

Awareness of Cervical Cancer and HPV Vaccine among the Reproductive Age Group Females Residing in Rural Field Practicing Area of Chengalpattu Medical College : A Cross Sectional Study.

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Conflict of interest: Nil

Abstract:

Background: Cervical cancer is the fourth most prevalent cancer among women globally, marking around 604,000 new cases and 342,000 fatalities in 2020. India accounts for one fourth of the global burden of cervical cancer. HPV infection is the most common cause of cervical cancer. It can be prevented by vaccinating all young Girls against HPV. Cancer cervix Incidence can reduced by Effective screening and treatment.

Objectives : (1) To Assess the awareness about cervical cancer and HPV vaccine among the reproductive age group females residing in rural field practicing area of Chengalpattu Medical College. (2) To find out the HPV vaccination status among the study participants. (3) To study the factors influencing Cervical cancer awareness and HPV vaccination status among the study population.

Methodology: A Community based cross sectional study was conducted among the Reproductive women in the age group of 18-49 years residing in Manampathi block by using Multistage sampling method during April 2023 to June 2023 in which there are 164 Reproductive age group females were selected by simple random technique . After obtaining Institutional Ethical committee permission and informed consent from the participants the data was collected by using semi structured questionnaire . After that the data was entered in MS Excel and analysed using SPSS software version 25.

Results: In this study the mean age of study participants was 38.2 ± 9 years. Among 164 participants, 35.4%, had Adequate awareness about cervical cancer. Women undergone cervical cancer screening was 20.1%. Knowledge regarding HPV vaccination was found to be 18.9%, those who are vaccinated against HPV infection was 1.8%. The strong association was found between adequate awareness with Education and working status of the study population.($p < 0.000^*$).

Conclusion : This study concludes that awareness about the cervical cancer and Knowledge regarding HPV vaccination was not satisfactory. The educated, employed women exhibited higher awareness levels regarding both cervical cancer and HPV vaccination. All the vaccinated individuals (1.8%) are belongs to Upper Socioeconomic status. So high focus on Cervical cancer awareness campaign and Screening, HPV vaccination in all health care level.

Keywords: Cancer cervix, HPV vaccination, Rural women, Screening test.

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Introduction

Cervical cancer is the fourth most prevalent cancer among women globally, marking around 604,000 new cases and 342,000 fatalities in 2020. Approximately 90% of both new diagnoses and deaths emerged in nations with low and moderate income countries. The constrained availability of cancer treatments in these regions contributes to

increased mortality rates associated with cervical cancer. [1]

In 2020, the WHO introduced the Global Cervical Cancer Elimination Initiative aiming to eradication of cervical cancer. Its objective is to decrease the incidence to less than 4 cases per 100,000 woman in every country. The initiative established the 90-70-90 target to be achieved by 2030, involving the

vaccination of 90% of girls before the age of 15, screening at least 70% of women using an efficient test at least twice a year, and ensuring that 90% of affected women undergoing treatment for cervical cancer receive appropriate care.[2]

The National Institute for Cancer Prevention and Research (NICPR) conducted a joint survey on Cervical Cancer revealed that India accounts for one fourth of the worldwide burden of cervical cancer. [3]

According to NFHS 5 data [4], in Tamil Nadu, only 9.8% (Rural) of women undergone cervical cancer screening. Human papillomavirus (HPV) infection stands as the leading cause of cervical cancer. Prevention of cervical cancer requires a comprehensive approach involving various elements such as community education, social mobilization, vaccination, screening, treatment, and palliative care.

Since there are few Community based studies on Awareness of Cervical Cancer and HPV Vaccination status in rural setting, So the study has been planned to do a research in the rural setting.

Objectives:

- To Assess the awareness about cervical cancer and HPV vaccine among the reproductive age group females residing in rural field practicing area of Chengalpattu Medical College.
- To find out the HPV vaccination status among the study population
- To study the factors influencing Cervical cancer awareness and HPV vaccination status among the study population

Materials and Methods

Study settings, Design, Study Period & Sampling method:

A Community based cross sectional study was conducted in Manampathi block by using Multistage sampling method from the period of April 2023 to June 2023, in which there are 164 females (18-49 years) were selected by simple random sampling (SRS). After obtaining Ethical committee approval, Informed consent from the participants the data was collected by using semi structured questionnaire. The data was entered in MS Excel and analysed using SPSS software version 25.

