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Socio-Demographic Determinants of Cancer Patients in South Western Punjab

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Abstract

The prevalent gender bias in our patriarchal society means women tend to compromise on their own health, keeping the health and welfare of husband, children and family first. Financial limitations, especially in the economically weaker sections, prevent women from visiting a doctor unless something serious happens. The present study was conducted to assess the socio-economic determinants of cancer patients in south western Punjab. Two districts i.e. Bathinda and Sri Muktsar Sahib were randomly selected. The rate of cancer was higher in females. The majority (85.6%) of the respondents were above 40 years of age. None of the respondents was educated above graduation level. Half of the total respondents (49.3%) had family income above Rs. two lakh. Print and electronic media significantly highlighted the carcinogenous impact of smoking and alcohol to the optimum level. Family Support system goes a long way in managing and mitigating the disease.

Key words: Cancer, Gender bias, Socio-Economic, Income, Occupation, Health

JEL Classification: I 10, I 12, I 20, I 22, I 31

Introduction

Cancers are often characterized by the body part and type of cell they originate from. The American Society of Clinical Oncology (ASCO) believes that there are more than 120 types of cancers. It is defined as an uncontrollable growth of abnormal cells within the human body. Cancer can involve any tissue of the body and have many different forms in each body area. Most cancers are named for the type of cell or organ in which they start. For example, breast cancer, cervical cancer, lung cancer, liver cancer, etc. In cancer, the cells in a particular part of the body start multiplying in a disorderly, uncontrolled manner. These cells not only grow in number but penetrate the adjoining tissues and this indiscriminate and uninterrupted growth is known as malignant tumor or cancer (Bose, 2009).In terms of gender, while the incidence of cancer is reported higher in men, more women are diagnosed with disease in India. A 2012 World Cancer Report suggests that over 5.37 lakh women were diagnosed with cancer against 4.77 lakh men. Whereas, in Punjab 43 people are dying daily because of cancer out of which 36 are females (Barnum and Greenberg, 1993 and Pandher, 1999).

While more women in India are diagnosed with cancer, what is worse is that the diagnosis happens at later stages when the cost and suffering during treatment shoots up while the chances of survival decrease. As per National Institute of Cancer Prevention and Research-Indian Council of Medical Research (NICPR-ICMR) report, over 70 per cent of cancers in women include breast, cervical, and uterine cancer. Accordingly around 1.95 lakh women die of cancer every year. Breast cancer and cervical cancer are one of the major causes of female deaths, leading to an estimated 76 thousand annual deaths and 200 deaths daily, respectively. The major factors behind delayed diagnosis include unawareness about cancer symptoms caused by ignorance or negligence. The prevalent gender bias in our patriarchal society means women tend to compromise on their own health, keeping the health and welfare of husband, children and family first. The financial limitations, especially in the economically

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weaker sections, prevent women from visiting a doctor unless something serious happens. The early signs, therefore are missed, diagnosis is delayed, and chances of survival drops drastically (Pandher, 1999 and Jain and Mukherjee 2016).

Data Sources and Methodology

The present study was conducted in south western region of Punjab during 2017-2018. Two districts i.e. Bathinda and Sri Muktsar Sahib (hereafter, Sri Muktsar Sahib will be referred as Muktsar in the text) were randomly selected. At the second stage, two blocks were randomly selected from each selected district to obtain a total of four blocks. At third stage, three villages from each block were taken for the purpose of investigation. So, the present study was conducted in twelve villages randomly selected from South Western region of Punjab. After the selection of the villages, a list of all the persons suffering from cancer or had cancer (though recovered later on) during the period of five years preceding the study comprised the sample for study. The present study was based on the primary data procured on the basis of records maintained by the hospitals both public and private, Auxiliary Nurse Midwives (ANMs), chemists, sarpanches and change agents were contacted. At the final stage, 160 cancer patients were personally interviewed for the study.

Statistical analysis

The data were tabulated and analyzed by using appropriate statistical tools. Thus, frequency distribution, percentages, Chi Square and E-Garrett's ranking were used to reach the logical conclusion.

Chi Square

Chi square test was applied to check the association between socio-economic indicators and anxiety level of cancer patients. The statistical equation is given below:

$$(x)^2 = \in \frac{(o-e)^2}{e}$$

Where,

x^2 = Chi-square value

O = Observed Frequency

E= Expected Frequency assigned as equal frequency to all the numbers by dividing the total sum of frequency to each number.

