Trends, Symptoms, Knowledge and Preventive Measures of Some Common Cancers among Men & Women in Rural Kashmir

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By

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PREFACE

Enduring health complications are part of older human populations, which are grossly elevated by common food habits and higher use of chemicals or chemical based products. Cancer, a deadliest disease is reason for higher mortality and morbidity on global scale. All types of cancers have been reported in Kashmir province including the cancers of skin, lungs, breast, rectum, stomach, prostate, liver, cervix, esophagus, bladder, blood etc. The causes of such high incidence rates of cancers may be both internal (genetic, mutations, hormonal, poor immune conditions) and external or environmental factors (food habits, industrialization, over growth of population, social etc.,). The incidence and mortality of diverse cancers among various geographical regions is important to initiate therapies against the wide range of cancers. The incidence and mortality of various cancers varies among the geographically heterogeneous countries worldwide, some represent the frequent type in geographically heterogeneous regions. This review provides in-depth status of cancers with reference to trends, symptoms, knowledge, causes and preventive measures of some common cancers among men and women in rural Kashmir, a cancer belt of India, having a peculiar cancer profile.

We are highly thankful to the Ministry of Health and Family Welfare, Govt., of India, New Delhi for providing the necessary financial support. We would like to thank our data collection team/data editing/data entry team for their keen pains in data collection. Last but not the least credit goes to all households and respondents who spend their valuable time in responding with tremendous patience to our questions. We are also thankful to ASHA workers who helped us in locating the sampled households. It is hoped that the findings of this study will be helpful to the Union Ministry of Health & Family Welfare (MoHFW) and the UT of J&K in taking necessary steps in controlling and containing the vicious disease like cancers.

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CHAPTER – I

INTRODUCTION

Introduction

Cancers are emerging global health problems throughout the world and is the second leading cause of deaths worldwide exceeded only by cardiovascular diseases. By far, Lung cancer is the most commonly diagnosed cancer (11.6 of the total cases) and the leading cause of cancer death (18.4 of the total cancer deaths), closely followed by the female breast cancer (11.6), colorectal cancer (9.2), stomach cancer (8.2), and liver cancer (8.2) for mortality. Lung cancer is the major cause of cancer related deaths in males, succeeded by prostate, colorectal cancer in incidence, liver and stomach cancer for mortality. Breast cancer is the most common and leading malignancy among females, succeeded by colorectal and lung cancer in incidence, and the reverse in mortality; cervical cancer ranks fourth for both incidence and mortality. The incidence and mortality of various cancers varies among the geographically heterogeneous countries worldwide, some represent the frequent type in geographically heterogeneous regions (e.g. liver cancer), while as others show occurrence in certain high-risk regions (e.g. cancers of lip and oral cavity in South Asia, Kaposi sarcoma in Eastern Africa). Because of its high fatality rate, lung cancer is the leading cause of death among men in 93 countries, followed by prostate cancer (46 countries) and liver cancer (20 countries). The incidence of breast cancer among other cancers also shows a dichotomous nature across countries with most frequent cases in the majority (i.e., 154 countries) of countries and with cervical cancer leading in most (28 0f 31 countries) of the remaining countries. The mortality contours among women is more heterogeneous, with breast and cervical cancer as the leading cause of cancer deaths in 103 and 42 countries respectively followed by lung cancer in 28 countries.

Causes of Cancers

Overall, the burden of cancer incidence and mortality is rapidly growing worldwide; this reflects both aging and growth of the population as well as changes in the prevalence and distribution of the main risk factors for cancer, several of which are associated with socio-economic development. All across the world, people are facing a wealth of new and challenging environmental problems every day. Pollution of air, water, and soil requires millions of years to recoup. The global burden of cancer continues to increase largely because of the aging and

growth of the world's population and an increasing adoption of cancer-causing behaviors, particularly smoking, in economically developing countries. Breast, lung, and colorectal cancers are occurring in high frequencies in many economically developing countries, in addition to the disproportionately high burden of cancers related to infections. Cancer is a major cause of morbidity and mortality in developing and developed countries alike. In many low-income and middle-income countries, including India, most of the population does not have access to a well-organized and well-regulated cancer care system. A diagnosis of cancer often leads to catastrophic personal health expenditures. Population ageing is often assumed to be the main factor driving increases in cancer incidence, death rates, and health care costs. Cancer accounts for about 23 and 7 deaths in United States and India, respectively. The world's population is expected to be 7.5 billion by 2025 and approximations predict that about 15.0 million new cancer cases will be diagnosed, with deaths of about 12.0 million cancer patients.

Trends of Cancers

There were 19.3 million incident cancer cases worldwide for the year 2020 (Global Cancer Observatory).

In 2022, the most common cases of cancers in the world were: breast (2.26 million cases); lung (2.21 million cases); colon and rectum (1.93 million cases); prostate (1.41 million cases); skin (non-melanoma) (1.20 million cases); and stomach (1.09 million cases).

The most common causes of cancer deaths in 2020 were: lung (1.80 million deaths); colon and rectum (916 000 deaths); liver (830 000 deaths); stomach (769 000 deaths); and breast (685 000 deaths).

On the basis of previous findings, it was hypothesized that there will be about 1,806,590 new cases of cancers and 606,520 cancer deaths by the end of 2025 (Society AC., 2020).

Each year, approximately 400 000 children develop cancers. India ranked third after China and the United States of America.