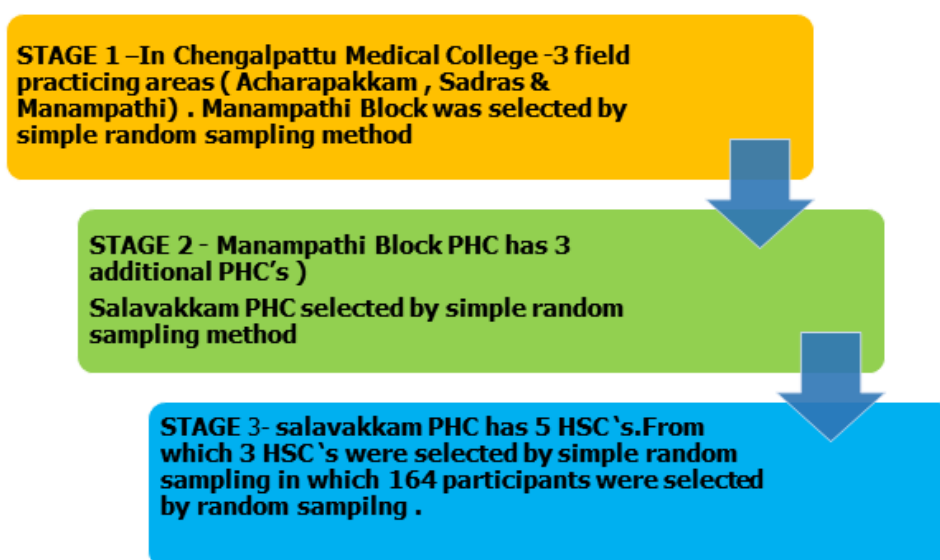


Figure 1: Multistage Sampling method

Eligibility Criteria: Reproductive women in the age group of 18- 49 years who are willing to participate in the study were included. Women with Major illness, bed ridden were excluded

Sample Size: The required sample size Based on the study was done by Wong et al at Rural South east Asia [5]

where the awareness of cervical cancer and HPV vaccine was found to be 11.6 % , Which was (P) taken for sample size calculation. Absolute precision (d) as 5 % , non-response rate 10%, the arrived sample size was 164.

Data Collection Tool: After obtaining of permission from Institutional ethical committee and informed consent from the study participants the data was collected by face-to-face interview using semi structured questionnaire Covid -19 protocol was maintained during the data collection. The interview was conducted privately and assured of confidentiality.

The Semi structured questionnaire were includes:

Section (A): Socio demographic characteristic of the study participants

Section (B): Questions related to Cervical cancer symptoms, Risk factor and Cervical cancer screening [6]

Section (C): Questions related to HPV vaccination

Data Analysis: The data was entered in MS Excel and analysed using SPSS software version 25. Appropriate descriptive and inferential statistical analysis were done

Results

Table : 1 Socio demographic characteristics of the study population

| Variables | | Frequency (N= 164) | Percentage (%) |
|-------------------|-------------------------|--------------------|----------------|
| Age Distribution | 18-30 years | 39 | 23.8% |
| | 31-49 years | 125 | 76.2% |
| Marital Status | Unmarried | 32 | 19.5% |
| | Married | 132 | 80.5% |
| Family Type | Nuclear family | 120 | 73.2% |
| | Joint family | 40 | 24.4% |
| | Three generation family | 4 | 2.4% |
| Education Status | Literate | 115 | 70.1% |
| | Illiterate | 49 | 29.8% |
| Occupation Status | Working women | 110 | 67.1% |
| | Not working | 54 | 32.9% |

As shown in Table : 1 Majority of the study participants belongs to 31-49 years(76.2%), most of them are married (80.5%),belongs to nuclear family(73.2%) and Educated (70.1%), most of them are working womens (67.1%).

