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**Community health Nursing**

# Effectiveness of Health Education on Knowledge Regarding HPV Vaccination in Prevention of Cervical Cancer among Women Attending in HSK Hospital Bagalkot

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**Abstract** **Original Research Article**

***Background of the study:*** Cervical cancer ranks among the top five cancers in India, with human papillomavirus (HPV) types 16 and 18 causing up to 70% of related lesions. HPV infection, acquired through various routes, poses risks for women, especially in the age group of 16 to 25 years. Effective prevention is possible through HPV vaccination, with Cervix and Gardasil approved for use in India. Despite its proven efficacy, HPV vaccine use remains minimal. ***Aim:*** This aim is to assess the effectiveness of health education on knowledge regarding HPV vaccination in prevention of cervical cancer among women. ***Methods:*** A experimental pre-test was conducted among women using self- administered structured closed ended questionnaire. Intervention was given in the form of health education programme on knowledge regarding HPV vaccination in prevention of cervical cancer among women; post test was conducted by using same structured closed ended questionnaire, to assess the effectiveness of intervention. ***Result:*** Findings reveals that mean post-test level of knowledge scores are significantly higher than mean pre-test level of knowledge scores, there was no significant association was found between levels of knowledge scores of women attending HSK hospital Bagalkot with their socio-demographic variables. Findings related to assessment of levels of knowledge of women attending HSK hospital Bagalkot reveals almost same percent of women had poor and average (40%), (20%) of women had good knowledge. ***Conclusion:*** On the bases of findings of the study, the following conclusion are drawn for pre-test assessment level of knowledge among women attending HSK hospital Bagalkot shows that highest (40%) were having poor and average. On the bases of findings of the study, the following conclusion are drawn for post-test assessment level of knowledge among women attending HSK hospital Bagalkot shows that highest (90%) of women had excellent knowledge.

**Keywords:** Knowledge, Health education, Women, Cervical cancer, HPV Vaccination.



## INTRODUCTION

Cervical cancer is abnormal cell proliferation in the cervix or abnormal cell growth in the cervix. The world health organization recommended that the vaccination against HPV in girls 9–13-year-old combined with regular screening in women over age 30 for precancerous lesions followed by adequate treatment is key tools to prevent the 530,000 new cervical cancer cases diagnosed every year [1].

Cervical cancer is caused by the human papilloma virus (HPV) some of cofactors and risk factors provided by the American cancer society includes. Human immunodeficiency virus (HIV) infection, Chlamydia, hormonal contraception, exposure to the hormonal drug diethylstilbestrol (des) and history of cervical cancer.

Early age at first intercourse and first pregnancy are also considering risk factors [2] some of the signs and symptoms such as vaginal bleeding, offensive vaginal discharge, back pain and leg pain, bladder symptoms such as Micturition, Dysuria, hematuria, and rectal involvement symptoms such as diarrhea, rectal pain, and bleeding rectum. In last stages patient may be cachectic and anemic with edema of legs [3].

HPV vaccine can prevent most cases of cervical cancer if given before a girl or woman is exposed to the virus. In addition, this vaccine can prevent vaginal and vulvae cancer in women, and can prevent genital warts and anal cancer in women and men [4].

It is preferable to administer girls before first sexual activity. WHO recommends a comprehensive approach to cervical cancer prevention and control is by administrating HPV vaccination to girls aged 9-13 years or before they become sexually active. Generally, it is recommended to females aged between 13 to 26 years [5].

## MATERIAL AND METHODS

**Study design and participants:** Present study is a experimental pre-test was conducted among women using self-administered structured closed ended questionnaire. Data were collected for 5 days from 29-09-2024 to 3-10-2024 in OBG units of HSK hospital Bagalkot.

**Sample Size:** 50 women

**Sampling Technique:** Simple-random sampling technique.

**Population**

The term „population" refers to "the aggregate or mass of subject upon which researcher intended to generalize the findings".

**Target population:** Women under age group (25-40) attending in HSK hospital Bagalkot.

**Accessible population:** The accessible population for the present study consist of women attending HSK hospital Bagalkot.

**Variables under the study:**

Variables is a content that has measurable changing attributes. Variables are qualities, properties, or characteristics of persons, things, or situation that change or vary.

**Independent variable**: Health education programme on knowledge regarding HPV vaccination in prevention of cervical cancer among women attending in HSK hospital Bagalkot.