Indian Scenario

Cancer mortality in India has doubled from 1990 to 2016. India's cancer incidence was estimated at 1.15 million new patients in 2018 and is predicted to be almost double as a result of demographic changes alone by 2040. Although, improvements in living standards and Human Development Index rankings are typically linked to increases in the occurrence of, for example, sex hormone exposure-related cancers, and cancers epidemiologically associated with reduced average family sizes, the positive gains that economic and social development bring e.g.,

improved food quality – normally far outweigh any such costs. The International Agency for Research on Cancer GLOBOCAN project has predicted that India's cancer burden will nearly double in the next 20 years, from slightly over a million new cases in 2024 to more than 1.7 million by 2035. These projections indicate that the absolute number of cancer deaths will also rise from about 6.80,000 to 1.2 million in the same period.

With advances in cancer detection and diagnosis, an increasing trend in the incidence of cancer patients is observed in India as depicted in below Table. In 2018, over 1.1 million new cancer patients were registered and 0.78 million people have died of cancer (Sahoo S. S. V. M, Parija P. P, 2018). It has been estimated that in India, the tobacco related cancers (TRC) for males were predicted to go up from 1,90,244 in the year 2010 to 2,25,241 in the year 2020 and for female cases, the figures was expected to go up from 75,289 in year 2010 to 93,563 in the year 2020 (Takiar R. N.D, Nandakumar A, 2010).

Year	Cases (millions)	Deaths (million)
2018*	11.0	7.8
2020**	13.9	7.7
2021**	14.2	7.9
2022**	14.6	8.08
2025**	15.7	NA

*Source: *Sahoo S. S. V. M, Pariji P. P, 2018*
*** National Cancer Registry of Indian Council of Medical Research (ICMR), 2022.*

The GLOBOCAN estimated that about 14 million new cancer cases were diagnosed world-wide in 2012 and slightly more than 8 million cancer deaths occurred. One million of these new cases and nearly 700,000 of the deaths occurred in India, which is home to about 17 of the global population. Even in age adjusted terms, the recorded incidence for India is, at 94 per 1,00,000 people, only slightly more than half of the world average of 182 per 1,00,000, and about a third of that recorded in the more developed countries (268 per 1,00,000). All cancers in Indian men other than oral, lung, stomach, colorectal, pharyngeal, and esophageal cancers have an incidence of 5 per 1,00,000 men or less. This, according to U.S. and European Union definitions, makes such cancers orphan diseases. Women have an age-adjusted incidence rate of 104.5 per 1, 00,000

women. With the exceptions of breast, cervical, and colorectal cancers, all other cancers in Indian women also have a recorded incidence of less than 5 per 1, 00,000 women.

The estimated number of cancer cases and crude incidence rate in India for the year 2022 was found to be 14, 61,427 (100.4 per 100,000), with a greater number of female cases 7, 49,251 (105.4 per 100,000) estimated compared to that in males 7,12,176 (95.6 per 100,000). Cancer cases in India would increase to 2.08 million, accounting for a rise of 57.5 percent in 2040 from 2020 (Global Cancer Observatory).

Data from National Cancer Registry of Indian Council of Medical Research (ICMR) presented to the Parliament revealed that nearly 14.6 lakh new cases of cancers were reported in 2022 as compared to 14.2 lakh cases in 2021 and 13.9 lakh in 2020. Deaths due to cancer increased to 8.08 lakhs in 2022 from 7.9 and 7.7 lakhs in 2021 and 2020 respectively. The data predicted that the overall incidence of cancer cases in India would reach 15.7 lakhs cases by 2025.

An ICMR research study based on population-based cancer registries has revealed that one in nine Indians will develop cancers during their lifetime. The study indicated that one in sixty-eight Indian men would develop lung cancer and one in 29 women would be affected by breast cancer. The rates of incidence of cancer were noted to be higher among women (103.6 per lakh people) than men (94.1 per lakh). The most common cancers among men were lung, mouth, prostrate, tongue and stomach while for women they were breast, cervix, ovary, uterus and lung. According to a report by the Indian Council for Medical Research on the 'Burden of cancers in India', seven cancers accounted for more than 40 of the total disease burden: lung (10.6), breast (10.5), esophagus (5.8), mouth (5.7), stomach (5.2), liver (4.6) and cervix uteri (4.3).

Jammu & Kashmir Scenario

The Union territory of Jammu and Kashmir (reorganized on 31st October 2019) is situated in the northern extreme of India. Kashmir province is located at a very high altitude with a majority of Muslim population; this place possesses unique culture from the rest of the country (Qurieshi Mariya A, S. M. Salim Khan, Masoodi A Muneer, Qureshi Uruj, Quratul Ain, 2016). Over the past decade, a significant increase in the number of cancer cases has been reported in Kashmir valley. However, the number of cancers diagnosed was predicted to double in the year between 2012-2027(F. A. Jan N. K., S. H. Khan, R Khurshid, K. K. Pandita & M. A. Wani, 2014). As per the surveys conducted in Kashmir, it has been shown that among the various cancers, gastric

cancer was one of the most common cancers with about 18.8 prevalence, followed by colorectal cancer, lung cancer, head, neck cancer and breast cancer. An analytic survey depicted the occurrence of various cancers on the basis of gender, the percentage share and occurrence of various cancers. A glance through the below Table shows that Jammu and Kashmir has seen a consistent increase in cancer cases with the union territory reporting 51,000 cancer cases in the last four years (2019 to 2022), according to the data of Government of India. The Union Health Ministry data reveals that Jammu & Kashmir reported an estimated 51,577 cases of cancer, with 12,396 cases being reported in 2019, 12,726 cases in 2020, 13,060 cases in 2021, and 13,395 cases in 2022.