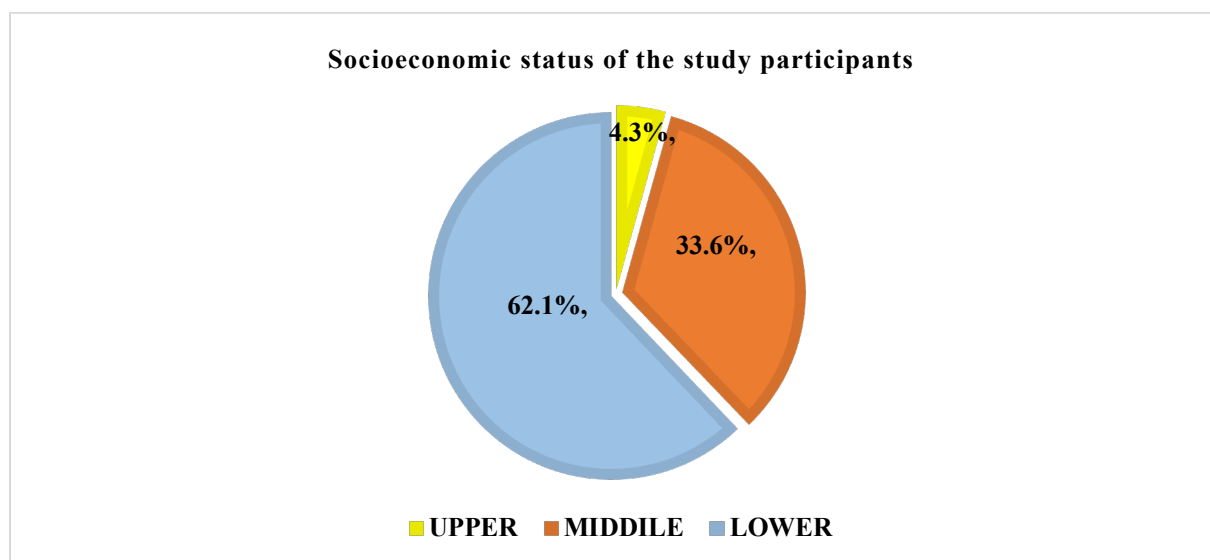


Figure 2: Socioeconomic status of the study participants

As shown in Figure 2: Most of them belongs to Lower socioeconomic status (62.2%), followed by Middle (33.6%), Upper (4.3%) respectively.

