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Effectiveness of an Awareness program on Knowledge regarding Cervical Cancer among Women

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Abstract: ***Cervical cancer is one of the most serious health problems affecting women across the world, particularly in developing and middle-income nations. It develops mainly due to a persistent infection with high-risk types of the Human Papillomavirus (HPV), especially HPV16 and HPV 18, which are transmitted through sexual contact.***
This study is designed to evaluate the effectiveness of an awareness programme on knowledge regarding cervical cancer among women. The research design selected was a pre-experimental, one-group pre-test and post-test design, which helps in evaluating the difference in participants' knowledge levels before and after the intervention. The study was conducted in the Chilkur, Moinabad Rural Community area of Hyderabad, Telangana. The target population for this study comprised women aged between 25 and 69 years residing in the selected community. A total of 100 participants was selected using a non-probability purposive sampling technique, based on their availability and willingness to participate in the study. A structured Interview Questionnaire administered to the samples followed with Awareness session on Cervical cancer and post test was conducted after the 7 days of intervention. The findings revealed that most participants were aged 30–39 years (31%), illiterate (33%), housewives (36%), and married (51%). The majority (42%) had irregular menstrual cycles, and 21% reported a family history of cancer.The mean pre-test score (9.25) increased to 14.76 in the post-test, indicating a notable improvement in knowledge following the awareness program. The obtained t-value (18.07) at df 99 and p = 0.001 confirms that the intervention was statistically significant in enhancing knowledge about cervical cancer. Therefore, the hypothesis H_1 is accepted, signifying a significant difference between pre- and post-test knowledge levels. The study concluded that structured awareness programs are effective tools for improving women's understanding of cervical cancer, leading to better preventive behaviours and early detection.
Keywords: Awareness Programme, HPA (Human Papilloma Virus), Cervical Cancer.

I. INTRODUCTION

Cervical cancer is one of the most serious health problems affecting women across the world, particularly in developing and middle-income nations. It develops mainly due to a persistent infection with high-risk types of the Human Papillomavirus (HPV), especially HPV 16 and HPV 18, which are transmitted through sexual contact. The introduction of the Pap smear test by Dr. George Papanicolaou in the early 20th century marked a major milestone in women's health. This screening method allowed for early identification of abnormal cervical cells and significantly reduced cervical cancer-related deaths in regions where it was regularly practiced. Both Pap smear and HPV testing are effective in identifying precancerous lesions, thereby preventing the development of cervical cancer. However, despite the availability of these preventive measures, many women fail to undergo screening due to several factors such as a lack of awareness about its benefits, fear of discomfort or embarrassment, and inadequate access to healthcare facilities. Educational and awareness programs play a crucial role in addressing these barriers by providing accurate information about cervical cancer, its risk factors, symptoms, and preventive strategies. Moreover, cervical cancer not only affects women physically but also has a considerable psychological and social impact. Many women experience stigma, emotional distress, and isolation following diagnosis, which can adversely affect their overall well-being. Hence, addressing both the medical and psychosocial needs of affected women is essential for improving quality of life and treatment outcomes. According to the World Health Organization (2022), cervical cancer is the fourth most common cancer among women worldwide, accounting for approximately 660,000 new cases and 350,000 deaths each year. In the Asian region, it continues to be a leading cause of cancer-related deaths among women, with more than 50,000 new cases reported annually and nearly half of them resulting in death.

In India, the Indian Council of Medical Research – National Cancer Registry Programme (ICMR-NCRP) estimated that more than 340,000 women were diagnosed with cervical cancer in 2023. The incidence varies across different states, with Mizoram showing the highest rate and Dibrugarh the lowest (ICMR, February 2023).

In Telangana, about 6,000 new cases occur every year. Although treatment options such as radiation therapy and chemotherapy are available, the success rate greatly depends on early detection.

Cervical cancer is largely preventable through vaccination, early diagnosis, and regular screening. However, due to limited awareness and healthcare access, many cases are still detected at advanced stages, leading to poor survival outcomes. Therefore, there is an urgent need for effective educational strategies to increase public understanding of the disease.

This study is designed to assess the effectiveness of an awareness programme on knowledge regarding cervical cancer among women in a selected community. Promoting continuous awareness not only aids in prevention and early detection but also empowers women to take charge of their reproductive health, ultimately contributing to a healthier and more informed society.

A. Objectives

1) To assess the level of knowledge regarding cervical cancer among women.

2) To evaluate the effectiveness of an awareness program on Knowledge regarding cervical cancer with pre and post-test level of Knowledge.

B. Hypothesis

H_1: There is a significant difference between the pre and post-test level of knowledge regarding Cervical cancer.

C. Delimitations

The study focuses on women residing in rural area, Hyderabad.

II. MATERIALS & METHODS

The present study adopted a quantitative research approach to evaluate the effectiveness of an awareness programme on knowledge regarding cervical cancer among women.

