A study to evaluate the effectiveness of Self-Instructional Module on knowledge regarding prevention of cervical cancer among adolescent girls of P.V.P first grade college Bangalore.

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Abstract*— Cervical cancer is the most common cancers among women world wide. Cervical cancer results from the uncontrolled growth of abnormal cells in the cervix. It's mortality exemplifies health inequity, as it's rates are higher in low and middle income countries (LMICS), and in low socio-economic groups within countries. Women of poorest communities are mostly affected with this condition as it is reported that 83% of world's new cases and 85% of all cervical cancer deaths occur in developing countries. This condition affects not only the health and lives of women, but also their children, families and their communities at large.

Index Terms*— Cervical cancer, Pap smear, HPV, HPV vaccine, Self Instructional Module.

I. INTRODUCTION

The health status of an adolescent determines the health status in his/her adulthood. Many serious diseases in adulthood have their roots in adolescence. Also, many adolescents do die prematurely due to various reasons that are either preventable or treatable and many more suffer from chronic diseases and disability. Cancer is the most progressive and devastating disease posing a threat to the entire world despite significant advances in medical technology for its diagnosis and treatment.[4] It is estimated that about 9 million new cancer cases are diagnosed every year and over 4.5 million people die from cancer each year in the world. The estimated number of new cancers in India per year is about 7 lakhs and over 3.5 lakh people die of cancer each year. There would be about 1.5 lakh cancer cases at any given time in Karnataka and about 35,000 new cancer cases are added to this pool each year. [5]

Cervical cancer is serious public health problem. Globally, every year around 4, 90,000 women develop cervical cancer and almost 2, 74,000 of them die from the disease. It is the second most common cancer among women and the most common in under developed and developing countries which bear more than 80%of the global burden of the disease. According to the WHO report, globally cervical cancer comprises 12% of all cancers in women and it is the leading gynecological malignancy in the world. According to the national cancer registry programmes of India, cervical cancer and breast cancer are the leading malignancies noted in Indian women. It has been estimated that in India, 1, 30,000 new cases of cervical cancer occur annually, lack of uniform policies and the programmes in organizing cervical cancer control activities have led to this disease remaining a major cause of death among Indian women.[4]

The prevention strategies for cervical cancer comprise immunization against HPV infection among adolescents prior to the first sexual exposure as a form of primary prevention or screening for evidence of pre-invasive lesions of the cervix among adult females using the Papanicoloau smear (Pap smear) as a form of secondary prevention. The Papanicoloau (Pap) smear has reduced the incidence of cervical cancer in the developed countries where nationally-organized screening programs exist. The most effective preventive method against cervical cancer among adolescent girls and other women prior to sexual

exposure is the primary prevention by the HPV vaccination. The World Health Organization recommends offering HPV vaccine to girls at ages 9–14 years, prior to sexual exposure, since the vaccine has highest efficacy if girls have not already acquired HPV. [6]

II. NEED FOR THE STUDY

Cancer of the cervix is largely preventable. The risk can be minimized by promotion of sexual risk reduction behavior and genital hygiene. Further prevention can be achieved by screening, using Visual Inspection with Acidic Acid (VIA) or Pap smear test, which can detect precancerous lesions early so as to prevent progress towards invasive cancer by timely treatment. Unlike many cancers, vaccine is available that works against 100% of human papilloma virus (HPV)-16 and-18, the genotypes responsible for about 70% cervical cancer cases. Prevention and early diagnosis have markedly reduced incidence and mortality due to cervical cancer in many developed countries.[14]

Primary Prevention of Cervical Cancer can be done through the development of HPV vaccines. Early vaccination with regular screening, which includes a Pap test and HPVDNA test are recommended according to the current guidelines, is now the most effective way to prevent cervical cancer. HPV vaccine administration begins at the age of 9 years. Vaccination is also recommended for 13- to 26-year-old females. The vaccine is found to be very effective in protecting women from developing pre-cancerous lesions of the cervix, vulva and vagina.[7]

