

Original Research Article

Risk Factors and Preventive Measures of Cervical Cancer among Women of Reproductive Age in Southeast, Nigeria

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Abstract

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Cervical cancer is a significant public health issue among women of reproductive age in Southeast Nigeria. Despite advances in preventive measures, awareness and uptake remain low, contributing to the high incidence of the disease in the region. This study investigates the risk factors and preventive measures of cervical cancer among women in Southeast, Nigeria. A cross-sectional descriptive study was conducted across the five states of Southeast Nigeria (Abia, Anambra, Ebonyi, Enugu, and Imo). The study population included women aged 15-49 years, who had resided in the region for at least one year and provided informed consent. A multistage sampling technique was used to select a representative sample of 235 participants from urban and rural communities. Data was collected through structured questionnaires administered via face-to-face interviews. Descriptive statistics were employed using SPSS software version 26 to analyze the data. The study identified multiple risk factors for cervical cancer, including early sexual activity (22.13%), multiple sexual partners (45.96%), and low awareness of Human Papillomavirus (HPV) (39.57%). Preventive measures such as cervical cancer screening (41.70%) and HPV vaccination (22.09%) were poorly utilized. A significant portion of the participants (74.04%) had never undergone cervical cancer screening, and only 29.36% had received the HPV vaccine. The findings highlight the urgent need for enhanced education and outreach programs to increase awareness of cervical cancer risk factors and preventive measures in Southeast Nigeria. Strategies should focus on promoting cervical cancer screening and HPV vaccination while addressing barriers such as lack of awareness, access to services, and cultural beliefs.

Keywords: Cervical cancer, HPV vaccination, Preventive measures, Risk factors, Screening

INTRODUCTION

Cervical cancer remains a significant public health challenge, particularly in low- and middle-income countries (LMICs) where access to preventive services is often limited. Globally, cervical cancer is the fourth most common cancer among women, with an estimated 604,000 new cases and 342,000 deaths in 2020 alone (Sung et al., 2021). Sub-Saharan Africa, including Nigeria, bears a disproportionate burden of the disease, with women in these regions facing higher incidence and

mortality rates due to various socio-economic, cultural, and healthcare-related factors (Bruni et al., 2021).

In Nigeria, cervical cancer is the second most common cancer among women of reproductive age, following breast cancer. It accounts for a significant proportion of cancer-related morbidity and mortality (Oguntayo et al., 2017). The high prevalence of Human Papillomavirus (HPV), particularly the high-risk strains such as HPV 16 and 18, has been identified as the

primary etiological factor in the development of cervical cancer (Ferlay et al., 2019). Despite the availability of HPV vaccines, screening programs, and early treatment options, the uptake of these preventive measures remains low in many parts of Nigeria, especially in the Southeast region (Ezechi et al., 2020).

The Southeast region of Nigeria, predominantly inhabited by the Igbo ethnic group, presents unique socio-cultural and economic dynamics that influence the risk factors and preventive measures for cervical cancer. Cultural beliefs, religious practices, and limited access to healthcare services are among the factors contributing to the low awareness and utilization of cervical cancer preventive measures in this region (Okoye et al., 2019). Furthermore, the high prevalence of risky sexual behaviors, early marriage, and multiple sexual partners exacerbates the risk of HPV infection and, subsequently, cervical cancer (Nwobodo & Ba-Break, 2016).

Educational level and awareness significantly influence the uptake of preventive measures against cervical cancer. Studies have shown that women with higher educational attainment are more likely to participate in cervical cancer screening programs and receive the HPV vaccine (Ifemelumma et al., 2019). However, in Southeast Nigeria, the literacy rate among women remains relatively low, contributing to poor awareness and misconceptions about cervical cancer and its preventive measures (Ossai et al., 2019). This lack of awareness is further compounded by inadequate healthcare infrastructure and limited availability of screening services, particularly in rural areas (Eze et al., 2021).

Another critical factor influencing cervical cancer prevention in Southeast Nigeria is the role of healthcare providers. The knowledge, attitude, and practices of healthcare workers regarding cervical cancer screening and prevention play a pivotal role in shaping the behaviors of the population. Studies have highlighted gaps in the knowledge and training of healthcare providers, which in turn affect the quality of care and information provided to women (Oluwole et al., 2017). Addressing these gaps through targeted training programs and policy interventions is crucial for improving the uptake of preventive measures.

