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A Study Evaluating the Effectiveness of a Structured Teaching Program on Cervical Cancer Prevention for Urban Women

Mrs. Nirmala
Mrs. Nirmala, Assistant professor, Department of Medical Surgical Nursing, Smt. Nagarathnamma College of Nursing, Bangalore, Karnataka, India
Prof. Snehalatha Reddy
Professor, Department of Medical Surgical Nursing, Smt. Nagarathnamma College of Nursing, Bangalore, Karnataka, India
Mrs. Perumala Keerthi Sudha
Associate Professor Department of Medical Surgical Nursing, Smt. Nagarathnamma College of Nursing, Bangalore, Karnataka, India
Mr. Guntu Durga Prasad ✉
Assist Professor, Department of Medical Surgical Nursing, Smt.Nagarathnamma College of Nursing, Bangalore, Karnataka, India
Prof. Devi Nanjappan
Principal, Department of Medical Surgical Nursing, Smt.Nagarathnamma College of Nursing, Bangalore, Karnataka, India

Abstract

This study aims to assess the effectiveness of structured teaching program on the prevention of cervical cancer among urban women in chikkabanavara, Bengaluru, Karnataka. Cervical cancer is one of the most preventable forms of cancer, yet remains a significant public health concern, especially in developing regions. The study employed a pre-test and post-test design to evaluate the knowledge of urban women regarding cervical cancer prevention before and after the teaching intervention. A total of 40 participants where participants were selected through random sampling.
A structured questionnaire was used to measure their knowledge on topics such as risk factors, early detection methods, and prevention strategies, including screening and vaccination. Statistical analysis was performed to assess the effectiveness of the teaching program. The findings indicated a significant improvement in knowledge among participants post-intervention, demonstrating the value of structured education in raising awareness and promoting preventive behaviors. This study underscores the importance of educational programs in empowering women to take proactive steps in preventing cervical cancer.

More Information

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Cervical cancer,
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health education,
urban women,
prevention.

Introduction

Cervical cancer is one of the leading causes of cancer related mortality among women worldwide, particularly in developing countries in India [1]. Despite being preventable through early detection, regular screenings, and vaccination many women remain unaware of these preventive measures, especially in urban areas where access to health care information may still be limited. In India, cervical cancer accounts for a significant portion of cancer cases among women, making public awareness and education crucial to reducing its prevalence [2].

This study aims to assess the effectiveness of a structured teaching program on cervical cancer prevention among urban women in Chikkabanavara, Bengaluru, Karnataka [3]. Educating women about the risk factors, early symptoms, screening methods, and the importance of HPV vaccination plays a pivotal role in reducing the burden of cervical cancer [4]. By evaluating the knowledge of these women before and after a structured teaching intervention, this study seeks to determine whether targeted educational programs can significantly enhance awareness and promote proactive behaviour for cancer prevention [5].

The findings from this study will provide insights into the role of structured educational programs in empowering women with the knowledge necessary to prevent cervical cancer, ultimately contributing to better health outcomes in urban populations.

Objectives

- To assess women's knowledge regarding the prevention of cervical cancer.
- To evaluate the effectiveness of a structured teaching program on cervical cancer prevention.
- To analyse the relationship between women's knowledge of cervical cancer prevention and selected variables.

Methodology

Research Approach and Design

The research approach for this study employs a quasi-experimental design using a one-group pretest-posttest method. This design is appropriate for collecting factual information regarding women's knowledge of cervical cancer prevention. A quasi-experimental design is particularly suitable for assessing the opinions of a selected population, as it provides reliable information about the existing situation.

Description of Variables

- Independent Variable: Structured Teaching Program
- Dependent Variable: Women's Knowledge

Setting of the Sample

The study was conducted at Acharya Institutes, located in Soldevanahalli, Bengaluru.

Population

The population for this study consisted of women employed at Acharya Institutes, Soldevanahalli, Bengaluru, Karnataka.

Sample Size

The sample comprised 40 women.

