Beliefs and Perceptions about Cancers among Patients Attending Radiotherapy Out Patient Department of a Tertiary Care Hospital

[1]Dr. Pulak Kumar Jana, [2]Dr. Arnab Sit, [3]Dr. Riddhisundar Samanta, [4]Dr. Suman Ghorai.

[1:] Professor, [2:] Tutor (Corresponding author), [3:] Junior Resident, Department of Pulmonary Medicine, [4:] Associate Professor, Department of Radiotherapy, Bankura Sammilani Medical College, Bankura, West Bengal, India.
*Corresponding author: Dr. Arnab Sit *

Abstract

Aims and objectives:
1. *To assess the beliefs and perceptions about cancer and its treatment among cancer patients.*
2. *To find out the care-seeking behaviour of cancer patients.*
3. *To determine socio-demographic correlation.*

Materials and methods: *This is a cross sectional observational study over one year (April 2016 – April 2017) in the Department of Radiotherapy, Bankura Sammilani Medical College, a tertiary care, teaching hospital in Bankura. Total 100 patients over 18 years of age were included in the study. Date were analysed in Excel sheet and tests of significance were applied wherever applicable by SPSS 20®.*

Results: *Present study revealed Male: Female ratio (1: 1) with majority of the patients from 46-60 years of age group (44%) and below poverty line (71%). About 64% patients were unaware of their disease. Seventy three percent patients believed that cancer is curable, 21% patients believed that it is preventable. Among them 98% patients had no family history of cancer. No statistical significance were found in association of education status and belief on preventability, contagiousness, knowledge of consumption of tobacco with cancer. However belief on early death in cancer with education status and false belief on positive outcome in cancer (Male: 62% and Female: 38%) in male and female patients were found to be statistically significant.*

Conclusion: *The study revealed some of the beliefs and perceptions prevalent among the cancer patients. Most of them were unaware about the diagnosis of their illness as cancer. Some of them still believe irreligious activity, supernatural powers as risk factors of cancers and rituals, worshipping, exorcism, repenting for sins as curative. Education was found to be an important issue in these beliefs and perceptions as these were more found in persons with lower educational qualification. Influence was not affected by economic condition.*

Keywords: *Belief, Perception, Education, Cancer.*

I. Introduction

Cancer is a public health problem worldwide. It is the second leading cause of death in developed countries and among the three leading causes of mortality in developing countries after the individual reach 15 years of age ([1]). It has been estimated that 12.4 million new cases of cancer and 7.6 million deaths (13% of all deaths) occurred in 2008 and of which almost 70% occurred in the low and middle income countries. Deaths from cancer worldwide are projected to continue rising, with an estimated 13.1 million deaths in 2030 ([2]).

Cancer has become one of the ten leading causes of death in India also. At any point of time there are 28 lakh cases of cancer. There are 10 lakh new cancer cases per year & 5 lakh cancer deaths per year ([3]). Nearly two-third of new cases is in advance and incurable stage at the time of diagnosis. Therefore only palliative treatment is possible in those cases ([4]).

Generally, cancer is considered as incurable in many cultures and perceived as a major life crisis in all aspects of patients' life ([5]). Myths and misconceptions are widely prevalent in cancer patients in India e. g. contagiousness of cancer, role of supernatural or religious powers in causation of cancer, cure by rituals, worshipping, exorcisms, fatalistic outcome of cancer etc. These beliefs mostly lead to delay in seeking medical treatment, thereby prolonging the interval between the first appearance of symptoms and the first visit to doctor. Thus, cultural beliefs and practices affect cancer care along the entire disease continuum: from prevention and early detection, treatment choices and adherence rates, management of side effects such as pain and its control, to appropriate psychosocial support, rehabilitation efforts, survivorship issues, hospice and effective end of life care ([6]).

But little is known about beliefs and perceptions about cancer among the Indian population particularly in rural and economically backward populations. Most of the studies conducted in India were done in metropolitan cities like Kolkata, Delhi *([1],[6],[7]).* In this background this study was conducted in Bankura Sammilani Medical College & Hospital which drew predominantly rural population from some economically backward districts of West Bengal like Bankura, Purulia, Paschim Medinipur etc. characterized by high prevalence of poverty and illiteracy across the population. The present study has been planned to assess the belief and perceptions about cancer among cancer patients as well as their care seeking behaviours and probable socio-demographic co-relations.