Government policies and health interventions also play a significant role in cervical cancer prevention. In Nigeria, the National Cancer Control Plan (NCCP) aims to reduce the burden of cancer through a comprehensive approach that includes vaccination, screening, early diagnosis, and treatment (Federal Ministry of Health, 2018). However, the implementation of these policies at the regional level, particularly in the Southeast, faces challenges such as inadequate funding, poor infrastructure, and limited political commitment (Umeh et al., 2021). Strengthening the healthcare system and ensuring the effective implementation of national policies at the local level are essential steps toward reducing the

incidence and mortality of cervical cancer in Southeast Nigeria.

In conclusion, cervical cancer remains a pressing public health issue in Southeast Nigeria, with multiple risk factors contributing to its high prevalence. The socio-cultural, economic, and healthcare-related challenges in this region hinder the effective implementation of preventive measures. Addressing these challenges through comprehensive public health interventions, education, and policy enforcement is vital to reducing the burden of cervical cancer among women of reproductive age in Southeast Nigeria.

MATERIALS AND METHODS

Study Design

A cross-sectional descriptive study design was utilized for this research. This design is appropriate as it allows for assessing the prevalence of risk factors and evaluating preventive measures of cervical cancer within a specific population at a single point in time. It facilitates the identification of associations between exposure factors and the occurrence of cervical cancer, providing a snapshot of the current situation in Southeast Nigeria (Ezirim et al., 2024).

Study Area

The study was conducted in Southeast Nigeria, comprising five states: Abia, Anambra, Ebonyi, Enugu, and Imo. The Igbo ethnic group predominantly inhabits this region and has a mix of urban and rural settings. The healthcare infrastructure varies across the states, with several tertiary, secondary, and primary healthcare facilities available. The selection of this region is informed by the need to understand regional-specific risk factors and the effectiveness of existing preventive measures in reducing the incidence of cervical cancer.

Study Population

The target population for this study includes women of reproductive age (18 - 49 years) residing in Southeast Nigeria.

The inclusion criteria are:

- Women who have been residents of Southeast Nigeria for at least one year.
- Women who provide informed consent to participate in the study.
- Women who are mentally and physically capable of responding to the study instruments.

The exclusion criteria are:

- Women with a history of hysterectomy.

- Women currently diagnosed with any other form of cancer.
- Pregnant women, due to potential hormonal influences on cervical pathology.

Sample Size Determination

The sample size will be determined using the Cochran formula for estimating proportions in a population outlined by Airaodion et al. (2023):

$$n = \frac{Z^2(Pq)}{e^2}$$

where n = minimum sample size

Z = 1.96 at 95% confidence level,

P = known prevalence of cervical cancer in Nigeria

e = error margin tolerated at 5% = 0.05

q = 1 - p

According to Omosun et al. (2022), the existing prevalence of cervical cancer in Nigeria is 16.4%.

$$P = 16.4\% = 0.164$$

$$q = 1 - p$$

$$= 1 - 0.164$$

$$= 0.836$$

$$n = \frac{(1.96)^2(0.164 \times 0.836)}{(0.05)^2}$$

$$n = \frac{3.8416 \times (0.137)}{0.0025}$$

$$n = \frac{0.526699}{0.0025} = 210.68$$

The minimum sample size was 211 and was adjusted to 235 to account for a non-response rate of 10 %.

Sampling Technique

A multistage sampling technique was employed to select participants. This includes:

1. **Selection of States:** All five (Abia, Anambra, Ebonyi, Enugu, and Imo) states in Southeast Nigeria were included in the study to ensure a comprehensive regional representation.
2. **Selection of Local Government Areas (LGAs):** From each state, three LGAs were randomly selected.
3. **Selection of Communities:** In each selected LGA, two communities (one rural and one urban) were randomly chosen.
4. **Selection of Participants:** From each community, women of reproductive age were selected using systematic random sampling from households. The sampling frame consisted of a list of households within each community, and every 3rd household was chosen until the desired sample size was achieved.

Inclusion and Exclusion Criteria

• Inclusion Criteria:

- Women aged 15-49 years who have resided in the study area for at least one year.
- Women who give informed consent to participate in the study.