Sampling Technique

A convenience sampling technique was utilized to select participants for this study.

Criteria for Sample Selection

Participants included women working at Acharya Institutes within the age group of 35 to 55 years.

Data Gathering Technique

The study employed structured questionnaires as the method of data collection. This approach is particularly effective in contexts where participants are literate, allowing them to engage thoughtfully with the material. The use of structured questionnaires enables clear and standardized responses while still providing the opportunity for participants to express their views comprehensively. This method ensures robust data collection from all subjects, making it well-suited for the objectives of the study.

Table 1: Frequency and Percentage Distribution of Women According to Place of Delivery

N=40

Place of delivery	Frequency	Percentage
PHC	7	17.5
RHC	3	7.5
Private hospital	14	35.0
Government hospital	15	37.5
Home delivery	1	2.5
Total	**40**	**100**

The above table shows that out of 40 sample 17.5 percent women were delivered at PHC, 7.5 percent were delivered at RHC, 35 percent were delivered at private hospital, 37.5 percent were delivered at Government hospital and 2.5 percent were delivered at home. The majority of 37.5 percent women delivered at Government hospital and least 2.5 percent were delivered at home

Table 2: Item-wise Frequency and Percentage Distribution of Women according to Their Knowledge Scores on Causes and Signs and Symptoms of Cervical Cancer in Pre-test and Post-test

N=40

S.no.	Area of knowledge	Pre-test		Post-test	
		Answered correct	%	Answered correct	%
1	Meaning of cancer	40	100	40	100
2	Meaning of cervical cancer	40	100	40	100
3	Causative organism	Nil	Nil	3	7.5
4	Causes of cervical cancer	19	47.5	28	70
5	Risk factors	20	50	22	55
6	High risk age	11	27.5	15	37.5
7	Less important risk factors	21	52.5	27	67.5
8	Common symptoms	13	32.5	18	45
9	General symptoms	9	22.5	16	40
10	Symptoms in Ulcerating stage	17	42.5	24	60
11	Main Symptoms	3	7.5	18	45

The above table shows that there is a gain in posttest knowledge scores on causes and clinical features of cervical cancer.

The above table shows that there is a gain in posttest knowledge scores on prevention of cervical cancer.

Table 3: Frequency and Percentage Distribution of Women According to Knowledge on Prevention of Cervical Cancer in Pre-test and Post-test

N=40

c	Pre-test		Post-test	
	F	%	F	%
Below Average (<=33.33%)	24	60	1	2.5
Average (33.33%-66.66%)	15	37.5	31	77.5
Above Average (>66.66%)	1	2.5	8	20
Total	40	100	40	100

The above table shows that out of40 samples in the pretest1 (2.5%) were above average, 15 (37.5%) were average and 24 (60%) were below average. In post test 8(20%) were above average, 31 (77.5%) were average and 1(2.5%) were below average.

Table 4: Frequency and Percentage Distribution of Women According to Overall Knowledge on Prevention of Cervical Cancer in Pre-test and Post-test

N=40

Level of knowledge	Pre-test		Post-test	
	F	%	F	%
Below Average (<=33.33%)	22	55	Nil	Nil
Average (33.33%-66.66%)	15	37.5	30	75
Above Average (>66.66%)	3	7.5	10	25
Total	40	100	40	100

Table 5: Women's Pre-test and Post-test Mean, Knowledge Scores, Standard Deviation, Standard Error and Paired t-Test of Significance in Each Section of Prevention of Cervical Cancer

N=40

Prevention of cervical cancer	Pre-test			Post-test			t-value
	Mean	SD	SE	Mean	SD	SE	
Section I	4.8250	1.46563	0.23174	6.2750	1.50192	0.23747	-7.950
Section II	6.3250	2.35761	0.37277	10.2250	2.22443	0.35171	12.429

Note: df=39

The above table shows that out section-wise knowledge scores of women's in the pretest and post test. The mean scores in Section -I were 4.8250 and 6.2750 and Section -II scores were 6.3250and 10.2250.