II. Aims And Objectives
1. To assess the beliefs and perceptions about cancer and its treatment among cancer patients.
2. To find out the care-seeking behaviour of cancer patients.
3. To determine socio-demographic correlates if any.

III. Materials And Methods
Study type: Hospital based observational, descriptive study
Study design: Cross-sectional
Study duration: One year (April 2016 to April 2017)
Study population: Cancer patients attending Radiotherapy Out Patient Department at Bankura Sammilani Medical College & Hospital, Bankura.
Sampling technique and Sample size: Sampling was done by consecutive sampling method. Only the new patients who attend the radiotherapy OPD, BSMCH for the first time were interviewed before their consultation with the oncologists so that their view about cancers did not get changed. Total sample size was **100**.
Inclusion criteria: All the patients who would attend the Radiotherapy Out Patient Department for the first time during the study period.
Exclusion criteria:
 i. Patients not willing to participate.
 ii. Patients not able to communicate or in critical condition.
 iii. Age: less than 18 years

Parameters of the study:
1. Socio-demographic factors:
- Age
- Sex
- Occupation
- Education
- Economic condition
2. Beliefs and perceptions about Cancer
3. Health Seeking Behaviour of Cancer Patients

Study Tools:
 i. Pre-designed, pre-tested, semi-structured questionnaire in local vernacular (i.e. Bengali) and English for collecting information from respondents through interview. The questionnaire was designed after review of literatures for studies on this theme *([6], [9]).* The data obtained during pre-testing were not included in the study results.
 ii. Available relevant patient records

Study Technique:
 i. Face-to-face Interview
 ii. Review of medical records available with the patients

Method of data collection: After obtaining informed consent, the participants were interviewed to document the socio-demographic profile, their belief and perceptions about the disease as well as their care-seeking behaviours.

Data analysis: Data was entered in MS Excel 2013® and analysed by using SPSS 20®. Chi square and Fisher's exact test (wherever applicable) were used for test of significance. The p value of <0.05 was considered as statistically significant. Frequencies of different variables are calculated by SPSS 20®.

IV. Observations And Results

In this hospital based observational cross sectional study by consecutive sampling one hundred cancer patients were interviewed and the following data were obtained. The data were tabulated and tests of significance were applied wherever applicable.

A. *Socio-Demographic profile of the participants:*

Table 1: Distribution of study population according to different socio economic factors

Variables	Categories	Frequency	Percentages (%)
Age (in complete years)	<30	12	12.0
	30-45	23	23.0
	46-60	44	44.0
	>60	21	21.0
	Total	100	100.0
Sex	Male	50	50.0
	Female	50	50.0
	Total	100	100.0
Occupation	Service	5	5.0
	Farmers	25	25.0
	Labourer	9	9.0
	Home Maker	46	46.0
	Students	2	2.0
	Business	5	5.0
	Unemployed	8	8.0
	Total	100	100.0
Educational Status	Illiterate	53	53.0
	Class I to IV	11	11.0
	Class V to X	27	27.0
	Above secondary	9	9.0
	Total	100	100.0
Economic Status	BPL (Below Poverty Line)	71	71.0
	APL (Above Poverty Line)	29	29.0
	Total	100	100.0

As per <u>table 1</u> highest number of the study population (44%) belong to (46 to 60) years age group. Proportion of male and female participants was equal. Farmer was the major occupation among males while most of the females were home-makers. More than the half of the study population (53%) were illiterate and only around one tenth (9%) of the study participants had more than secondary education. Majority of the study population were of BPL category.

B. *Beliefs and Perceptions about cancer and its treatment:*

Table 2: Distribution of the study population according to their knowledge on diagnosis of their illness

Questions	Response	Frequency	Percentage (%)
Do you know what illness you have?	Yes	36	36.0
	No	64	64.0
	Total	100	100.0

As table 2 shows about two third of the study population (64%) could not perceive that they had cancer and rests were aware of the diagnosis of their illness as cancer.

