



## Dietary and Life Style Habits of Patients with Advanced Stage of Cancer in Southern Assam and Scope of Social Work Intervention

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### Abstract

**Introduction:** Worldwide, cancer is the second leading disease after cardiovascular disorders. Cancer is also a dietary and life style related disease which includes dietary habits of individual and life style habits like tobacco and alcohol. Southern part of Assam is having various diversities in terms of food and life style habits. Majority of population are SLYHETI Bengali spoken people and the use of tobacco is relatively high.

**Methodology:** This study was based on quasi experimental research design where 120 consecutive advanced cancer patients were interviewed during their pre intervention phase related to their dietary and life style habits. Collected data were analysed in SPSS and parametric tests were used.

**Results:** Majority of patients were males (58.33%). About 42% of patients earned monthly Rs. 5000/- or less. Majority of patients had dietary habits of eating fish, dry fish, chicken, mutton, and egg. The consumption of chicken, mutton, beef, pork, fish and dry fish was statistically found insignificant. But the consumption of egg was found to be significant as male consumed more eggs than females. Among males 98.57% were tobacco users and among females 92% were users. Overall, more than 95% of patients had tobacco habits. Among males, majority of patients (57.14%) were bidi users. One third of patients (n=18, 33.33%) had smoked 1,46,101 – 2,19,150 numbers of bidi sticks which was equivalent to 20.1 – 30 bidi pack-years. Majority of women were tobacco chewers. Tobacco chewing of women (n=45, 90%) was relatively high than male (n=58, 82.86%) counterparts.

**Discussion:** Various studies stated that tobacco causes various kinds of cancer and in this study it reflects the same statistics where more than 95% of patients had the habits of tobacco use. A large number of patients ate red meat which is also a cause of developing human cancer. Cultural diversity, low socio-economic status, and poor levels of awareness also lead people to such dietary and life style habits. **Suggestion:** State and district administration should take appropriate steps toward tobacco control, should take steps for tobacco cessation, and to recruit professional social workers in tobacco control units.

**Key words:** Alcohol; Cancer; Dietary; Life Style; Tobacco.



**Introduction:**

Cancer is the second leading disease after cardiovascular disorders which cause maximum deaths in the world (Jemal et al., 2007). In developing countries, cancer is the second leading cause of deaths (World Health Organisation, 2008) which is also having an increasing trend in India with high alarming rate. A study by Rao and Ganesh (1998) mentioned that, in 1991 there were approximate 609,000 cancer cases but at the end of that century there were 806,000 reported cancer cases. The burden of cancer is increasing due to the factors of increasing age, adaptation of modern lifestyle choices which involves smoking, physical inactivity, and dietary habits. As per International Agency for Research on Cancer (2003), there are some causative factors for cancers are tobacco use, asbestos, aflatoxins, viruses, and ultra violet light. Life style involves tobacco habits, alcohol habits and physical activity. Tobacco use in any form is a causative agent to developing several health threatening diseases including cancer. Worldwide, it is very important etiology of cancer. Tobacco users use tobacco in the form of chewing, smoking, snuffing, and tobacco toothbrush. Tobacco smoking causes cancers of human oesophagus, oral cavity, larynx, lung, pancreas, pharynx, kidney and bladder (IARC, 1986). It has been estimated that 25% of male and 4% of female cancers are due tobacco smoking (Parkin et al., 1994). A study by (Rodgman et al., 2000) mentioned that, mainstream smoke having about 4,000 specific chemicals along with addictive substance of nicotine (0.1 – 2.0 mg per cigarette). Whereas carcinogenic (cancer causing agent) effect of tobacco smoking were reported by Hecht (1999). Another study (Sreeramareddy et al., 2014) stated that, tobacco chewing is common in India, Bangladesh, Nepal, Maldives, and Cambodia.

Alcohol consumption is another important etiology which increases the risk of oral cancer, oesophageal cancer, liver cancer, etc. (Franceschi et al., 1999).

Causes of developing cancer are also responsible for human dietary habits. Caloric diets have an association with obesity and overweight which sometimes lead to cancer (Willett, 2001). A close association found between processed meat and red meat consumption with colorectal cancer (Norat, 2002). About 25% of digestive tract cancers may decrease with 500 gm. daily consumption of fruit and vegetables (Bueno-de-Mesquita et al., 2002).

The present study conducted at southern part of Assam to get detailed information about advanced cancer patients dietary and life style habits. 120 advanced cancer patients' data were collected at Cachar Cancer Hospital & Research Centre, Silchar in the year 2015 – 16.

**Objectives:** The main objective of this research are given below –

1. To know advanced cancer patients dietary habits,
2. To know advanced cancer patients life style habits which includes tobacco and alcohol habits,
3. To make certain strategies toward reduction of dietary and life style related cancer burden from the modern society.