• Exclusion Criteria:

- Women with a known history of cervical cancer, as they may have higher knowledge than the general population.
- Women who are healthcare professionals or are working in a related field, as their knowledge levels might differ significantly.
- Women who did not give informed consent to participate in the study

Data Collection

A structured questionnaire was developed based on validated instruments from previous studies and adapted to the local context. The questionnaire was pretested on a sample of 30 women from a community outside the study area to assess clarity, relevance, and reliability. Necessary modifications were made based on feedback and results from the pretest. Trained research assistants fluent in English and local languages administered the questionnaires through face-to-face interviews to ensure clarity and accuracy. The interviews were conducted in the local language (Igbo) where necessary, and translations were provided to maintain consistency. Data collection occurred over a period of three months.

Data Analysis

Data was analyzed using Statistical Package for Social Sciences (SPSS) software version 26. Descriptive statistics (frequencies, and percentages) were used to summarize the data.

Ethical Considerations

The study adhered to the principles of the Declaration of Helsinki. Participants were informed about the study's objectives, their right to withdraw at any time, and the measures taken to ensure confidentiality. Written informed consent was obtained from all participants.

RESULTS

The study involved 235 participants with a diverse age distribution, predominantly aged between 30-34 years (24.68%), followed by those aged 45-49 years (20.00%)

Table 1. Socio-Demographic Information of Participants

Socio-Demographic Information	Frequency (n = 235)	Percentage (%)
Age (in Years)		
15-24	21	8.94
25-29	34	14.47
30-34	58	24.68
35-39	36	15.32
40-44	39	16.60
45-49	47	20.00
Educational Level		
No formal Education	19	8.09
Primary Education	34	14.47
Secondary Education	135	57.45
Tertiary Education	47	20.00
Marital Status		
Single	47	20.00
Married	130	55.32
Divorced/Widowed	58	24.68
Employment Status		
Unemployed	21	8.94
Self-employed	77	32.77
Private sector employee	48	20.43
Public sector employee	51	21.70
Student	38	16.17
Residence		
Rural	115	48.94
Urban	120	51.06
Monthly Income (Naira)		
Below 10,000	00	0.00
10,001 - 50,000	55	23.40
50,001 - 100,000	104	44.26
100,001 - 150,000	54	22.98
Above 150,000	22	9.36
Number of Children		
0	33	14.04
1-2	118	50.21
3-4	73	31.06
5 or more	11	4.68

and 40-44 years (16.60%). Most participants had secondary education (57.45%), and a significant proportion were married (55.32%). The majority resided in urban areas (51.06%), and over half (50.21%) had 1-2 children. Notably, most participants had a monthly income between 50,001 - 100,000 Naira (44.26%), indicating a moderate-income level (Table 1).

Regarding sexual health, 51.49% of participants first had sexual intercourse between 19-24 years, and 45.96% reported having 4-5 sexual partners in their lifetime. A significant majority (87.66%) had never smoked, and none had a history of sexually transmitted infections (STIs). Awareness of HPV and its link to cervical cancer was moderate, with 39.57% aware, though a significant portion (41.70%) were unsure. Contraceptive use was common, with 66.38% having used them, primarily condoms (41.30%) and oral

contraceptive pills (34.06%). When asked about perceived risk factors for cervical cancer, a majority identified HPV infection (18.98%) and early sexual activity (20.82%) as significant risks. Additionally, most participants considered it important (38.72%) or very important (36.17%) to educate women about cervical cancer prevention, with social media (32.15%) and community outreach programs (25.44%) seen as the most effective awareness methods (Table 2).

Belief in the preventability of cervical cancer was mixed, with 41.70% affirming it could be prevented, while 47.23% were unsure. Among those who believed in prevention, regular screening (30.52%) and safe sexual practices (28.51%) were the most cited preventive measures. However, only 25.96% had undergone cervical cancer screening, with the most recent screenings often occurring 2-5 years ago (34.43%). The