The research design selected was a pre-experimental, one-group pre-test and post-test design, which helps in evaluating the difference in participants' knowledge levels before and after the intervention. The study was conducted in the Chilkur, Moinabad community area of Hyderabad, Telangana. The target population for this study comprised women aged between 25 and 70 years residing in the selected community.

A total of 100 participants were selected using a non-probability purposive sampling technique, based on their availability and willingness to participate in the study.

Inclusion Criteria for this study are Women who are willing to participate in the study, Women residing in rural area, Women who are available during the period of data collection. The study excluded that, Women who are deaf or mute and Women with diagnosed mental health disorders.

1) Description of the Tool: A structured interview questionnaire was developed to assess the participants' knowledge regarding cervical cancer. The tool consisted of 24 multiple-choice questions, each designed to measure different aspects of awareness related to cervical cancer, including causes, symptoms, prevention, and screening. Each item had four alternative responses, with one correct answer assigned a score of "1", while the remaining three incorrect options were given a score of "0."

2) Reliability of the Tool: The reliability of the instrument was determined using the split-half technique, and the reliability coefficient was calculated using Cronbach's Alpha formula ($\alpha = 0.7$). The result indicated that the tool was reliable for data collection.

3) Ethical consideration: The data were collected using a structured interview technique. The following steps were followed during the data collection process: Participants were made comfortable prior to the interview. Clear instructions about the purpose of the study and the questionnaire were provided to ensure understanding and cooperation. Informed consent was obtained from each participant before initiating the interview. Confidentiality and anonymity of the participants were strictly maintained throughout the study.

III. RESULTS &DISCUSSION

A. *Section A: Frequency and Percentage Distribution of Women According to Demographic Variables*

Table 1: Frequency and Percentage Distribution of Demographic Variables
(n = 100)

S.No	Demographic Variable	Frequency	Percentage
1.	Age (in years)		
	20–29	35	35%
	30–39	31	31%
	40–49	17	17%
	50–59	13	13%
	60–69	4	4%
2.	Education		
	Illiterate	32	32%
	Primary Education	18	18%
	Secondary Education	23	23%
	Diploma	8	8%
	Bachelor's Degree	12	12%
	Others	5	5%
3.	Occupation		
	Private Sector	36	36%
	Housewife	36	36%
	Self-employed	17	17%
	Government Employee	11	11%
4.	Marital Status		
	Married	51	51%
	Unmarried	37	37%
	Widowed	9	9%
	Separated	3	3%
5.	Obstetrical History		
	Parity	68	68%
	Nullipara	30	30%
	Gravida	2	2%
6.	Menstrual History		
	Irregular	42	42%
	Regular	39	39%
	Menopause	19	19%
7.	Family History of Cancer		
	Yes	21	21%
	No	79	79%

Interpretation: The data reveal that the majority of participants, 35%, were aged between 20–29 years, while only 4% were in the 60–69 years age group. Regarding education, most women (32%) were illiterate, and a small proportion (5%) had other degrees. In terms of occupation, both private employees and housewives constituted 36% each, whereas only 11% worked in government jobs. Most participants were married (51%), and only 3% were separated. Regarding obstetrical history, 68% were parous, and 2% were gravida. Concerning menstrual history, 42% had irregular cycles, and 19% had reached menopause. A large proportion, 79%, reported no family history of cancer, while 21% had a positive family history.

B. Section B: Comparison of Pre-test and Post-test Knowledge Levels Regarding Cervical Cancer

Table 2: Pre- and Post-test Level of Knowledge Regarding Cervical Cancer
(n = 100)

Level of Knowledge	Score Range	Pre-test Frequency	Pre-test Percentage	Post-test Frequency	Post-test Percentage
Low	1–6	11	11%	0	0%
Moderate	7–12	84	84%	16	16%
High	13–18	5	5%	84	84%

Interpretation: The results show that in the pre-test, 11% of participants had low knowledge, 84% had moderate knowledge, and only 5% demonstrated a high level of knowledge regarding cervical cancer. After the awareness program, 84% of the participants achieved high knowledge levels, 16% remained at a moderate level, and none scored in the low category. This clearly indicates a significant improvement in knowledge following the intervention.

C. Section C: Test of Significance : Difference Between Mean and Standard Deviation of Pre- and Post-test Scores

Table 3: Comparison of Pre-test and Post-test Mean and Standard Deviation Scores
(n = 100)

S.No	Test	Mean	Standard Deviation	Obtained "t" Value	Degree of Freedom	Table Value	p-Value
1	Pre-test	9.25	2.139	18.07	99	1.96	0.001
2	Post-test	14.76	2.050				

Interpretation: The findings show that the mean knowledge score increased from 9.25 (SD = 2.139) in the pre-test to 14.76 (SD = 2.050) in the post-test. The calculated t-value (18.07) at df = 99 is greater than the table value (1.96) at p = 0.001, indicating a statistically significant improvement in knowledge.

Hence, the research hypothesis (H_1) is accepted, confirming that the awareness program had a significant effect on improving women's knowledge regarding cervical cancer.

