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Awareness Of Risk Factors And Screening Methods Of Cancer Cervix Among Women Attending Gynaecology Department At A Tertiary Care Hospital

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ABSTRACT:
Examining the knowledge and attitudes of women who attend the gynaecology ward at SVIMS, Tirupati about cervical cancer screening strategies and risk factors was the goal of this study. The 250 female participants in this prospective study all lived in a hospital environment. We believed that by distributing a booklet with relevant information, we might teach patients the value of early detection and the steps they may take to improve their health and reduce the progression of cervical cancer. A predetermined questionnaire was used to gather data from interviewees. Statistical significance was determined while using multivariate logistic regression to determine independent variables, with a p-value less than 0.05. While 46.7% were in the dark about cervical cancer, 53.3% had some knowledge about the disease. A mean awareness score of 125 ± 9 was recorded. A total of 55.3% of the participants had no idea what symptoms to look out for (mean score: 28.75 ± 25.56), while only 34.4% were aware of the risk factors (19.25 ± 3.89). A mean score of 34 ± 38.56 indicated that 68% of the participants were aware of screening options, which includes the Pap smear test. The majority of participants knew that a Pap test might detect cervical cancer, but there were major knowledge gaps when it came to symptoms and risk factors, according to the study's conclusion. Age, marital status, and years of experience were not shown to be important factors in awareness. The results highlight the need for more education on cervical cancer, its symptoms, and risk factors, as well as more frequent screenings to lower death rates. This study serves as a baseline for further awareness programs in health professions.

KEY WORDS: Acquired Immune Deficiency Syndrome, Cervical Intraepithelial Neoplasia, Human Papillomavirus, Polycystic Ovarian Disease, Pap smear test, Cervical cancer, tumour, Vaginal speculations, Liquid based cytology.

INTRODUCTION:

There is a serious problem with cervical cancer that affects women all over the world. The cervix is a thin tunnel that connects the uterus to the vagina and is also a component of the birth canal. The genesis of cervical tumours is predominantly linked to persistent infection with the human papillomavirus (HPV), though alterations in healthy cervical cells due to other factors can also initiate this process. Tumours can manifest as benign or cancerous, with the potential for metastasis to distant sites within the body. The main way cervical cancer is classified is by the kind of cells that make it up. Squamous cell carcinomas, which originate in the cells that border the exterior of the cervix, constitute the great majority of cervical malignancies, accounting for 80 to 90% of cases. Adenocarcinoma, which grows in the glandular cells that border the inner region of the cervix, accounts for a minor percentage, 10–20%. This convergence of cell types at the cervical aperture is the squamocolumnar junction, and it is here that most malignancies start.

Transmutation from normal cervical cells to cancerous ones is a gradual process that might take years or even months. Cytological analysis of exfoliated cervical cells, often known as a Pap smear, is an essential component of cervical cancer diagnosis procedures. Cervical cancer affects over 15,000 American women annually. In the cervical region, an aberrant proliferation of squamous cells is called a squamous intraepithelial lesion (SIL). Depending on how much of the cervical region is affected and how aberrant the cells are, these lesions are categorised as low-grade or high-grade. Early cellular alterations, known as low-grade SIL, may either go away on their own or develop into high-grade lesions. Women in their twenties and thirties are at increased risk for developing mild dysplasia, which is another name for Cervical Intraepithelial Neoplasia 1 (CIN 1).

An abundance of aberrant, precancerous cells is indicated by a high SIL level. A few months to a few

years may pass before these changes, similar to low-grade SIL, spread beyond the cervical surface and develop into invasive cervical cancer. "Frequently seen in women in their 30s and 40s are high-grade lesions, which go by a variety of names including moderate or severe dysplasia, CIN 2 or 3, or cancer in situ. Invasive cervical cancer occurs when cancer cells expand to other parts of the body or penetrate deeper layers of cervical tissues. Women over the age of 40 are more likely to experience this period. Cervical cancer is the fourth most common disease in women globally, with an expected 604,000 new cases and 342,000 deaths in 2020. Low- and middle-income countries account for a startling 90% of all cases. Worldwide, it accounts for over one-third of cervical cancer deaths and is the most prevalent cancer among women in India.