Trends of Cancer Patients Registered in J&K 2019-2022

Year	Cases
2019	12396
2020	12726
2021	13060
2022	13395

Review of Literature

Recent studies regarding the scenario of cancers reveal entirely peculiar existence of cancers in Kashmir valley, in comparison to other states of India. In a study carried out by F. A. Jan & et., al., 2014, "it has been found that out of total 24,768 patients with carcinoma reported to Regional Cancer Centre at Sheri-e-Kashmir Institute of Medical Sciences (SKIMS); 15,193 were males and 9,575 were females with majority of patients falling in the age group of 65- 69. The study revealed that cancer of esophagus; stomach and lungs have a high incidence both in men and women in Kashmir valley.

Pandith & et. al., made a study on "Burden of Cancers in the Valley of Kashmir" (2012). The study revealed that stomach cancer is the leading one followed by esophagus and lung cancers. Stomach and lung cancers are frequently found in males while as esophagus cancer tops among women followed by breast cancer. In another study, it was revealed that cancer of esophagus was the most frequent type of cancer found in both males and females in the valley. The preponderance of esophagus cancer was attributable to the local practice of drinking hot salty tea.

In addition, the databases on cancer during 2009-2011 prevalence revealed that out of 8,648 cancer patients which were registered in the hospital, 5,174(59.82) patients were males and 3,474(40.17) were females patients. Combined gender based studies revealed that the prevalence of esophageal cancers was the mostly found in 1,221 patients with 699(57.24) males and 522(42.75) females.

Studies also revealed that esophagus is the leading site of cancer in both sexes, followed by lung, brain, head and neck in males and breast and rectum in females (Shiekh Gazalla Ayub, Taha Ayub, Saquib Naveed Khan, Shabhat Rasool, 2011).

Studies carried during 2016-2017 reported that 6,359 patients have been diagnosed with different types of cancers in the Union Territory of Jammu & Kashmir. Among all these individuals majority of them 4,038(63.50) were males followed by 2,321(36.49) females patients (Khair Ul Nisa, 2018).

Causes of Cancers in J&K

A number of factors are responsible for the development of cancers, which includes; physical environment (climate, soil and water) and socio-cultural (lifestyle, food habits, alcohol and tobacco consumption, occupation). Among these factors, environmental factors account for about 80 of all the human cancers and the rest 10-20 of all human cancers are associated with dietary factors while as with a considerable variation in different types of cancers in areas with different physical and socio-economic setups. The incidence and mortality rate of cancer among Kashmiris have increased due to some unique behavioral and dietary risks including high body mass index, low fruit and vegetable intake, lack of physical activity, tobacco use and lack of regular check-up. There is an alarming increase in cancer incidence in Kashmir valley, mainly because of the changing life style and food habits among the inhabitants that has caused a surge in different cancers especially in esophagus, colon and breast cancers.

Inhabitants of Kashmir province are having distinctive food habits like consumption of large quantity of red meat, sun-dried vegetables, smoked fish, locally prepared vegetable pickles, local salted tea consumed hot (noon chai) in large quantities and tobacco use (hookah) for greater part of the year, which plays a devastating role in the development of gastric cancers in the valley of Kashmir.

Epidemiologic studies showed that the increased risk of colorectal cancer is associated with a diet with a diet high in red meat and animal fat, low fiber diet and low overall intake of fruits and vegetables. Another study has revealed that smoking along with other life style choices, such as alcohol and tobacco consumption, obesity and sedentary life style have been associated with increased risk for colorectal cancer in the valley of Kashmir.

Other risk factors which cause gastric cancer include consumption of adultered food products like pickled food, high rice intake, spicy food, excess chilly consumption, and intake of food at high temperature, which have emerged as significant risk factors causing stomach cancer in India as well as in Kashmir. Socio-economic factors and some genetic factors which are distinct to each community have a close association with the gastric cancer load on the community. It has also been reported that sun dried vegetables like turnips, tomatoes, bottle gourd, and brinjal, exposing to uncontrolled UV radiations makes the vegetables more prone to aflatoxins and fungi, which may be detrimental to human health. Studies revealed that these preserved and peculiar foods have a significant amount of N-Nitroso compounds, which have great potential to cause cancers. Kashmiri population enjoys a large variety of smoked foods like mutton and beef barbecues popularly called as 'Tujji', which contains large amount of cancer causing of N-Nitroso compounds. Heredity diffuse gastric cancer (HDGC) is a rare genetic condition in which the mutated gene (cancer gene) passes from one generation to another, thus making the generation inheriting it more this class of cancer.

The studies revealed that gastric cancer is the highly prevalent malignancy in Kashmir. Peculiar life style habits like consumption of hot salted tea and tobacco smoking by hookah (a special device to consume raw tobacco) as well as *Helicobacter pylori* infection are main risk factors causing gastric cancer in the Union Territory of Jammu & Kashmir.