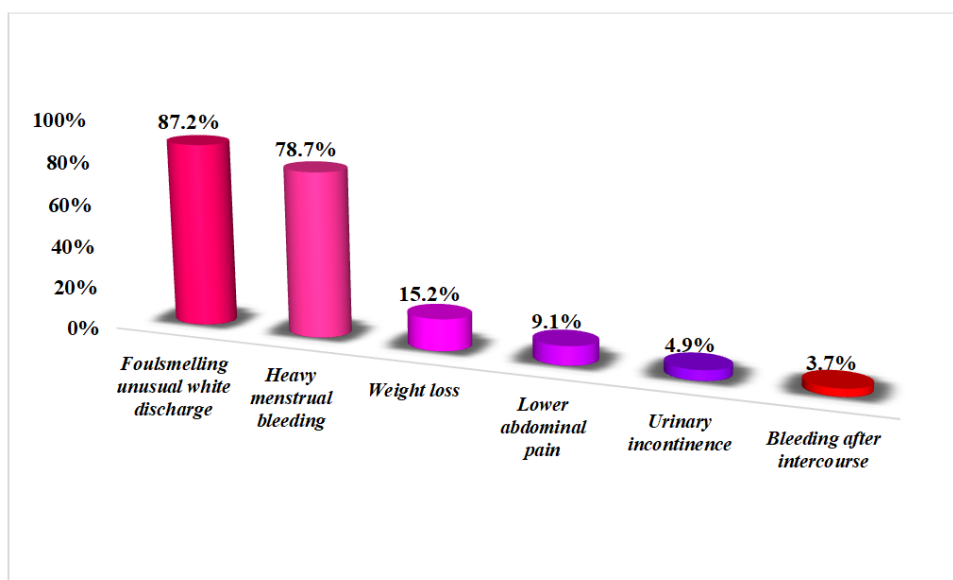


Figure : 3 Awareness about Cervical cancer symptoms among the study participants

As shown figure 3: Foul smelling unusual white discharge is one of the most common symptom of cancer cervix (87.2%) followed by heavy menstrual bleeding (78.7%), weight loss (15.2%), lower abdominal pain (9.1%), urinary incontinence (4.9%) bleeding after intercourse (3.7%) among the study participants.

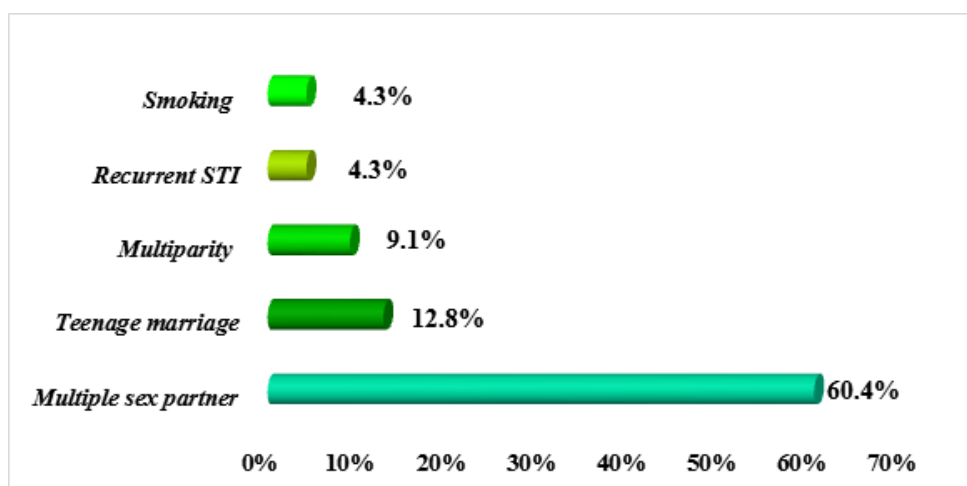


Figure : 4 Awareness about cervical cancer Risk factor among the study participants

As shown Figure : 4 knowledge about cervical cancer risk factors among the study participants, 60.4% aware of multiple sex partner is one of the main risk factor for cancer cervix, followed by Teenage marriage (12.8%), Multiparity (9.1%), Recurrent STI (4.3%), Smoking (4.3%).

Table: 2 Association of Awareness about Cervical cancer with Education and working status of the study participants (n= 164)

| Variable | | Awareness Status | | Statistical test Value df | P Value |
|----------------|--------------------------|------------------|------------|--------------------------------------|---------|
| | | Adequate | Inadequate | | |
| Education | Literate (n=115) | 59(51.3%) | 56(48.7%) | Fisher’s Exact Test value 29.9 df=1 | 0.000* |
| | Illiterate (n=49) | 2(4.1%) | 47(95.9%) | | |
| Working status | Working women (n=110) | 65(59.1%) | 45(40.9%) | Fisher’s Exact Test value 31.29 df=1 | 0.000* |
| | Not working women (n=54) | 3(5.6%) | 51(94.4%) | | |

As shown in Table: 2 The adequate awareness about the cervical cancer was Higher among educated individuals than illiterates. The difference was found to be Statistically significant (p value 0.000*) and also the awareness was Higher among the working individuals. The difference was found to be Statistically significant (p value 0.000*).

