

Healthcare Scenario of Cancer Patients in Tamil Nadu

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Abstract: Introduction: In recent decades, incident of cancer cases have been systematically and continuously registered all over the world. World Health Organization has revealed that the cancer is a leading cause of death worldwide, accounting for 7.6 million deaths in 2008 and continues to rise to over 13.1 million in 2030. In India there has been an increasing trend of cancer patients during the last few decades. In Tamil Nadu, cancer cases were in 2001 male 28,246 and female 30,283; 2006 male 32,496 and female 35,298; 2011 male 37,106 and female 40,737. Thus, the present research aims to study the healthcare of cancer patient living in Tamil Nadu. Objectives: 1) To evaluate the socio-economic and demographic backgrounds, 2) To analyse the health status and 3) To identify the underlying factors of healthcare scenario of cancer patients. Sample: This study based on scientifically tested deliberate/purposive random sampling procedure. The information is collected from 1000 registered cancer patients receiving healthcare from 10 multi-speciality hospitals in Tamil Nadu. Methodology: Collected data have been analysed with the help of SPSS software package and Factor analysis is employed to identify the underlying dimensions of healthcare of cancer patient. Conclusion: Eight most important dimensions are drawn to facilitate easy interpretation of variables; Acquired Disease, Working Environment, Lifestyle, Health Condition, Psychosomatic Condition, Abortion, Physical Changes after the Treatment and Expenses. These are the major dimensions of healthcare of cancer patients.

Keywords: Cancer, Healthcare, Factor analysis, Health status

1. Introduction

In recent decades, incident of cancer cases have been systematically and continuously registered all over the world. World Health Organization (WHO) has estimated that the cancer is a leading cause of death worldwide and accounting for 7.6 million deaths in 2008 and continues to rise to over 13.1 million in 2030. India is experiencing a rapid health transition with a rising burden of Non-Communicable Diseases and they are emerging as the leading cause of death in India accounting for over 42 percent of all deaths with considerable loss in potentially productive years of life. Among a variety of diseases, cancer has become a big menace to human beings globally. As per Indian population census data, the rate of mortality due to cancer in India was high and alarming with about 806,000 existing cases by the end of the last century. Cancer is the second most common disease in India responsible for maximum mortality with about 0.3 million deaths per year. The leading sites of cancer are oral cavity, lungs, oesophagus and stomach among men and cervix, breast and oral cavity amongst women.

2. Review of Literature

The health care delivery in India is going through a process of transition, more so the tertiary speciality care of chronic diseases like diabetes, hypertension, heart attack, kidney or liver failure, mental disorder, ageing and cancer. More than 80 percent of these patients are now seeking medical interventions from a private doctor or private/corporate hospital sector and more than 90 percent of these individuals end up paying the costs from their own pocket [1].

In India the cancer incidences are higher in females compared to males. The incidence in rural areas is quite low compared to urban counterparts. At present, it is estimated that nearly one million new cancer cases are being detected annually in the country [2]. The lifetime cumulative risk indicates that an average of one of 10 to 13 people in the urban areas was suffering from cancer during their lifetime [3]. The Chennai Cancer Registry has reported that the age-adjusted mortality rate per 100,000 populations for males and females in Chennai is 62 and 56 respectively.

Recently, it was emphasized that establishing of hospital networks and streamlining of referral services can improve cancer care in India [4]. Though there is no doubt about the positive effects on the treatment outcome provided by specialized cancer centres although, establishing super specialized hospitals is often not feasible in India, because of financial problem, lack of resources, inadequate planning and . There is still no public funded tertiary cancer caring hospital in all the Indian states.

Majority of Indian cancer patients have late stage incurable disease when first diagnosed and many are not seen in a hospital [5]. Poor medical facilities and shortage of doctors as well as medicines is a predominant feature of government hospitals. The worst affected cancer patients are from rural areas where they have to depend on rural private practitioners (RPP) and doctors practicing some form of alternative medicine. Several studies have shown that there is a marked reluctance to use free governmental health facilities even among the poorest section of the Indian society [6].