Significance of the study

Deaths due to cancers in Jammu & Kashmir have shown an alarming situation since the past few years and have become a cause of great concern. The number of registered cancer cases has increased from 12675 in 2019 to 13012 (2.65) in 2020 whereas in 2021 it surged to 13354 (2.62) cases. The number of deaths has increased from 6824 in 2019 to 7189 (5.07) in 2021 (Source: SKIMS). An important cause of high mortality due to cancers is its detection at advanced stages as people do not have right knowledge about symptoms of various cancers, risk factors,

advantages of early testing, knowledge of place of testing/treatment. Even if they have some knowledge, they fear going for testing and visit quacks and reach the appropriate place when it is too late. Proper knowledge about common cancers, their symptoms, risk factors, places of detection/treatment can help in early detection of cancers and save precious lives. As per the figures from the Registered Cancer Centre SKIMS, lung, stomach and prostate cancer are more prominent among men whereas Breast and stomach cancers are common among women in Kashmir. Though the exact cause of rising cancers was not known but some studies conducted in Kashmir province have blamed food habits, life style patterns, consumption of high salted content foods and dried vegetables for the growing incidence of cancers. In this background, the present study has been taken to understand the trends, knowledge, symptoms and preventive measures of some common cancers among men and women of rural Kashmir.

Main objectives of the study

In consonance with the significance and nature of study, following are the broad objective of present study is to:

1. Study the trends and regional pattern of cancers in Kashmir;
2. Assess the awareness of Lung, stomach, breast and prostate cancer among men and women; and assess the awareness of warning signs of common cancers;
3. Understand the knowledge about preventive measures to minimize the risk of cancers and
4. Assess the knowledge of risk factors and place of diagnosis, treatment and barriers in seeking help.

Methodology of the study

The present study is based on the primary and secondary sources of data. The primary data has been collected from three hundred households of two districts of Kashmir province. The secondary data for the trend analysis has been collected from the various reputed medical institutions of J&K such as Sheri-e-Kashmir Institute of Medical Sciences (SKIMS), Soura, Srinagar. There is a narrative that cancer prevalence is higher in those districts which have higher proportion of population engaged in horticultural activities. Horticulture is the main occupation of people living in South, North & Central Kashmir. From these three regions only two districts were selected randomly on the basis of horticulture and non-horticulture. The health blocks in each selected district was divided into three (03) categories based on distance criteria 0-5 kms, 6-10 kms and more than 10 kms from District head quarter. From each group we planned to select

one (01) health block randomly. In one district, three health blocks were selected and in each health block, one village was selected. In each village 50 households were taken for the study depending upon the distance criterion as mentioned above was selected. Thus, from each district a total number of three (03) villages were selected. From each village a total number of 50 households were selected based on systematic random sampling. The list of households was collected from the local concerned sub-centres (SC) and primary health centres (PHCs).

The cancers to be included were lung, stomach, breast and Prostate cancer. There has been two questionnaires one for the household and second for the eligible men/women. The respondent for the household questionnaire has been any responsible person of age 18 years and above.The questionnaire/schedule for the eligible respondent has been used to collect information on the broad areas like socio-economic characteristics, information about consumption of smoking, alcohol, exposure to various health programmes on electronic media, information about practices followed during spraying of insecticides/pesticides, knowledge about various cancers and source of information, general symptoms of cancers, general preventive measures, causes and knowledge of nearest place of diagnosis.

The schedule that was used to collect information on the household characteristics was also helpful in identifying the eligible respondent for individual interview. The eligibility for the individual interview has been any household member age 18 and above. From each household a maximum of two persons (1 male and 1 Female) has been selected. Wherever we found more than 2 eligible members we planned to use Kish Technique of sampling for the selection of members.

The PRC does not have adequate manpower for the collection of data. The PRC, therefore, hired 4 field investigators for the data collection. These hired persons were trained for a period of four days at PRC Srinagar. A doctor from Oncology department of Sher-i-Kashmir Institute of Medical Sciences (SKIMS) Soura was associated with the design of questionnaire, training and gave a special lecture on cancers, their symptoms, preventive measures etc during the training. The field work lasted for about 20 days. Data was entered and analyzed using SPSS 22. A tabulation plan and draft structure of the report was finalized with Sher-i-Kashmir Institute of Medical Sciences (SKIMS) Soura.

CHAPTER – II

TRENDS OF CANCERS IN JAMMU AND KASHMIR

Trends of Cancers

With the deadly cancer disease emerging as a major health threat globally, Kashmir is witnessing an upsurge in the number of cases in the past few years with lung and breast cancers topping the list. Cancers of Gastrointestinal Tract (GI Tract) troubled the most people in Kashmir province. Cancers of Esophagus, Stomach, Colon, Gall Bladder and Rectum when put together form 28.3 of all cancers among men and 21.1 of Cancers among women (Source: SKIMS). Stomach and Esophagus Cancers are very common in Kashmir region among men and women and have for long intrigues the healthcare professionals as these cancers are not as common in other parts of the country. GI tract Cancers have been inconclusively linked to contaminations in food, especially of fertilizers and pesticides, some micro-organisms, food habits and more. In this background, the present chapter discussed the trends of some common cancers irrespective of gender in Kashmir region.