Table 3: Distribution of the study population according to belief about contagiousness of cancer

Questions	Responses	Frequency	Percentage (%)
Do you believe cancer is contagious?	Yes	17	17.0
	No	59	59.0
	Don't know	24	24.0
	Total	100	100.0
If "yes" then source of information	School	0	0.0
	Peers	17	100.0
	Media	0	0.0
	Total	17	100.0

If "no" then source of information	School	7	11.9
	Peers	27	45.8
	Media	25	42.4
	Total	59	100.0

As seen in table 3, about one fifth of the study population (17%) perceived cancer as contagious. All of them received this information from peers. Around three fifth of the study population (59%) believed that cancer is not contagious and among them the major source of information is peers (45.8%) and media (42.4%).

Table 4: Distribution of the study population according to perceived risk factors for cancer

Questions	Responses	Frequency	Percentage (%)
Perceived risk factors	Bad habits (smoking/alcohol/drugs)	53	53.0
	Anger to God/ unreligious activity/ other super natural powers	19	19.0
	People with injuries	5	5.0
	No risk factors/ anyone can get cancer	23	23.0
	Total	100	100.0
Association of tobacco in causation of cancer	Yes	51	51.0
	No	34	34.0
	Don't know	15	15.0
	Total	100	100.0

As per table 4, nearly one fifth (19%) of the study population believed unreligious activities or super-normal power as the cause of cancer. About half of the participants (49%) did not perceive or know about the harmful effects of tobacco use in causation of cancer.

Table no 5: Distribution of the study populations according to their view about curability of cancer

Question	Response	Frequency	Percentages (%)
Curable	Yes	73	73.0
	No	27	27.0
	Total	100	100.0

As seen in the table 5, around three fourth of the study population (73%) perceived cancer as curable but rest 27% did not think the same.

Table 6: Distribution of the study populations according to their belief on treatment by rituals/ worshipping/ exorcism/ repenting for sins

Questions	Responses	Frequency	Percentages (%)
Belief on cure of cancer by performing rituals/ worshipping/ exorcism/ repenting for sins	Yes	13	13.0
	No	87	87.0
	Total	100	100.0
If "yes" then reason of coming to Radiotherapy OPD	Referred by well-wishers or to come here	4	30.8
	Not cured by the above methods	9	69.2
	Total	13	100.0
If "no" rationale behind their belief	These methods become ineffective	63	72.4
	This curse has no remedy	24	27.6
	Total	87	100.0

As per table 6, reveals majority of the participants (87%) believed that cancer cannot be cured by performing rituals or worshipping or exorcism or repenting for sins. Among them around three fourth (72.4%) expressed their unreliability upon these methods. Although 13% believe that religious activities, rituals, exorcism could bring positive outcome of cancer.

Table 7: Distribution of the study population according to belief regarding prevention of cancer

Questions	Responses	Frequency	Percentage
Cancer is preventable	Yes	21	21.0
	No	41	41.0
	Don't know	38	38.0
	Total	100	100.0
If 'yes' then how?	No bad habits	19	90.5
	Praying to God, rituals etc.	2	9.5
	Total	21	100.0
If 'no' then source of information	Peer	37	90.2
	Media	4	9.8
	Total	41	100.0

Table 7 reveals that only one fifth (21%) of the respondents believe that cancer is preventable of whom majority (90.5%) mentioned that avoiding unhealthy habits like smoking, alcohol etc. is helpful in prevention of cancer. About two-fifth (41%) stated that cancer is not preventable while 38% did not answer to the question.

Table 8: Distribution of the study population according to family history

	Responses	Frequency	Percentages
Family history of cancer	Yes	2	2.0
	No	98	98.0
	Total	100	100.0
Believe on inevitability of getting cancer from affected family members	Yes	0	0.0
	No	2	100.0
	Total	2	100.0
Different behaviour of other family members	Yes	10	10.0
	No	90	90.0
	Total	100	100.0
Different behaviours (if any)	Isolated completely	3	30.0
	Separate cloths/ foods/ utensils	7	70.0
	Total	10	100.0

As per table 8, majority of the study population (98%) had no family history of cancer. When asked about social stigma faced by the cancer patients in their own family it was found that one tenth of them (10%) were discriminated against in some way and among them 30% were isolated completely.