At present in India, over half of the health budget is spent on secondary and tertiary curative services. However, better health outcome measures could be achieved by investing in preventive measures [6]. Since 1980s, the National Cancer Control Programme has identified that 'cancer patients with advanced stage require good palliative treatment.' Yet the establishment of Palliative Care (PC) clinics has not gone ahead [7]. In India the challenge is to provide treatment to majority underprivileged cancer patients who cannot afford evidence based conventional care. Also, in many situations elderly cancer patients cannot be provided conventional cancer treatment because of poor performance status [8]. Complementary and Alternative Medicines (CAM) in such situations can play an important role in providing some help to these patients. In India a large number of cancer patients are dependent on Complementary and alternative medicines for treatment and palliation [9]; [10]. Radiation Therapy (RT) is a key treatment modality, two-thirds of all major cancers require radiation therapy with or without other the two types of treatment and approximately 40 percent of all cancer cures are directly attributable to the benefits of radiation therapy [11]. Radiation therapy is delivered over a continuous period covering several weeks, mostly a curative aim of radiation therapy course lasts between 5 to 7 weeks. It is often observed that patients may not receive this radiation therapy course because of long duration needed to stay near a cancer centre and the patients are away from their own home and the medical expenses of therapy duration is unaffordable [12]. This non-compliance can have serious implications in term of a curative disease progressing to an incurable stage and subsequent loss of life.

Drawing on evidence from the past morbidity and health surveys (1986-87 to 2004) and consumer expenditure surveys (1993-94 to 2004-05) of the National Sample Survey Organisation, [1] have argued that public provisions of healthcare in India has dwindled to new lows.

Outpatient (OP) and Inpatient care in public hospitals in India in the last two decades has declined drastically, leading to the emergence of private care players in a predominant way. While healthcare costs have shot up manifold in private provision, government health facilities are increasingly compelling patients to look for private outlets for procuring drugs and diagnostics. Due to these developments, millions of households are incurring catastrophic payments and are being pushed below poverty lines every year.

In a 2006 survey in USA, almost a quarter of insured patients reported using most or all of their savings during treatment, and a similar proportion said their insurance plan paid less than expected for a medical bill. It is a challenge for this century's healthcare system to balance the expanding financial burden of cancer on one side and the increasing incidence and prevalence of many types of cancer on the other side [13].

Healthcare is one of India's largest service sectors. The challenges that the healthcare sector face are substantial, from the need to reduce mortality rates, improve physical infrastructure, necessity to provide health insurance, ensuring availability of trained medical personnel etc. There

has been a rise in both communicable/infectious diseases and non-communicable diseases, including chronic diseases. While ailments such as poliomyelitis [14] leprosy, and neonatal tetanus will soon be eliminated, some infectious diseases once thought to be under control, for example dengue fever, viral hepatitis, tuberculosis, malaria, and pneumonia have re-turned in force or have developed a stubborn resistance to drugs.

As Indians live more affluent lives and adopt unhealthy diets that are high in fat and sugar, the country is experiencing a rapidly rising trend in non-communicable diseases /lifestyle diseases such as hypertension, cancer and diabetes that is expected to grow at a faster rate than infectious diseases [15]. In addition, the growing elderly population will place an enormous burden on India's healthcare systems and services.

There are considerable shortages of hospital beds and trained medical staff such as doctors and nurses, and as a result public accessibility is reduced. There is also a considerable rural-urban imbalance in which accessibility is significantly lower in rural compared to urban areas [16]. Women are under-represented in the healthcare workforce [17].

3. Study Area

Tamil Nadu is chosen as a primary unit of investigation to study about the "*Healthcare of Cancer Patients in Tamil Nadu*". Tamil Nadu lies in the southernmost part of the Indian Peninsula and is bordered by the union territory of Pondicherry and the states of Kerala, Karnataka, and Andhra Pradesh. It is bounded by the Eastern Ghats on the north, by the Nilgiri, the Anamalai Hills, and Kerala on the west, by the Bay of Bengal in the east, by the Gulf of Mannar and the Palk Strait on the southeast, and by the Indian Ocean on the south. Tamil Nadu is the eleventh largest state in India by area and the sixth most populous (72,138,958) state in India. The state ranked sixth among states in India according to the Human Development Index in 2011. It is the second largest state economy in India in 2012. The state has the highest number (10.56 per cent) of business enterprises and stands second in total employment (9.97 per cent) in India, compared to the population share of about 6 per cent. In the year 2013, according to Raghuram Rajan panel report, Tamil Nadu ranked as the third most developed state in India based on a "Multidimensional Development Index".