Jammu & Kashmir has reported 39041 cancer cases, of which 12675 (32.46) were recorded in 2019 and 13012 (33.32) cases were recorded in 2020 whereas 13354 (34.20) cases were recorded in 2021 (Source: Union Health Ministry). Moreover, as per the records of Population Based Cancer Registry (PbCR) of Sheri-e-Kashmir Institute of Medical Sciences, Soura (SKIMS), 5284 new cancer patients were registered from January 2022 to December 2022 (Source: PbCR, SKIMS). Of the 5284 patients, 501 patients (388 males and 113 females) were diagnosed Lung Cancer whereas 351 patients were diagnosed Breast Cancer and 221 female patients diagnosed thyroid cancers.

So far as the estimation of Regional Cancer Centre of Sher-e-Kashmir Medical Institute, Soura (RCC SKIMS) is concerned almost 22,002 persons died due to cancers from 2018 to 2021 in Jammu & Kashmir. Out of these 22,002 deaths, 986 (4.48) persons died in 2018, 6824 (31.01) patients died in 2019 and in 2020 the number of deaths rose to 7003 (31.82) whereas the fatalities surged to 7189 (32.62) in 2021, thus showing an upward trend (Source: RCC SKIMS).

Year	Cases as per the MoHFW	Cases as per SKIMS	Deaths as per RCC, SKIMS	Follow-ups Patients at SKIMS
2007	NA	2097	NA	70,000
2016	NA	4800	NA	
2018	NA	NA	986	
2019	12675	Lung = 501	6824	
2020	13012	Breast = 351	7003	
2021	13354	Thyroid = 221	7189	
2022	NA	**5284**	1110	
Total	**39041**	**5284**	**22,002**	

From the other sources, since January 2014 there were 12,091 patients who were detected with cancers in various Jammu & Kashmir hospitals while as in 2013, 6,300 patients were detected with the killer disease of cancers. In 2016 till now, 4800 cancer patients were registered at SKIMS with the number increasing at an alarming pace. The official data at Regional Cancer Centre, SKIMS revealed that the number of registered patients has jumped from 2097 in 2007 to 4800 in 2016 to 1100 cases of cancers in the first quarter of ensuing year which is expected to go much higher.

The Regional Cancer Centre SKIMS Soura witnessed a heavy rush with nearly 70,000 older cases that doctors call follow-ups, visiting it for various kinds of therapies. The data available with the Regional Cancer Centre SKIMS Soura reveals that cancer patients registered for 2007 were 2,097, in 2008 the number was 2,465, and in 2009, it was 2,968. However; the patient influx recorded a sharp decline in 2010 at 2,623 only but in 2011 it went up again to 3,057. Even as cancer cases in far flung areas go unreported, the 2010 decline has been attributed to the unrest in the valley that year.

The medicos at the Department of Radiation Oncology, SKIMS, Soura, believed that the cancer cases in Kashmir region have witnessed a surge with the prevalence of lung cancer in men folk as the most common disease while women are fast falling prey to breast cancers. Figures revealed that against 2021 total patient load of 4800, SKIMS Soura received 1110 cancer cases in the first three months (Jan 1 to March 31) of 2022, highest in recent times.

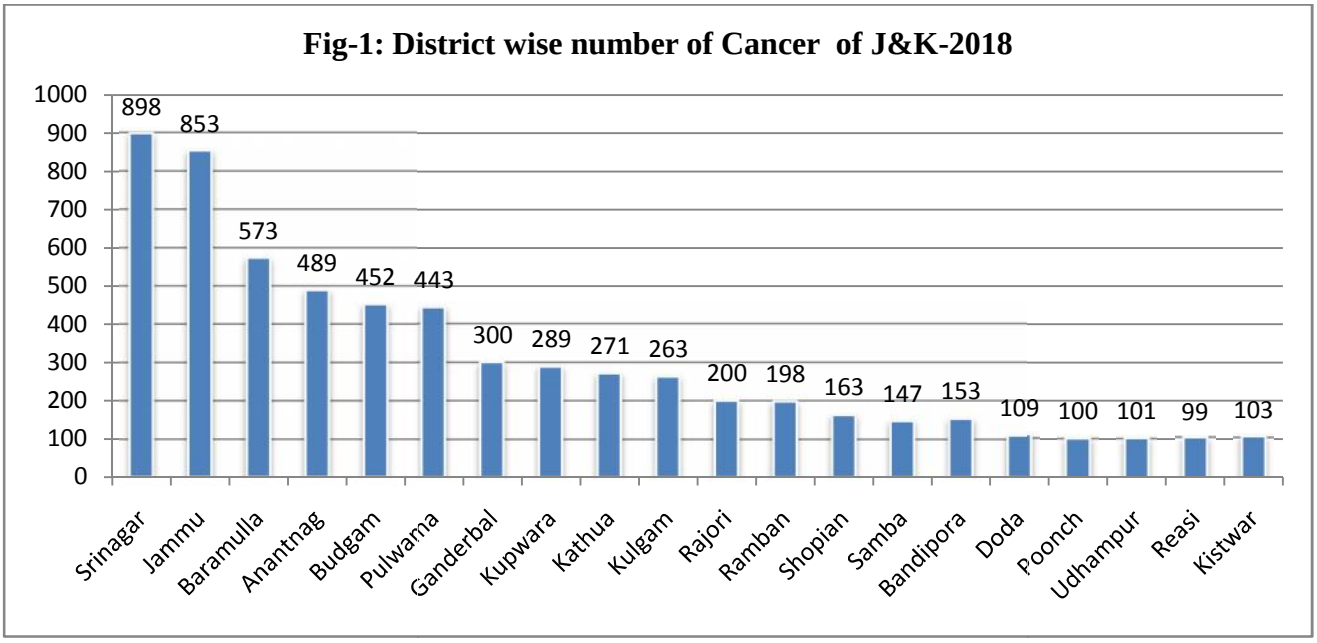
In an alarming trend, every day, two new cases of cancer are diagnosed in Kashmir, while the majority of patients come from the summer capital of Srinagar. This number is constantly adding to the 5000 old cases already suffering from the life consuming ailment in the Valley. Even as

