

The Impact of Structured Awareness Programme on Cancer Prevention among Rural Population of Assam.

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Abstract: Background: The burden of cancer is increasing in developing countries as people in the developing countries adopt Western lifestyles such as cigarette smoking, higher consumption of saturated fat and calorie-dense foods and reduced physical activity. It is estimated that there are 2 million cancer patients in India with 0.7 million new cases each year. Cancer is the third greatest cause of death with 0.4 million deaths per annum, and is thus a major public health problem in India. Facilities for screening and proper management of cancer patients are grossly limited in developing countries and also more than two third of cancer patients are already in advanced and incurable stage at the time of diagnosis. ¹ Even though rate of cancer cases are increasing at an alarming rate, the level of awareness is remains very low. The researcher planned to assess baseline knowledge on risk factors of cancer and its preventive aspects followed by structured awareness programme and assessing the impact of the programme among rural population of Assam.

Materials and Methods: A Quantitative evaluative research approach with an interventional pre experimental design (One Group Pre test Post Test Design) was adopted to assess the impact of structured awareness programme on cancer prevention among rural population of Assam. Total 155 samples were selected by using Multistage random sampling followed by purposive sampling technique. The Structured interview questionnaire, Modified Cancer Prevention Module (with reference to WHO Cancer module and “What you need to know about cancer” by National Cancer Institute, U.S) were used as tool to collect data. Content validity of the tool was obtained from 10 experts and reliability was determined by Internal consistency using Split Half method. Collected data were analysed by descriptive and inferential statistics.

Results: The finding shows that before structured awareness program on cancer out of 155 selected rural population 35 (22.6%) had low, 96 (61.9%) had medium and 24 (15.5%) had high knowledge on risk factors of cancer. The finding shows that before structured awareness program on cancer out of 155 selected rural population 30 (19.4%) had low, 96 (61.9%) had medium and 29 (18.7%) had high knowledge on preventive aspects of cancer. Findings shows that before structured awareness program on cancer, mean score for knowledge on risk factors were 14.2 whereas after structured awareness program on cancer mean score for knowledge on risk factors were 38.43 .Hence, before structured awareness program on cancer, mean score for knowledge on preventive aspects were 13.03 whereas after structured awareness program on cancer mean score for knowledge on preventive aspects were 17.45 Before structured awareness program on cancer, mean score for knowledge on risk factors and preventive aspects were 27.23 whereas after structured awareness program on cancer, mean score for knowledge on risk factors and preventive aspects were 55.88. So, it is concluded that the structured awareness program on cancer improved the knowledge on risk and preventive aspects of cancer for rural population of Assam. There is significant increase of knowledge on risk factors of cancer (24.22 ± 3.21 , $n=155$), $t(154)= 94.061$, $P < .001$ and preventive aspects (4.43 ± 2.70 , $n=155$), $t(154)= 20.378$, $P < .001$ after awareness program on cancer. It is concluded that there is significant increase of knowledge on risk factors and preventive aspects (28.65 ± 4.22 , $n=155$), $t(154)= 84.494$, $P < .001$ after awareness program on cancer.

Conclusion: It suggests that t- values are significant at $P < .001$, so null hypothesis is rejected and concluded that the knowledge on risk factors and preventive aspects of rural population are increased after structured awareness program on cancer. So, it is concluded that there is significant impact of structured awareness program on cancer among rural population of Assam.

Key Word: Impact, Structured awareness programme, Cancer, Prevention, Rural population.

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I. Introduction

The world at present is heading towards various types of non communicable diseases which are also known as modern epidemics. Among the modern epidemics cancer is second largest non-communicable disease and it has a sizable contribution in the total number of deaths. The World Health Organization documents that cancer rates are set to increase at an alarming rate globally and it is projected that cancer burden would increase to 20 million by 2020 with 70% in the developing world.¹ Cancer burden is increasing worldwide. The number of cancer cases is increasing by the day in the state, a study conducted by B Barooah Cancer Institute (BBCI) revealed. Assam is the worst-affected state in the northeast. In 2011-12, the maximum number of cancer cases in the hospital has been reported from Kamrup, Nagaon and Dhubri districts. In 2011-12 the number of patients has gone up to 8,708. The number of deaths was 55 in 2001-02 and it has more than doubled to 129 in 2011-12. In 2011-12, maximum number of cases have been reported from Kamrup (986), followed by Nagaon (483) and Dhubri (239). Among all the other states of NE, Assam has the highest incidence of cancer with 4,443 cases, next is Meghalaya with 101 cases, Manipur with 38 cases, Mizoram with 59 cases, Nagaland with 84 cases, Arunachal with 65 cases and Tripura with 14 cases in 2011-12. Even though rate of cancer cases are increasing at an alarming rate, the level of awareness is remains very low. Eighty per cent patients come to the hospital at a very late stage, when there are no chances of recovery. So awareness on cancer is on great need in Assam.² The researcher felt the urgent need for improving knowledge and bringing awareness on cancer among people and planned for providing structured awareness programme on cancer prevention to bring about a change in the knowledge and preventive practices of people. The present study conducted with the aim to assess baseline knowledge on risk factors of cancer and its preventive aspects followed by structured awareness programme and assessing the effectiveness of the programme among rural population of Assam.

