexually transmitted disease [14]. One of the obstacles to the implementation of primary and secondary prevention programs against the disease is the insufficient knowledge possessed by most populations about the virus and its consequences. Lack of knowledge may lead to the further spread of the disease [15].

Aim of the study: To evaluate the effect of educational sessions on enhancing female nursing students’ knowledge about human papillomavirus and its vaccination.

Research Hypotheses: Educational sessions will enhance female nursing students’ knowledge about human papillomavirus and its vaccination.

Material and Methods

Research Design: A quasi-experimental design was used in this study.

Study Setting: The study was conducted in the Faculty of Nursing, Zagazig University.

Subjects and Sample

Sample size: The study was conducted in (182) female nursing students who registered in the first, second, third & fourth academic years (2019-2020).

Sample type and Sample criteria: A purposive sample for all the female students who are studied through the studied year (2019-2020) was included and agreed to participate in the study.

Tools of data collection: Data collection was done through the use of the following tools:

- Tool I: A Structured Interview Questionnaire: A structured interview questionnaire was designed in a simple Arabic form, it was included items such as (Age, Academic year, Marital status, family history of HPV & contraceptive methods, etc).

- Tool II: Females’ Knowledge questionnaire items: It included (28) multiple-choice questions which divided into two sections:
  - Section (A): To pertaining students’ knowledge regarding HPV infection as it included (12) multiple-choice questions (Definition, Incubation period, Types, etc.)
  - Section (B): To pertaining students’ knowledge regarding HPV vaccination which comprised of [16], multiple-choice questions as (Definition, Component, Importance, Recommended age of HPV vaccination etc.).

Scoring system for knowledge: For multiple-choice questions were categorized into: Don’t know was given (zero), the incomplete answer was given (one), and the complete answer was given (two). The total knowledge score was calculated by adding the scores for each correct answer. The total score of knowledge ranged from 0 to 56 points.

Levels of knowledge: Studied student’s total knowledge was divided into 3 levels as the following:

- Good: (≥ 75% -100%).
- Average: (50 - < 75%).
- Low: (< 50%).

Official Approvals: Official approval was obtained by submitting an official letter to the Dean of the Faculty of Nursing at Zagazig University to obtain the agreement to apply this study after an explanation of its purpose.

Fieldwork

Preparatory phase: During this phase, the researcher reviewed local and international literature to get more knowledge about the study. This also helped in designing the study tools.

Validity and Reliability: Tools were thoroughly reviewed by a panel of five experts in the field of Obstetrics and Gynecological Medicine and Nursing to test its content validity. Modifications were done accordingly based on their judgment. Reliability was done by Cronbach’s Alpha Coefficient Test.

Pilot study: A pilot study was conducted on a sample of students on 10%(19 students) of the total sample who’s not included in the total sample size. According to the results of it, required modifications were done.

Assessment Phase: The researchers introduced themselves, greeted all the students, and explained brief information around the questionnaire. The average time for the completion of the questionnaire was around (30 minutes).

Planning & Implementation Phase: The students were classified into four groups (each group specific to each academic year), this distribution according to their availability to facilitate their attendance to the sessions, at the educational lecture hall at the faculty of nursing at Zagazig University. The content was divided into four interactive sessions “once per week” for each group of students for one month. Each session was conducted for 2 hours. The PowerPoint presentation was done with printed Arabic booklet for each student, followed by a group discussion.
Follow up and Evaluation Phase: At the final session for each group, the researchers asked the studied students to fill up the post-test by using the exact format of knowledge questionnaires.

Results

Table 1 presents the distribution of the studied students according to their socio-demographic characteristics. It illustrates that about more than half (54.6%) of studied students were in the age group 18-20 years with a mean age of 19.95 ± 0.510 years. Furthermore, the majority of them (85.9%) were single. The family history about HPV & cervical cancer, there was detected in 1.1% of the sample. This result also reveals that there was only 12.3% of the total studied students who had previous knowledge about HPV and its vaccine.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age /year</td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>54.6</td>
</tr>
<tr>
<td>21-23</td>
<td>44.9</td>
</tr>
<tr>
<td>More than 23</td>
<td>0.5</td>
</tr>
<tr>
<td>Mean age = 19.95 ± 0.510</td>
<td></td>
</tr>
<tr>
<td>Gynecological and Family history</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>14.1</td>
</tr>
<tr>
<td>Single</td>
<td>85.9</td>
</tr>
<tr>
<td>Contraceptive methods</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>93.5</td>
</tr>
<tr>
<td>Hormonal</td>
<td>6.5</td>
</tr>
<tr>
<td>Family History of HPV</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>98.9</td>
</tr>
<tr>
<td>Yes</td>
<td>1.1</td>
</tr>
<tr>
<td>Family History of cervical cancer</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>98.9</td>
</tr>
<tr>
<td>Yes</td>
<td>1.1</td>
</tr>
<tr>
<td>Previous knowledge about HPV and vaccine &amp; its source</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>12.3</td>
</tr>
<tr>
<td>No</td>
<td>87.7</td>
</tr>
<tr>
<td>Health care provider</td>
<td>64.9</td>
</tr>
</tbody>
</table>

Table 1: Distribution of the studied students regarding their sociodemographic characteristics (n = 182).