Σ = Summation

E-Garrett's ranking

E-Garrett's ranking technique was used to analyze the mode of treatment and expenditure cut faced by cancer patients. As per this method, respondents had been asked to assign the rank for all the problems and treatments and the outcome of such ranking had been converted into source value with the help of the following formula:

$$\text{Percent position} = \frac{100\ (Rij - 0.5)}{Nj}$$

Where

R_{ij} = Rank given for the ith variable by jth respondents

N_j = Number of variables ranked by jth respondents

With the help of E- Garrett's table, the percentage position estimated is converted into scores. Then for each factor, the scores of each individual are added and then total value of scores and mean values of score is calculated.

Results and Discussion

Socio-demographic variables gender, age, income, occupation have determinant role in management and mitigation of the disease (Singh *et al.*, 2013; Kaur, 2013)

Gender

The distribution of the respondents on the basis of gender is shown in Table 1. The study revealed that in south-western region of Punjab greater number of females (65.0%) suffered from cancer than their male counter-parts (35.0%). A perusal of data corroborates the figures provided by Bal *et al* (2015), Singh *et al* (2013), Hvidberg (2016) and Kaur (2013) which also showed similar findings that women suffered more cancer in Punjab.

Site of cancer

The distribution of the respondents on the basis of site of cancer is presented in the Table 2. More than one fourth (28.7%) of female respondents had breast cancer. The second most prevalent site of cancer was uterus (10.6%). The third site of cancer in both males and females was throat (10.0%) followed by prostate in males (9.3%), food pipe (7.5%), tongue (6.2%), brain (4.3%) and cervix in females (3.7%). Few respondents had cancer in stomach (3.1%), rectum (1.2%), liver

Table 1. Distribution of respondents on the basis of gender

Gender	Bathinda (n_1=76)	Sri Muktsar Sahib (n_2=84)	Overall (N=160)
Male	22 (28.94)	34 (40.47)	56 (35.00)
Female	54 (71.06)	50 (59.53)	104 (65.00)

Figures in the parentheses indicate percentages to total

Table 2. Distribution of respondents on the basis of site of cancer (Multiple response)

Site of cancer	Bathinda (n_1=76)			Sri Muktsar Sahib (n_2=84)			Overall (N=160)		
	Male (n=22)	Female (n=54)	Total (n=76)	Male (n=34)	Female (n=50)	Total (n=84)	Male (n=56)	Female (n=104)	Total (n=160)
Stomach	-	-	-	5 (14.71)	-	5 (5.95)	5 (8.93)	-	5 (3.13)
Rectum	-	2 (3.70)	2 (3.57)	-	-	-	-	2 (1.92)	2 (1.25)
Brain	2 (9.09)	3 (5.56)	5 (8.93)	1 (2.94)	1 (2)	2 (2.38)	3 (5.36)	4 (3.85)	7 (4.38)
Breast	-	21 (38.89)	21 (27.65)	-	25 (50.00)	25 (29.76)	-	46 (44.23)	46 (28.75)
Liver	1 (4.55)	-	1 (1.79)	2 (5.88)	-	2 (2.38)	3 (5.36)	-	3 (1.88)
Gall bladder	1 4.55	2 (3.70)	3 (5.36)	-	-	-	1 (1.79)	2 (1.92)	3 (1.88)
Food pipe	5 (22.73)	-	5 (8.93)	2 (5.88)	5 (10.00)	7 (8.33)	7 (12.50)	5 (4.81)	12 (7.50)
Throat	3 (13.64)	3 (5.56)	6 (10.71)	6 (17.65)	4 (8.00)	10 (11.90)	9 (16.07)	7 (6.73)	16 (10.00)
Blood	1 (4.55)	8 (14.81)	9 (16.07)	2 (5.88)	1 (2.00)	3 (3.57)	3 (5.36)	9 (8.65)	12 (7.50)
Cervix	-	1 (1.85)	1 (1.79)	-	5 (10.00)	5 (5.95)	-	6 (5.77)	6 (3.75)
Prostate	5 (22.73)	-	5 (8.93)	10 (29.41)	-	10 (11.90)	15 (26.79)	-	15 (9.38)
Tongue	2 (9.09)	4 (7.41)	6 (10.71)	3 (8.82)	1 (2.00)	4 (4.76)	5 (8.93)	5 (4.81)	10 (6.25)
Uterus	-	8 (14.81)	8 (14.29)	-	9 (18.00)	9 (10.71)	-	17 (16.35)	17 (10.63)
Kidney	2 (9.09)	2 (3.70)	4 (7.14)	1 (2.94)	-	1 (1.19)	3 (5.36)	2 (1.92)	5 (3.13)
Bone	-	2 (3.70)	2 (3.57)	2 (5.88)	1 (2.00)	3 (3.57)	2 (3.57)	3 (2.88)	5 (3.13)