A study in a developing country showed that 70.6% of the respondents lacked knowledge of cancer of cervix and only 15.5% of the respondents had knowledge of cervical cancer screening. Donta et al. (2012) reported that awareness of cervical cancer and Pap smear test among couples is low. Dhamija et al. (1993) reported that younger women have better awareness and knowledge about cervical cancer and related information. Literacy status and exposure to family planning are influential in creating awareness about cancer cervix.[11]

Health education should aim to ensure the adolescent girls and women, their families and the community at last should understand that cervical cancer is preventable. The awareness can be created by imparting knowledge and promotion of health of the adolescent girls and women through the educational interventional program. This study aims at determining its effectiveness in terms of significant increase in knowledge regarding prevention of cervical cancer. Hence the above mentioned factors influenced and aroused interest in the investigator to select this study.

III. REVIEW OF LITERATURE

A Cross- sectional survey study on knowledge of cervical cancer screening among rural Indian women was conducted in village of Udupi taluk in Karnataka. A sample size of 407 women aged 21-65 yrs was selected through convenient sampling technique. The results of the study revealed that 401 (98.5%) had poor knowledge regarding cervical cancer screening and 06 (1.5%) had good knowledge. The study concluded that undergoing regular cervical cancer screening is important in the prevention of invasive cervical carcinoma. The knowledge about cervical cancer screening and its prevention is very poor among rural Indian women[11].

A Pre-experimental study to evaluate the effectiveness of structured teaching program on knowledge of women regarding cervical cancer was conducted at Chennai. A sample size of 60 women age group of 35-55 yrs was selected through purposive sampling technique. The results of the study revealed that 80.0% of women had low level of knowledge in pre-test and none of them had low level of knowledge in post-test, moderate level of knowledge in pretest 20.0% and 53.3% had high level of knowledge in post-test. The study concluded that in educating the middle aged women regarding early detection and prevention of cancer cervix helps to prevent the mortality and morbidity rate of women. Thus structure teaching program was effective. [19]

A Pre-experimental Study was conducted to evaluate the Effectiveness of Self Instructional module on Knowledge regarding HPV Vaccination among Adolescent Girls in Selected Arts and Commerce

College of Mehasana city. The study results revealed that, regarding level of knowledge, in pre-test 70% had poor level of knowledge on HPV vaccination, 30% had average level of knowledge and 0% had good level of knowledge on HPV vaccination. During post-test 62.5% had good knowledge on HPV vaccination, 37.5% had Average knowledge on HPV vaccination. There was highly significant difference found between pretest and posttest knowledge scores and there was no significant association found between pretest knowledge scores and demographic variables. The study concluded that self instructional module found to be effective in improving the knowledge of adolescent girls.[35]

IV. STATEMENT OF THE PROBLEM

A study to evaluate the effectiveness of Self Instructional Module on knowledge regarding prevention of cervical cancer among adolescent girls of P.V.P first grade college Bangalore.

V. OBJECTIVES

1) To assess the knowledge regarding prevention of cervical cancer among adolescent girls.
2) To evaluate the effectiveness of Self Instructional Module on knowledge regarding prevention of cervical cancer among adolescent girls in terms of gain in knowledge scores.
3) To find out an association between pre-test knowledge scores regarding prevention of cervical cancer among adolescent girls and their selected socio-demographic variables.

V. HYPOTHESES:

H_1: The mean post test knowledge scores of the adolescent girls receiving self instructional module on knowledge regarding prevention of cervical cancer will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

H_2: There will be statistical association between pre-test knowledge scores of adolescent girls and their selected socio demographic variables at 0.05 level of significance.

VI. RESEARCH METHODOLOGY

In the view of the nature of the problem selected and the objectives to be accomplished, an evaluative approach was considered appropriate for the present study. The research design used for the present study was pre-experimental: one group pre-test, post test design. Research setting: P.V.P first grade degree college, Bangalore. The sample size for the study was 50 adolescent girls studying in P.V.P first grade degree college, Bangalore. The researcher in the present study selected target population through Non-Probability; Convenient sampling technique.

Data collection tool:The tool selected for the study was a structured knowledge questionnaire which comprised two sections. They are:

Section I: Socio-demographic variables: This part consists of 8 items for obtaining information about socio demographic Age, religion, area of residence, course of study, occupation of mother, type of family, family income, and source Information.

