



E-ISSN: 2664-2301
P-ISSN: 2664-2298
IJOGN 2024; 6(1): 36-39
Received: 07-12-2023
Accepted: 10-01-2024

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Effectiveness of self-instructional module on knowledge regarding human papilloma virus vaccination among the students in selected basic BSC nursing colleges

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DOI: <https://doi.org/10.33545/26642298.2024.v6.i1a.132>

Abstract

HPV infection is a viral infection that commonly causes skin or mucous membrane growths (warts). There are more than 100 varieties of human papillomavirus (HPV). Some types of human papillomavirus (HPV) infection cause warts, and some can cause different types of cancer. Most HPV infections don't lead to cancer. But some types of genital HPV can cause cancer of the lower part of the uterus that connects to the vagina (cervix). The HPV vaccine protects against genital warts and most cases of cervical cancer. It protects against cancer of the vagina, vulva, penis or anus caused by HPV. The HPV vaccine also protects against mouth, throat, head, and neck cancers caused by HPV. The vaccine gives the body a safe way to build immune system awareness of some HPV strains. This means the body has an easier time clearing out those strains of the virus if a person catches them later. Many studies found that knowledge about HPV vaccine among teenage found very poor. Method: Descriptive Evaluative Approach and pre-experimental one group pre-test post-test design used to conduct study. The sample size of the study was 100. The sampling technique used for the study was Non-Probability Convenient sampling. Result: Finding of the study revealed that in pre-test 36.95% of samples answered correctly. In Post-test 88.6% of samples answered correctly after administration of self-instruction module. Finding shows that self-instruction module is effective to enhance knowledge about HPV vaccine among students. Conclusion: self-instruction module was found effective in improving knowledge of students regarding HPV vaccine. Hence it is recommended by researcher that furthermore studies shall be conducted, and HPV awareness needs to enhance by government bodies.

Keywords: Human papilloma virus, HPV vaccine, self-instruction module, effectiveness, cancer

Introduction

The World Health Organization's Global Burden of Disease statistics identified cancer as the second largest global cause of death, after cardiovascular disease. Cancer is the fastest growing segment of the disease burden; global cancer deaths are projected to increase from 7.1 million in 2002 to 11.5 million in 2030. One third of cancers are preventable and another third are curable through early detection and effective therapy. Human papillomavirus (HPV) has been conclusively demonstrated to be the causative agent of cervical cancer. Approximately 130 different Human Papilloma Virus types have been identified and, of these Human Papillomavirus types 15 types of Human Papilloma Virus types are classified as 'high risk' for the development of cervical cancer. Together Human Papilloma Virus 16 and 18 are responsible for over 70% of all cases of cervical cancer ^[1].

Worldwide about 15 percent and nearly 26 percent of cancer cases in developing countries are attributed to infectious agents, particularly viruses ^[1]. Cervical cancer, which is mainly caused by specific types of high-risk (HR) human papillomavirus (HPV) infection, is a leading cause of cancer-related deaths among women in India. HR HPV types 16 and 18 infections are considered responsible for about 75-80 percent of cervical cancer worldwide ^[2]. In India, annually, about 1,32,000 new cancer cases and 80,000 deaths occur, and the prevalence of HPV type 16 was found to be exclusively very high. Two prophylactic vaccines, namely Gardasil and Cervarix approved by the USFDA (US Food and Drug Administration) are available for vaccination of adolescent girls.

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According to the similar studies, prophylactic HPV vaccination can reduce the burden of cervical cancer in India by more than 75 percent [2].

Need of the study

Global burden of cancer worldwide using the GLOBOCAN 2018 estimates of cancer incidence and mortality produced by the International Agency for Research on Cancer, with a focus on geographic variability across 20 world regions. There will be an estimated 18.1 million new cancer cases (17.0 million excluding nonmelanoma skin cancer) and 9.6 million cancer deaths (9.5 million excluding nonmelanoma skin cancer) in 2018. In both sexes combined, lung cancer is the most commonly diagnosed cancer (11.6% of the total cases) and the leading cause of cancer death (18.4% of the total cancer deaths), closely followed by female breast cancer (11.6%), prostate cancer (7.1%), and colorectal cancer (6.1%) for incidence and colorectal cancer (9.2%), stomach cancer (8.2%), and liver cancer (8.2%) for mortality. Among females, breast cancer is the most diagnosed cancer and the leading cause of cancer death, followed by colorectal and lung cancer (for incidence), and vice versa (for mortality); cervical cancer ranks fourth for both incidence and mortality [3].