Table 2. Risk Factors of Cervical Cancer

Variable	Frequency (n = 235)	Percentage (%)
At what age did you first have sexual intercourse?		
Below 15 years	13	5.53
15-18 years	52	22.13
19-24 years	121	51.49
25 years and above	49	20.85
How many sexual partners have you had in your lifetime?		
1	11	4.68
2-3	51	21.70
4-5	108	45.96
More than 5	65	27.66
Do you or have you ever smoked?		
Yes	29	12.34
No	206	87.66
Have you been diagnosed with any sexually transmitted infections (STIs) in the past?		
Yes	00	0.00
No	235	100.00
Are you aware of HPV and its link to cervical cancer?		
Yes	93	39.57
No	44	18.72
Not sure	98	41.70
Have you ever used contraceptives?		
Yes	156	66.38
No	79	33.62
*If yes, what type of contraceptive do you use? (select all that apply) (n = 276)		
Oral contraceptive pills	94	34.06
Intrauterine device (IUD)	22	7.97
Condoms	114	41.30
Injectable contraceptives	21	7.61
Other (please specify)	25	9.06
*Which of the following do you believe are risk factors for cervical cancer? (Select all that apply) (n = 490)		
Human Papillomavirus (HPV) infection	93	18.98
Early sexual activity	102	20.82
Multiple sexual partners	68	13.88
Smoking	26	5.31
Family history of cervical cancer	142	28.98
Long-term use of oral contraceptives	59	12.04
How important do you think it is to educate women about cervical cancer and its prevention?		
Very important	85	36.17
Important	91	38.72
Neutral	23	9.79
Unimportant	26	11.06

Table 2. Continue

Very unimportant	10	4.26
*In your opinion, what is the best way to increase awareness about the preventive measures of cervical cancer in your community? (Select all that apply) (n = 507)		
Community outreach programs	129	25.44
Television and radio campaigns	115	22.68
School health education	58	11.44
Social media	163	32.15
Other	42	8.28

*indicates multiple responses

Table 3. Preventive Measures of Cervical Cancer

Variable	Frequency (n = 235)	Percentage (%)
Do you believe cervical cancer can be prevented?		
Yes	98	41.70
No	26	11.06
Not sure	111	47.23
*If yes, how can it be prevented? (You may select more than one) (n = 249)		
Regular screening (Pap smear)	76	30.52
HPV vaccination	55	22.09
Safe sexual practices	71	28.51
Avoiding smoking	36	14.46
Others	11	4.42
Have you ever undergone cervical cancer screening?		
Yes	61	25.96
No	174	74.04
If yes, when was the last time you had cervical cancer screening?		
Less than a year ago	17	27.87
1-2 years ago	16	26.23
2-5 years ago	21	34.43
More than 5 years ago	07	11.47
*If you have not undergone cervical cancer screening, why not? (Select all that apply) (n = 452)		
Lack of awareness	151	33.41
Fear of the procedure	26	5.75
Cost	63	13.93
No symptoms present	72	15.93
Cultural or religious beliefs	13	2.88
No access to screening services	84	18.58
Lack of Time	29	6.42
Others	14	3.10
Have you received the HPV vaccine?		
Yes	69	29.36
No	92	39.15
Unsure	74	31.49

Table 3. Continue

If yes, how many doses of the HPV vaccine have you received?		
1 dose	23	33.33
2 doses	15	21.74
3 doses	07	10.14
I don't remember	24	34.78
If not, why have you not received the HPV vaccine? (select all that apply) (n = 225)		
Unsure about it	35	15.56
It is too expensive	24	10.67
I am afraid of side effects	82	36.44
I don't think I need it	53	23.56
I don't have access to it	31	13.77
How often do you practice safe sex (e.g., use of condoms)?		
Always	14	5.96
Often	33	14.04
Sometimes	51	21.70
Rarely	94	40.00
Never	43	18.29
How often do you visit a healthcare facility for regular check-ups?		
Every 6 months or less	03	1.28
Once a year	35	14.89
Every 2-3 years	68	28.94
Rarely/Never	129	54.89
Are there cervical cancer screening centres near your residence?		
Yes	81	34.47
No	154	65.53
Have you received any education or counselling about cervical cancer prevention?		
Yes	92	39.15
No	143	60.85
If yes, where did you receive the education or counselling?		
Hospital/Clinic	22	23.91
Community Outreach	19	20.65
Media	34	36.96
School	11	11.96
Others	06	6.52
Do you have access to affordable cervical cancer screening services?		
Yes	74	31.49
No	161	68.51

*Indicates multiple responses

primary reasons for not undergoing screening were a lack of awareness (33.41%) and no access to screening services (18.58%). Regarding HPV vaccination, 29.36%

had received the vaccine, though 31.49% were unsure if they had been vaccinated. Safe sex practices were infrequent, with only 5.96% always using condoms, and

regular healthcare facility visits were rare, with 54.89% rarely or never attending check-ups. Access to cervical cancer screening centres was limited, with 65.53% lacking nearby facilities, and 60.85% had not received any education or counselling about cervical cancer prevention (Table 3).