Figures in the parentheses indicate percentages to total

(1.8%), bone (3.1%), gall bladder (1.8%) and in kidney (3.1%) respectively. According to ICMR report, cancer burden in India has more than doubled over the last about 26 years (Anonymous, 2018).Thus, it can be concluded that more females got diagnosed by breast, rectum, cervix and uterus cancer and male respondents by stomach, liver and prostate cancer respectively.

Age

The data given in Table 3 reveals that in overall study area, nearly half of the respondents (45.0%) aged 60 years and above, another 40.6 per cent of the respondents were between 41-60 years of age. The rest 10.6 per cent of the respondents belonged to age group of 21-40 years and 3.8 per cent of cancer victims were up to 20 years of age. Overall, the data indicated that majority (85.6%) of the sampled respondents were above 40 years of age. The study indicated that though all age groups were affected by the disease, above 40 years got more affected. The studies by Kaur (2013) also revealed that 60 years and about age group was the worst affected from cancer. No significant association was found between prevalence of cancer and age of the respondent.

Education

Education helps an individual to live a healthy and pleasant life. People who are well educated can lead a better life than uneducated in every aspect. Education is recognized as an important determinant of health because an educated person is always conscious about their health. It is important that people should be aware about the disease and it is a must for all to know how the disease is caused. The data given in Table 4 revealed that none of the respondents were educated above graduation level. Only two respondents from the district Bathinda were graduate. Overall 73.7 per cent of the respondents were barely educated and one-fourth (24.9%) of the respondents had medium level education i.e. they were educated up to the level of senior secondary and possessed only diplomas. Chi Square valued established a significant association between prevalence of cancer and education of respondents of Muktsar districts only.

Marital Status

Marriage is a socially and ritually recognized union. It is a legal contract between spouses that establishes rights and obligations between them and their children. The previous studies had divulged that institution of marriage and family burden the females more as their bargaining power is least and put them in disadvantaged position both physically and socially (Agarwal, 1997 and Kabeer, 1999). Individuals (both male and female) may marry for several reasons including legal, social, emotional, spiritual and religious purposes. As already revealed that cancer patients were above 40, showing that most contracted disease after marriage. The study revealed that in south western region of Punjab majority (96.2%) of cancer patients were married. Age wise distribution of respondents corroborates the above said fact as just 3.7 per cent of cancer patients were up to 20 years of age and rest of the respondents were from

Table 3. Distribution of respondents on the basis of their age

Age Groups (Years)	Bathinda (n_1=76)			Sri Muktsar Sahib (n_2=84)			Overall (N=160)		
	Male (n=22)	Female (n=54)	Total (n=76)	Male (n=34)	Female (n=50)	Total (n=84)	Male (n=56)	Female (n=104)	Total (n=160)
Up to 20	1 (4.54)	3 (5.55)	4 (5.26)	-	2 (4.00)	2 (2.38)	1 (1.78)	5 (4.80)	6 (3.75)
21-40	5 (22.72)	6 (11.11)	11 (14.47)	1 (2.94)	5 (10.00)	6 (7.14)	6 (10.71)	11 (10.57)	17 (10.62)
41-60	4 (18.18)	25 (46.29)	29 (38.15)	18 (52.94)	18 (36.00)	36 (42.85)	22 (39.28)	43 (41.34)	65 (40.62)
Above 60	12 (54.54)	20 (37.03)	32 (42.10)	15 (44.11)	25 (50.00)	40 (47.61)	27 (48.21)	45 (43.26)	72 (45.00)
X^2		5.267ns			4.101ns			0.447ns	