II. Material And Methods

An interventional pre experimental design (One Group Pre test Post Test Design) is adopted to assess the impact of structured awareness programme on cancer prevention among rural population of Assam.

Research Design: An interventional pre experimental (One Group Pre test Post Test Design) design is adopted to assess the impact of structured awareness programme on cancer prevention among rural population of Assam.

Setting of the study: Due to feasibility of the study and availability of the sample, the present study was conducted in Rural areas of Kamrup and Darrang District of Assam.

Study Duration: February 2015 to January 2016.

Population of the study: In the present study the target population comprises of all adult (20-60 years of age) of Kamrup and Darrang District of Assam

Sample : The samples were the adults (20-60 years of age) attending the Primary Health Centre (PHC) and Community Health Centre (CHC) of Kamrup and Darrang District of Assam

Sample size: The total sample size is 155 (One hundred fifty five).

Sampling technique: The samples were selected based on availability and fulfillment of criteria. The technique employed for selection of CHC and PHC was Multistage Random Sampling and Purposive Sampling for the samples.

Inclusion criteria:

1. Those are willing to participate in the study.

Exclusion criteria:

1. Diagnosed case of Cancer.

Tools and Technique: The tool used for the present study was Structured interview questionnaire, Modified Cancer Prevention Module (with reference to WHO Cancer module and “ What you need to know about cancer” by National Cancer Institute, U.S). Interview schedule and self reporting was used to assess knowledge on risk factors and preventive aspects of cancer among rural population of Assam. Questionnaires comprises of demographic data, knowledge on cancer and its preventive aspects. Content validity of the tool was obtained from 10 experts from the field of Nursing, Medicine and Community Medicine. Reliability was determined by internal consistency using Split Half method.

Data collection process: Permission was obtained from the Joint Director of Health Services of Kamrup (Rural) and Darrang District. Prior to data collection permission was obtained from Medical Superintendent and Health Officer i/c of various PHC and CHC. The samples were then informed about the nature of the study. Written consent was obtained from the selected samples. The samples were interviewed and the responses given were recorded simultaneously against structured questionnaire on knowledge on risk factors and preventive aspects on cancers. After assessing the pre-existing knowledge, the structured awareness programme on cancer was carried out with the help of modified cancer prevention module. The investigator also distributed the module

among the samples. After 15 days the samples were interviewed again on the same parameters and responses were simultaneously noted.

Statistical analysis: Data was analyzed in terms of frequency and percentage for demographic data. Mean, SD for assessing knowledge on risk factors and preventive aspects in relation to cancer. Paired ‘ t ’ -test for assessing the impact of Structured Awareness Programme on Cancer.

III. Result

The findings shows in table no.1 reveals that out of 155 samples 24(15.48%) was in the age group of 20-30yrs, 51(32.9%) were in 30-40 yrs of age, 74(47.74%) were in the age group of 40-50 yrs and 6(3.87%) were in the age group more than 50-60 years. 89(57.42%) were male and 66(42.58%) were female, 110(70.97%) married and 28(18.06%) unmarried, 13(8.39%) widow and 4(2.58%) were divorced among selected rural and urban population of Assam. The finding shows that 11(7.1%) had studied up to secondary school, 66(42.58%) graduates, 78(50.32%) were post graduate, 27(17.42%) from government service, 58(37.42%) from private service, 50(32.26%) were self employed, 20(12.9%) were unemployed. Data revealed 89(57.42%) worked in office, 49(31.61%) in Field, 11(7.1%) in industries and 6(3.87%) in other areas. 13(8.39%) earned below Rs. 3000, 15(9.68%) earned between Rs.3000- 6000 per month, 33(21.29%) earned between Rs 6000 - 9000, whereas 94(60.65%) earned more than Rs.9000/month

Table no 1: Frequency & Percentage distribution of demographic data
N=155

Age	20 – 30 years	24(15.48%)
	30 – 40 years	51(32.9%)
	40 – 50 years	74(47.74%)
	50 - 60 years	6(3.87%)
Gender	Male	89(57.42%)
	Female	66(42.58%)
Marital Status	Married	110(70.97%)
	Unmarried	28(18.06%)
	Widow	13(8.39%)
	Divorce	4(2.58%)
Educational Qualification	Primary	0(0%)
	Secondary	11(7.1%)
	Graduate	66(42.58%)
	Post Graduate	78(50.32%)
Occupation	Govt– service	27(17.42%)
	Private– service	58(37.42%)
	Self employed	50(32.26%)
	Unemployed	20(12.9%)
Area of work	Office	89(57.42%)
	Field work	49(31.61%)
	Industries	11(7.1%)
	Others	6(3.87%)
Monthly income	< Rs 3000	13(8.39%)
	Rs 3000 - 6000	15(9.68%)
	Rs 6000 - 9000	33(21.29%)
	> Rs 9000	94(60.65%)

Table no. 2 shows that before structured awareness program on cancer out of 155 selected rural population 35 (22.6%) had low, 96 (61.9%) had medium and 24 (15.5%) had high knowledge on risk factors of cancer.