4. Statement of the Problem

In 2010, the World Health Organization (WHO) report has emphasised universal health coverage as the key in health system target; the plan is to provide all people with access to affordable, cost-effective health services and financial protection from the costs of ill-health to those most in want. The delivery of affordable and reasonable cancer care is one of India's greatest public health challenges. Public overheads on cancer in India remain below and overall public expenditure on health care is still only slightly above one percent of Gross Domestic Product (GDP). Out-of-pocket expenses, it accounts for more than three-quarters of cancer expenditures in India. It is one of the greatest pressures to patients and families and a cancer diagnosis is

increasingly responsible for catastrophic expenditures that negatively influence not only the patient but also the welfare and education of several generations of their family.

The burden of cancer is still increasing worldwide despite the medical advancements for diagnosis and treatment. Epidemiological studies have shown that many cancers may be avoidable. It is commonly held that 80 to 90 percent of human cancers may be attributable to environmental and lifestyle factors such as change in life-style, chewing tobacco, alcohol, dietary habits, smoking, air pollution, occupational exposure to asbestos, arsenic, genital warts, prostitution, oral contraceptive pills, early pregnancies and a family history of breast cancer are some of the risk factors contributing to cancer in India. The most frequently affected organs are lung, breast, colon, rectum, stomach and liver. 132,082 women affected by Cervical Cancer every year in India, 74,118 women die of the disease every year in India, 493,243 women affected by Cervical Cancer every year in the world and 2,73,505 women die of the disease every year in the world (NCRP, 2007).

Globally about 5.4 million people die each year as result of diseases resulting from tobacco consumption. More than 80 percent of these deaths occur in the developing countries. Tobacco is a risk factor for 6 of the 8 leading causes of death. Nearly 800,000 to 900,000 people die every year in India due to diseases related to tobacco use. Deaths caused by cancer are projected to increase from 730,000 in 2004 to 1.5 million in 2030 [18].

In India, most of the population does not have access to a well organised and well regulated cancer care system. A diagnosis of cancer often leads to catastrophic personal health expenditures. Such expenditures can push entire families below the poverty line especially when combined with an absence of what are seen as acceptable services, threaten social stability. In Tamil Nadu, cancer cases are steadily increasing in 2001 cancer cases were 58,528, in 2006 were 67,695, in 2011 was 77,843 and it is estimated that in 2016 it will be 88,847. In Tamil Nadu, Cervical Cancer is the second most common cancer to affect women, especially those in rural areas. Eighty per cent of women in the low socio-economic strata are at risk owing to the lack of awareness regarding the disease and the services available to combat the disease. In this endeavour, the present study focuses on the "Healthcare of Cancer Patients in Tamil Nadu".

Objectives

- 1) To evaluate the socio-economic and demographic backgrounds,
- 2) To analyse the health status and
- 3) To identify the underlying factors of healthcare scenario of cancer patients.

5. Methodology

This present study is based on questionnaire sample survey by scientifically tested deliberate/purposive random sampling procedure. One thousand registered cancer patients (male 500; female 500) have been selected from 10 multi-speciality hospitals in Tamil Nadu. The questions are

related to socio-economic, cultural, demographic, physiological, healthcare, other diseases, status of disease/health check up, treatment, expenditure, working environment, dietary behaviour, other behaviours and mental health. The information collected through the questionnaire have been transformed into 116 selected variables and entered into SPSS for the application of statistical technique to find out the association. These variables are assumed to be the vital factor of healthcare of cancer patients. Factor analysis is employed for the present data structure and accordingly a matrix of 1000x116 is subjected to dimension reduction process. 24 out of 116 variables were extracted for the interpretation purpose of present study. So the data are reduced to 24x24 inter correlation matrix to facilitate for easy interpretation. In addition to the above the factor, the loading matrix is used to explain the strength of relationship and the variance of every variable with all other variables.