Table 9: Distribution of the participants according to their belief about the outcome of cancer

Beliefs	Responses	Frequency	Percentages
People with cancer are incapable of leading a productive life	Yes	55	55.0
	No	45	45.0
	Total	100	100.0
Everyone who has cancer dies soon	Yes	55	55.0
	No	39	39.0
	Don't know	6	6.0
	Total	100	100.0
You will be all right	Yes	50	50.0
	No	13	13.0
	Don't know	37	37.0
	Total	100	100.0

As table 9 says meaningful life despite of cancer was thought not to be possible by majority of the participants (55%). More than half of the participants had believed that everyone who has cancer eventually died soon. Half of the study participants (50%) had fatalistic views about their illness and more than one third (37%) did not know the outcome.

C. Care-seeking Behaviour:

Table 10: Distribution of the respondents according to the previous treatment history

	Responses	Frequency	Percentage (%)
Previous treatment history	Yes	92	92.0
	No	8	8.0
	Total	100	100.0
Mode of previous treatment	Allopathic medicine practitioner/ hospital	58	63.0
	Alternative medicine practitioner	23	25.0
	Faith healer	11	12.0
	Total	92	100.0
Duration of previous treatment (if present)	0-6 months	65	70.7
	7-12 months	15	16.3
	More than 12 months	12	13.0
	Total	92	100.0

Table 10 reveals that majority of the study participants (92%) seek medical care before coming to this hospital. Among them more than one third (37%) seek treatment from alternate medicine practitioner or faith healer. More than two third (70.7%) of them come within 6 months of initiation of previous treatment.

D. Socio- Demographic Co-relation:

Table 11: Distribution of the study populations according to their knowledge about the diagnosis of their disease with educational status

		Educational Status		Total	χ2 (p value)
		Up-to Primary	Above Primary		
Knowledge about diagnosis of their illness	Yes	16 (25.0%)	20 (55.6%)	36 (36.0%)	**9.336 (0.002)**
	No	48 (75.0%)	16 (44.4%)	64 (36.0%)	
	Total	64 (100.0%)	36 (100.0%)	100 (100.0%)	

As table 11 reveals that the proportion of the study population having knowledge about the diagnosis of their illness, was more than double in those whose educational qualification was above primary (55.6%) than the others whose educational status were up-to primary level (25.0%). There was statistically significant association between these two (p= 0.002).

Table 12: Distribution of the study populations according to previous treatment history and educational status

		Educational Status		Total	χ2 (p value)
		Up-to Primary	Above Primary		
Previous Treatment History	Allopathic medicine practitioner or Hospital	35 60.3%	23 67.6%	58 63.0%	1.689 (0.430)
	Alternative medicine practitioner	17 29.3%	6 17.6%	23 25.0%	
	Faith hailer	6 10.3%	5 14.7%	11 12.0%	
	Total	58 100.0%	34 100.0%	92 100.0%	

From the table 12 it is revealed that the proportion of study population seeking care from alternative medicine practitioner was more in participants with up-to primary education compare to those with higher educational qualification. However statistically significant association was not present (p= 0.430).

Table 13: Distribution of the study populations according to duration of previous treatment and educational status.

		Educational Status		Total	Fisher's Exact Test value (P value)
		Up-to Primary	Above Primary		
Duration of Previous Treatment	0-6 months	33 56.9%	32 94.1%	65 70.7%	**16.849 (0.001)**
	7-12 months	15 25.9%	0 0.0%	15 16.3%	
	>12 months	10 17.2%	2 5.9%	12 13.0%	
Total		58 100.0%	34 100.0%	92 100.0%	

As per table 13, major portion of the participants with above primary education (94.1%) had a previous treatment history for the period of less than six months where among participants with up to primary education it was only 56.9%. But proportion of the study participants had history of previous treatment greater than twelve months was higher among participants with up-to primary education (17.2%) than those of above primary education (5.9%). Here the association between previous treatment period and educational status is statistically significant (p= 0.001).

