



To Assess the KAP Study about HPV Vaccination among Women of Reproductive Age Group

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Background: Human papillomavirus vaccines prevent infection by certain types of human papillomavirus. HPV vaccine is recommended at age 11-12 years.

Objectives: This study aims to assess the knowledge, attitude and practice about HPV vaccination among Women of reproductive age group.

Materials and Methods: This community based cross sectional study was conducted over a period of three months from January 2021- March 2021 at the Obstetrics and Gynaecology Department OPD at Saveetha Medical College and Hospital. A total of 193 women who attended the Obstetrics and Gynaecology Department were included as study participants. A pretested, semi-structured data tool was used. Descriptive variables were presented as proportions and frequencies. Chi-square test was used to ascertain the associations.

Results: About 55.9% of them had knowledge about HPV vaccination and 52.6% with the risk factors, signs and symptoms, and prevention of cervical carcinoma among the study population.

Conclusion: Advancement of health facilities, encouragement of service provider, sustainable health programs and creating awareness will support to achieve decrease in incidence of cervical cancer.

Keywords: Cervical cancer; HPV vaccine; knowledge; practice.

1. INTRODUCTION

The second most prevalent cancer in women worldwide is uterine cervix cancer, and it is the most common health threat in India [1]. Every year, more than 270,000 women die from cervical cancer, with low and middle-income countries accounting for more than 85 percent of these deaths [1]. Early detection and treatment of cervical precancerous lesions, on the other hand, can reduce morbidity and mortality from cervical cancer. The introduction of a population-based cytological screening programme employing the Pap test has lowered mortality in developed countries. Furthermore, screening for HPV infection in the cervical region has proven to be more effective and reliable [2].

Carcinoma cervix is caused by a sexually transmitted infection with the Human papillomavirus (HPV). Long-term use of hormonal contraceptives, high parity, initiation of early sexual intercourse, multiple sex partners, tobacco smoking, and HIV; co-infection with Chlamydia trachomatis and herpes simplex virus type-2, immunosuppressive status, low socioeconomic status, poor hygiene and diet that contains low antioxidants are probable cofactors. Genetic and immunological host factors and viral factors like variants of type, viral load and viral integration are likely to be important but haven't been clearly identified [3].

Two HPV vaccinations, the quadrivalent "Gardasil" and the bivalent "Cervarix", have recently been found to be highly successful in avoiding infection with the high-risk varieties HPV16 and HPV18, the two most common carcinogenic variants [4]. Cervical cancer mortality has decreased in the last 40 years as a result of the implementation of preventive screening programmes. However, cervical cancer screening in India is still opportunistic, resulting in late diagnosis in the majority of cases [5].

2. MATERIALS AND METHODS

This community based cross sectional study was conducted from January to March 2021 in the Obstetrics and Gynaecology department at Saveetha Medical College, Chennai, Tamil Nadu. Study comprised of 193 women who attended the Obstetrics and Gynaecology department

OPD during the study period (i.e. January 2021 to March 2021) is the population studied.

2.1 Selection of Study Participants and Data Collection

A pretested semi-structured questionnaire was used to collect data containing the demographic details, knowledge of cervical cancer, HPV and awareness about HPV vaccine and opinion about vaccination and the other information required. Pilot testing was performed with investigators in the field for uniformity. All data were cross-checked by principal investigator at field level and mistakes were rectified immediately to maintain the quality of data.

2.2 Study Tools and Study Variables

The study instrument consisted of four components:

Section-I: Sociodemographic Details which incorporates Age (in years), Family history of carcinoma cervix.

Section- II: Knowledge about HPV vaccination like its cause, age criteria for vaccination, risk factors, signs and symptoms, its prevention and various other information.

Section-III: Attitude on HPV vaccination which includes their opinion on protection by the vaccine, use of barrier methods during sexual intercourse.

Section-IV: Acceptance of HPV vaccination by the women concerned with their need for screening before vaccination, counseling by experts, any obstacle preventing them from getting vaccinated.

2.3 Statistical Analysis

SPSS Software 21.0, a Statistical Package for Social Sciences, was used to evaluate the data, which was tabulated in Microsoft Excel 365. All of the variables were given descriptive statistics in the form of frequencies and percentages. To elicit knowledge, attitude, and behaviour on HPV vaccination, analytical statistics such as chi-square testing were used.

2.3.1 Inclusion criteria

All the participants belonging to reproductive age group.