6. Findings

Socio-Economic and Demographic Backgrounds

Of the 1000 respondents aged less than 15 years were 0.6 and 0.8, 16 to 30 years 2.4 and 5.4, 31 to 45 years 16.8 and 29.6, 46 to 60 years 69.0 and 55.2, 61 to 75 years 11.0 and 8.6 and above 76 years 0.2 and 0.2 male and female respectively. The registered cancer patients' marital status indicates that 3.8 to 4.0 per cent male and females are unmarried correspondingly. 88.2 percent of male and 86.8 per cent of female are married. 7.8., and 9.2 per cent are widowers and widows respectively. 88.8 per cent of the respondents' annual income was less than 100,000 - 100,001 to 300,000 rupees. And 11.0 per cent of their income was 200,001 to 300,000 0.2 per cent. Their family sizes were small (<3) 34.5, medium (4 to 6) 56.6 and large (>7) 8.9 per cent. The respondents' occupational status was showed that 16.2 per cent are engaged in house work/house wife, agriculture (1.6%), agriculture labourer (15.3%), labourers (49.5%), private jobs (8.1%), government jobs (5.3%), business (2.0%) and students (2.0%). Their communal backgrounds are scheduled caste (8.5%), backward class (61.0%), most backward class (3.0%) and others (0.5%). The educational backgrounds of respondents are illiterate (22.0%), elementary (29.3%), middle school (25.2%), high school (7.0%), higher secondary/diploma (5.9%), undergraduate (6.6%) and post graduate (4.0%). 86.8 per cent of the respondents are living in own house and the remaining 13.2 per cent living in rented house. These houses are thatched roofs with muddy wall (0.8%), thatched roofs with red bricks (9.3%), tiled house with muddy wall (0.1%), tiled house with red bricks (34.7%), thoguppuvedu (3.5%), single storied (46.9%) multi- storied (2.3%) and tin/plastic sheet roofs (2.4%).

Health Status

The cancer patients also reported that they have health problems like diabetics (15.7%) and high and low blood pressure (28.0%). 43.5 per cent of the respondents have revealed that they have undergone surgical operation. They informed that the major initial symptoms of cancer in their body pain in specific location (30.3%), stomach pain (13.9%), swelling/tumour (12.5%), itching (8.9%), breast pain (5.0%), blood bleeding (5.0%), neck pain (4.5%), shoulder pain (4.2%), chest pain (3.5%), throat pain (3.3%),

head-ache (2.9%), tooth-ache (2.4) hip-pain (1.6%) diarrhoea (1.0%) and wound (1.0%). Gradually, in their physio some changes occurred like swelling (38.8%), enlarging wound (25.0%), white deposits (8.1%), reddish (8.0%), vomiting (7.0%) itching (5.5%), digestive problem (4.0%) and irritation (3.6%). Therefore, they have confirmed their cancer in the private (89.05) and government (11.7%) hospitals by saliva test (57.2%), scan (36.6%), blood test (5.0%), endoscope (0.8%), biopsies (0.30) and monograph (0.15). Moreover, 99.5 per cent of the respondents conveyed that they have started treatment immediately after confirmation. Accordingly, their cancers were first (8.7%), second (86.3%), third (4.8%) and fourth (0.2%) stage. As a result, they have taken treatment to cure the cancer by tablet (13.0%), surgical (73.3%) and radiation (13.7%) according to the advice of physician. The respondents have revealed that they have taken in-patient treatment for one (13.8%), two (22.3%), three (38.8%), four (20.1%), five (2.9%) and six (2.1%) months and above. Similarly, they have also taken one (80.6%), two (10.6%), three (2.8%), four (1.4%), five (1.4%), six (2.4%) and seven months and above(0.8%) as out-patient treatment for cancer. The respondents have reported of having reduced pain (1.8%), clear wounds (0.4%), good changes in the body (73.8%), no change in the body (23.2%), decreasing size of the tumour (0.6%), and reduced head-ache (0.2%) for the statement 'what kind of physical changes noticed after treatment?' And 90.3 per cent of the registered cancer patients have conveyed that they have taken treatment freely with the help of health insurance. However, they have spent less than rupees 10,000 (10.6%), 10,001 to 50,000 (81.8%), 50,000 to 100, 000 (6.9%), 100, 001 to 150,000 (0.3%) and above 150,001 (0.4%). To meet the extra expenses they borrowed money (76.6%) from money lenders and jewel loan (72.3%) for interest.