Claudio Pelucchi., (2010) conducted a study to assess Knowledge of human papillomavirus infection and its prevention among adolescents and parents in the greater Milan area, Northern Italy. Results of the study shows that More mothers than fathers were aware that HPV infection could concern their children (58% vs 53%; $p = 0.004$) and were favourable towards vaccinating their children against HPV (68% vs 65%; $p = 0.03$); among the students, more females than males were aware that HPV infection could concern themselves (45% vs 26%; $p < 0.001$) and would undergo vaccination against HPV (68% vs 40%; $p < 0.001$). researcher concluded study that Both students and parents seem to underestimate the likelihood of HPV infection, and this is associated with a lower propensity for vaccination [4].

Orkun Çetin *et al.*, (2013) conducted study on Knowledge levels of adolescent girls about human papilloma virus and its vaccine. The aim of our study was to evaluate the level of knowledge of the adolescent girls who presented to our clinic about human papilloma virus (HPV) infection and HPV vaccine. Results of the study found that only one of the subjects (0.9%) was vaccinated with HPV vaccine. When the subjects who did not wish to be vaccinated were asked for the reason, 40.9% stated that the reason was inadequate information, 26.4% stated that the reason was high cost, 16.4% stated that the reason was the fact that they did not consider themselves at risk and 16.4% stated that the reason was the fact that they were afraid of side effects [5].

Aim of the study

The aim of the present study is to improve the knowledge regarding Human Papilloma Virus Vaccination.

Methodology

Research Objective

To assess the effectiveness of self-instructional module on knowledge regarding Human Papilloma Virus vaccination

among the students in selected Basic BSc nursing colleges. To assess the pre-test knowledge regarding Human Papilloma Virus vaccination among the students in selected Basic BSc Nursing Colleges before distribution of self-instructional module. To assess the post-test knowledge regarding Human Papilloma Virus vaccination among the students in selected Basic BSc Nursing Colleges after distribution of self-instructional module. To compare pre-test and post-test knowledge regarding Human Papilloma Virus vaccination before and after distribution of self-instructional module. Descriptive Evaluative Approach and pre-experimental one group pre-test post-test design.

Setting of study: Selected Basic BSc nursing collages in metropolitan city. Basic BSc Nursing students. 100 Basic BSc Nursing students at Basic BSc nursing collages in metropolitan city. The sampling technique used for the study was Non-Probability Convenient sampling. A structured questionnaire was prepared, and it was divided into four sections. The section I includes basic demographic variables of the Basic BSc Nursing students, Section II contains – pretest – structured Questionnaire: To assess the knowledge regarding the Human Papilloma Virus Vaccination, Section III- self-instructional module and section IV- post-test – To assess the effectiveness of self-instructional module on knowledge regarding Human Papilloma Virus vaccination.

Reliability is the extent to which the measurements of a test remain consistent over repeated tests of the same subject under identical conditions [6]. Reliability was tested on 10 samples selected according to the recommendation criteria and the coefficient of correlation was calculated by test re-test method. The reliability was calculated by Cronback's Alpha correlation coefficient. A correlation coefficient of 1 which shows excellent acceptant, was obtained indicating that the tool was reliable.

Results

Table 1 shows that in pretest majority 36.95% of samples given correct answers and in post test majority 88.6% of samples given correct answers.

Table 1: Comparison of pretest and post-test knowledge of Basic BSc Nursing Student regarding Human Papilloma Virus Vaccination.

Pre-Test		Post Test	
N	%	N	%
739	36.95	1772	88.6

Table 2: Comparison of pretest vs post-test knowledge regarding human papilloma virus vaccination.

Pre-Test		Post Test	
Mean±SD	Median	Mean±SD	Median
7.37±2.29	7.0	17.72±1.84	18.0

Table 2 shows that in pre-test mean score is 7.37 along with 2.29 SD. In Post-test mean score is 17.72 and SD is 1.84 which shows effectiveness of self-instruction module.