the number of cancer cases has been on rise across the UT J&K, Kashmir seems to be bearing the brunt. As per the data collected from government sources, in 2022, 4632 cases of cancer were received by the Sher-e-Kashmir Institute of Medical Sciences Soura and the SMHS Hospital alone. What is more alarming is that most of the cases are detected only when the disease has reached the last stage, meaning that chances of survival through treatment are bleak, or zero.

District wise trend of Cancers

The incidence of various cancers differs across the all districts in Union territory of Jammu and Kashmir with maximum number of cancer patients belonged to the district Srinagar (898; 14.11), followed by Jammu (853; 13.4), Baramulla (573; 9.0), Anantnag (489; 7.7) and Budgam (452; 7.1). The district wise incidence of cancer in different districts of Union territory of Jammu & Kashmir is show in Fig-1.

Fig-1: District wise number of Cancer of J&K-2018



CHAPTER – III

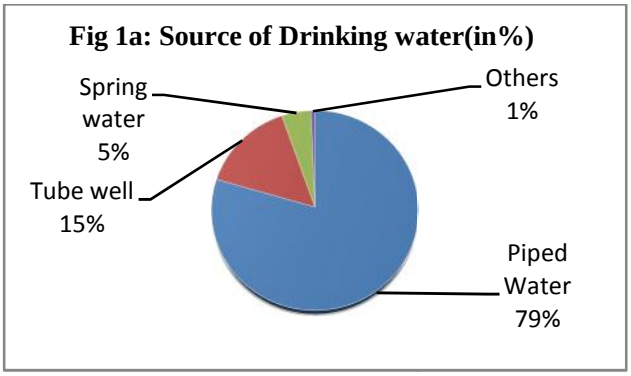
CHARACTERISTICS OF HOUSEHOLDS AND RESPONDENTS

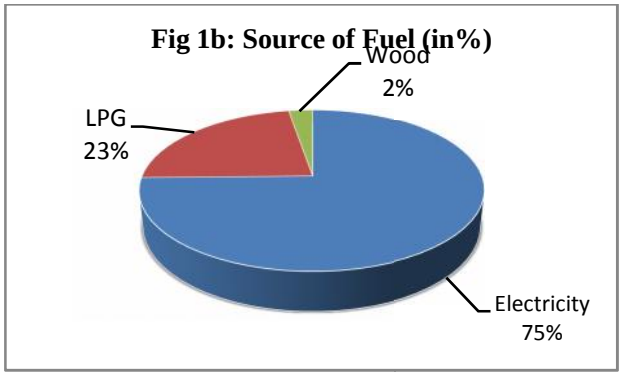
Introduction

The study is based on the primary survey. The data has been collected from two districts of Kashmir province i.e., district Ganderbal and district Pulwama. Randomly, three hundred (300) respondents were taken from two selected districts, of which 120 (40) are males and 180(60) are female respondents. Moreover, Out of the 300 respondents, 150(50.0) respondents were taken from district Ganderbal in which 52(34.66) are male and 98(65.33) are female whereas 150(50.0) respondents are taken from district Pulwama in which 61(40.66) are male and 89(59.33) are female respondents. The background characteristics of households and respondents are presented in Table-1(appendix – I).

Source of Drinking Water/Fuel for Cooking

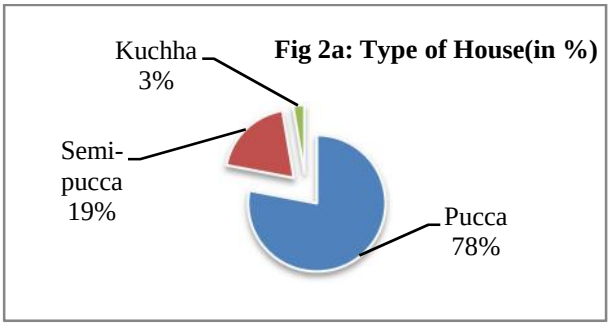
Table – 1 presents the background information of selected households of district Ganderbal and district Pulwama. Out of three hundred households, around 79 respondents have piped water and 15 have tube well while as only 04 respondents have purifiers. Moreover, 75 respondents have electricity connections and 23 respondents have LPG while as only 03 percent of respondents using wood to cook food (Fig-1a & 1b).