Tobacco use, immune system deficiencies, and HPV exposure are all contributors to the development of cervical cancer." [1] Staging, utilising the FIGO system, describes the cancer's location, spread, and impact on other body parts, guiding treatment decisions and prognosis. [2] Surgical procedures, chemo, and radiation therapy are all part of the treatment plan, which is often overseen by a team of specialists including radiation oncologists, gynaecologic oncologists, surgeons, and medical oncologists. [3] Screening with HPV testing, Pap tests, and visual examination with acetic acid (VIA) are all part of the prevention strategy, as is HPV vaccine, which is especially important for girls between the ages of 9 and 14. [4] While screening has significantly reduced incidence and mortality in developed countries, challenges persist in implementing effective programs in resource-limited settings.

MATERIALS AND METHODOLOGY

An tertiary care hospital in Tirupati, Sri Venkateshwara Institute of Medical Sciences (SVIMS), SPMC (W)-Gynaecology Department, undertook this prospective research. A sample of 250 patients was included in the study who were admitted to the Gynaecology Department, SVIMS, SPMC (W), meeting the predefined inclusion and exclusion criteria and were enrolled over six months utilising a hospital-based prospective study design. The study employed informed consent forms, patient demographic forms, structured questionnaires for data collection, and patient information leaflets.

In this study, women's knowledge and awareness of cervical cancer were assessed using a standardised questionnaire. Participants were categorized by age groups (15–30, 30–45, 45–60, and above 60) and asked about their nutritional status, marital and occupational status, and educational background (primary, secondary, graduation, or uneducated). They were also queried about etiological factors like ovarian cysts, abnormal uterine bleeding, polymenorrhagia, post-menopausal symptoms, and infertility. Family history of cervical cancer was explored, identifying affected relatives such as mothers, sisters, grandmothers, or maternal aunts. Awareness of cervical cancer was measured, including sources of information (healthcare professionals, family/friends, academics, or others). The following symptoms were listed to the participants: abnormal bleeding, foul-smelling discharge, pelvic discomfort, pain during intercourse, and pain overall. We checked for knowledge of risk factors including hormonal contraceptives, smoking, alcohol use, HPV, sexually transmitted diseases, and multiple pregnancies. Additionally, participants' familiarity with several screening procedures was assessed; these methods included ocular examination, HPV DNA testing, vaginal speculum exams, liquid-based cytology, and Pap smears. Safe sexual practices, limiting the number of sexual partners, and early diagnosis were some of the preventative techniques discussed in the survey, along with treatment choices, vaccination rates, and knowledge about cervical cancer. By taking such a holistic view, we hoped to fill in the gaps in females' knowledge of cervical cancer and gauge their current level of awareness.

The Institutional Ethical Committee of Sri Venkateshwara Institute of Medical Sciences, SPMC (W) – Tirupati (IEC Approval No. 1257) reviewed and approved the research protocol, data collecting tools, and informed consent form before to its initiation.

STUDY CRITERIA:

Inclusion criteria:

- "All women above 21 years attending outpatient and Inpatient Gynaecology
- Patients who were willing to participate in the study.
- Individuals who attended Cervical cancer screening or developed of cervical cancer over time.
- Male individuals who attended as bystanders for women patients.

Exclusion criteria:

- Patients who were not willing to participate in the study were excluded.
- Patients underwent treatment/HPV cytology tests for post-treatment surveillance.
- Women who have had a hysterectomy with the removal of the cervix.
- Pregnant and Lactating women were not considered in the study.
- Girls below 21 years were not included in the study."