Section– II: Structured Knowledge Questionnaire on prevention of Cervical Cancer: This part consists of 30 items for obtaining level of knowledge of adolescent girls regarding cervical cancer prevention. Each correct answer carries 1 mark and incorrect answer 0 mark.

Part A: 6 items on Anatomy & Physiology of Female Reproductive System.

Part B: 8 items on meaning and causes of cervical cancer.

Part C: 6 items on symptoms and diagnosis of cervical cancer.

Part D: 10 items on Prevention & Management of cervical Cancer

Description of Self Instructional Module: The Self instructional module on knowledge regarding prevention of cervical cancer was designed and administered to the adolescent girls to upgrade their knowledge**.**

VII. ANALYSIS

Table no 1: Distribution of sample characteristics according to demographic variables.

n = 50

Sl No	Demographic variables	Frequency	Percentage
1	Age in years		
	a) 18 to 20	18	36%
	b) 20 to 22	14	28%
	c) 22 to 24	18	36%
2	Religion		
	a) Hindu	26	52%
	b) Muslim	08	16%
	c) Christian	16	32%
3	Habitat		
	a) Rural	10	20%
	b) Urban	40	80%
4	Course of study		
	a) Bachelor of Arts (B.A)	12	24%
	b) Bachelor of commerce (B.com)	18	36%
	c) Bachelor of science (B.Sc)	20	40%
5	Occupation of mother		
	a) Daily wage worker	06	12%
	b) Private employee	12	24%
	c) Govt employee	08	16%
	d) House wife	24	48%
6	Family Income		
	a) Rs. 10000/- to Rs.20000/-	16	32%
	b) Rs. 20000/- to 30000/-	28	56%
	c) More than 30000/-	06	12%
7	Type of Family		
	a) Joint Family	10	20%
	b) Nuclear Family	40	80%
8	Source of information		
	a) Print media	10	20%
	b) Electronic media	10	20%
	c) New age media	08	16%
	d) Health professionals	02	04%
	e) None (No Information)	20	40%

Table No 2: Mean, Median, Mode, Standard deviation and Range of knowledge scores of subjects regarding prevention of cervical cancer.

n = 50

Area of analysis	Mean	Median	Mode	SD	Range
Pre-test	12.8	13	15	3.1	11
Post-test	24.4	25	25	1.5	8
Difference	11.5	12	10	1.6	3

Table No 3: Frequency and percentage distribution of knowledge scores of subjects regarding prevention of Cervical Cancer.

n=50

Level of knowledge	Pre-test		Post-test	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Good (16 and above)	10	20%	50	100%
Average (11 to 15)	25	50%	00	00%
Poor (10 and below)	15	30%	00	00%

EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING PREVENTION OF CERVICAL CANCER AMONG ADOESCENT GIRLS

Table No 4: Pre-test, post-test percentage of Knowledge scores of subjects regarding prevention of cervical cancer.

n = 50

Items	Total Score	Mean % of Knowledge scores of subjects		
		Pre-test	Post-test	Gain in knowledge
Structured knowledge questionnaire	1500	42.86%	81.46%	38.60%

Table No 5: Mean difference (d), Standard Error (SEd) and paired 't' values of knowledge score of subjects.

n = 50

Mean difference ($\bar{d}$)	Standard Error of difference (SEd)	Paired 't' values	
		Calculated	Tabulated
11.58	0.494	24.00*	2.660

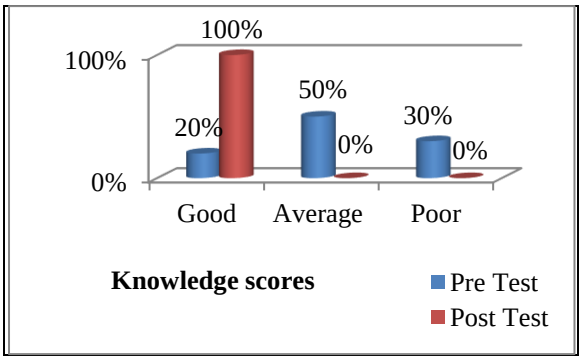
Table No 5 reveals that calculated paired't' value (t_{cal}= 24.00*) was greater than tabulated' value (t_{tab}= 2.660). Hence H_1 was accepted. This indicates that gain in knowledge score was statistically significant at 0.05 level of significance. Therefore, the Self Instructional Module was effective in terms of gain in knowledge scores of the subjects.