7. Discussion

The application of factor analysis for the present study is very useful in separating the major dimensions of cancer patients in Tamil Nadu. Eight dimensions are identified and contributing a total variance of 60.162 per cent. An Eigen value of 1.0 is taken as a cut-off point to determine the number of dimensions to be extracted. Correlation matrix has revealed the presence of many coefficients of 0.5 and above. The Kaiser-Meyer-Olkin (KMO) value is 0.692, exceeding the recommended value (Table-1) of 0.6 and the Bartlett's Test of Sphericity reached statistical significance (0.001), supporting the factorability of the correlation matrix [19]. Principal components analysis has revealed the presence of eight components with Eigen values exceeding 1.0

Factor I: Acquired Disease

People acquire disease by many ways. This present study "Acquired Disease" has been emerged as the most important single factor with an Eigen value of 2.331 and the total variance of 9.711 per cent (Table-2).

Table 1

<i>KMO and Bartlett's Test</i>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.692
Bartlett's Test of Sphericity	Approx. Chi-Square	4818.461
	df	276
	Sig.	0.001

Three out of 24 variables are positively loaded on this factor. It clearly indicates that the variables 'I do not follow physical exercise regularly that is why I have got this disease (0.884)', 'As I am obese, I have got this disease (0.862)' and 'I do not follow diet control that is why I have got this disease (0.686)'. This indicates clearly that they have got cancer because of the above mentioned variables. This is also evidently proved that for the statement 'I do not follow physical exercise regularly that is why I have got this disease' 11.9, 48.2, 25.5 and 14.4 per cent of the respondents have not strongly accepted, not accepted, not believed and accepted respectively. For the assertion 'As I am obese, I have got this disease' the respondents havenot strongly accepted (11.9%), not accepted (60.9%), not believe (21.2%) and accepted (6.0%). Similarly, the respondents are strongly not accepted (1.6%), not accepted (38.8%), not believed (31.1%) and accepted (28.5%) for the statement 'I do not follow diet control that is why I have got this disease'.

Table 2

Factor I: Acquired Disease

<i>Variable No.</i>	<i>Variable Name</i>	<i>Factor Loading</i>
Mh102	I do not follow physical exercise regularly that is why I have got this disease	.884
Mh103	As I am obese, I have got this disease	.862
Mh101	I do not follow diet control that is why I have got this disease	.686
Eigen value: 2.331		Total Variance: 9.711
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 7 iterations.		

It is undoubtedly proved that the acquired cancer disease accepted by 48.9 per cent of the respondents for the aforesaid variables/statements.

Factor II: Working Environment

Working environment is playing an important role in determining the health of an individual. Thus, the 'Working Environment' comes out as second important factor with an Eigen value of 2.305 and the total variance of 9.605 per cent (Table-3). Five out of 24 variables are positively loaded on this factor namely noisy environment (0.730); I have got cancer because of working in polluted environment (0.715), dusty environment (0.673), smoky environment (0.605), and occupation (0.505). The variable 'noisy environment' is not strongly accepted (22.6%), not accepted (34.1%), not believed (8.9%), accepted (32.1%) and strongly accepted (2.3%) by the respondents. Likewise, the cancer patients conveyed for the assertion 'I have got cancer because of working in polluted environment' is strongly not accepted (18.1%), not accepted (47.4%), not believes (23.4%), accepted (10.6%) and strongly accepted (0.5%). The

variable 'dust environment' is not strongly accepted (19.5%), not accepted (37.2%), not believed (34.5%), accepted (8.5%) and strongly accepted (0.3%) by the respondents. The cancer patients have also revealed for the variable 'smoky environment' is not strongly accepted (29.8%), not accepted (52.6%), not believed (9.9%), accepted (7.0%) and strongly accepted (0.7%).

Table 3
 Factor II: Working Environment

Variable No.	Variable Name	Factor Loading
Wa64	Noisy environment	0.730
Mh105	I have got cancer because of working in polluted environment	0.715
Wa66	Dusty environment	0.673
Wa62	Smoky environment	0.605
Se14	Occupation	0.505
Eigen value: 2.305		Total Variance: 9.605

Hence, the variable 'occupation' is loaded at the end of this factor. Accordingly, 16.2 per cent are engaged in house work/house wife, agriculture (1.6%), agriculture labourer (15.3%), labourers (49.5%), private jobs (8.1%), government jobs (5.3%), business (2.0%) and students (2.0%). Therefore, 58.2 and 3.8 per cent of the respondents have accepted and strongly accepted that the working environment is the second most important root for cancer.