**Dependent variable**: Level of Knowledge of the HPV vaccination in prevention of cervical cancer among women attending in HSK hospital Bagalkot.

**Socio-demographic variables:** In this study socio-demographic variable refers to selected characteristics of the women such age, religion, residential area, family income, type of family, education, occupation, number of children, age of children, have you attended any intervention previously.

**Instruments**

**Tool I: Socio demographic factors of women in HSK hospital Bagalkot**

Age, Religion, Residential area, Family income, Type of family, Education status of women, Occupational status, Number of children's, Age of children, Have you attended any intervention previously.

**Tool II: Items to assess the level of knowledge by using knowledge variables**

It consists 30 knowledge regarding HPV vaccination in prevention of cervical cancer among women. These items were closed ended, multiple choice questions. Data was collected by means of Self-Administered Questionnaire with the use of structured closed ended knowledge questionnaire. A seeking system developed for the items each correct answer is assigned a score of one and wrong answer carries zero score. Total score is 30.

**Data Collection Procedure:**

Prior permission was obtained from SIONS of Bagalkot President B.V.V. Sangha. Permission was taken from the Medical Superintendent of HSK hospital Bagalkot. This study obtained written and verbal informed consent from women in the hospital. The knowledge questionnaire was applied to women residing in the hospital. Data collection took place from 9 am to 5 pm with subject to subject availability.

**Statistical Analysis:**

The data will be analysed by using experimental statistics. Numerical data obtained from the sample was organized and summarized with the help of experimental statistics like percentages, mean, median and standard deviation. Chi- square test used to find out association between knowledge with selected demographic variables among women in HSK hospital Bagalkot.

## RESULTS

**Socio-demographic characteristics of women-** Percentage wise distribution of women according to their group highest percentage (40%) in the age group 25-30 years, religion the highest percentage (70%) is Hindu, residential area the highest percentage (52%) is rural areas, family monthly income the highest percentage (40%) is 5000-10000, type of family the highest percentage (70%) is joint family, education status of women the highest percentage (40%) is graduation, occupation the highest percentage (70%) is house wife, number of children the highest percentage (30%) is 1 children and (30%) is 3 children, age of children the highest percentage (40%) is 9 to 10 age of children, have

you attended any intervention previously the highest percentage (98%) don't have intervention previously.

**Table 01: Description of socio- demographic characteristic of sample**

| VARIABLES | F | % |
|---|---|---|
| **Age in year** | | |
| **a. 25-30** | 20 | **40** |
| **b. 31-34** | 15 | **30** |
| **c. 35-40** | 15 | **30** |
| **Religion** | | |
| **a. Hindu** | 35 | **70** |
| **b. Muslim** | 15 | **30** |
| **c. Christian** | - | - |
| **d. Others** | - | - |
| **Residential area** | | |
| **a. rural** | 26 | **52** |
| **b. urban** | 24 | **48** |
| **Family income** | | |
| **a. 5000** | - | - |
| **b. 5000-10000** | 20 | **40** |
| **c. 10000-20000** | 15 | **30** |
| **d. 20000 above** | 15 | **30** |
| **Type of family** | | |
| **a. Nuclear** | 35 | **70** |
| **b. Joint** | 15 | **30** |
| **Education** | | |
| **a. illiterate** | 10 | **20** |
| **b. primary** | 5 | **10** |
| **c. secondary** | 15 | **30** |
| **d. Graduation** | 20 | **40** |
| **occupation** | | |
| **a. House wife** | 35 | **70** |
| **b. Agriculture** | 10 | **20** |
| **c. Private employee** | 5 | **10** |
| **d. Government employee** | - | - |
| **Number of children** | | |
| **a. 1** | 15 | **30** |
| **b. 2** | 10 | **20** |
| **c. 3** | 15 | **30** |
| **d. 3 and above** | 10 | **20** |
| **Age of children** | | |
| **a. 9-10** | 20 | **40** |
| **b. 11-12** | 15 | **30** |
| **c. 13-14** | 15 | **30** |
| **Have you attended any intervention Previously?** | | |
| **a. yes** | 1 | **2** |
| **b. no** | **49** | **98** |

**Table 02: Comparison of level pre-test and post-test level of knowledge scores of women**

| Level Of knowledge | Pre test | | Post test | |
|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage |
| **Poor** | 20 | 40% | 00 | 0% |
| **Average** | 20 | 40% | 00 | 0% |
| **Good** | 10 | 20% | 05 | 10% |
| **Excellent** | 00 | 00% | 45 | 90% |
| **Total** | **30** | **100%** | **50** | **100%** |