Figures in the parentheses indicate percentages to total
ns- non significant

Table 4. Distribution of respondents on the basis of their education

Education	Bathinda (n_1=76)			Sri Muktsar Sahib (n_2=84)			Overall (N=160)		
	Male (n=22)	Female (n=54)	Total (n=76)	Male (n=34)	Female (n=50)	Total (n=84)	Male (n=56)	Female (n=104)	Total (n=160)
Illiterate	9 (40.90)	30 (55.55)	39 (51.31)	13 (38.23)	30 (60.00)	43 (51.19)	22 (39.28)	60 (57.69)	82 (51.25)
Up to Middle	4 (18.18)	9 (16.66)	13 (17.10)	10 (29.41)	13 (26.00)	23 (27.38)	14 (25.00)	22 (21.15)	36 (22.5)
Matric	7 (31.81)	14 (25.92)	21 (27.63)	9 (26.47)	3 (6.00)	12 (14.28)	16 (28.57)	17 (16.34)	33 (20.62)
Sen. Sec and Diploma	-	1 (1.85)	1 (1.31)	2 (5.88)	4 (8.00)	6 (7.14)	2 (3.57)	5 (4.80)	7 (4.37)
Graduation	2 (9.09)	-	2 (2.63)	-	-	-	2 (3.57)	-	2 (1.25)
X^2		0.859ns			8.022*			5.636ns	

Figures in the parentheses indicate percentages to total
** Significant at five per cent level*

marriageable age i.e. above 20 years of age. There was no significant association found between prevalence of cancer and marital status of cancer victims.

Occupation

The occupation distribution among the respondents had been shown in Table 6. It has been revealed from the study that three fourth (75.0%) of respondents were housewives in the region.

Amongst the male cancer victims, about 70% were cultivators and agricultural labour. One fourth (20.0%) of the cancer victims includes painter, RMP doctors, petty businessmen or were students. One third (31.3%) of the cancer victims were either agricultural laborers or cultivators. Three-fourth (75%) of the female victims who were not involved in any gainful employment at the time of data collection, divulged that majority amongst them were involved in agricultural pursuits. Due to course of treatment for cancer like steroids, chemotherapy, radiation etc. they had become so week and fragile that they were unable to do labour jobs but for the want of the treatment majority had to do labour which further put them in vulnerable position. Chi square values established highly significant association for prevalence of cancer and occupation of the cancer victims.

Family Income

In Punjab, out of the total number of farmers only one out of three farmers earned less than Rs.2500 per

Table 5. Distribution of respondents on the basis of their marital status

Marital Status	Bathinda (n_1=76)			Sri Muktsar Sahib (n_2=84)			Overall (N=160)		
	Male (n=22)	Female (n=54)	Total (n=76)	Male (n=34)	Female (n=50)	Total (n=84)	Male (n=56)	Female (n=104)	Total (n=160)
Married	21 (95.45)	51 (94.44)	72 (94.73)	34 (100)	48 (96.00)	82 (97.61)	55 (98.21)	99 (95.19)	154 (96.25)
Unmarried	1 (4.54)	3 (5.55)	4 (5.26)	-	2 (4.00)	2 (2.38)	1 (1.78)	5 (4.80)	6 (3.75)
X^2		0.032ns			1.393ns			0.921ns	

Figures in the parentheses indicate percentages to total
ns- non significant

month or nearly every third farmer of Punjab lives below poverty line, based on an estimate by an expert group of NITI Ayog (Padhi, 2017). Table 7 reveals that half of the respondents (49.3%) out of total number of respondents were fetching family income above Rs. 2,00,000 per annum. Females were dominant in this category as half (50.9%) of the females had family income more than Rs. 2,00,000 whereas 46.4 per cent males were in this category, in the study region. Chi square values showed non-significant association between prevalence of cancer and family income of the respondents.

Use of narcotics and alcohol

The information given in Table 8 highlights that the use of narcotics and alcohol by the respondents. The previous studies (Thakur *et al.,* 2008, Ferlay *et al.,* 2010 and Kumar and Kaur, 2014) has shown association between substance use and alcohol use with cancer. The print and electronic media also highlighted the carcinogenous impact of smoking and alcohol to the optimum level. Inspite of this, a significant majority (96.5%) of the male cancer victims were taking alcohol and only 7 female cancer victim were using tramadol capsules (capsule is a synthetic painkiller belonging to a group of medicines known as Opioid Analgesics) as due to financial compulsion they had to do labour jobs. It was divulged that the respondents enabled them to bear the physical pressure demanded by their job. Though the drug temporarily enhanced their capacity, it was devastating to the health of cancer victims in the region.