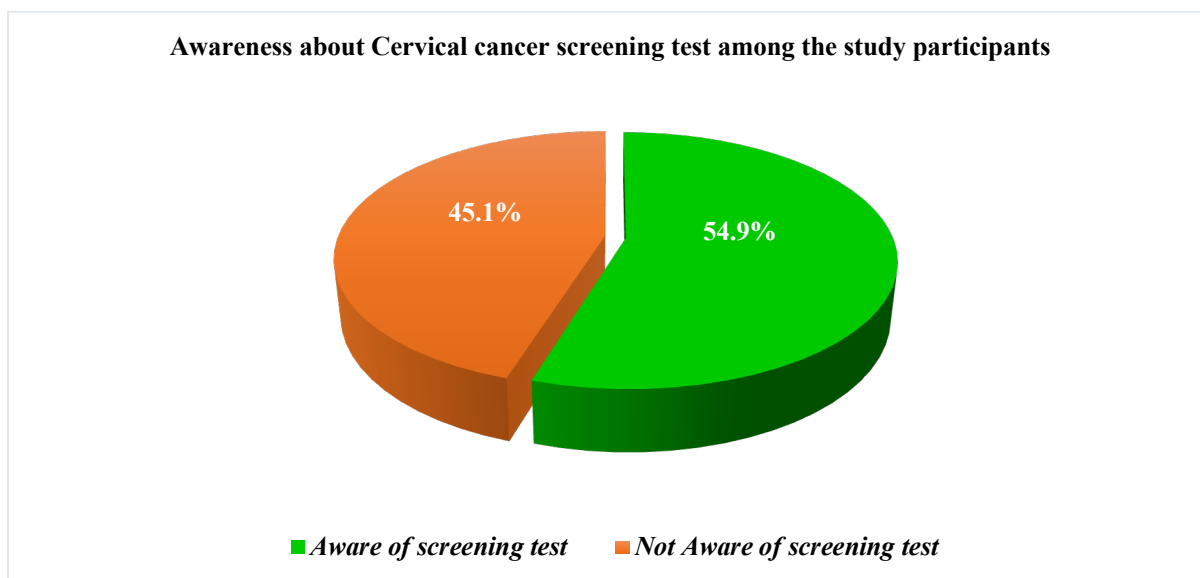


Figure : 5 Awareness about Cervical cancer screening test among the study participants

As shown in Figure 5: The awareness of cervical cancer screening test was found to be 54.9% and 45.1% not aware of cervical cancer screening among the study participants.

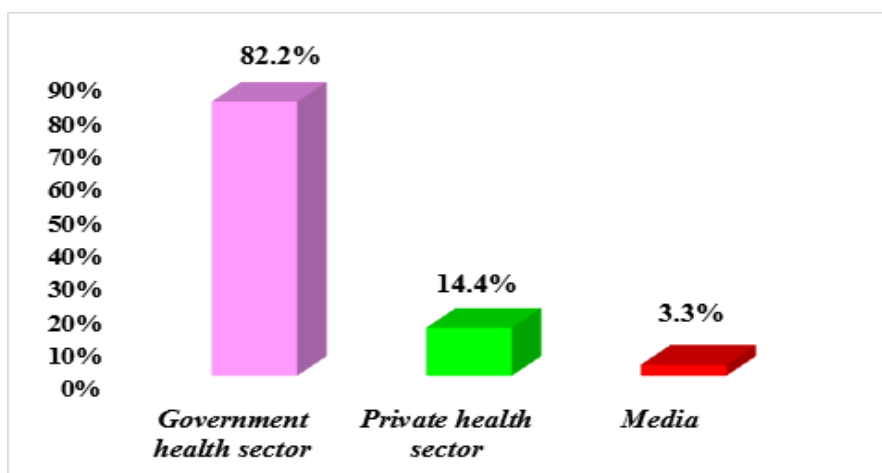


Figure 6: Source of information about Cervical cancer screening test

As shown in Figure 6: Majority of the people got information about cervical cancer screening from Government health sector (82.2%), followed by private health sector(14.4%), Media (3.3%).