DISCUSSION

The results of this present study found that the majority of participants initiated sexual activity between the ages of 19 and 24 (51.49%), with a significant portion also reporting sexual initiation between 15 and 18 years (22.13%). Previous research has consistently highlighted early sexual debut as a significant risk factor for cervical cancer, primarily due to the increased likelihood of exposure to Human Papillomavirus (HPV) at a younger age, which is a well-established cause of cervical cancer (Bruni et al., 2019). The high percentage of participants reporting multiple sexual partners (45.96% had 4-5 partners, and 27.66% had more than 5) further corroborates the association between multiple sexual partners and increased HPV exposure, a finding supported by a study conducted by Bosch et al. (2018).

Only 12.34% of participants reported a history of smoking, which is relatively low but still notable considering the established link between smoking and cervical cancer risk due to the carcinogenic effects of tobacco on cervical cells (Plummer et al., 2020). The absence of self-reported sexually transmitted infections (STIs) among the participants (100% reported no STIs) is an interesting finding, as it contradicts the widespread understanding that STIs, particularly HPV, are highly prevalent in sexually active populations. This discrepancy may indicate a lack of awareness or underreporting of STI diagnoses, which could be addressed through improved sexual health education and screening programs.

Awareness of HPV and its connection to cervical cancer was moderate, with 39.57% of participants reporting knowledge of the link, while 41.70% were unsure. This level of awareness is comparable to findings from a study by Bode et al. (2019), which reported that HPV awareness among Nigerian women remains suboptimal. The use of contraceptives was reported by 66.38% of participants, with condoms being the most commonly used method (41.30%). The use of oral contraceptive pills (34.06%) is particularly significant given the ongoing debate about the long-term use of hormonal contraceptives and their potential role in increasing cervical cancer risk (Moreno et al., 2002). However, the relatively low percentage of participants using intrauterine devices (IUDs) (7.97%) may reflect cultural or accessibility factors that influence contraceptive choices in this region.

The perception of cervical cancer risk factors among participants varied, with family history of cervical cancer (28.98%) and early sexual activity (20.82%) being the most frequently identified. Surprisingly, only 18.98% recognized HPV infection as a risk factor, which highlights a significant knowledge gap that could be addressed through targeted educational campaigns. This is consistent with the findings of a study by Odetunde et al. (2021), which emphasized the need for increased public health education to bridge knowledge gaps regarding HPV and its role in cervical cancer.

The majority of participants (74.89%) acknowledged the importance of educating women about cervical cancer and its prevention, with 36.17% deeming it "very important" and 38.72% considering it "important." This reflects a positive attitude towards cervical cancer education, which is crucial for the success of preventive measures. Community outreach programs (25.44%) and social media (32.15%) were identified as the most effective channels for increasing awareness, which aligns with the findings of Adamu et al. (2018), who reported that community-based interventions and digital platforms are effective in reaching diverse populations.

The results of this study are consistent with previous research in several areas, particularly regarding the identification of multiple sexual partners and early sexual activity as significant risk factors for cervical cancer (Bosch et al., 2018; Bruni et al., 2019). However, the study also highlights areas where knowledge and awareness are lacking, such as the recognition of HPV as a risk factor, which echoes the findings of Bode et al. (2019). The preferred channels for increasing awareness, particularly the use of social media, are also in line with recent trends in public health education, as noted by Adamu et al. (2018).

Despite the global emphasis on cervical cancer prevention, particularly through regular screening and HPV vaccination, the study shows that nearly half of the respondents (47.23%) are unsure whether cervical cancer can be prevented, and only 41.70% believe it can be prevented. This level of uncertainty is alarming, considering the preventability of cervical cancer through early detection and vaccination.

Regular cervical cancer screening, particularly through Pap smears, is a well-established preventive measure. However, only 25.96% of the participants reported having ever undergone cervical cancer screening, a figure that aligns with previous research conducted in Nigeria, where screening rates have been consistently low (Ezechi et al., 2021). The barriers to screening identified in this study, such as lack of awareness (33.41%), no access to screening services (18.58%), and the absence of symptoms (15.93%), are consistent with the findings of previous studies, which have also highlighted similar obstacles (Aniebue and Aniebue, 2010; Okunowo et al., 2018).