Mode of treatment

The various modes of treatment were selected by the respondents as presented in Table 9. The score were assigned to various modes ranked by the respondents using E-Garret ranking technique. Regarding treatment seeking behavior, more respondents went to a qualified doctors or hospitals for the treatment after the first appearance of symptoms. Among the mode of treatment used by the respondents, qualified doctors/ oncologist was ranked first by the respondents in the study area. The second mode of treatment used by respondents was consultation from RMP doctor (Ranked II) with the average mean score of 54.46. Males opted for Ayurvedic treatment and ranked III whereas in case of females, they visited quacks and traditional healers and ranked it III as a mode of treatment. Homeopathic treatment was the least opted by the cancer victims of the region and was ranked V mode of treatment

Cancer diagnosed stage

The early diagnosis in case of cancer is very crucial and the key to early diagnosis is prior awareness of this disease. By awareness and knowledge, of the signs and symptoms of cancer, this disease can be detected at the early stage and which could improves the chances of curability and the survival rate significantly and hence contributes considerably towards good health

Table 6. Distribution of respondents on the basis of their occupation

Occupation	Bathinda (n_1=76)			Sri Muktsar Sahib (n_2=84)			Overall (N=160)		
	Male (n=22)	Female (n=54)	Total (n=76)	Male (n=34)	Female (n=50)	Total (n=84)	Male (n=56)	Female (n=104)	Total (n=160)
Agri. Labour	2 (9.09)	7 (12.96)	9 (11.84)	1 (2.94)	4 (8.00)	5 (5.95)	3 (5.37)	11 (10.57)	14 (8.75)
Cultivators	14 (63.63)	-	14 (18.42)	22 (64.70)	-	22 (26.19)	36 (64.28)	-	36 (22.50)
Housewives	-	38 (70.37)	38 (50)	-	40 (80.00)	40 (47.61)	-	78 (75.00)	78 (48.75)
Others*	6 (27.27)	9 (16.66)	15 (19.73)	11 (32.35)	6 (12.00)	17 (20.23)	17 (30.35)	15 (14.42)	32 (20.00)
X^2		27.505**			18.027**			44.12**	

Figures in the parentheses indicate percentages to total
** includes Painter, RMP doctor, Student, Petty business etc.*
*** Significant at one per cent level*

Table 7. Distribution of respondents on the basis of their Family income per annum

Family Income (Rs in thousand)	Bathinda (n_1=76)			Sri Muktsar Sahib (n_2=84)			Overall (N=160)		
	Male (n=22)	Female (n=54)	Total (n=76)	Male (n=34)	Female (n=50)	Total (n=84)	Male (n=56)	Female (n=104)	Total (n=160)
Below 50	3 (13.63)	3 (5.55)	6 (7.89)	1 (2.94)	3 (6.00)	4 (4.76)	4 (7.14)	6 (5.76)	10 (6.25)
50-100	9 (40.90)	16 (29.62)	25 (32.89)	3 (8.82)	9 (18.00)	12 (14.28)	12 (21.42)	25 (24.03)	37 (23.12)
100-150	3 (13.63)	7 (12.96)	10 (13.15)	6 (17.64)	3 (6.00)	9 (10.71)	9 (16.07)	10 (9.61)	19 (11.87)
150-200	1 (4.54)	4 (7.40)	5 (6.57)	4 (11.76)	6 (12.00)	10 (11.90)	5 (8.92)	10 (9.61)	15 (9.37)
Above 200	6 (27.27)	24 (44.44)	30 (39.47)	20 (58.82)	29 (58.00)	49 (58.33)	26 (46.42)	53 (50.96)	79 (49.37)
Average family income		143421			177381			161250	
X^2		2.271^{ns}			8.023^{ns}			5.400^{ns}	

Figures in the parentheses indicate percentages to total
ns- non significant

management. The data given in Table 10revealsthat half male (50.0%) and one third female (31.7%) cancer patients were diagnosed at the early stage of this disease. Off late, the south western region has become infamous for higher prevalence of cancer, awareness regarding the disease was quite impressive. Since it was considered a dreadful disease, people in the region were particular about the screening of the disease at the first sign or symptom of the disease. However, certain type of cancers got detected only at later stages. Some gender differences were observed as stated earlier. Still nearly one fourth of the respondents revealed that diseased was detected at third and terminal stage where the chance of survival were too bleak.