ASSOCIATION BETWEEN PRETEST KNOWLEDGE SCORES REGARDING PREVENTION OF CERVICAL CANCER AND SELECTED SOCIODEMOGRAPHIC VARIABLES

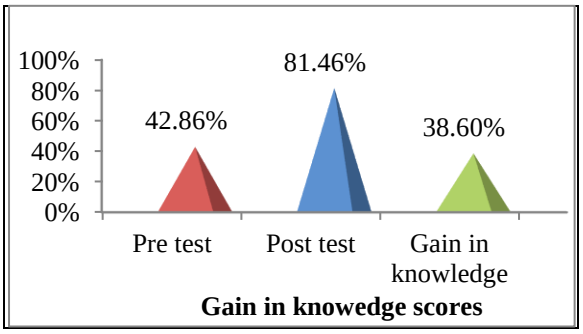
Table No. 6: Association between knowledge scores and selected demographic variables.

No	Demographic variables	Good	Average	Poor	Chi square		df
					Calculated	Tabulated	
1	Age in years						
	a) 18 – 20	06	08	04	4.24	9.49	04
	b) 21-23	01	07	06			
	c) 23 and above	03	10	05			
2	Religion						
	a) Hindu	07	11	08	2.06	9.49	04
	b) Muslim	01	05	02			
	c) Christian	02	09	05			
3	Habitat						
	a) Rural	00	06	04	3.17	5.99	02
	b) Urban	10	19	11			
4	Course of study						
	a) B.A	00	10	02			
	b) B.Com	06	08	04	**10.3***	9.49	04
	c) B.Sc.	04	07	09			
5	Occupation of Mother						
	a) Daily wage worker	00	02	04	11.9	12.59	06
	b) Private Employee	01	09	02			
	c) Govt Employee	04	02	02			
	d) House wife	05	12	07			
6	Family income (in rupees)						
	a) 10000/- to 20000/-	00	10	06	6.22	9.49	04
	b) 20000/- to 30000/-	08	13	07			
	c) More than 30000/-	02	02	02			
7	Type of family						
	a) Joint family	00	06	04	3.17	5.99	02
	b) Nuclear family	10	19	11			
8	Source of information						
	a) Print media	04	01	05	**19.20***	15.51	08
	b) Electronic media	01	05	04			
	c) New age media	03	05	00			
	d) Health professionals	00	00	02			
	e) None	02	14	04			

Table No.6 reveals that there was no association between knowledge scores and selected demographic variable such as age, religion, habitat, occupation of mother, family income and type of family but there was statistical association between knowledge scores and demographic variables, course of study and source of information. Hence H_2 was accepted only in case of course of study and source of information.



Graph 01: The cylindrical graph represents percentage distribution of subjects according to their level of knowledge scores in pre and post-test.



Graph 02: The pyramid graph represents the mean percentage gain in knowledge scores of subjects according to their knowledge scores

CONCLUSION

The overall pre-test knowledge scores of the subjects were average. The post-test knowledge scores of the subjects after administration of the Self Instructional Module were significantly higher than the pre-test knowledge scores. Post-test knowledge results showed that gain in knowledge score of subjects was statistically significant at 0.05 levels. Thus it is concluded that the Self Instructional Module was effective in terms of gain in knowledge scores of the subjects.

RECOMMENDATIONS

Keeping in view the findings of the present study, the following recommendations were made:

1. A similar study that can be done on larger and wider sample size, would be more pertinent in making broad generalizations.
2. A comparative study can be done between private and government college girl students regarding prevention of cervical cancer.
3. A descriptive study can be conducted to assess the Knowledge, Attitude and Practice regarding prevention of cervical cancer among adolescent girls.
4. An experimental study can be conducted regarding prevention of cervical cancer amongst females aged 15-26 yrs.

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