Figure 1: Distribution of the studied students regarding their level of knowledge about Human Papillomavirus (n = 182)
The distribution of the studied students regarding their level of knowledge about Human Papillomavirus was presented in Figure 2. It was noticed that majority (9.7%, 93% and 95%) of the studied sample had a good level of knowledge regarding HPV infection at pre-test, post-test & follow up phases respectively.

![Figure 2: Distribution of the studied students regarding their level of knowledge about Human Papillomavirus vaccine.](image-url)

Figure 2 displays that, 3.2%, 61.9%, and 100% of the studied sample had a good level of knowledge regarding human papillomavirus vaccine at pre-intervention, post-intervention & follow up phases respectively.

Table 2 illustrates that there was a highly significant relation between studied students’ pre educational sessions knowledge about Human Papillomavirus and marital status.

<table>
<thead>
<tr>
<th>Items</th>
<th>Pre HPV knowledge Level</th>
<th>Post HPV knowledge Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Average</td>
</tr>
<tr>
<td>Age (year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>71</td>
<td>70.3%</td>
</tr>
<tr>
<td>21-23</td>
<td>51</td>
<td>61.4%</td>
</tr>
<tr>
<td>&gt; 23</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>single</td>
<td>16</td>
<td>61.5%</td>
</tr>
<tr>
<td>married</td>
<td>107</td>
<td>67.3%</td>
</tr>
</tbody>
</table>

Table 2: Relationship between the level of students’ knowledge about Human Papillomavirus and sociodemographic characteristics

Table 3 illustrates that there was statistically significant between studied students’ Pre and post-intervention knowledge about Human Papillomavirus and contraceptive methods (P = .021 and .016 respectively).
Table 3: Relationship between the level of students’ knowledge about Human Papillomavirus and Family and gynecological history:

Discussion

There are about 630 million persons are infected with human papillomavirus (HPV), Worldwide. The prevalence of HPV infections increases in adolescence in both genders every year from 14 to 24 years of age; HPV infection has alarming proportions and is a predisposing factor for several types of cancers, such as cervical cancer. The development of highly effective HPV vaccines is important to reduce the incidence of cervical cancer caused by HPV infection [16].

Regarding the family history of HPV and cervical cancer, there were only 1.1% had a family history of HPV and cervical cancer. Similar findings were noted by [17] study about “Knowledge and perception of female nursing students about human papillomavirus (HPV), cervical cancer, and attitudes toward HPV vaccination” stated that 1.2% of the sample had a family history of CC [18] study about “Knowledge and perception of female nursing students about human papillomavirus (HPV), cervical cancer, and attitudes toward HPV vaccination” stated that 1.2% of the sample had a family history of cervical cancer. This low rate could be explained by decrease awareness of the importance of annual checkups and screening. This study showed that previous knowledge of the studied students about HPV and its vaccine was very low and the majority of them had this knowledge from the health care provider.

This supports the finding of a previous study done in Egypt by [19] about “Prevalence and type distribution of human papillomavirus among women older than 18 years in Egypt: a multicenter, observational study” in Cairo, Egypt who showed that more than half of the sample hadn’t known before about HPV, the common source was from TV/magazine/newspaper and Friend or family member. On the contrary, [20] study about “Human Papillomavirus Infection and Vaccination: Knowledge and Attitudes among Nursing Students in Italy” reported that most of the sample had heard about HPV. Regarding the female level of knowledge about HPV, this study showed the knowledge of studied students before the educational intervention that more than two-thirds of them had a low level while immediately after the educational intervention the majority had a good level and increase more after follow up. A similar finding was reported by [21] study about “Effect of Educational Intervention on Knowledge and Attitudes Regarding Human Papillomavirus Infection and Its Vaccination among Nursing Students” that 4.5% and 84% of the sample had a good level of knowledge at pre-intervention and post-intervention phases respectively. While it was revealed that 94% and (4.5%) of the studied sample had a poor level of knowledge of pre-intervention and post intervention phases respectively.

Conclusion

The educational sessions enhanced female student’s knowledge regarding human papillomavirus and its vaccination.

During all phases of the study, all ethical issues were taken into consideration; the researcher maintained anonymity and confidentiality of the subjects.

References

2. https://doi.org/10.1542/peds.2018-1457
8. https://doi.org/10.1016/j.jiph.2018.06.005
9. https://doi.org/10.1016/j.jegh.2018.02.003
10. https://doi.org/10.1177%2F0956462418824441
15. http://dx.doi.org/10.18203/2394-6040.ijcmph20174826
18. https://doi.org/10.1016/j.ijid.2014.07.029
19. https://doi.org/10.3390/ijerph16101770