Delay in seeking treatment

The delay of treatment is defined as the interval between diagnosis and the start of treatment (Korsgaard

Table 8. Distribution of respondents on the basis of use of narcotics and alcohol

(Multiple responses)

Particulars	Bathinda (n_1=76)			Sri Muktsar Sahib (n_2=84)			Overall (N=160)		
	Male (n=11)	Female (n=5)	Total (n=16)	Male (n=18)	Female (n=2)	Total (n=20)	Male (n=29)	Female (n=7)	Total (n=36)
Alcohol	11 (100.00)	-	11 (68.75)	17 (95.44)	-	17 (85.00)	28 (96.55)	-	28 (77.77)
Smoking/ Tobacco	4 (36.36)	-	4 (25.00)	5 (16.66)	-	5 (25.00)	9 (31.03)	-	9 (25.00)
Drugs*	7 (63.63)	-	7 (43.75)	7 (38.88)	-	7 (35.00)	14 (48.27)	-	14 (38.88)
Tarmadol capsules	-	5 (100.00)	5 (31.25)		2 (100.00)	2 (10.00)		7 (100.00)	7 (19.44)

Figures in the parentheses indicate percentages to total
** Includes opium, poppy husk and cocaine.*

Table 9. Distribution of respondents on the basis of mode of treatment

Mode of Treatment	Bathinda (n_1=76)						Sri Muktsar Sahib (n_2=84)						Overall (N=160)					
	Male (n=22)		Female (n=54)		Total (n=76)		Male (n=34)		Female (n=50)		Total (n=84)		Male (n=56)		Female (n=104)		Total (n=160)	
	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank
RMP	57.95	II	57.22	II	57.43	II	48.67	III	53.9	II	51.78	II	52.33	II	55.62	II	54.46	II
Quakes	39.54	V	50.09	III	47.03	III	44.11	IV	49.4	III	47.26	IV	42.32	IV	49.76	III	47.15	IV
Qualified doctors	66.36	I	61.85	I	63.15	I	66.91	I	62.2	I	64.1	I	66.69	I	62.01	I	63.65	I
Ayurvedic	47.04	III	44.44	IV	45.19	IV	53.64	II	46.7	IV	49.1	III	50.44	III	45.52	IV	47.25	III
Homeo-pathic	40.22	IV	37.03	V	37.96	V	38.67	V	38.3	V	38.45	V	39.28	V	37.64	V	38.22	V

et al., 2008). A Post Graduate Institute of Medical Education and Research, Chandigarh expert had proved that people often ignored symptoms of cancer resulting in delayed diagnosis and treatment. This lets the deadly disease spread silently (Dhaliwal, 2016). The data given in Table 11 highlights that one third (33.1%) of the respondents had made no delay in seeking their treatment because in this region people were too much afraid of this disease as several people died due to this deadly disease and they knew the symptoms of the problem as many people from their surroundings had suffered from the disease or were sufferer. Fifteen per cent of the respondents didn't disclose to their family members about this disease and need a quick treatment as they were already facing economic hardships in their family and thought whatever meagre resource they had should be spent for the welfare of their kids and they simply ignored their problem as they were sure of mortality by this disease. Due to quacks and other traditional healers 11.25 per cent of the respondents had delayed in seeking treatment. Due to lack of money in the family patients (11.2%) of the respondents delayed in seeking their treatment. One-tenth of the respondents did not know exactly from what they were suffering and delayed in seeking treatment. Some respondents of this region (11.8%) delayed in seeking their treatment because they were not aware about the recurrence of the problem. There were few facilities disseminating cancer awareness, early detection and early diagnosis in rural regions. Even the biopsies or the blood samples were sent to other cities and the reports took weeks to return back. By the time, the patient can arrange the logistics to go to cities for treatment, it caused further delays in treatment and advancement of the disease (Banavali, 2015).