STUDY PROCEDURE:

In the Department of Gynaecology at Sri Venkateshwara Institute of Medical Sciences, SPMC(W) – Tirupati, under the mentorship of Dr. Malathi and Dr. Y. Lavanya, was the setting for this investigation. The study's design and focus were established after a thorough review of relevant literature and careful consideration of logistical aspects. Following institutional and ethical committee approval, a comprehensive data collection instrument, including a bilingual informed consent form, was prepared. Participant enrollment and data acquisition adhered strictly to predefined inclusion and exclusion criteria. Before participation, the study's aims and advantages were communicated in the local language to all potential participants and their families, ensuring voluntary consent. All patients presenting to the gynaecology ward were considered for inclusion, and for each participant, demographic details and questionnaire responses were documented in an Excel database. The resulting knowledge scores were subsequently analysed and classified to differentiate between individuals with sufficient and insufficient understanding.

DATA COLLECTION:

In order to raise awareness about cervical cancer risk factors and screening methods, researchers contacted patients at the gynaecology ward and obtained their consent to use a structured patient demographic form to gather data such as age, sex, weight, family history, previous medical history, social history, and so on.

Knowledge, attitude, and practices were used to raise awareness about what people can do to reduce their risk of cervical cancer, while questions were used to collect information.

RESULTS

There was an average age of 40 years in the study's participants. According to the data, 37.3% of the participants were in the age bracket of 30–45, and 28.1% were in the 15–30 age bracket. People in the 45–60 age bracket accounted for an additional 32.9% of the sample. Only 1.7% of those who participated in the research were 50 and over. While 15.5% of the participants identified as vegetarian, 84.5% said they followed a varied diet. The most frequent gynaecological complaints among the participants were abnormal uterine bleeding (34.9%), followed by ovarian cysts (20.1%), and polymenorrhagia (13.7%). Less common issues included postmenopausal symptoms (2.8%) and problems with conception (1.2%). A significant majority of the participants (90%) were married. Most participants were unemployed (69.5%), and regarding education, the largest group had completed graduation (36.9%), while a significant portion were uneducated (30.9%). Finally, most participants reported no hereditary status of cervical cancer (87.2%).

DEMOGRAPHIC DETAILS:

Category	Details	Frequency (N)	Percentage (%)
Age Group	15–30	93	28.1%
	30–45	70	28.0% (Corrected)
	45–60	82	32.9%
	Above 60	5	2.0% (Corrected)
Nutritional Status	Mixed Diet	211	84.5%
	Vegetarian	39	15.5%
Occupational Status	Employed	79	31.5%
	Unemployed	171	69.5%
Educational Status	Primary education	28	11.2%
	Secondary education	53	20.9%
	Graduation	92	36.9%
	Uneducated	77	30.9%
Marital Status	Married	225	90%
	Unmarried	25	10%
Hereditary Status	Yes	32	12.8%
	No	218	87.2%

Tab.1: Demographic details of the study

It indicates a moderate level of general awareness about cervical cancer (around 53.3%), with family and friends serving as the primary information source. However, a deeper understanding of the disease is lacking, as a substantial majority were unaware of key symptoms (around 83.6%) and risk factors (around 65.6%). This suggests that while the topic might be discussed within social circles, accurate and comprehensive information dissemination is limited.

On a more encouraging note, awareness of cervical cancer screening methods was higher (68%), with the Pap smear being the most commonly known test. Despite this, knowledge about other screening techniques like vaginal speculation, HPV DNA testing, liquid-based cytology, and visual screening was considerably lower. Additionally, a large percentage of individuals (about 71.5% of the total) were not aware of the many cervical cancer treatments that are accessible. These findings highlight the importance of targeted and effective regional health education initiatives in addressing knowledge gaps and empowering individuals to make educated choices on cervical cancer prevention and treatment.