2.3.2 Exclusion criteria

Women already diagnosed and treated for advanced stages of carcinoma cervix.

3. RESULT

A total of 193 women of reproductive age were included for analysis. The mean age of the women was 28.37±6.5. Among those women the majority 165(85.5%) did not have a family history of carcinoma cervix and the remaining 28(14.5%) had a family history of carcinoma cervix (Table 1).

3.1 Knowledge About HPV Vaccination

Among the study population majority 108(55.9%) of them had knowledge about HPV vaccination and its availability, the age to be administered and about the administration of vaccine during pregnancy (Table 2). Figure 1 depicts the source through which knowledge about HPV vaccination was obtained where the highest source was found to be through internet 76(39.3%) and the minimum gained through television 5(2.5%).

Among the respondents 52.6% of them had knowledge on the definition of cervical cancer, its signs and symptoms and its preventive measures (Table 3). Figure 2 shows the source of cervix carcinoma where the majority 76.6% of the study population had knowledge on the Human Papilloma Virus (HPV) as the causative organism with the remaining left with bacteria, fungi and none of these. Among the participants, 33.6% of them had awareness that the risk factor for developing cervical carcinoma is through sexually transmitted diseases and the least 6.7% with prolonged use of OCPs (Fig. 3). The

maximum 108(55.9%) women had stated that cancer of cervix is preventable, few 50(25.9%) states that it is not preventable and the remaining 35(18.1%) has no idea about its prevention.

3.2 Attitude on HPV vaccination

The maximum 109(56.4%) women recommends that it is not safe to have sex without condoms after diagnosing HPV infection whereas the other 20(10.3%) and 64(33.1%) suggests that it is safe to have sexual intercourse without condoms and doesn't have an opinion respectively.

Also some 21(10.8%) of the participants says that it is safe to have sexual intercourse with multiple partners after full course of HPV vaccination while the maximum 125(64.7%) doesn't recommend this attitude and the remaining 47(24.3%) has no idea about the information. About 97(50.2%) of the study population has suggested that the efficacy of HPV vaccination is 90%, some 45(23.3%) has stated that it is about 70% followed by 38(19.6%) chose to be 50% and the remaining 13(6.7%) for 100% efficacy.

3.3 Acceptance of HPV Vaccination

Among 193 participants, 107(55.4%) of the women were willing to get vaccinated with 81(75.7%) of them wished screening before getting vaccinated and the remaining 86(44.5%) were not willing to be vaccinated. The majority 114(59%) of the population liked to be educated by health professionals irrespective of their willingness for vaccination. Figure 4 depicts the various obstacles that prevent them from getting vaccinated where the fear of side effects was the maximum obstacle. Chi square was calculated comparing the age with the number of participants willing to get vaccinated and was found to be 0.0673 and the P value was found to be 0.795 which is not significant since p-value is greater than 0.05.

Table 1. Sociodemographic characteristics of study participants

Demographic characteristics	Categories	N	%
Age	17-24	70	36.3
	25-34	87	45
	35-45	36	17.6
	Yes	28	14.5
Family history	No	165	85.5

Table 2. Knowledge on HPV vaccination

Knowledge on HPV vaccination	Characteristics	N	%
Availability of HPV vaccination	Yes	108	55.9
	No	40	20.7
	Don't know	45	23.3
Age group to be given	0-10 years	23	11.9
	10-30 years	117	60
	30-50 years	52	26.9
	More than 50 years	1	0.5
	Pregnancy is a contraindication	True	85
	False	108	55.9