The low uptake of HPV vaccination, with only 29.36%

of participants having received the vaccine, further underscores the challenges in cervical cancer prevention. Fear of side effects (36.44%) and a belief that the vaccine is unnecessary (23.56%) were the most common reasons for not receiving the HPV vaccine. These findings are consistent with previous studies in similar settings, which have also noted vaccine hesitancy due to misinformation and fear of adverse effects (Balogun et al., 2012; Makwe and Anorlu, 2011).

Safe sexual practices, including condom use, are critical in reducing the risk of HPV transmission, a major cause of cervical cancer. However, the study shows that a significant proportion of women either rarely (40.00%) or never (18.29%) practice safe sex. This finding is concerning and suggests that risky sexual behaviours are prevalent among women in Southeast Nigeria, potentially increasing their vulnerability to HPV infection and subsequent cervical cancer. This trend has been noted in previous studies, where inconsistent use of condoms was reported as a major risk factor for HPV infection (Adeoye et al., 2019).

The study highlights significant barriers to accessing healthcare, with 65.53% of respondents reporting no cervical cancer screening centres near their residences and 68.51% lacking access to affordable screening services. This lack of access is a significant determinant of the low screening rates observed and has been similarly documented in other studies conducted in rural and semi-urban areas of Nigeria (Eze et al., 2012). Moreover, the infrequent visits to healthcare facilities for regular check-ups, with 54.89% of respondents rarely or never attending, further exacerbate the situation. Regular healthcare visits are crucial for early detection and prevention of cervical cancer, yet the low frequency of these visits suggests a missed opportunity for early intervention.

The study indicates that only 39.15% of respondents have received any education or counselling about cervical cancer prevention, primarily through media (36.96%) and healthcare facilities (23.91%). The low level of education on cervical cancer prevention is a critical issue, as knowledge is a key factor in promoting preventive behaviours. Previous studies have emphasized the importance of health education in increasing awareness and uptake of preventive measures (Awodele et al., 2011; Nwankwo et al., 2011). The findings suggest that more targeted and widespread educational campaigns are needed to improve awareness and understanding of cervical cancer prevention among women in Southeast Nigeria.

The findings of this study are consistent with those of previous research conducted in various parts of Nigeria and other low-resource settings. The low screening rates and HPV vaccination uptake observed are in line with the results of studies by Ezechi et al. (2021) and Balogun et al. (2012), which also reported similar challenges in promoting cervical cancer preventive measures. The

barriers identified, such as lack of awareness, fear, and access issues, have been well-documented in the literature as major obstacles to cervical cancer prevention (Okunowo et al., 2018; Aniebue and Aniebue, 2010). The study further reinforces the need for comprehensive strategies that address these barriers, including enhanced education, improved access to services, and efforts to reduce vaccine hesitancy.

CONCLUSION

The study's findings indicate a relatively low level of awareness regarding cervical cancer risk factors, such as early sexual activity, multiple sexual partners, and HPV infection. Despite some knowledge about preventive measures like regular screening and HPV vaccination, the uptake of these services remains low, with only 25.96% of respondents having undergone cervical cancer screening. The primary barriers to screening include lack of awareness, access to services, and cultural beliefs. Furthermore, the study highlights a concerning gap in education and counselling on cervical cancer prevention, with most women not having received any form of education on the topic.

RECOMMENDATIONS

- 1. Enhance Community Awareness Programs:** Implementing community outreach programs and media campaigns to increase awareness about cervical cancer and its risk factors is essential. These programs should target both urban and rural areas, focusing on the importance of early detection and preventive measures such as HPV vaccination and regular screenings.
- 2. Improve Access to Screening Services:** Efforts should be made to establish more cervical cancer screening centres, particularly in rural areas where access is limited. Subsidizing the cost of screening services and providing mobile screening units could help overcome financial and logistical barriers.
- 3. Promote HPV Vaccination:** Education on the benefits and safety of the HPV vaccine should be intensified, especially among younger women. Public health policies should aim to make the HPV vaccine more accessible and affordable, potentially integrating it into routine immunization programs.
- 4. Integrate Cervical Cancer Education in Schools:** School health education programs should include comprehensive information on cervical cancer prevention, emphasizing the importance of safe sexual practices, regular check-ups, and the role of HPV vaccination.
- 5. Strengthen Healthcare Provider Training:** Training healthcare providers to offer better counselling and education on cervical cancer prevention during routine

visits can ensure that women receive accurate and relevant information. This could also help in debunking myths and addressing cultural or religious concerns.

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