Factor III: Life Style

'Modern ways of life' have impacts on health of people in many ways. As a result, in this present study the variables how long have you been using tobacco product? (0.760), aging (0.733), I do wear tight dresses (0.608) and I am unable to have food on time due to continuous and heavy work (0.554) are positively loaded on the factor 'Lifestyle'. It is emerged as the third most vital factor with an Eigen value of 2.063 and total variance of 8.596 per cent (Table-4). The respondents have revealed that they have been using tobacco product less than 5 years (9.7%), six to ten years (21.6%), eleven to fifteen years (10.7%), above sixteen years (3.2%) and never used (54.8%). Therefore, in any form using the tobacco product causes cancer. Their age is less than fifteen years and they are 0.6 and 0.8, 16 to 30 years 2.4 and 5.4, 31 to 45 years 16.8 and 29.6, 46 to 60 years 69.0 and 55.2, 61 to 75 years 11.0 and 8.6 and above 76 years 0.2 and 0.2 male and female respectively.

Table 4
 Factor III: Lifestyle

Variable No.	Variable Name	Factor Loading
Oh96	How long have you been using tobacco product?	0.760
Se6	Aging	0.733
Oh98	I do wear tight dresses	0.608
Dh81	I am unable to have food in time due to continuous and heavy work	0.554
Eigen value: 2.063		Total Variance: 8.596

Hence, respondents aged between 31 to 60 years have been affected by this cancer disease. 52.6 per cent of the respondents confirmed that they used to wear tight dresses. 53.0-32.5 per cent of the cancer patients have accepted and

have strongly accepted for the question I am unable to have food on time due to continuous and heavy work. Therefore, lifestyle is responsible for the origin of cancer disease.

Factor IV: Health Condition

Health status is one of the determining factors for healthcare. In such condition people are taking care for existing health problems. Therefore, the fourth factor 'Health Condition' comes out with an Eigen value of 1.780 and the total variance of 7.417 per cent (Table-5). Three out of 24 variables are positively loaded on this factor specifically drowsiness (0.823), breathing trouble (0.781) and because of taking pain killer I have got cancer (0.544). This is evidently proved that 13.2 and 1.4 per cent of the respondents have accepted and strongly accepted for the variable drowsiness respectively. In the same way, 5.6 and 0.4 per cent of the cancer patients accepted (5.6%) and strongly accepted (0.4%) for breathing trouble. 8.7 per cent of the respondents have conveyed answer for the statement 'because of taking pain killer I have got cancer'. Consequently, health condition is also accountable for the occurrence of cancer.

Table 5
 Factor IV: Health Condition

Variable No.	Variable Name	Factor Loading
Wa71	Drowsiness	0.823
Wa70	Breathing trouble	0.781
Mh108	Because of taking pain killer I have got cancer	0.544
Eigen value: 1.780		Total Variance: 7.417

Factor V: Psychosomatic Condition

Patients' mental health will be affected after positive sign of cancer. Hence, the fifth factor 'Psychosomatic Condition' emerged as a fifth most important factor with an Eigen value of 1.643 and the total variance of 6.846 per cent (Table-6). Three out of 24 variables positively loaded on this factor particularly because of this disease, I push pressure on my family members (0.731), I doubt of my recovery from the illness (0.644) and I regret for having spent lot of money for the treatment (0.546). This is clearly proved that 16.8 and 82.1 per cent of the respondents have accepted and strongly accepted respectively for the assertion 'because of this disease, I push pressure on my family members'. Likewise, for the statement 'I doubt of my recovery from the illnesses'. 75.6 to 12.5 per cent of the respondents have accepted and strongly accepted respectively. 41.4 to 41.0 per cent of the respondents have accepted and strongly accepted respectively for the statement 'I regret for having spent lot of money for the treatment'. Thus, it is undoubtedly explained that after the confirmation of cancer the Patient's Psychosomatic Condition is affected.

