



## “Effectiveness of health education on knowledge regarding prevention of colorectal cancer.”

### Nursing

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### ABSTRACT

**Background of the study:** Cancer is a group of diseases involving abnormal cell growth with the potential to invade or spread to other parts of the body. The occurrence of cancer in India is 70-90 per 1,00,000 population and prevalence is estimated around 25,00,000 (2.5 million). As per WHO in 2012, 4.77 lakh men and 5.37 lakh women died due to cancer in India. Colorectal cancer is third most common cancer among men (663000 cases, 10% of total cases) and second in women (570000 cases, 9.4% of the total cases) worldwide. The colorectal cancer is preventable if it detected for its early sign and symptoms.

**Aim:** Aim of the study was to assess effectiveness of health education regarding prevention of colorectal cancer among patients.

**Material and method:** An evaluatory research approach with quasi experimental non randomized control group design was used. The Sampling technique was purposive sampling. Data was collected by using structured knowledge questionnaire. The data was tabulated and analyzed in term of objectives of the study using descriptive and inferential statistics.

**Results:** In experimental group mean post test score (18.06) was higher than mean pre test score (8.77). In control group mean post test score (9.3) was similar to mean pre test score (8.13). Unpaired t-test value 7.28 and mean difference 31.31 suggesting marked difference between knowledge score of control and experimental group. The chi-square value shows that there is a significant association between knowledge of patients with selected demographic variable such as age, occupation, food pattern and living area. There is no significant association between gender, educational status, family history of colorectal cancer, previous knowledge and life style.

**Conclusion:** The study finding revealed that health education was effective in improving knowledge of patients.

### KEYWORDS

Effectiveness, Health Education, Knowledge, Patients, Prevention of Colorectal Cancer.

### INTRODUCTION:

Colorectal cancer (CRC), also known as Bowel cancer, it is the development of cancerous growth from the colon or rectum. In 2016, approximate 16,85,210 new cases of cancer was diagnosed in United States and 5,95,690 died due to this illness. The occurrence of cancer in India is 70-90 per 1,00,000 populations and prevalence is estimated around 25,00,000 (2.5 million) with, over 800000 new cases and 550000 deaths taking place each year. CRC is third most common cancer among men (663000 cases, 10% of total cases) and second in women (570000 cases, 9.4% of the total cases) worldwide. The CRC is preventable if it detected for its early sign and symptoms. Effective periodic screening practice, high fiber intake, low meat and fatty intake, high vitamin D, calcium and vitamin B intake, cessation of smoking and tobacco, practice of daily exercise can prevent CRC.

### STATEMENT OF THE STUDY:

“A Quasi Experimental study to assess effectiveness of Health education on knowledge regarding prevention of colorectal cancer among patients of Dhiraj hospital.”

### OBJECTIVES:

1. Assess existing knowledge regarding prevention of colorectal cancer among patients.
2. Evaluate effectiveness of health education on knowledge regarding prevention of colorectal cancer among patients.
3. Identify association between pre-test knowledge score and selected demographic variables.

### MATERIALS & METHODS:

A Quantitative evaluative approach with quasi experimental design: non randomized control group design was adapted. 60 samples were selected (30 in each group) by using purposive sampling. The study was conducted at Dhiraj hospital, Piparia, Waghodia.

#### Inclusion criteria

- Patients admitted in Medical and Surgical wards of Dhiraj hospital.
- Patients who were willing to participate.
- Patients having age between 35-65 years.

#### Exclusion criteria

- Patients already diagnosed with colorectal cancer.
- Patients who are terminally ill.

### Instrument used for the study:

**PART A:** Questionnaire pertaining to selected demographic variables - age, gender, educational status, occupation, food pattern, living area, previous knowledge, family history of cancer and life style..

**PART B:** Structured knowledge questionnaire was used to assess the knowledge of patients regarding prevention of colorectal cancer. It consists of 28 knowledge questionnaire where the maximum score was 28 and minimum score was 0.

### Data collection procedure:

Prior permission was obtained from the Medical superintendent of Dhiraj hospital. The data collection was done within a given period of 2 weeks, dated 3rd to 14th October 2017. After a brief introduction of the self and establishing the rapport, the investigator has selected the sample with purposive sampling technique and gives a brief detail about the nature of the study and consent was obtained from the sample and confidentiality of the response was assured. On 1st day researcher has provided structure knowledge questionnaires for pre test among experimental and control group. then provided the health education to the samples regarding prevention of colorectal cancer on same day to the experimental group samples. After 6 days of pre-test researcher has conducted the post-test from both experimental and control group.