**Table 03: Significance of difference between the pre- test and post-test level of knowledge scores of women attending HSK hospital Bagalkot**

| Knowledge | Mean | Median | Range | SD | t value | P value | significant |
|---|---|---|---|---|---|---|---|
| **Pre test** | 10.1 | 11 | 4 – 8 | 4.48 | 19.76 | <0.001 | **Significant** |
| **Post test** | **24.82** | **25** | **21 – 28** | **2.08** | | | |

**P<0.05**

**Table 04: Association between the pre-test knowledge level and socio- demographic variables**

| Sl. no | Socio demographic variables | Df | TABLE VALUE | Chi- square-value | P-value | Association |
|---|---|---|---|---|---|---|
| **1** | Age | 2 | 5.99 | 7.729 | 0.00054 | **Very statistically Significant** |
| **2** | Religion | 1 | 3.84 | 0.549 | 0.4585 | **Not significant** |
| **3** | Residential area | 1 | 3.84 | 5.128 | 0.0235 | **statistically significant** |
| **4** | Family income | 3 | 7.81 | 2.679 | 0.1017 | **Not significant** |
| **5** | Type of family | 1 | 3.84 | 2.381 | 0.1228 | **Not significant** |
| **6** | Education | 3 | 7.81 | 0.095 | 0.75 | **Not significant** |
| **7** | Occupation | 3 | 7.81 | 0.936 | 0.334 | **Not significant** |
| **8** | Number of children | 3 | 7.84 | 0.720 | 0.3961 | **Not significant** |
| **9** | Age of children | 2 | 5.99 | 0.00 | 1.0000 | **Not significant** |
| **10** | **Have you attended any intervention previously?** | **1** | **3.84** | **1.020** | **0.3124** | **Not significant** |

## DISCUSSION

Findings of present study shows that level of knowledge among women attending HSK hospital Bagalkot depicts that highest (40%) of women attending HSK hospital Bagalkot were had poor and average. Findings about the assessment of mean, SD and mean percentage of pre-test knowledge scores of women attending HSK hospital Bagalkot reveals that, the total mean percentage of pre-test level of knowledge scores was 33.66% with mean and SD 10.1±4.48. Findings related to assessment of levels of knowledge of women attending HSK hospital Bagalkot reveals almost same percent of women had excellent (90%) of women had good knowledge. Findings about the assessment of mean, SD and mean percentage of post- test level of knowledge scores of women reveals that, the total mean percentage of post-test level of knowledge scores was 82.73 percent with mean and SD 2.08 ± 24.82. Findings about the comparison of level of pre-test and post-test knowledge scores of women shows that pre-test 40% of women had poor and average, 20% of good. In post-test the majority 90% of women had excellent level of knowledge and 10% of them had good level of knowledge. Findings related to comparison of mean percentage of the level of knowledge scores of women attending HSK hospital in pre- test and post-test reveals, an increase of 49.07% in the mean percent of level of knowledge scores of the women after conducting health education program regarding the HPV vaccination in prevention of cervical cancer. Findings related to the association between the pre-test level of knowledge of women attending HSK hospital Bagalkot with their socio-demographic variables reveals that a significant association was found between level of knowledge of women attending HSK hospital Bagalkot with their Age (chi-square 7.729, P> 0.00054). Hence $H_2$ stated was accepted for only age of women attending HSK hospital Bagalkot and rejected for other variables.

## CONCLUSION

On the bases of findings of the study, the following conclusion are drawn assessment level of knowledge among women attending HSK hospital Bagalkot shows that highest (40%) of women attending HSK hospital Bagalkot were having poor and average. On the bases of findings of the study, the following conclusion are drawn assessment level of knowledge among women attending HSK hospital Bagalkot shows that highest (90%) of women had excellent knowledge. Significance of the difference between the pre-test and post-test level of knowledge of women attending HSK hospital Bagalkot shows that difference between the mean pre-test [10.1 ± 4.48] and post-test [2.08 ± 24.82] level of knowledge scores women attending HSK hospital Bagalkot found to be statistically significant at 0.05 level of significant [t=19.76, p<0.001]. Findings related to the association between the post-test level of knowledge of women attending HSK hospital Bagalkot with their socio-demographic variables reveals that a significant association was found between level of knowledge of women attending HSK hospital Bagalkot.

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