Table no. 2: Pre test knowledge on risk factors on cancer
N=155

Categories of Pre Knowledge on Risk factors	Count (%)	
Low (<12.16)	Count (%)	35 (22.6%)
Medium (12.16-16.24)	Count (%)	96 (61.9%)
High (>16.24)	Count (%)	24 (15.5%)

Table no. 3 shows that before structured awareness program on cancer out of 155 selected rural population 30 (19.4%) had low, 96 (61.9%) had medium and 29 (18.7%) had high knowledge on preventive aspects of cancer.

Table no. 3: Pre test knowledge on preventive aspects of cancer
N=155

Categories of Pre Knowledge on Preventive aspects	Count (%)	
Low (<10.23)	30 (19.4%)	
Medium (10.23-15.75)	96 (61.9%)	
High (>15.75)	29 (18.7%)	

Table no. 4 shows that before structured awareness program on cancer, mean score for knowledge on risk factors were 14.2 whereas after structured awareness program on cancer mean score for knowledge on risk factors were 38.43 . Hence, before structured awareness program on cancer, mean score for knowledge on preventive aspects were 13.03 whereas after structured awareness program on cancer mean score for knowledge on preventive aspects were 17.45 Before structured awareness program on cancer, mean score for knowledge on risk factors and preventive aspects were 27.23 whereas after structured awareness program on cancer, mean score for knowledge on risk factors and preventive aspects were 55.88. So, it is concluded that the structured awareness program on cancer improved the knowledge on risk and preventive aspects of cancer for rural population of Assam.

Table no. 4: Descriptive statistics on pre and post knowledge score

Knowledge on Risk		Knowledge on prevention		Knowledge (Both risk factors & preventive aspects)	
Pre Test	Post Test	Pre Test	Post Test	Pre Test	Post Test
14.21±2.12	38.43±2.59	13.03±2.84	17.45±2.67	27.23±3.46	55.88±3.52

Table no. 5 shows that there is significant increase of knowledge on risk factors of cancer (24.22±3.21, n=155), $t(154) = 94.061$, $P < .001$ and preventive aspects (4.43±2.70, n=155), $t(154) = 20.378$, $P < .001$ after awareness program on cancer. It is concluded that there is significant increase of knowledge on risk factors and preventive aspects (28.65±4.22, n=155), $t(154) = 84.494$, $P < .001$ after awareness program on cancer.

Table 5: Paired sample t -test on pre and post test knowledge score on risk factors and preventive aspect of cancer.

N=155

Knowledge on	Test	Mean±SD	D±SDD	t -value	Df	P-value
Risk factors	Pre Test	14.21±2.12	24.22±3.21	94.061	154	<.001**
	Post Test	38.43±2.59				
Preventive aspects	Pre Test	13.03±2.84	4.43±2.70	20.378	154	<.001**
	Post Test	17.45±2.67				
Knowledge (risk factors & preventive aspects)	Pre Test	27.23±3.46	28.65±4.22	84.494	154	<.001**
	Post Test	55.88±3.52				

**Significant at $P < .001$)

IV. Discussion

Cancer is the second leading cause of death globally after cardiovascular diseases. The estimated number of incident cancer cases in India increased from 548000 (95% UI 520000 -576000) in 1990 to 1069000 (1043000 -1101000) in 2016. The crude cancer incidence rate in India increased by 28.2% from 63.4 per 100000 in 1990 to 81.2per 100000 in 2016. Crude cancer incidence was highest in Kerala, and Mizoram followed by Haryana, Delhi, Karnataka, Goa, Himachal Pradesh and Assam. The Number of deaths due to cancer in India increased from 382000 in 1990 to 813000 in 2016.³ Patients with cancer generally have a poorer prognosis in low-income and middle-income countries, including India, because of relatively low cancer awareness, late diagnosis, and lack of or inequitable access to affordable curative services compared with patients in high – income countries.³ Therefore, the investigator tried to probe the learning needs of the subjects, by exploring their fund of knowledge on risk factors and preventive aspects of cancer and to bring awareness on cancer.

The objective of the study was to assess baseline knowledge on risk factors of cancer and its preventive aspects followed by structured awareness programme and assessing the impact of the programme among rural population of Assam. There is significant increase of knowledge on risk factors and preventive aspects (28.65±4.22, n=155), $t(154) = 84.494$, $P < .001$ after awareness program on cancer among rural population of Assam. It suggests that ‘ t’- values are significant at $P < .001$, so null hypothesis is rejected and concluded

that the knowledge on risk factors and preventive aspects of rural population of Assam are increased after structured awareness program on cancer.

V. Conclusion

The study findings showed that the structured awareness program on cancer improved the knowledge on risk factors and preventive aspects of cancer among rural population of Assam. So, it is concluded that there is significant impact of structured awareness program on cancer among rural population of Assam.

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