### RESULT:

#### SECTION I: Assessment of pre and post-test knowledge score in Experimental and Control group.

Group	Knowledge aspects	Pre test	Post test				
		Mean	Mean %	SD	Mean n	Mean %	SD
	Introduction	1.2	60	0.7143	1.67	83.33	0.48
	Incidence	0.2	20	0.41	0.83	83.33	0.38

Experimental group	Causes And Risk Factors	2.66	43.89	0.93	3.37	56.11	0.80
	Sign And Symptoms	0.23	11.67	0.54	1.37	68.33	0.49
	Screening Methods	0.93	23.33	0.79	2.13	53.33	0.78
	Preventive Measures	3.57	27.44	1.67	8.7	66.92	1.56
	Over All Knowledge Score	8.77	31.31	2.47	18.06	64.52	2.35
	Introduction	1.2	60	0.61	1.5	75	0.57
	Incidence	0.1	10	0.31	0.1	10	0.30
	Causes And Risk Factors	2.37	39.44	0.96	2.4	40	0.81
	Sign And Symptoms	0.27	13.33	0.49	0.57	28.33	0.68
	Screening Methods	0.77	19.17	0.62	0.9	22.5	0.48
Control group	Preventive Measures	3.43	26.41	1.04	3.83	29.48	1.29
	Over All Knowledge Score	8.13	29.04	1.83	9.3	33.21	1.98

**Table 1: Knowledge on prevention of CRC in Experimental and Control group.**

## SECTION II: Effectiveness of administering health education on prevention of colorectal cancer.

Here, at  $df = 58$  and significance level 0.05 the obtained  $t$ -value is 7.28 is found to be more than table value 2 which suggest the significant difference between experimental and control post test knowledge score.  $N = 60$

POST TEST KNOWLEDGE SCORE	MEAN %	MEAN DIFFERENCE	$t$ -VALUE	SIGNIFICANCE
Experimental group (N = 30)	64.52	31.31	7.28	S
Control group (N = 30)	33.21			

**Table 2: Distribution of mean percentage of post test knowledge scores in experimental and control group**

## SECTION III: Frequency and percentage distribution of demographic variables.

Here, observed that among 60 participants majority belongs to age group of 35-44 years (51.66%), majority of patients were female 31 (51.69%), maximum samples 40 (66.66%) having educational qualification till primary level. Majority of participants 36 (60%) were employed. Total 40 (66.67%) samples were non vegetarian. 33 (55%) of samples living in urban area. Majority of samples 45 (75%) doesn't have family history of CRC. Majority of samples 56 (93.33%) doesn't have previous knowledge regarding prevention of CRC. There were 22 (36.67%) samples who having habit of smoking and 22 (36.67%) samples doesn't have any kind of bad habit.

## SECTION IV: Association of the pre- test knowledge score among patient with their demographic variables.

Sr. No.	Variable	Level of knowledge	Df	Level of significance at 0.05 level
		Below 9	Above 9	
1	Age of patients	35-44 years	29	2
		55-65 years	6	8
2	Gender	Male	20	9
		Female	23	8

3	Educational status	Primary	30	10	3.327	3	7.82 NS
		Secondary	10	3			
		Graduate	2	3			
		Post graduate	1	1			
4	Occupation	Employed	31	5	9.248	1	3.84 S
		Unemployed	12	12			
5	Food pattern	Vegetarian	18	2	4.966	1	3.84 S
		Non vegetarian	25	15			
		Rural	13	14			
7	Family history of cancer	Yes	12	3	0.684	1	3.84 NS
		No	31	14			
8	Previous knowledge on prevention of colorectal cancer	Yes	4	0	1.694	1	3.84 NS
		No	39	17			
9	Life style	Alcoholic	14	2	2.806	2	5.99 NS
		Smoker	15	7			
		Nil	14	8			

**Table 3: Association of the pre- test knowledge score among patient with their demographic variable**

## DISCUSSION:

The aim of study was to assess effectiveness of health education regarding prevention of CRC among patients. The researcher found that patients are having inadequate knowledge regarding prevention of CRC and health education was significantly effective tool for enhancing patients' knowledge regarding prevention of CRC. Baron A John, et al in 2015, had conducted randomized, double-blind, placebo-controlled trial and he has found that supplementation of Vitamin D is helpful in prevention of Colorectal Adenomas.<sup>6</sup> Nishihara Reiko, et al (2013) has conducted study on preventive measures of CRC and found that that endoscopy is effective screening method in prevention of colorectal cancer.<sup>7</sup> AT Kunzmann, et al (2016) has conducted prospective research study on Fruit and vegetable intakes and risk of colorectal cancer and result of study indicated that increased fruit and vegetable intake protect against multiple adenoma development.<sup>8</sup> Michael Asher, et al (2008) has carried out randomize control trials and found that calcium is having influence on prevention of colorectal cancer.<sup>9</sup> Shaw E, et al (2017) has dealt cross sectional study and result shown that Total dietary fibre intake was associated with a decreased incidence of CRC.<sup>10</sup> Shubhra Gupta, et al (2014) conducted study on effect of a health education program on cancer awareness and result suggested that health education through group approach should be applied at community level because health education is an effective tool to increase the knowledge and awareness regarding cancer.<sup>11</sup>

## CONCLUSION:

The present study assessed the knowledge regarding prevention of CRC among patients. According to pre test knowledge score of patients, found that patients had inadequate knowledge regarding prevention of CRC among both experimental and control group. After provision of health education only among experimental group, results of post test knowledge score was increased among experimental group and there was no significant change in knowledge score of the control group. This suggests that health education is effective tool for enhancing knowledge of patients.

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