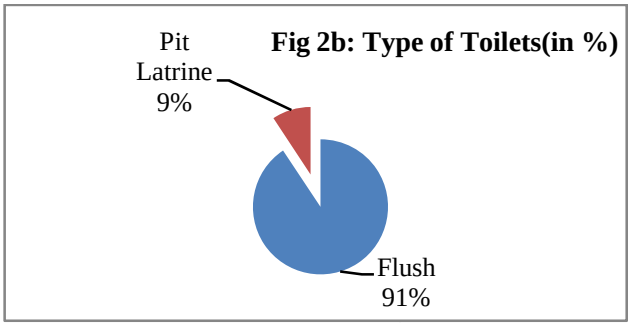




Type of House/toilet

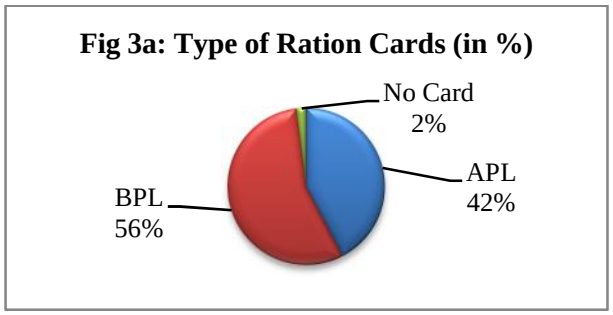
Table – 1 also shows that 78 respondents living in Pucca houses and 19 living in Semi-pacca whereas only 2.7 households living in Kacha houses. Moreover, out of the total respondents, 54 households have designated area for hand washing in their houses. Table – 1 also shows that almost 91 households have flush type of toilets and 9 have Pit latrine (Fig-2a & 2b).

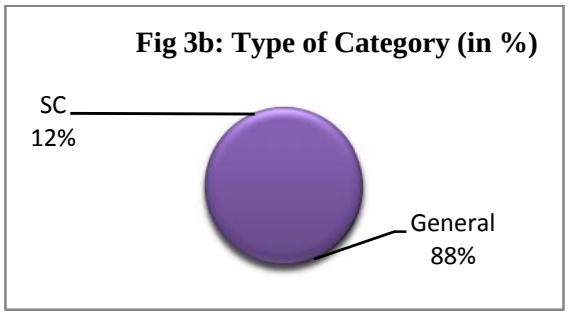




Households by Category/ration Cards

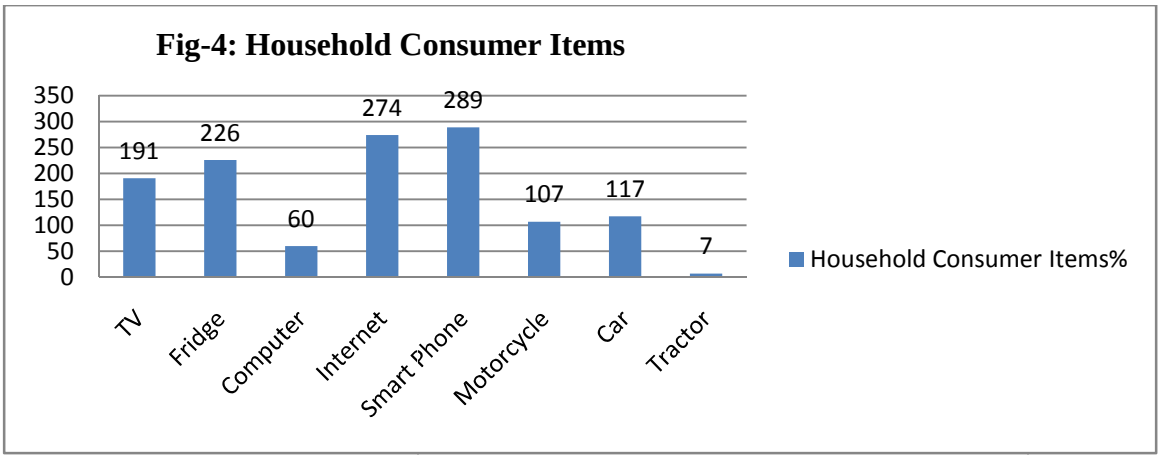
Table 1 shows 88 household belongs to general category (GE) whereas only 12 belongs to other categories like schedule tribes/other backward categories (ST/OBC). Out of the total households, 42 households have APL ration cards and 56 have BPL ration cards whereas only 2 households have no ration cards available during the survey (Fig-3a & Fig-3b).





Household Consumer Items

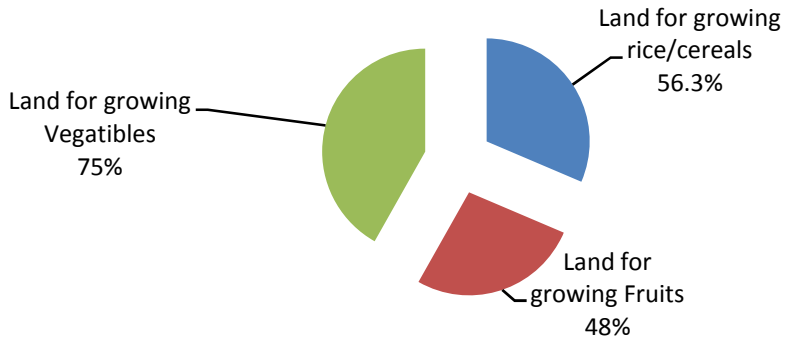
Table 2 presents the household consumer items of respondents. Out of 300 respondents, 191 (64) households have television (TV), 226(75) have fridge, 60(20) have computer, 274(91) have internet and 289(96) have smart phones whereas only 107(36) respondents have motorcycle and 7(2) have tractors (Fig-4).