Conclusion and Policy Implications

Prevalence of cancer and socio-demographic determinants of the cancer victims revealed that in south-western region of Punjab females (breast, uterus and cervix cancer) suffered more from cancer than their male counter parts (throat, prostate, food pipe, tongue cancer). Education and income of the family did not have any significant association with disease. In majority cases, disease was detected at third and terminal stage where the chance of survival remained very less. This deadly disease had adversely affected their economic condition and it was devastating for, whole the family. Early screening of cancer cases should

Table 10. Distribution of respondents on the basis of stage at which cancer diagnosed

Stage of cancer	Bathinda (n_1=76)			Sri Muktsar Sahib (n_2=84)			Overall (N=160)		
	Male (n=22)	Female (n=54)	Total (n=76)	Male (n=34)	Female (n=50)	Total (n=84)	Male (n=56)	Female (n=104)	Total (n=160)
Early (Stage I)	12 (54.54)	25 (46.29)	37 (48.68)	12 (35.29)	20 (40.00)	32 (38.09)	28 (50.00)	33 (31.73)	61 (38.12)
Middle (Stage II)	7 (31.81)	12 (22.22)	19 (25.00)	13 (38.23)	17 (34.00)	30 (35.71)	20 (35.71)	25 (24.03)	45 (28.12)
Later (Stage III)	2 (9.09)	14 (25.92)	16 (21.05)	8 (23.52)	10 (20.00)	18 (21.42)	13 (23.21)	21 (20.19)	34 (21.25)
Terminal (Stage IV)	1 (4.54)	3 (5.55)	4 (5.26)	1 (2.94)	3 (6.00)	4 (4.76)	2 (3.57)	6 (5.76)	8 (5.00)

Figures in the parentheses indicate percentages to total

Table 11. Distribution of the respondents on the basis of causes behind delay in seeking medical treatment

Causes behind delay	Bathinda (n_1=76)			Sri Muktsar Sahib (n_2=84)			Overall (N=160)		
	Male (n=22)	Female (n=54)	Total (n=76)	Male (n=34)	Female (n=50)	Total (n=84)	Male (n=56)	Female (n=104)	Total (n=160)
No delay	5 (22.72)	19 (35.18)	24 (31.57)	13 (38.23)	16 (32.00)	29 (34.52)	18 (32.14)	35 (33.65)	53 (33.12)
Non-disclosure to family	6 (27.27)	6 (11.11)	12 (15.78)	8 (23.52)	4 (8.00)	12 (14.28)	14 (25.00)	10 (9.61)	24 (15.00)
Treatment from quacks	-	5 (9.25)	5 (6.57)	4 (11.76)	9 (18.00)	13 (15.47)	4 (7.14)	14 (13.46)	18 (11.25)
Financial constraints	4 (18.18)	7 (12.96)	11 (14.47)	2 (5.88)	5 (10.00)	7 (8.33)	6 (10.71)	12 (11.53)	18 (11.25)
Diagnose at 3rd stage	-	4 (7.40)	4 (5.26)	3 (8.82)	2 (4.00)	5 (5.95)	3 (5.37)	6 (5.76)	9 (5.62)
Unable to cope up for treatment	1 (4.54)	5 (9.25)	6 (7.89)	2 (5.88)	6 (12.00)	8 (9.52)	3 (5.35)	11 (1.57)	14 (8.75)
Not aware about the recurrence of the problem	3 (13.63)	7 (12.96)	10 (13.15)	2 (5.88)	7 (14.00)	9 (10.71)	5 (8.92)	14 (13.46)	19 (11.87)
Due to excessive weakness	3 (13.63)	1 1.85)	4 (5.26)	-	1 (2.00)	1 (1.19)	3 (5.37)	2 (1.92)	5 (3.12)

Figures in the parentheses indicate percentages to total

be done at minimal cost at public hospitals. Amount provided through Mukh Mantri Punjab Cancer Raahat Kosh Scheme need to be enhanced in order to meet the real expenses towards cancer management. Cost of treatment charged by private hospitals could be lowered through effective government interventions. Support system at family level could prove too helpful and goes a long way in mitigating the socio-economic and psychological consequences faced by victims. Awareness programs on bursting the myths associated with cancer should be arranged at village levels through panachayat, NGOs and religious bodies.

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