

A Study To Evaluate The Effectiveness Of Self-Instructional Module On Knowledge Regarding Prevention Of Cervical Cancer Among Women.

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Abstract- Background- The incidence of cervical cancer has declined in developed countries, cervical cancer remains a significant problem in people who are developing. Past studies suggest that Indian women, who account for a minimum of one-fourth of the worldwide disease burden, aren't routinely screened. Thus the investigator intended to conduct the study with to a study to evaluate the effectiveness of self-instructional module on knowledge regarding prevention of cervical cancer among women visiting in selected hospital, at Maharashtra. **Material & Method** – Pre experimental research design, one group pre test post test research design with A Quantitative evaluative research approach was used in women visited in selected hospital at BKL Walawalkar hospital, Dervan, Sawarde. A total of 60 women's were selected with help of Non-Probability Purposive Sampling technique, to evaluate the effectiveness of self-instructional module on knowledge regarding prevention of cervical cancer among women. **Results** - Finding revealed that the overall post test mean score was (15.55 ± 3.416) which is 51.83% of total score. It interprets that the self-instructional module was effective in increasing knowledge regarding prevention of cervical cancer among women's. There was no significant association between post test knowledge score and demographic variables like age, education, occupation, age at marriage, number of children, per capita monthly income, family history of cancer, diet and use of oral contraceptive pills. However, significant association was found between post test knowledge score and demographic variable like age at menarche. Paired "t" test between the pre test and post test mean score level of knowledge shows that the significant positive relationship $t = 8.53$ $p \leq 0.0001$ found between the pre test and post test level of knowledge mean score of women's. **Conclusion-** The result of the study will enable the health professionals to utilize the self-Instructional module on prevention of cervical cancer in the hospital setting. Hence researcher concluded that the self-instructional module was an effective teaching strategy where by the women could be helped to enhance the knowledge regarding prevention of cervical cancer.

Index Terms- Evaluate, Effectiveness, Self- Instructional Module, Knowledge, Prevention, Cervical Cancer, Women, Hospital

I. INTRODUCTION

“Early DETECTION for your PROTECTION”

Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body. Cancer can start almost anywhere within the physical structure, which is created of trillion of cells. As cancerous cells grow and multiply, they continuously invade nearby tissues. It migrates to distant parts of the body and promotes the growth of new blood vessels from which the cells derive nutrients. Cancerous (malignant) cells can develop from any tissue within the body.¹

Cancer is that the second leading reason behind death and is chargeable for an estimated 9.6 million deaths. Globally, about 1 in 6 death is because of cancer. Approximately 70% of deaths from cancer occur in low- and middle-income countries. In 2018, there have been an estimated 18 million cancer cases round the world, of these 9.5 million cases were in men and 8.5 million in women.² In 2020, an estimated 604,237 women were diagnosed with cervical cancer globally, representing 6.5% of all female cancers. Cervical cancer is the most common cancer among women in 36 low-and-middle-income countries, mainly in sub-Saharan Africa. A women diagnosed with cervical cancer is almost twice as likely to die than a woman diagnosed with breast cancer.³

About 96,922 new cervical cancer cases are diagnosed annually in India estimates for 2018. Cervical cancer ranks as the second leading cause of female cancer in India. Annually about 60,078 cervical cancer death occurs. If detected at an early stage, cervical cancer is often curable.⁴

According to study, cervical cancer is the second leading cause of cancer death for women in the state of Maharashtra, approximately 10 deaths happen due to cervical cancer per 100000. In 2019 about 5,700 deaths were reported due to cervical cancer. The burden is growing in Maharashtra; thus, the programme is aimed in providing knowledge and awareness

regarding prevention of cervical cancer among the women is most important.⁵

Tata Memorial Hospital (TMH), Mumbai, India, premier cancer institute is a tertiary cancer centre in India. Annually, out of 45,000 new cancers cases, approximately 800-1000 new cervical cancer cases are diagnosed, among them 75% undergo complete treatment at TMH.⁶

A study to assess the level of knowledge regarding cervical cancer among women (n=50), estimated that the women had 35 (70%) inadequate knowledge and 15 (30%) had moderate knowledge regarding cervical cancer. Some of the demographic variables like educational status, religion and source of information are significantly association at (p<0.05) with knowledge score of women. The knowledge level and understanding of cancer as well as its preventable nature should be improved consisting nurse education may strengthen cervical cancer screening programme. Health care professional has to create awareness of disease can educate masses and increase health seeking behaviour women.⁷