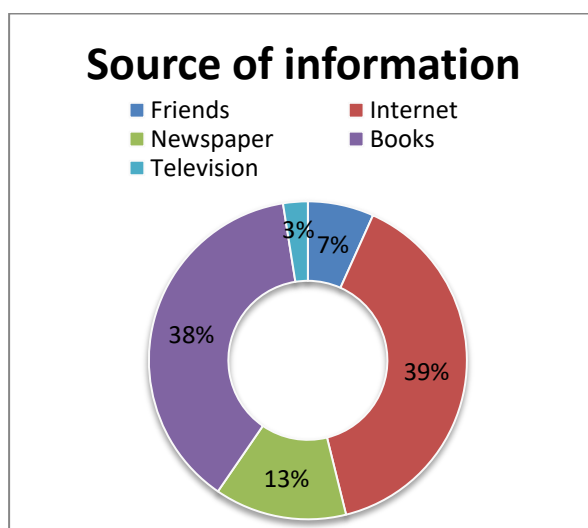


Fig. 1. Source of information Knowledge on carcinoma of cervix

Table 3. Knowledge on cervix carcinoma

Knowledge on Carcinoma cervix	Characterisitics	N	%
Meaning of cervix carcinoma	Pain in the cervix	23	11.9
	Swelling in the cervix	36	18.6
	Abnormal growth of cells in the cervix	100	51.8
	Wound in the cervix	18	9.3
	Don't know	16	8.2
Early Signs & symptoms	Post-coital bleeding	33	17
	Intermenstrual bleeding	26	13.4
	Foul smelling vaginal discharge	40	20.7
	Lower abdominal pain	35	18.1
	Painful intercourse	31	16
Preventive measures	Don't know	28	14.5
	Avoid early exposure	30	15.5
	Avoid multiple partners	62	32.1
	Vaccination against HPV virus	54	27.9
	Avoid cigarette/ tobacco	10	5.1
	Avoid multiple pregnancy	20	10.3
	Use of safe sex practice	13	6.7
Avoid prolonged use of OCPs	4	2	