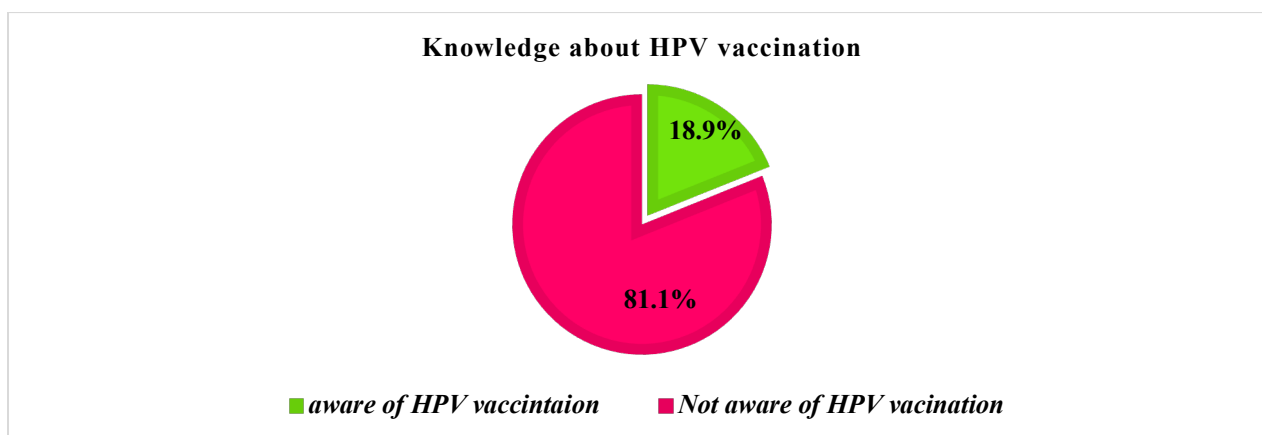


Figure 7: Knowledge about HPV vaccination

As shown in Figure : 7 Only 18.9% of the study participants were aware about HPV vaccination remaining 81.1 % was not aware of HPV vaccination among the study participants

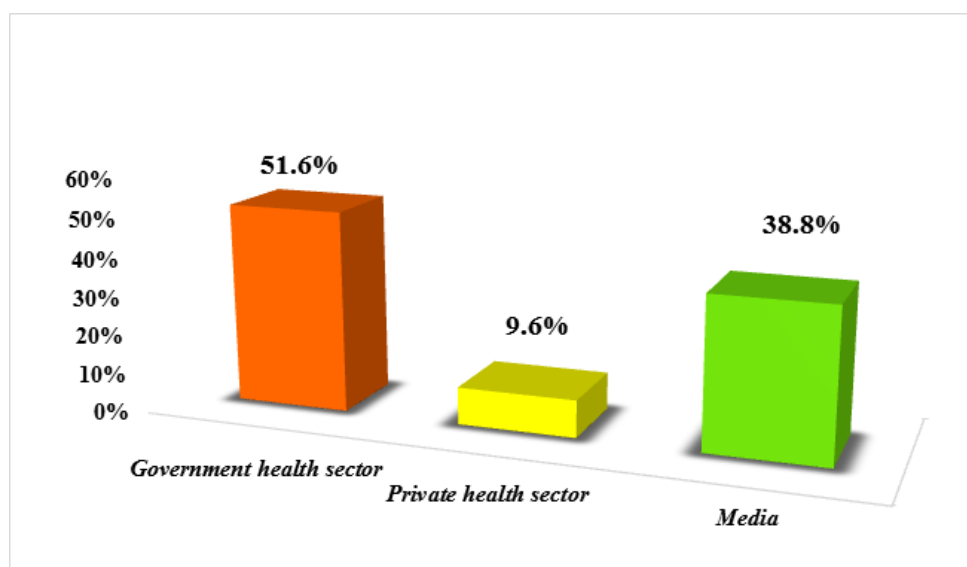


Figure 8: Source of information about HPV vaccination among the study participants

As shown in Figure: 8 The Main source of information about HPV vaccination was found to be (51.6%) Government health sector, followed by Media (38.8%), (9.6%) from private health sector

Discussion

In this study the Mean age of the study participants was 38.2 ±9 years. Most of them are married (80.5%) and Educated (70.1%) belongs to Nuclear family (73.2%) and working womens (67.1%). Majority of them belongs to Lower Socioeconomic status(62.2%).