Table 14: Distribution of the study populations according to duration of previous treatment and economic condition

		Economic Condition		Total	Fisher's Exact Test value (P value)
		BPL	APL		
Duration of Previous Treatment	0-6 months	46 71.9%	19 67.9%	65 70.7%	0.914 (0.725)
	6-12 months	9 14.1%	6 21.4%	15 16.3%	
	>12 months	9 14.1%	3 10.7%	12 13.0%	
Total		64 100.0%	28 100.0%	92 100.0%	

Table 14 revealed that the proportion of the study participants who had treated previously for a duration of less than six months was more among BPL participants (71.9%) than APL (67.9%). The proportion of the study participants had history of previous treatment greater than twelve months was higher among BPL (14.1%) than APL (10.7%). However statistically significant association between previous treatment period and educational status was not present here (p= 0.725).

Table 15: Distribution of the study populations according to their belief about contagiousness of cancer and educational status

		Educational Status		Total	χ^2 (p value)
		Up-to Primary	Above Primary		
Whether Cancer is Contagious	Yes	10 15.6%	7 19.4%	17 17.0%	3.154 (0.219)
	No	35 54.7%	24 66.7%	59 59.0%	
	Don't Know	19 29.7%	5 13.9%	24 24.0%	
Total		64 100.0%	36 100.0%	100 100.0%	

As per table 15, the proportion of the study population believed cancer as non-contagious disease was more in participants having above primary educational qualification (66.7%) than those having up-to primary education. Around one third (29.7%) of the participants having up-to primary education did not comment about the infectivity of cancer. However statistically significant association was not found between their belief regarding contagiousness of cancer and educational status (p= 0.219).

Table 16: Distribution of the study populations according to their belief whether cancer is preventable or not and educational status of the respondents

		Educational Status		Total	χ^2 (p value)
		Up-to Primary	Above Primary		
Whether cancer is preventable or not	Yes	10 15.6%	11 30.6%	21 21.0%	5.110 (0.078)
	No	25 39.1%	16 44.4%	41 41.0%	
	Don't know	29 45.3%	9 25.0%	38 38.0%	
Total		64 100.0%	36 100.0%	100 100.0%	

From table 16 it was revealed that around one third of population having above primary education (30.6%) believed cancer as preventable which was double of those with lower educational status. However statistically significant association was not evident between the belief whether cancer is preventable or not and educational status of the respondents (p= 0.078).

Table 17: Distribution of the study populations according to their belief about association of tobacco and cancer with the sex of the respondents

		Sex		Total	χ^2 (p-value)
		Male	Female		
Association of tobacco with cancer	Yes	28 56.0%	23 46.0%	51 51.0%	1.027 (0.598)
	No	15 30.0%	19 38.0%	34 34.0%	
	Don't know	7 14.0%	8 16.0%	15 15.0%	
Total		50 100.0%	50 100.0%	100 100.0%	

From the table 17 it is revealed that 56% male and 46% female believed in association of tobacco in causation of cancer. More female (38%) compared to male (30%) did not believed so was though statistically significant association was not found (p= 0.598).

Table 18: Distribution of the study populations according to their belief whether cancer patients die soon and educational status of the respondents

		Educational Status		Total	Fisher's Exact Test value (P value)
		Up-to Primary	Above Primary		
Inevitability of early death in cancer	Yes	42 65.6%	13 36.1%	55 55.0%	**15.392 (0.001)**
	No	16 25.0%	23 63.9%	39 39.0%	
	Don't Know	6 9.4%	0 0.0%	6 6.0%	
Total		64 100.0%	36 100.0%	100 100.0%	

As per data of the table 18, it is seen that proportion of the respondents believing in inevitability of early death in cancer was much more (nearly double) in respondents with education up-to primary (65.6%) than those with above primary (36.1%). Statistically significant association was found between their belief whether cancer patients die soon and educational status of the respondents (p= 0.001)

Table 19: Distribution of the study populations according to their belief about the outcome of cancer and sex of the population

		Sex		Total	χ2 (p-Value)
		Male	Female		
Do you believe you will be all right? (Outcome)	Yes	31 62.0%	19 38.0%	50 50.0%	**6.127 (0.047)**
	No	4 8.0%	9 18.0%	13 13.0%	
	Don't Know	15 30.0%	22 44.0%	37 37.0%	
Total		50 100.0%	50 100.0%	100 100.0%	

From table 19, it is seen that the proportion of the male participants believing in positive outcome in cancer (62%) was much more than that of female (38%). There was statistically significant association between their belief about the outcome of cancer and sex of the population (p= 0.047).