### **Methodology:**

This study was a part of quasi experimental research design. All study related information was also described in a descriptive way. Data of 120 consecutive advanced cancer patients were collected before initiating any cancer directed treatment at Cachar Cancer Hospital & Research Centre. The study data were collected in the year 2016. From the study participants Informed Consent Form were also collected by stating the importance and need of this study. To collect these data, the researcher used interview schedule as per the guidelines of Hospital Ethics Committee. Collected data were analysed and interpreted by using statistical package of social sciences (SPSS). Parametric statistical tests were followed to get the statistical inferences for this study.

### **Results:**

#### **Brief Profile of the Patients:**

This study deals with 120 advanced cancer patients from the Barak Valley those who were registered at Cachar Cancer Hospital & Research Centre in the year 2015-16. Majority of 58.33% (n=70) of patients were male followed by 41.67% (n=50) females. Majority of 56.67% (n=68) of patients were in the age group of 41 to 60 years followed by age group of 60 years & above (n=38, 31.67%) and age group of 18 – 40 years (n=14, 11.67%). More than half of the patients (n=61, 50.83%) of patients were Hindu by their religion followed by Muslims (n=56, 46.67%) and Christians (n=3, 2.50%). Three quarter of patients (n=90, 75.00%) were married. This study also found that, 47.50% (n=57) of patients were belonging to nuclear family followed by joint families (n=55, 45.83%), and extended families (n=08, 6.67%). It has noticed that 41.67% (n=50) of patient's monthly family income was up to Rs. 5000/-. Overall, 26.67% (n=32) of patients were non-literate. 15% (n=18) patients were daily wage earners and 14.17% (n=17) were farmers. One quarter of patients (n=40, 33.33%) reported with head and neck cancer followed by gastro intestinal cancer (n=33, 29.17%), lung cancer (n=19, 15.83%), oesophageal cancer (n=09, 7.50%), cervical cancer (n=09, 7.50%), and breast cancer (n=08, 6.67%). Majority of the 77.50% (n=93) patients were diagnosed in fourth stage of cancer and rest 22.50% (27) were diagnosed in third stage of cancer.

#### **Dietary Habits of Advanced Cancer Patients:**

Barak valley is located at southern part of Assam and majorities speak a common Sylheti Bengali dialect. The food habits are also different from rest of the country. Majorities of population are non-vegetarian. In this study it was found that, majority (n=116, 96.67%) of them were non-vegetarian. The gender wise non-vegetable dietary habits are shown in below table (table 1):



Dietary Habits	Male	Percentage	Female	Percentage	Total	Percentage
Chicken	62	88.57%	39	78.00%	101	84.17%
Mutton	48	68.57%	26	52.00%	74	61.67%
Beef	32	45.71%	15	30.00%	47	39.17%
Pork	06	8.57%	05	10.00%	11	9.17%
Fish	68	97.14%	46	92.00%	114	95.00%
Dry Fish	61	87.14%	41	82.00%	102	85.00%
Egg	59	84.29%	30	60.00%	89	74.17%

The above table (table 1) stated that majority of patients were in favour of eating fish (95%), followed by dry fish (85%), chicken (84.17%), egg (74.17%), mutton (61.67%), beef (39.17%), and pork (9.17%). Accordingly chi square tests were conducted to see the significant relationship between patient's gender and dietary habits. The result suggest that patient's gender and habits of chicken consumption ( $X^2= 2.45$ ,  $df= 1$ ,  $p = .118$ ), mutton consumption ( $X^2= 3.39$ ,  $df= 1$ ,  $p = .066$ ), beef consumption ( $X^2= 3.02$ ,  $df= 1$ ,  $p = .082$ ), pork consumption ( $X^2= 0.07$ ,  $df= 1$ ,  $p = .789$ ), fish consumption ( $X^2= 1.62$ ,  $df= 1$ ,  $p = .203$ ), and dry fish consumption ( $X^2= 0.61$ ,  $df= 1$ ,  $p = .437$ ) were statistically not significant. These indicated that the consumption of chicken, mutton, beef, pork, fish and dry fish were more or less similar to both males and females. Chi square test found significant relationship between patients gender and dietary habits of egg consumption ( $X^2= 8.98$ ,  $df= 1$ ,  $p = .003$ ) where male consumed more eggs than females.

#### **Life Style Habits of Tobacco and Alcohol Use of Patients with Advanced Stage of Cancer:**

The following table (table 2) shows the result of tobacco use by the advanced cancer patients –

Tobacco Habits	Male	Percentage	Female	Percentage	Total	Percentage
Smoking (S)	11	15.71%	1	2.00%	12	10.00%
Chewing (C)	13	18.57%	39	78.00%	52	43.33%
Both S + C	45	64.29%	06	12.00%	51	42.50%
No Habits	01	1.43%	04	8.00%	05	4.17%
<b>Grand Total</b>	<b>70</b>	<b>100.00%</b>	<b>50</b>	<b>100.00%</b>	<b>120</b>	<b>100.00%</b>

From the above table (table 2) it was noticed that, overall 98.57% (15.71% + 18.57% + 64.29%) of males were tobacco users in any form followed by 92.00% (2.00% + 78.00% + 12.00%) females who were users to it. Moreover, it has also noticed that total 95.83% (10.00% + 43.33% + 42.50%) of patients had tobacco habits.