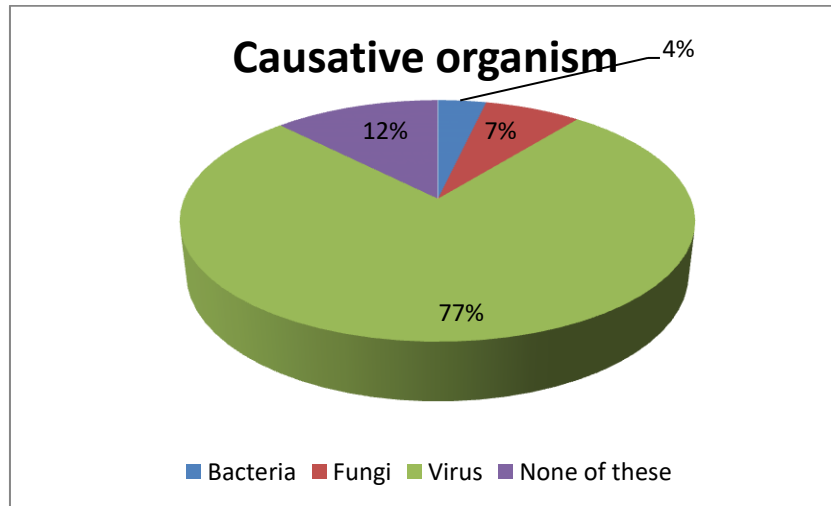


Fig. 2. Cause of carcinoma cervix

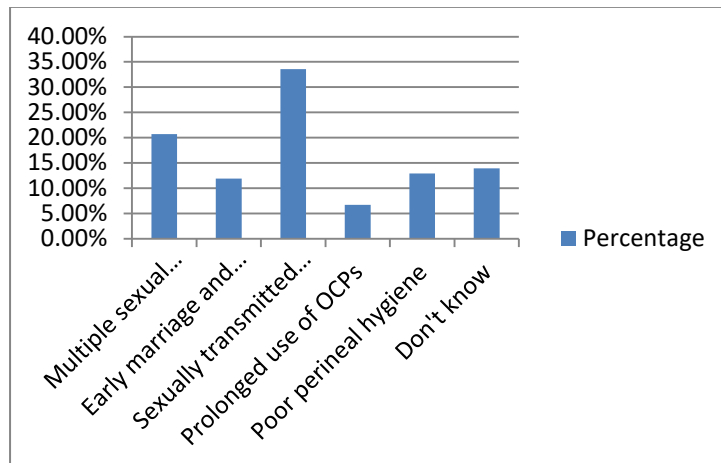


Fig. 3. Risk factors

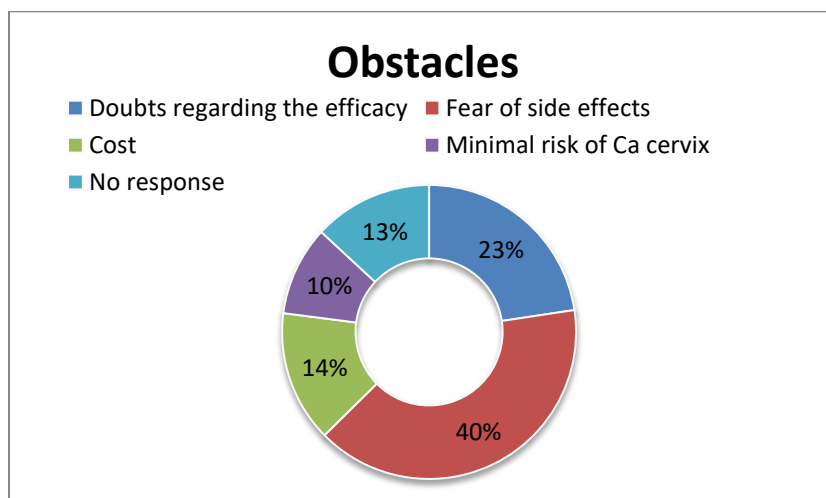


Fig. 4. Obstacles preventing from getting HPV vaccination

4. DISCUSSION

Correct knowledge and awareness of a disease and its prevention is a key step in developing a positive attitude toward it. Early detection has been shown to avert up to 80% of invasive cervical cancer cases. However, poor screening prevalence in developing countries has been attributed to educational hurdles and behavioural trends. Hence, this study aimed at determining the knowledge and awareness about HPV vaccination among the women of reproductive age group.

In the current study, only 55.9% of the participants displayed good knowledge regarding HPV vaccination. The most striking aspect of the study is only 50.2% of the subjects believed that vaccine had more than 90% efficacy. The overall knowledge about the risk factors, signs and symptoms and preventive measures of carcinoma cervix was good in the study. Our result is consistent with other studies where only 44.9% of the total study population had good knowledge about the HPV vaccination and only 17.9% of them stated the efficacy of the vaccine to be more than 90% which is low [6].

Only 52.6% of the respondents were well aware of risk factors of cervical cancer development and its causal relation with HPV which is low when compared to a study made by Pandey et al from India which showed majority 89.6% of the participants were well aware [7]. In another study from India conducted on female dental students only 18% of the study population had high level of total correct knowledge, but majority of them (63%) had average level of correct total knowledge [8].

In our study, 20.7% of females had stated foul smelling vaginal discharge to be the earliest symptom for developing HPV infection which is equitably high with the study performed among women in New Delhi where only 17.3% of females had knowledge about the same [9].

The maximum participants (69.75%) stated that carcinoma cervix can be prevented by HPV vaccination in a study conducted among the nursing and medical students at a tertiary care centre in India whereas in our study population majority (32.1%) of them states avoiding multiple sexual partners to be the preventive measure and only 27.9% says vaccination is the preventive method for developing carcinoma cervix [10].

Our study states that 55.4% of participants are willing to get vaccinated which is more than half of the study group and similar study conducted for health care professionals working in tertiary hospitals across Chennai, shows 77.7% were willing to receive HPV vaccination [11].

A study conducted in Bangladesh shows the major source of information about HPV vaccination was obtained through mass media which includes TV, radio (46.3%) and the least with the books 5.4% while compared to our study which shows the maximum source to be internet (39.3%) and the least to be television (2.5%) [12].

The major obstacle faced by our study participants remained fear of side effects which accounts for 40% of the total and the cost was found to be an obstacle in 14% of them which is comparatively low when compared to other study made in a tertiary care hospital where the common reasons for not getting vaccination were lack of awareness regarding HPV vaccination, the importance of the vaccine and its high cost [11].

5. LIMITATION

Cultural issues could not be addressed completely, as it was quantitative study. Qualitative studies may throw light on this aspect. Study area is limited to our selection of study population, which is restricting the scope and relevance.

6. CONCLUSION

This study reveals that the women in the study group had a firm knowledge of HPV vaccination, as well as the risk factors, signs and symptoms, and prevention of cervical carcinoma. The majority of participants were willing to be vaccinated, with only a handful opting for a pre-vaccination screening test and being informed of the vaccine's adverse effects. The results of this study could not be applied to the entire Indian population. As a result, raising awareness about cervical cancer, its prevention, and care is necessary. Eventually, in order to reduce the burden of cervical cancer and implement a vaccination programme, public awareness is required, which can be achieved through print and electronic media by raising slogans, organising free cancer screening camps in rural areas, and most importantly, sensitising the Indian population to vaccine acceptance.

The institutional ethics committee board granted ethical approval.

Written informed consent was obtained after informing the participants regarding the aim of study, benefits, procedure and confidentiality of the research study in the local language.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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