IV. RECOMMENDATIONS

1) Similar studies can be replicated on a larger sample size to validate the findings across diverse rural and urban communities.
2) Comparative studies may be conducted among nulliparous and multiparous women to explore differences in awareness and preventive practices related to cervical cancer.
3) Future research can include follow-up assessments to determine the long-term retention of knowledge after awareness interventions.

V. CONCLUSION

The study was conducted among 100 women residing in a rural community, Hyderabad, Telangana. The findings revealed that most participants were aged 30–39 years (31%), illiterate (33%), housewives (36%), and married (51%). The majority (42%) had irregular menstrual cycles, and 21% reported a family history of cancer.

The mean pre-test score (9.25) increased to 14.76 in the post-test, indicating a notable improvement in knowledge following the awareness program. The obtained t-value (18.07) at df = 99 and p = 0.001 confirms that the intervention was statistically significant in enhancing knowledge about cervical cancer. Therefore, the hypothesis H_1 is accepted, signifying a significant difference between pre- and post-test knowledge levels. The findings suggest that structured awareness programs are effective tools for improving women's understanding of cervical cancer, leading to better preventive behaviours and early detection.

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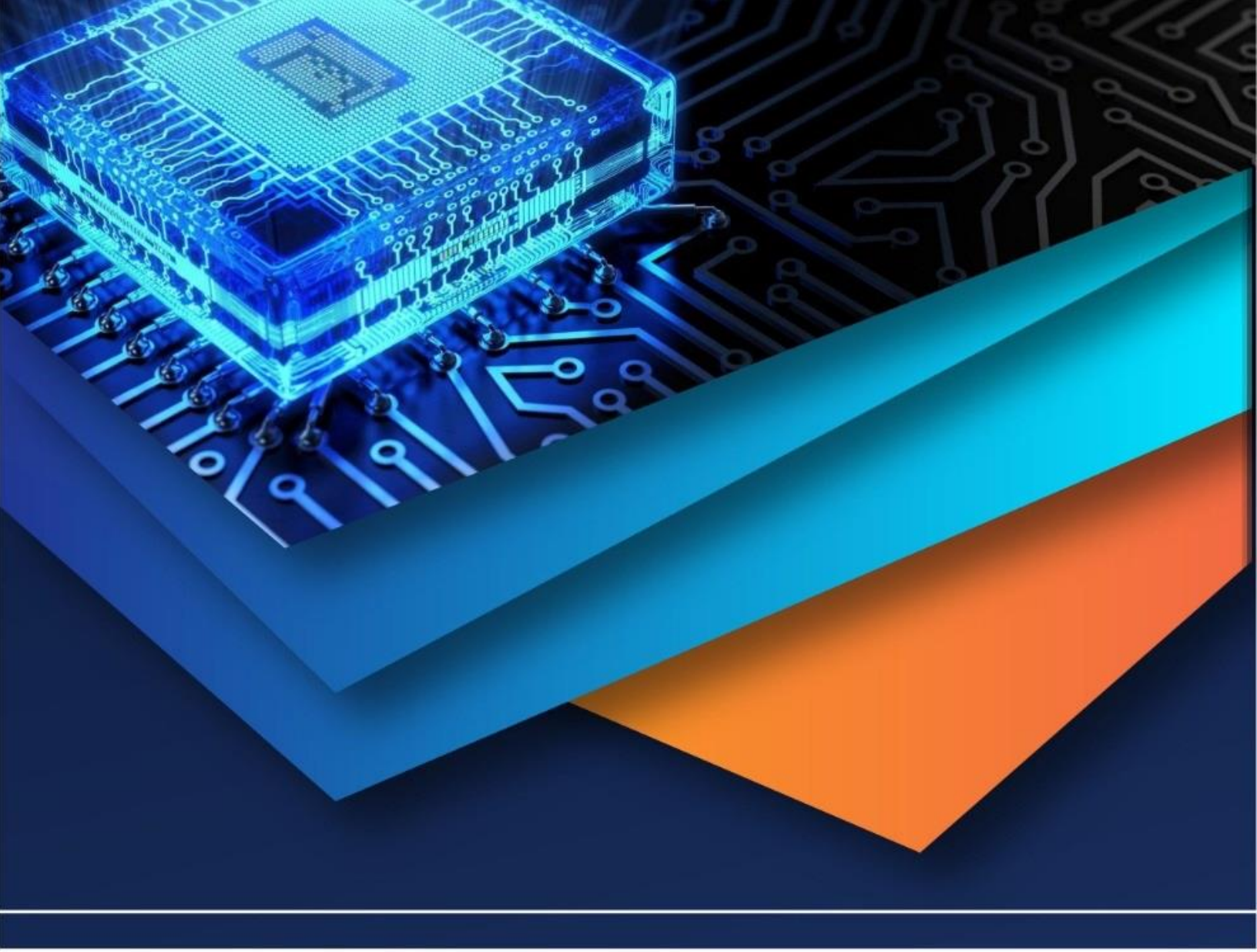

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