A study to assess effect of planned teaching programme on knowledge regarding cervical cancer among women (n=100), showed that, there was significant difference between pre-test and post-test knowledge score, women with poor knowledge about cervical cancer had got increased awareness regarding the topic after planned teaching programme.⁸

A study on effectiveness of self-instructional Module (SIM) on knowledge regarding cancer of cervix and its prevention among married women, study revealed that sample size was 60 married women and purposive sampling technique was used. Self-instructional module was accustomed evaluate its effectiveness by using pre-experimental one group pre test and post test design, knowledge level of married women was less before administration of self-instructional module and increased after the programme.⁹ A study to assess the effectiveness of Self-Instructional Module on knowledge regarding prevention of cervical cancer among women at selected village, revealed that the paired pre-test value was 27.3 which was highly significant and it indicated that the SIM improved the level of knowledge regarding cervical cancer among the women.¹⁰

A study on effectiveness of Self-Instructional Module (SIM) on cervical cancer on learning outcomes among married women study (n=50), estimated that, after implementation of SIM the post-test knowledge score was high than the pre-test and significant association between the knowledge and age of married women was also high. Hence it revealed that the SIM was an effective method for improving learning outcomes.¹¹

A study to assess the knowledge of staff nurses regarding cervical cancer and its prevention in view of information booklet at primary care hospital (n=30), revealed that the 27% nurses had moderate knowledge, 73% nurses had adequate knowledge. Socio-demographic variables were found to be non-significant with the knowledge of staff nurses at $p > 0.05$.¹²

II. MATERIAL AND METHOD:-

The Pre experimental research design, one group pre test post test research design with A Quantitative evaluative research approach was conducted among 60 women's visiting in BKL Walawalkar hospital & Diagnostic center, Dervan, Sawarde.

Before commencement of the study, ethical approval was obtained from the Institutional Ethical Committee, and official permission was received from the authority. The women's who were Visiting the OPD in the selected hospital, Age group above 35 years, Willing to participate in the study, Able to read, write and understand Marathi, Hindi, English, Available during data collection period were included in the study by using the non – probability; purposive sampling method. The Womens who are, Unable to read, write and understand English, Hindi or Marathi. and Participated in same or similar cancer awareness programme were excluded from the study. The purpose of study was explained to womens with self-introduction and consent was obtained to participate in the study. The data was collected from 01.12.2021 to 31.12.2021. During the period, the investigator collected data from women visiting in selected hospital. Women's were made to feel comfortable. An instruction related to tool was given to facilitate co-operation and participation. Printed 30 structured questionnaire was issued to the women visited in selected hospital. Before giving Self - Instructional Module pre test on knowledge regarding prevention of cervical cancer was taken. The Self – Instructional Module was given to the women's who fulfill the inclusion criteria and present during the data collection period. Post test data was collected after 7 days.

Tab No. 1
Scoring procedure of the tool for assessment of level of knowledge adapted by awareness on cervical cancer

Area	Area of Score	Percentage	Level of Knowledge
Effectiveness of SIM on awareness regarding cervical cancer	1-10	1-33%	Inadequate knowledge
	11-20	34-67%	Moderately Adequate knowledge
	21-30	68-100%	Adequate knowledge
Total	30	100%	

The collected data was tabulated and analyzed using appropriate statistical methods like descriptive statistics (mean, SD and mean percentage) and inferential statistics (chi – square test) and Paired ‘t’ test.

Results:

Findings related to demographic variables of women visiting in selected hospital:-Majority (33.34%) were seen in age group 46-50years, Highest percentage (63.34%) of women had primary education., Majority (46.66%) of women were home maker, Nearly half (53.33%) women's were in the age of menarche 13-15years, Highest percentage (63.33%) of women's were married in the age group of 19-21yrs, Majority percentage (40%) of women's had 1 child, Majority percentage (45%) of women's had Rs.3,793-Rs.5,693 per capita monthly income,

Majority (100%) women's had no family history of cancer, Majority (83.34%) were had mixed type of diet, Majority 60 (100%) of women were not using oral contraceptive pills.