Table 6: Women's Pre-test and Post-test Mean, Knowledge Scores, Standard Deviation, Standard Error and Paired t-Test According to General Education

Demographic Characteristics	F	Pre-test		Post-test		Paired t-test
		Mean	SD	Mean	SD	
Non-Literate	6	8.6667	1.03280	13.6667	0.81650	-11.180
1-5th Class	12	9.4167	1.37895	16.0833	2.46644	-13.401

6-10th Class	6	10.6667	4.58984	15.5000	4.41588	- 8.907
Intermediate	8	12.1250	2.16712	17.5000	2.61861	- 7.124
Other	8	15.0000	3.54562	19.0000	4.0000	- 4.151

The above table shows the mean scores according to education among women the non-literate women in the pretest and posttest means were 8.6667 and 13.6667, 1-5th class women pretest and posttest means were 9.4167and 16.0833, 6-10th class women pretest posttest mean scores were 10.6667 and 15.5000, with the qualification of intermediate women pretest posttest means were12.1250 and 17.5000 and women with other qualification in pretest and posttest means are 15.0000and 19.0000.

Table 7: Women's Pre-test and Post-test Mean, Knowledge Scores, Standard Deviation, Standard Error and Paired t-test According to Marital Status

N=40

Demographic Characteristics	F	Pre-test		Post-test		Paired t-test
		Mean	SD	Mean	SD	
Married	37	11.3243	3.48851	16.6486	3.44171	-15.169
Widow	3	9.0000	0.0000	14.6667	1.52753	-6.425

The above table shows the mean knowledge scores according to the marital status. the mean knowledge scores of married women in pretest and posttest were 11.3243 and 16.6486 and widow women mean knowledge scores in pretest and posttest were 9.0000 and 14.6667.

Table 8: Women's Pre-test and Post-test Mean, Knowledge Scores, Standard Deviation, Standard Error and Paired t-Test According to Religion

N=40

Demographic Characteristics	F	Pre-test		Post-test		Paired t-test
		Mean	SD	Mean	SD	
Hindu	21	11.9524	3.51392	17.0476	3.42748	-10.151
Muslim	13	10.2308	3.37031	15.8462	2.76424	-11.220
Christian	6	10.3333	2.87518	16.0000	4.51664	-6.720
Others	Nil					

The above table shows the mean knowledge scores according to religion Hindu women mean scores in pretest and post were 11.9524 and 17.0476, Muslim women mean scores in pretest and posttest were 10.2308 and 15.8462, and Christian women in pretest and posttest were 10.3333 and 16.0000.

Table 9: Women's Pre-test and Post-test Mean, Knowledge Scores, Standard Deviation, and Paired t-Test According to Occupation

N=40

Demographic Characteristics	F	Pre-test		Post-test		Paired t-test
		Mean	SD	Mean	SD	
Housewives	22	10.0909	2.81000	16.0909	3.16091	-16.649
Laborer	6	9.8333	2.113698	15.6667	2.16025	-14.533
Employee	9	14.0000	14.0000	18.2222	4.54911	-4.642
Others	3	13.0000	1.00000	16.0000	2.00000	-3.000

The above table shows that the mean knowledge scores of women according to occupation among housewives in pretest and post were 10.0909 and 16.0909, mean knowledge scores of laborer in pretest and post were 9.8333 and 15.6667, mean knowledge scores of employees in pretest and post were 14.0000 and 18.2222,And others mean knowledge scores in pretest and post were 13.0000 and 16.0000.

Discussion

The findings of this study underscore the significant impact of a structured teaching program on the prevention of cervical cancer among urban women. Prior to the intervention, the results revealed that many participants had inadequate knowledge regarding the causes, signs, symptoms, diagnosis, and prevention of cervical cancer. This lack of awareness is concerning, especially given that cervical cancer is

highly preventable through timely screening and vaccination [6].