Category	Sample number(n)	Details	Frequency (N)	Percentage (%)	Mean ± SD
Awareness of Study Participants	250	Yes	134	53.30%	125 ± 9
		No	116	46.70%	
Awareness about Cervical Cancer	134	Neighbour	14	10.44%	
		Health care professionals	40	29.85%	
		Academics	60	44.77%	
		Family and friends	20	14.93%	
Cervical Cancer Risk Factor	250	Yes	86	34.40%	19.25 ± 3.89
		No	164	65.60%	
Aware about Risk Factors	86	Multi parity	26	30%	
		HPV	17	20%	
		Hormonal contraceptives	17	20%	
		History of STDs	17	20%	
		Post menopausal bleeding	9	10%	
Awareness of Symptoms	134	Yes	112	83.58%	
		No	22	16.42%	
Symptoms Awareness	112	Excessive vaginal discharge	35	30%	28.75 ± 25.56
		Pain in lower abdomen	68	60%	
		Alterations in menopause	3	4%	
		Abnormal vaginal bleeding	66	66%	
Awareness about Screening Methods	250	Yes	170	68%	125 ± 45
		No	80	32%	
Screening Method Awareness	170	Pap smear test	141	83.20%	34 ± 38.56
		Vaginal speculations	9	5.20%	
		HPV-DNA testing	88	52%	
		Liquid-based cytology	44	26.10%	
		Visual screening	108	63.50%	
Cervical Cancer Treatment Awareness	250	Yes	71	28.50%	
		No	179	71.50%	

Tab :2. Awareness regarding the cervical cancer.

The data highlights a significant lack of awareness and engagement with cervical cancer prevention and vaccination among the respondents. The overwhelming majority (90.9%) are not vaccinated, and a large portion (43.9%) is unaware of preventive measures, with 32.4% uncertain about how to prevent cervical cancer. Preventive measures, such as early pregnancy/abortion, having a single sexual partner, and safe sexual intercourse, are not widely recognised, with 72% of respondents unaware of these practices. This suggests a gap in education and public health outreach, as many respondents either lack the necessary information or have misconceptions about how to prevent cervical cancer. Additionally, the statistical mean and high standard deviation (62.5 ± 66.961) suggest considerable variability in the responses, possibly indicating differences in age, education, or other factors influencing awareness and practices. Addressing these gaps through better education and awareness campaigns is crucial in improving public health outcomes.

"Category	Details	Frequency (N)	Percentage (%)	Mean ± SD
Vaccination of Cervical Cancer	Yes	19	7.80%	
	No	227	90.90%	
	Don't know	4	1.30%	
Aware about Prevention	Yes	60	23.80%	
	No	110	43.90%	
	Don't Know	80	32.40%"	
Preventive Measures	Early pregnancy/Abortion	30	12%	62.5 ± 66.961
	Single sexual partner	20	8%	
	Safe Sexual intercourse	20	8%	
	Don't Know	180	72%	

Tab: 3. About the preventive measures.

DISCUSSION:

Research and existing literature indicate that women's knowledge of cervical cancer and their efforts to avoid the disease provide a complex picture with many gaps that must be filled. Participants were women with gynaecological problems who were between the ages of 15 and 60 and who visited gynaecology or cancer outpatient departments (OPDs). Demographic, epidemiological, and clinical data were gathered for this research. Getting a record of their knowledge of cervical cancer screening procedures and risk factors was the main objective.

A similar prospective study by Hirani et al. (2021) in Karachi, Pakistan, included 384 women aged 15–50 attending the Aga Khan University Hospital. Despite being mostly educated and from higher socioeconomic backgrounds, participants showed poor knowledge and practices regarding cervical cancer screening. This suggests that awareness may be even lower in the broader population.

At Maulana Azad Medical College (MAMC), Delhi, Only 30.8% of 1411 women younger than 35 years old were aware that cervical cancer existed, according to a cross-sectional survey. When asked about tests that may assist, only 36.3% of women with a history of gynaecological problems in their family were aware of them. Similarly, Sauvaget et al. (2011) found that out of 400 women in Malaysia who had never had a Pap smear, only 48.7% were familiar with cervical cancer and the screening procedure.