Table No.2
Demographic Variable frequency and Percentage

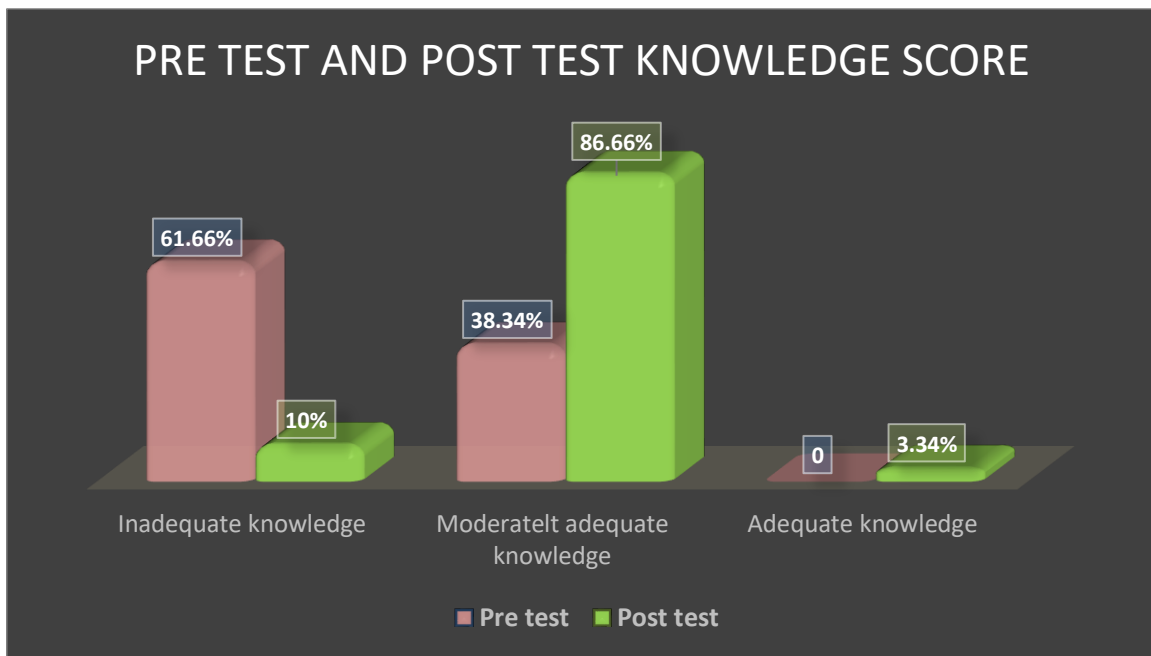
SN	Variables	Items	Frequency	Percentage
1	Age in Year	35 – 40	12	20%
		41 – 45	13	21.66%
		46 – 50	20	33.34%
		51 – 55	5	8.34%
		56 and above	10	16.66%
		Total	60	100%
2	Education qualification	Primary education	38	63.34%
		Secondary education	21	35%
		Higher education	1	1.66%
		Graduate and above	0	0%
		Total	60	100%
3	Occupation	Home maker	28	46.66%
		Daily wages	4	6.67%
		Private Employee	0	0%
		Govt. Employee	0	0%
		Business	6	10%
		Agriculturist	22	36.67%
		Total	60	100%
4	age at menarche	10yrs-12yrs	26	43.34%
		13yrs-15yrs	32	53.33%
		Above 15yrs	2	3.33%
		Total	60	100%
5	Age at Marriage	13yrs-15yrs	0	0%
		16yrs-18yrs	22	36.67%
		19yrs-21yrs	38	63.33%
		Above 21yrs	0	0%
		Total	60	100%
6	Number of Children	No children	4	6.66%
		1 child	24	40%
		2 children	23	38.34%
		3 children and above	9	15%
		Total	60	100%
7	Per Capita monthly Income	Rs.15197 and above	2	3.34%
		Rs.7,595 - Rs.15196	2	3.33%
		Rs.5,694 – Rs.7,594	15	25%
		Rs.3,793 – Rs.5,693	27	45%
		Rs.2,273 – Rs.3,792	14	23.33%
		Rs.762 – Rs.2,272	0	0%
		Total	60	100%
8	Family History of cancer	No	60	100%
		Yes	0	0%
		Total	60	100%
9	Diet	Vegetarian diet	7	11.66%
		Non vegetarian diet	3	5%
		Mixed diet	50	83.34%
		Total	60	100%
10	Are you using oral contraceptive pills?	No	60	100%
		Yes	0	0%
		Total	60	100%