Table 20: Distribution of the study populations according to their belief about treatment of cancer by rituals/worshiping/exorcism/repenting for sins etc. and sex of the study population

		Sex		Total	χ2 (p-Value)
		male	female		
Cancer cure by rituals/worshiping/ exorcism/ repenting for sins etc.	Yes	4 8.0%	9 18.0%	13 13.0%	2.210 (0.137)
	No	46 92.0%	41 82.0%	87 87.0%	
Total		50 100.0%	50 100.0%	100 100.0%	

Table 20 reveals that among the thirteen, believing in positive outcome of cancer by rituals/worshiping/ exorcism/ repenting for sins, more than two third were female. Among male 92% believed that cancer could not be cured by the above methods which stood 82% in case of female respondents. However statistically significant relation could not be established between their belief about cure of cancer by rituals/worshiping/exorcism/repenting for sins and female gender.

V. Discussion

This study was conducted on hundred newly diagnosed cancer patients attending Radiotherapy OPD to unveil the common misconceptions about cancers affecting cancer diagnosis and care-seeking behaviour by the patients. Attempts were made to identify socio-demographic factors which might have some bearings on care-seeking behaviours.

It was seen that about two-third (64%) of all were not aware of their illness. It is similar to the findings of the study by Ravichandran K et al in Riyadh region of Saudi Arabia *([8])*. But in study in Delhi conducted by Kishore J et al revealed that about three-fourth (75.4%) of the study population were aware of diagnosis of their illness and in case of the study conducted by Kumar S et al at Kolkata it stood above 90%. It may occur as the respondents in this study had not undergone any sort of counselling as only the newly diagnosed cancer patients were interviewed before their consultation with the oncologist. It might also happen due to the largely rural base

of the current study and the resulting lack of awareness. It was seen that more the educational qualification more the awareness that they had cancer, as expected.

Here about one fifth of the study population (17%) perceived that cancer is contagious of whom major source of information were peers. In the study by Kishore J et al *([6])* this perception surpasses (27%) the present study. Although here educational status was interestingly not found to affect this perception significantly (p = 0.219).

It was seen from this study that only 51% of all know about the harmful effects of tobacco in causation of cancer which is poorer than that obtained from the study in Pakistan by Kumar s et al *([9])* (81%). But almost similar trend were found in study in Ray K et al *([1])* (45%) and Kishore J et al *([6])* (44%). It may be due to high prevalence of poverty and illiteracy among the study population which leads to lack of affordability and utilisation of the printing and mass media by the study population. Unlike the present study, a Pakistan study by Kumar et al showed association of gender with this awareness (female were more aware) *(9).* Proportion of persons believed in super natural powers like evil eye, God's curse, spirits, and sins in causation of cancer was about 19% which is lesser than that of study by Kishore et al *(6)* (26%).

Here more than ninety percent (92%) of the study population seek treatment from other facilities before coming to this hospital of whom majority (65%) had a previous treatment period below six months. One fourth (25%) went to alternative medicine practitioner and 12% to faith healer. Almost similar trend was found in study in Pakistan by Kumar S et al *([9]).* But in studies by Kishore et al and Loehrer PJ et al showed more trend towards the alternative medicine practice and faith healing *([6], 11).* The trend of visiting alternative medicine practitioners or faith healers is seen throughout the world albeit with proportions varying according to level of literacy or area of residence *(9).* Here statistically significant association has been established between duration of previous treatment and educational status (p= 0.001) but not with economic condition. It was seen lower the educational qualification more the time required to report the oncologists.

Majority of the respondents (73%) in this study believed that cancer was curable and 87% did not believe in rituals, worshipping, exorcism or repenting for sins as a curative measure. These are impressive compared to other studies like Kishore et al and Loehrer et al *(6, 11).* It reflects that some awareness had been created among the study population against rituals, worshipping, exorcism etc. Similar t[11]rend was found in study by Kumar S et al in Pakistan *(9).*

In the present study about one fifth of the respondents (21%) believed cancer to be preventable. Majority of them (90.5%) thought that avoiding unhealthy practices like smoking, alcohol etc. is preventive to cancer. This finding surpasses the observation (17%) by Kishore J et al in a Delhi study *(6).* But the positive response is poorer than that of the study by Kumar S et al (67%) *(9).* Significantly a big proportion of the respondents (38%) did not answer to this question which revealed that awareness was low among the participants. Educational qualification of the respondents might have some influence on the belief about prevention of cancer.