The structured teaching program effectively enhanced the participants' knowledge, as evidenced by the substantial increase in posttest scores compared to pretest scores [7]. The improvement from a pretest mean of 11.15 to a posttest mean of 16.50 indicates that the educational intervention successfully conveyed critical information about cervical cancer prevention. This finding aligns with previous research that demonstrates the efficacy of targeted educational programs in increasing health awareness and knowledge [8].

Additionally, the study's analysis of the relationship between knowledge and selected variables revealed that age was a significant factor influencing women's knowledge of cervical cancer prevention. This suggests that older women may benefit more from educational initiatives, possibly due to their greater health concerns and experiences [9]. Conversely, no significant relationships were found between knowledge and other variables such as education, marital status, religion, occupation, number of children, type of delivery, or place of delivery. These findings highlight the complexity of health education and suggest that knowledge may be influenced by factors beyond demographic characteristics [10].

The implications of this study are far-reaching. By effectively increasing knowledge about cervical cancer prevention, the structured teaching program not only empowers women to take charge of their health but also has the potential to reduce the incidence of cervical cancer in the community. Public health initiatives should consider integrating such educational programs into routine health services, particularly in urban settings where awareness is lacking [11].

In conclusion, this study reinforces the importance of structured educational interventions in promoting health knowledge and prevention strategies [12]. It calls for continued efforts to address gaps in awareness and to provide accessible educational resources to empower women in making informed health decisions [13]. Further research could explore long-term retention of knowledge and the actual impact of increased awareness on cervical cancer screening rates and vaccination uptake.

Conclusions

The following conclusions were drawn on the basis of the findings of the study.

1. The mean post test percentage scores in all areas that is causes, signs and symptoms and prevention of cervical cancer is found to be high.

The structured teaching program effectively enhanced the participants' knowledge, as evidenced by the substantial increase in posttest scores compared to pretest scores. The improvement from a pretest mean of 11.15 to a posttest mean of 16.50 indicates that the educational intervention successfully conveyed critical information about cervical cancer prevention. This finding aligns with previous research that demonstrates the efficacy of targeted educational programs in increasing health awareness and knowledge.

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Conflict of Interest

No evidence of the conflict

Ethical Statement

This procedure in this investigation complied with equivalent ethical standards or the 1964 Helsiki Declaration and its revisions. “The ethical aspect of the study has been institutionally reviewed”. Informed consent has been procured by all respondents in this study.

References

[1] Dutta DC. Textbook of Obstetrics. 5th ed. Calcutta: New Central Book Publishers; 2005.

[2] Dutta DC. Textbook of Gynecology. 4th ed. Calcutta: New Central Book Publishers; 2004.

[3] Black JM. Medical Surgical Nursing. 1st ed. India: Thompson Press Limited; 2005.

[4] McCorker BS, Grant M. Cancer Nursing – A Comprehensive Textbook. Philadelphia: W.B. Saunders; 1991.

[5] Heitmper Lewis. Medical Surgical Nursing: Assessment and Management of Clinical Problems. Philadelphia: Mosby; 2000.
[6] Park K. Preventive and Social Medicine. 20th ed. Jabalpur: Banarsidas Bhanot Publishers; 2008.
[7] Chukwuma. Cancer Survival and Incidence. Oncologist J. Dane Point, California; 2003.
[8] Mishref Clinic. Medical Principles and Practice. Int J Kuwait Univ Health Serv Centre. 2009;18(1).
[9] Mayer DK. Cancer Overview. Am J Nurs. 2000;100(4).
[10] Nandakumar A, Dhar Murali. Indian Cancer Registry Programme: Five Years Consolidated Report of Hospital Based Cancer Registries. Delhi; 2002.
[11] National Cancer Control Programme. Policies and Managerial Guidelines. 2nd ed. Geneva: WHO; 2000.
[12] Raw NY, Agarwal PS. Fifty Years of Cancer Control in India. National Cancer Control Programme Directorate of Health Services, Ministry of Health and Family Welfare, Government of India, Delhi; 2002.
[13] World Health Organization. Cancer Statistics. Geneva: WHO; 2008.