Findings related to Assessment of pre test and post test level of knowledge.: Percentage wise distribution of level of knowledge score of women’s according to their pre test score shows that highest percentage (61.66%) of women’s had “inadequate knowledge (1-10)” and (38.34%) of women’s had “moderately adequate knowledge (11-20)”. It depicts that in pre test level of knowledge score shows majority of women’s had ‘inadequate knowledge’ regarding prevention of cervical cancer. Percentage wise distribution of level of knowledge score of women’s according to their post test score shows that the majority

(86.66%) of women had “moderately adequate knowledge (11-20)”, (10%) of women’s had “inadequate knowledge (1-10)” whereas the lowest percentage (3.34%) of women’s had “adequate knowledge (21-30)”. It depicts that in post test level of knowledge score shows majority of women’s had ‘moderately adequate knowledge’ regarding prevention of cervical cancer. Hence it interprets that the self-instructional module was effective in increasing the level of knowledge regarding prevention of cervical cancer among women.

Table No. 3
Assessment of pre test and posttest level of knowledge regarding prevention of cervical cancer among women

Level of knowledge	Pre test		Post test	
	Frequency	%	Frequency	%
Inadequate knowledge (1-10)	37	61.66%	6	10%
Moderately adequate knowledge (11-20)	23	38.34%	52	86.66%
Adequate knowledge (21-30)	0	0%	2	3.34%



Graph No. 01

Bar diagram showing percentage distribution of women’s according to their pre test and post test level of knowledge

Findings related to Effectiveness of self-instructional module on knowledge regarding prevention of cervical cancer

among women. The percentage wise distribution of mean, mean percentage and SD of pre test and post test level of knowledge

score of women’s shows that the highest score (15.55 ± 3.416) which is 51.83% of total score was obtained during post test which indicates women’s had “Moderately adequate knowledge”. The lowest mean score (10.36 ± 3.700) which is 34.53% of the total score was obtained during pre test which indicates women’s had “Inadequate knowledge”.

However, the overall post test mean score was (15.55 ± 3.416) which is 51.83% of total score. It interprets that the self-instructional module was effective in increasing knowledge regarding prevention of cervical cancer among women’s.

Table No.4
Comparison of pre test and post test knowledge score based on mean, mean percentage and standard deviation

Standard measures	Pre test Level of knowledge score	Post test level of knowledge score
Mean	10.36	15.55
Mean %	34.53%	51.83%
Standard deviation	3.700	3.416

Finding related to effectiveness of Self - Instructional Module on knowledge regarding prevention of cervical cancer among women based on paired “t” test:- Paired “t” test between the pre test and post test mean score level of knowledge shows that the significant positive relationship $t = 8.53$ $p \leq 0.0001$ found between the pre test and post test level of knowledge mean score

of women’s. it indicates that the obtained ‘p’ value is less than 0.005, the self-instructional module was effective in improving the knowledge regarding prevention of cervical cancer among women. Hence, null hypothesis H_0 is rejected and research hypothesis H_1 is accepted.

Table No. 5
Effectiveness of Self - Instructional Module on knowledge regarding prevention of cervical cancer among women based on paired “t” test

Outcomes	Level of knowledge score			Paired “t” Test
	Mean	SD	Mean %	
Pre test	10.36	3.700	34.53%	t = 8.53 p ≤ 0.0001 Significant
Post test	15.55	3.416	51.83%	

Findings related to Association between the post test level of knowledge regarding prevention of cervical cancer among women with their selected demographic variables. Chi square values were calculated to find out association between post test knowledge score with their selected demographic data. Findings reveled that there was no significant association between post test knowledge score and demographic variables like age, education, occupation, age at marriage, number of children, per capita monthly income, family history of cancer and diet. However, significant association was found between post test knowledge score and demographic variable like age at menarche. Hence, the stated null hypothesis (H_0) was rejected as there was significant association was found between the level of knowledge and their demographic variables.