Here majority (90%) of the participants did not face any stigma from their family and the society. It was one tenth (10%) who were discriminated from their family and of whom 30 % were isolated completely. In contrast to this observation Kishore J et al shows in their study that about 90% of the families behaved in different way with the cancer patients of whom 60% were isolated completely. Although 55% of all though that productive life was not possible with cancer like the study by Kishore et al. However this finding is subjective and may not be reflective of true family attitude of the population.

In this study more than half of the (55%) participants believed in inevitability of early death in cancer. But interestingly only 13% of all had fatalistic view about cancer. More than one third (37%) were uncertain about their outcome. As seen in this study lower educational qualification plays a significant role in establishing the belief that early death is inevitable in cancer as expected (p=0.001). Males are more optimistic about their cure than the females (p= 0.047). Almost similar trend was found in study by Kishore J et al *([6])* (inevitability of death 48%, optimistic about positive outcome 47%, uncertain 42%).

VI. Summary

This hospital based cross sectional descriptive study was conducted during August to September, 2013 among newly diagnosed cancer patients attending radiotherapy OPD, B S Medical College to assess the belief and perceptions about cancer and its treatment among them as well as care their seeking behaviour. Sampling is done by consecutive method. After taking a valid informed consent from the participants they were interviewed by using pre-designed, pre-tested, semi-structured proforma. Other medical records available with the patients were reviewed also to collect relevant information. The data were then entered in MS Excel 2013 and was analysed using SPSS 20.

A total one hundred patients were interviewed. Proportion of male and female participants was equal. Farmer was the major occupation among males while most of the females were home-makers. Most of the participants were illiterate and of BPL category.

Of all 64% could not perceived that they had cancer. 17% of the study population believed cancer as contagious. Some 19% believed in unreligious activities or super-normal power as the cause of cancer. Most of the study participants (92%) visited somewhere for cure before coming to this hospital of whom more than one third (37%) seek treatment from alternate medicine practitioner or faith healer. Most of the respondents believe in curability of cancer but only 21% thought cancer can be preventable. Productive life despite of cancer was considered to be possible by 55% of the respondents. Half of the study participants had fatalistic view about their illness.

As expected, education was found to be related with belief and perceptions of the patients about cancer and its outcome. It was also seen to influence the care seeking behaviour of the patients particularly on knowledge about the diagnosis of their illness and duration of previous treatment. It is seen that males are more optimistic than the female about the positive outcome of the cancer. Influence of economic condition was not prominent.

From above discussion we can draw some recommendations as mentioned below:
1. There is lack of adequate studies about beliefs and perceptions of cancers among the cancer patients. Therefore more studies should be carried out on this point of view. Studies to be done on a wider population and over a longer period of time.
2. Awareness should be generated via mass education campaign among the population about cancers, its signs, symptoms, preventive measures and available scientific treatment procedures. It may be helpful for early detection and initiation of proper treatment.
3. Strategies should be taken to provide proper counselling, treatment facilities of cancer and referral services from the primary levels of health care systems.

VII. Conclusions

The study unfolds some of the beliefs and perceptions prevalent among the cancer patients. It was seen that most of them were unaware about the diagnosis of their illness as a cancer. Though not majority, some of the respondents still believe irreligious activity supernatural powers as risk factors of cancers and rituals, worshipping, exorcism, repenting for sins as curative methods of cancers. A large proportion of the respondents keep their faith over alternative medicine practitioner or faith healer which ultimately leads to delay on initiation of scientific treatments. However, majority of the study populations realized cancers to be non-contagious mainly. This may be helpful for lowering the social stigma over the cancer patients. But majority of them believed in inevitability of death in cancer. Education is found to be an important issue in these beliefs and perceptions as these were more found in persons with lower educational qualification. Influence of economic condition was not prominent.

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