Muwamba et al. (2015) polled 356 female Zimbabweans and discovered that only 9.8% knew about Pap smears and 12.6% about VIA. Almost all of them (95.6%) had never been screened. The research concluded that health education, nationwide screening programs, and screening facilities at the district level would be beneficial.

Only 45 percent of the 156 rural women surveyed in a qualitative research conducted in Uganda (Sikise et al., 2014) reported ever having undergone screening. In a similar vein, a cross-sectional study of 2,942 Russian women (aged 25–65) found that, mostly as a result of low awareness, only 22.3% actually participated in screenings.

Even though screening programs are available worldwide, participation is low. Access is still limited due to socioeconomic, cultural, and logistical factors, particularly for lower-income groups. An option that shows promise is HPV self-sampling, which allows for more privacy and comfort while removing the need for pelvic inspections. When HPV DNA testing was made available for self-collection, screening uptake in Argentina jumped from 20% (Pap smear) to 86%.

Just one-third of 219 women in a 2019 cross-sectional research in metropolitan Pondicherry knew about cervical cancer. Younger, better-educated, working women who had a personal or familial history of cancer were more likely to be aware of the disease. While 60% of those aware recognized the potential for early detection, fewer than 15% were aware of specific screening methods. Only 32% were willing to undergo screening, with major deterrents being fear and lack of symptoms.

In our study, 250 women were asked to fill out a standardised questionnaire that measured their knowledge of cervical cancer. Participating women were those who made hospital visits; the research was cross-sectional in nature. Risk factors and screening techniques. The majority of women (53.3%) were knowledgeable about cervical cancer, whereas 46.7% had little understanding of the disease and its screening procedures. Problems conceiving (1.2%), abnormal uterine bleeding (34.9%), polymenorrhagia (13.7%), postmenopausal symptoms (2.8%), and ovarian cysts (20.1%) were the most common complaints among the research subjects. Out of the whole sample, only over 36.9% had completed high school; 30.9% were illiterate; 20.9% had completed secondary school; and 11.2% had completed elementary school. Women of working age were more likely to have a bachelor's degree or higher, be well-versed in cancer, and have a personal or family history of the illness. The origins, manifestations,

and warning signals of cervical cancer were largely unknown. Only 44.7% of research participants were familiar with the symptoms, while 55.3% were completely clueless. There was no history of cervical cancer in either the participants' immediate families or themselves for 67.5% of the women in the research. Only 32.5 percent of the women who underwent screening had a relative with cervical cancer. Research participants' symptoms included lower abdomen pain (60%), copious vaginal discharge (30%), alterations in menarche (6%), and abnormal vaginal haemorrhage (6%). Just 34.4% of those who took part in the survey knew about the risk factors, and 65.6% had no idea what they were. Thirty percent of participants knew about multiparity, twenty percent about the HPV, and twenty percent about hormonal contraception. Twenty percent were aware of the participants' STD histories, and ten percent knew about the symptoms of postmenopausal haemorrhage. about those who have heard about HPV DNA testing, 31.2% are familiar with the pap smear, 5.2% with vaginal speculation, 10.4% with liquid-based cytology, and 8.2% with visual screening. Among the study subjects (7.8%) heard about the vaccination, Majority of the study participants had no idea about vaccination (90.9%).

CONCLUSION:

Finally, our study confirms that there is a significant knowledge vacuum about cervical cancer fundamentals, including risk factors (particularly HPV), screening methods, and prevention strategies. Not knowing how to test for HPV and not being aware of it as the primary cause are two major problems. While mass media serves as a primary information source for those with some awareness, the overall knowledge levels are inadequate and lag behind those reported in other middle-income countries. These findings underscore an urgent need for targeted, large-scale public health interventions, involving mass media and healthcare professionals, to enhance awareness, improve knowledge, and ultimately promote the uptake of crucial preventive measures like HPV vaccination and regular cervical cancer screening within this population.

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