III. DISCUSSION:

Description to assess pre test and post test level of knowledge regarding prevention of cervical cancer among women. In the present study, percentage wise distribution of level of knowledge score of women’s according to their pre test score shows that highest percentage (61.66%) of women’s had “inadequate knowledge (1-10)” and (38.34%) of women’s had “moderately adequate knowledge (11-20)”. It depicts that in pre test level of knowledge score shows majority of women’s had ‘inadequate knowledge’ regarding prevention of cervical cancer. Percentage wise distribution of level of knowledge score of women’s according to their post test score shows that the majority

(86.66%) of women had “moderately adequate knowledge (11-20)”, (10%) of women’s had “inadequate knowledge (1-10)” whereas the lowest percentage (3.34%) of women’s had “adequate knowledge (21-30)”. It depicts that in post test level of knowledge score shows majority of women’s had ‘moderately adequate knowledge’ regarding prevention of cervical cancer. Hence it interprets that the self-instructional module was effective in improving the level of knowledge regarding prevention of cervical cancer among women. A similar study supported to evaluate effectiveness of self-structured module on knowledge regarding cancer of cervix and its prevention among married women (n=60), revealed that the pre-test and post-test mean score was 8.37 and 24.85; standard deviation 3.08 and 2.27 respectively. The paired t-test value was 39.419. Significant difference was seen in pre-test and post-test knowledge level of married women. All women should be aware about cancer of cervix and its prevention and encourage them for screening for prevention.¹³

Description to evaluate the effectiveness of self-instructional module on knowledge regarding prevention of cervical cancer among women by comparing the mean pre test and post test level of knowledge scores. In the present study, mean, mean percentage and SD of pre test and post test level of knowledge score of women’s shows that the highest score (15.55 ± 3.416) which is 51.83% of total score was obtained during posttest which indicates women’s had “Moderately adequate knowledge”. The lowest mean score (10.36 ± 3.700) which is 34.53% of the total score was obtained during pre test which indicates women’s had “Inadequate knowledge”. However, the overall post test mean score was (15.55 ± 3.416) which is 51.83% of total score. It interprets that the self-instructional module was effective in increasing knowledge regarding prevention of cervical cancer among women’s. The similar study was conducted to assess the effectiveness of self-instructional module on knowledge regarding prevention of cervical cancer among women at selected village, Tamil Nadu (n=50) samples were selected by using non probability convenient sampling technique. A study revealed that in pre test 35(70%) had Inadequate level of knowledge, 15(30%) had Moderate level of knowledge and 0 (0%) had Adequate level of knowledge. In post test 0(0%) had Inadequate level of knowledge, 19(38%) had Moderate level of knowledge and 31(62%) had Adequate level of knowledge.¹⁴

Description to find out the association between post test level of knowledge score regarding prevention of cervical cancer among women with their selected demographic variables.

In the present study, association between post test knowledge score with their selected demographic data. Findings revealed that there was no significant association between post test knowledge score and demographic variables like age, education, occupation, age at marriage, number of children, per capita monthly income, family history of cancer, diet and are you using of oral contraceptive pills? However, significant association was found between post test knowledge score and demographic variable like age at menarche. A similar study revealed to assess the effectiveness of self-instructional module on knowledge and attitude regarding prevention of cervical cancer among middle aged women between (30-55yrs) in selected areas at Namakkal. (n=60), revealed that, in the pre test the mean score of knowledge was 10.116 with SD 4.47 whereas in the post test the mean score

of knowledge was 30.70 with SD 4.52. The calculated paired ‘t’ value of $t = 20.671$ was found to statistically significant at $p < 0.001$ level. None of the demographic variable other than the residential area had shown statistically significant association with post test level of knowledge regarding prevention of cervical cancer among middle aged women between (30-55yrs) at $p < 0.05$ level. The association between post test level of attitude showed that demographic variables had shown statistically not significant association with post test level of attitude regarding prevention of cervical cancer among middle aged women between (30-55yrs) at $p < 0.01$ level.¹⁵

IV. CONCLUSION

The study finding shows that the overall mean score of post test level of knowledge was (15.55±3.416) which is 51.83% of total score. It interprets that the self-instructional module was effective in improving the knowledge regarding prevention of cervical cancer among women’s mean score of post test level of knowledge indicates “Moderately adequate knowledge (11-20)”. Significant association was found between post test knowledge score and demographic variable like age at menarche. Hence researcher concluded that the self-instructional module was an effective teaching strategy where by the women could be helped to enhance the knowledge regarding prevention of cervical cancer.

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Financial Disclosure

None to declare.

Conflict of Interest

None to declare.

Informed Consent

The informed consents have been obtained from the parents.

Author Contributions

DG: Literature exploration, research data collection, statistical analysis and first draft. LVR: Guide, concept, research design, literature exploration and final draft. VB: Research guidance, clinical support, co-ordination.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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