In current study shows 35.4% had adequate awareness about cervical cancer, indicating dissatisfaction with the level of awareness compared to other studies Bhutta et al 2020 & kadian et al 2021 [7]. It might be due to factors like rural residency, limited education, entrenched beliefs.

In present study the most common symptom of cervical cancer was came to know by study participants was Unusual foul smelling discharge (87.2%) followed by heavy menstrual bleeding (78.7%), weight loss (15.2%), lower abdominal pain (9.1%), urinary incontinence(4.9%), bleeding after intercourse (3.7%), which was vary from study done by Harsha kumar et al 2014 [8] where Irregular menstrual bleeding (26.5%) is the common symptom followed by Blood stained discharge from vagina (25.3%) Weight loss (19.3 %) Difficulty in passing urine (14.5%) Bleeding after sexual activity (9.6%). Awareness of Cervical cancer risk factor was similar to other studies.

The awareness about cervical cancer screening test was found to be 54.9%. Women undergone Screening was 20.1% which was higher than NFHS 5(2023) where screening was 9% in Rural setting. Most of them got information about cervical screening primarily through the Government health

sector (82.2%) (including primary, secondary, tertiary care centres, and health camps) followed by the Private sector (14.4%/%), Media (3.3%).

The knowledge of the HPV vaccine was found to be 18.9%, which was similar when compared to study done by Rehman et al [9] in India (18% -2022). only 1.8% of individuals have vaccinated against HPV infection which was very poor vaccination coverage when compared to other studies(Hollins et al 2021 – 42%) [10]

Majority of them got information about HPV vaccination from the Government health sector (51.61%), media (38.7%), and to a lesser extent, the private sector (9.6%). Notably, all vaccinated individuals (1.8%) belonged to a higher socio-economic status. The economic status of the population plays a vital role in getting vaccination in private sector.

Surprisingly, even among well-educated and affluent families, the percentage of vaccinated women remains notably low. This trend is concerning given that despite the availability of HPV vaccines in India since 2008, many parents show disinterest in having their daughters vaccinated.[11]

The low HPV vaccine coverage in India appears to result from various factors includes social, religious, and prejudicial influences, as well as socio-economic status. [12].

The cervical cancer awareness and knowledge about HPV vaccination is significantly associated with women education and working status. Access to information, health care resources and opportunities for education and employment can empower individuals especially women, to learn about preventive measures like HPV vaccination, aiding in the prevention and early detection of cervical cancer.

These factors can significantly impact health care outcomes and awareness within communities.

Conclusion

This study shows unsatisfactory levels of awareness regarding cervical cancer (35.4%) and knowledge about HPV vaccination (18.9%). Interestingly, educated, employed women exhibited higher awareness levels regarding both cervical cancer and HPV vaccination.

Raising the awareness regarding cervical cancer (symptoms, risk factors, screening) and the importance of HPV vaccination in rural area through outpatient visits, immunization sessions, outreach camps, and Mobile Medical Unit in remote areas act as a pivotal strategy for reducing the incidence of cervical cancer in Rural area.

Limitation

This study specifically explores knowledge related to cervical cancer and HPV vaccination within rural setting only.

Recommendation

- Prioritize comprehensive awareness campaigns about cancer cervix and screening programs across all healthcare facilities to ensure accessibility and coverage for all.
- Strengthening IEC activities related to cervical cancer and HPV vaccination is vital. Informing and educating the public through various communication channels can significantly increase awareness.
- Target schools as primary sites for HPV vaccination programs. For those not attending school, establish Community Outreach Mobile Teams to provide vaccinations, ensuring broader coverage.
- Engage school teachers to actively participate in raising awareness about the HPV vaccine among parents. Their involvement can significantly influence parental decisions regarding vaccination.
- In future, research studies can be conducted in urban areas focusing the urban slums and remote areas in rural to gain a deeper understanding of knowledge about cervical cancer and HPV vaccination.
- Implementing these measures can greatly enhance awareness, accessibility, and acceptance of HPV vaccination, ultimately contributing to the prevention of cervical cancer.

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