This study also stated that, among males 80% (n=56) were tobacco smokers. Bidi was found more common used tobacco smoking products where 57.14% (n=32) were users.



One third of patients (n=18, 33.33%) had smoked 1,46,101 – 2,19,150 numbers of bidi sticks which was equivalent to 20.1 – 30 bidi pack-years followed by 10.1 – 20 pack-years (n=14, 25.93%) and other pack years. For overall smoking, majority of 58.73% (n=37) patients had smoking initiation between the age of 15 – 25 years. Tobacco chewing is also common in southern part of Assam. This study was also reflects that female tobacco chewing (n=45, 90%) was relatively high than males (n=58, 82.86%). For overall chewing, majority of 56.31% (n=58) of patients had chewing initiation between the age of 15 to 25 years.

Chi square test was conducted to get the significant relationship between patients gender and tobacco smoking habits and found significant ( $X^2= 50.95$ ,  $df= 1$ ,  $p = .000$ ) which means that male smoking habits (80%) differs from female smoking habits (14%). There was no significant relationship found between patients gender and tobacco chewing habits ( $X^2=1.22$ ,  $df=1$ ,  $p=.269$ ) means tobacco chewing was almost similar in both gender. There was no significant relationship found between cancer stage and smoking habits ( $X^2= 0.01$ ,  $df= 1$ ,  $p = .939$ ) and similarly no relationship was found between cancer stage and chewing habits of patients ( $X^2= 0.27$ ,  $df= 1$ ,  $p = .605$ ). Thus, it means that both smoking and chewing prevailed more or less equal in all stages of cancer.

Among tobacco smokers, 92.06% (n=58) of them had left smoking habit after registration at hospital and among chewers, 82.52% (n=85) of them had left.

#### **Discussion:**

Worldwide, cancer is a growing health issue with high mortality rate. Socio economic and life style factors have certain impacts on patients especially in underdeveloped and developing countries. In these countries, patients generally reports and diagnose in an advanced stage due to the factors of their ignorance, negligence, fear, and socio economic situations.

Dietary and life style habit also influences advanced cancer patient and their quality of life. In this study it has found that very few patients were lifelong vegetarians. Several studies (Dos Santos Silva et al., 2002; Lagiou et al., 2009) stated that, lifelong vegetarianism reduces the risk of developing cancer. A study (Chao et al., 2005) suggests that heavy consumption of red meat is causative factor for gastrointestinal and colorectal cancer. Similarly, (Tappel, 2007) expressed in a study that heavy consumption of red meat causes breast cancer. A case control study (Rao et al., 2002) explained that dry fish consumption increases the risk of stomach cancer. So, various studies viewed that non-vegetarian dietary habits leads to several human cancers.

About 90% – 95% of human cancers are attributed to lifestyle factors (Anand et al., 2008). Life style factors include the habits of tobacco and alcohol use. Use of tobacco is known cause of cancer and other health related hazardous events. Habits of tobacco smoking and chewing differ from area to area. In Assam state, people are very much in favor of tobacco use especially both chewing and smoking. In regards to tobacco use Barak valley also follows Assam state where people frequently using tobacco. In this present study it has noticed that more than 90% of males and females had tobacco habits. Majority of males were tobacco smokers and majority of females were tobacco chewers. Advanced cancer patients also had early tobacco initiations. Thus, these early initiation also increases the risk of cancer. A study conducted by Nayar et al., (2000), stated that



bidi smoking increases the risk of developing oesophageal cancer and this study also noticed a large number of bidi smokers. As Barak Valley of Southern part of Assam is distinguished with distinguished culture where chewing tobacco is very common and perhaps, it is a risk to the population to develop cancer. Low socio-economic status and low level of awareness also leads people to start such type of dietary and life style habits.

#### **Scope of social work intervention and suggestion:**

Social work is a professional service which is also applied in the field of health. Now-a-days, medical social workers are emerging all over the world including India. Social workers in health settings are providing professional services to the patients, families, hospital team, communities, and other stakeholders. Social workers are able to work to reduce the burden of tobacco habits prevailing to our region. In this regard, social worker can go for community awareness programmes which include both dietary and life style habits.

Social workers are also trained in various social work methods for problem solving. Social workers can also be able to use the method of social casework, group work, community organisation, social work research, social work administration, and social action to reduce these existing problems in the society. For problem solving, the following suggestion are given –

1. Both state and district administration should take appropriate step to ban the tobacco products,
2. District administration should take appropriate step to provide more awareness programs on tobacco related cancer, and dietary and life style parameter relating to cancer,
3. Both state and district authority should include more tobacco cessation clinics in both developed and remote parts of the region, and
4. Professional social workers should be involved in all the tobacco cessation clinics.

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