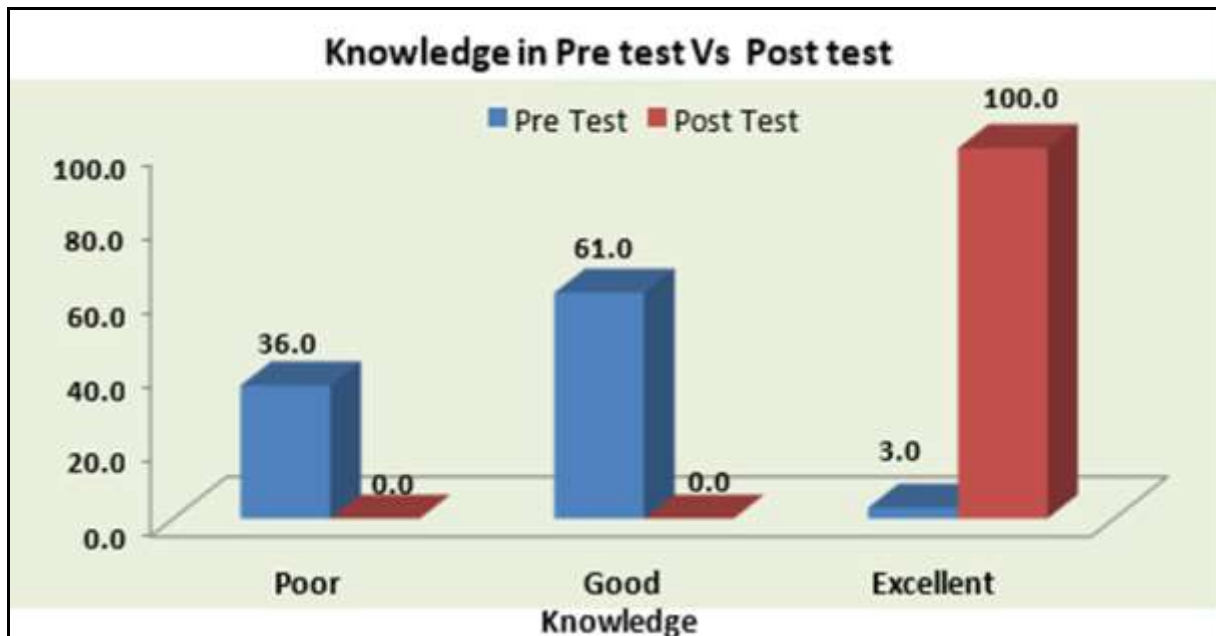


Fig 1: Distribution of knowledge score in Pre test Vs Post test

Figure 1 shows the difference between pretest and posttest knowledge. 100 students are used in the study. In pretest 36 students have poor knowledge, the percentage is 36%. 61 students have good knowledge, the percentage is 61%. 3 students are having excellent knowledge the percentage is 3%. The posttest is giving 100% excellent result. This suggests that self- instructional module is an effective tool to deliver knowledge regarding human papilloma virus vaccination.

Discussion

Dennis Vaidakis (2017) *et al.*, conducted study on Knowledge of Greek adolescents on human papilloma virus (HPV) and vaccination. The aim of the present study was to identify the sexual behavior, attitudes, beliefs, and knowledge on sexually transmitted infections (STIs) focused on human papilloma virus (HPV) in the Greek adolescent population. The participants were 4547 adolescents, a representative sample for Greek territory with a mean age of 17 years. The study results revealed that 43% and 75% of the participants knew about HPV or cervical cancer, while more than 6 out of 10 did not know the association between the 2. More than 60% of the participants could not answer correctly neither about HPV infection and cervical cancer frequency in sexually active women, nor about protection methods against HPV and cervical cancer [7].

Ayebo Evawere Sadoh *et al.*, (2018) conducted a study to assess Effect of Peer Education on Knowledge of Human Papilloma Virus and Cervical Cancer among Female Adolescent Students in Benin City, Nigeria. This was an intervention study. The knowledge and awareness of female students of four secondary schools were assessed using a pre-tested self-administered questionnaire prior to the training of some of the students (peers). The results revealed that 1337 students who responded to the baseline questionnaire while 1201 responded to the post-peer training questionnaire. Awareness of cervical cancer, knowledge of risk factors and cause of cervical cancer was low prior to the peer training. There was statistically significant improvement in awareness about cervical cancer and in the

knowledge domains following peer training. Mean knowledge score prior to training was 12.94 ± 9.23 and this increased significantly to 53.74 ± 10.69 following peer training $p < 0.0001$ [8].

Conclusion

The aim of the present study is to improve the knowledge regarding Human Papilloma Virus Vaccination. Descriptive Evaluative Approach and pre-experimental one group pre-test post-test design used to conduct study. The sample size of the study was 100. The sampling technique used for the study was Non-Probability Convenient sampling. The research committee of the faculty of nursing established the validity and reliability of the tool. The tool was divided into four section, The section I includes basic demographic variables of the Basic BSc Nursing students, Section II contains – pretest – structured Questionnaire: To assess the knowledge regarding the Human Papilloma Virus Vaccination, Section III- self-instructional module and section IV- post-test – To assess the effectiveness of self-instructional module on knowledge regarding Human Papilloma Virus vaccination. Pilot study was conducted to assess effectiveness of tool and it was found effective. Data was collected and analysed by descriptive and inferential statistics. Results of the study shown that in pre-test majority of samples were having poor knowledge whereas in post-test after self-instruction module administration almost 100% participants were given correct answers to all questions. Therefore, self-instruction module found effective to enhance knowledge of BSc students about HPV vaccination.

Conflict of Interest

Not available

Financial Support

Not available

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How to Cite This Article

Patil HS. Effectiveness of self-instructional module on knowledge regarding human papilloma virus vaccination among the students in selected basic BSC nursing colleges. International Journal of Obstetrics and Gynaecological Nursing. 2024;6(1):36-39.

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