Table 6
 Factor V: Psychosomatic Condition

Variable No.	Variable Name	Factor Loading
Mh115	Because of this disease, I push pressure on my family members.	0.731
Mh112	I doubt of my recovery from the illness.	0.644
Mh114	I regret for having spent lot of money for the treatment.	0.546
Eigen value: 1.643		Total Variance: 6.846

Factor VI: Abortion

Among the 500 female respondents 2.4 to 0.2 per cent have accepted and strongly accepted correspondingly for the statements ‘Since I have done abortion many times, I have got this disease. 1.4 to 2.2 per cent have accepted and strongly accepted respectively for the assertion ‘I used to take pills/tablets to avoid Pregnancy and so I have got this disease. As a result, the sixth factor ‘Abortion’ comes out with an Eigen value of 1.607 and the total variance of 6.697 per cent (Table-7). Therefore, it is confirmed that the abortion is also one of the emerging cause for the cancer disease.

Table 7
Factor VI: Abortion

Variable No.	Variable Name	Factor Loading
Mh109	Since I have done abortion many a time , I have got this disease	0.822
Mh111	I used to take pills/tablets to avoid Pregnancy and so I have got this disease.	0.814
Eigen value: 1.607		Total Variance: 6.697

Factor VII: Physical Changes after the Treatment

Some changes are noticed either positively or negatively in/on the human body after treatment of the cancer. Accordingly, the seventh factor ‘Physical Changes after the Treatment’ is emerged as a seventh important factor with an Eigen value of 1.400 and the total variance of 5.832 per cent (Table-8). For the question ‘What kind of physical changes are noticed the after treatment?’, the respondents have revealed that the their pain has reduced (1.8%), clear wounds (0.4%), good changes in the body (73.8%), no change in the body (23.2%), decreasing size of the tumour (0.6%), and has reduced head-ache (0.2%). However, the respondents have also conveyed that they have to wait up to a month(s) (61.8%), two (10.8%), three (1.6%), four (0.2%), five (0.1%) and do not know (25.5%) for the question ‘how many days have I to wait yet for the complete treatment? So, it is clearly indicating that there is a positive effect on the health after the treatment.

Table 8
Factor VII: Physical Changes after the Treatment

Variable No.	Variable Name	Factor Loading
Th48	What kind of physical changes are noticed the after treatment?	0.770
Th49	How many days have I to wait yet for the complete treatment?	0.764
Eigen value: 1.400		Total Variance: 5.832

Factor VIII: Expenses

Expenses are unavoidable for the utilization of healthcare, treatment and. In this juncture the last eighth factor ‘Expenses’ emerged as an important factor with an Eigen value of 1.310 and the total variance of 5.458 per cent (Table-9). Two out 24 variables are positively loaded on this factor namely how much of money have you spent so far? (0.784), and where had you mostly had your food?(0.750). The respondents have informed that they have spent less than rupees 10,000 (10.6%), 10,001 to 50,000 (81.8%), 50,000 to 100, 000 (6.9%), 100, 001 to 150,000 (0.3%) and above 150,001 (0.4%). To meet the extra expenses they

borrowed money (76.6%) from money lenders and jewel loan (72.3%) for interest. 99.6 per cent of the respondents are revealed that they had no food at their house. Therefore, for the treatment of the disease like cancer expenses are inevitable.

Table 9
Factor VIII: Expenses

Variable No.	Variable Name	Factor Loading
Ex50	How much of money have you spent so far?	0.784
Dh73	Where did you mostly have your food?	0.750
Eigen value: 1.310		Total Variance: 5.458

8. Conclusion

This present study concludes that the absence of physical exercise and diet control and obesity and abortion are the reasons for the origin of cancer disease. Working environment, working-practices, poor health conditions and medication to avoid pregnancy have induced to become cancer patients. Prolonged smoking behaviour, not taking food on time and wearing of tight clothes are also the grounds for the positive sign of cancer. The patients’ mental health is affected after the confirmation of cancer disease. During and after clinical lesion some positive and negative health conditions have been noticed on their physique. Expenses are unavoidable for the treatment of cancer in various stages. The cancer disease is very complicated once it touched us and it is preventable by being cautious in our lifestyles and behaviours.

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