Household by Ownership of Land

Table 3 shows the ownership of land for growing rice/cereals, fruits and vegetables of total sample households. The Table 3 shows that 169(56) households have agriculture 'Land' for growing rice/cereals and only 48 percent respondents have 'Land' for growing fruits whereas 75 percent households have 'Land' for growing vegetables (Fig-5).

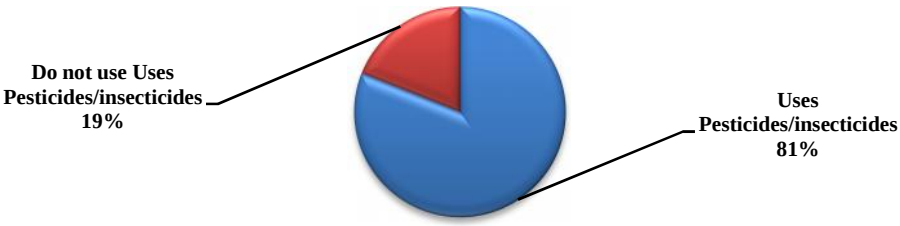
Fig 5: Ownership Land for different purposes (in %)



Distribution of use of pesticides/insecticides

Table 4 shows that 243(81) households use chemicals or pesticides/insecticides to their crops, fruits and vegetable lands and 57(19) households do not spray chemicals or pesticides in their land for cultivation or they do not have land for the same (Fig-6).

Fig 6: Use of Pesticides/insecticides(in %)



Households by person who are involved in Spraying

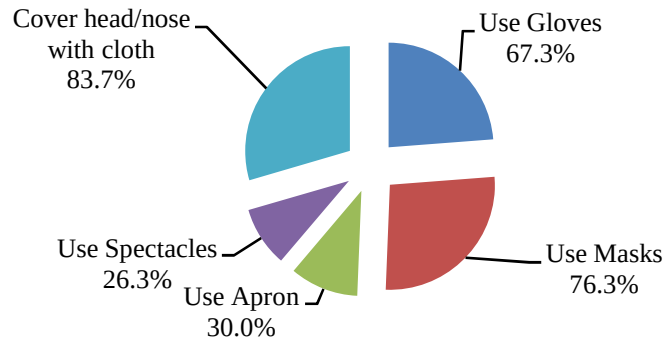
Table 5 shows that out of 243 respondents, 206 (84.0) of household men are dealing with the preparation and spraying of chemicals in their own lands and 71(29) household women are dealing with these chemicals. This Table shows that only 5(2) household children are dealing with these chemicals and 40(16) household reported that the hired persons deals in preparation and spraying of these chemicals (Fig-7).

Fig-7: Households by person who are involved in spraying (in %)

Households by Knowledge of Precautions while Chemicals

Table 6 presents that 202(67) of our selected sample of respondents of Kashmir division having knowledge of using gloves for precautions during the spray of chemicals to insecticides and pesticides and 229(76) have knowledge of using mask whereas only 90 (30) respondents have knowledge about using Apron. Moreover, 79(26) respondents have knowledge of using spectacles and 251(83) households have knowledge to cover head and nose with cloth while spraying (Fig-8).

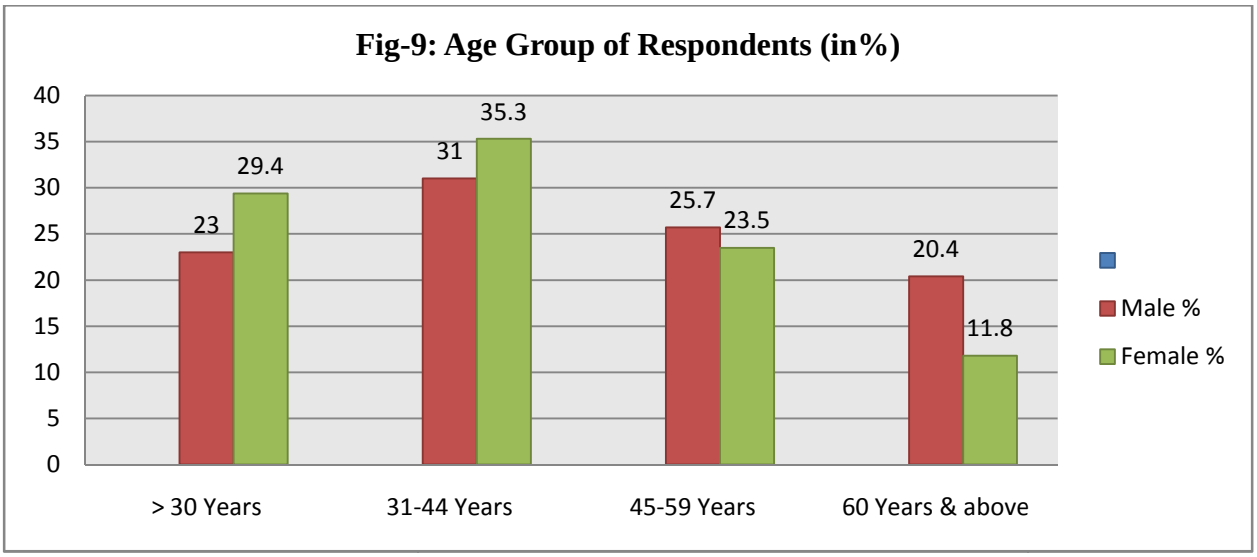
Fig-8:Household's Knowledge about Precautions while Spraying Chemicals (in %)



Age of the respondents

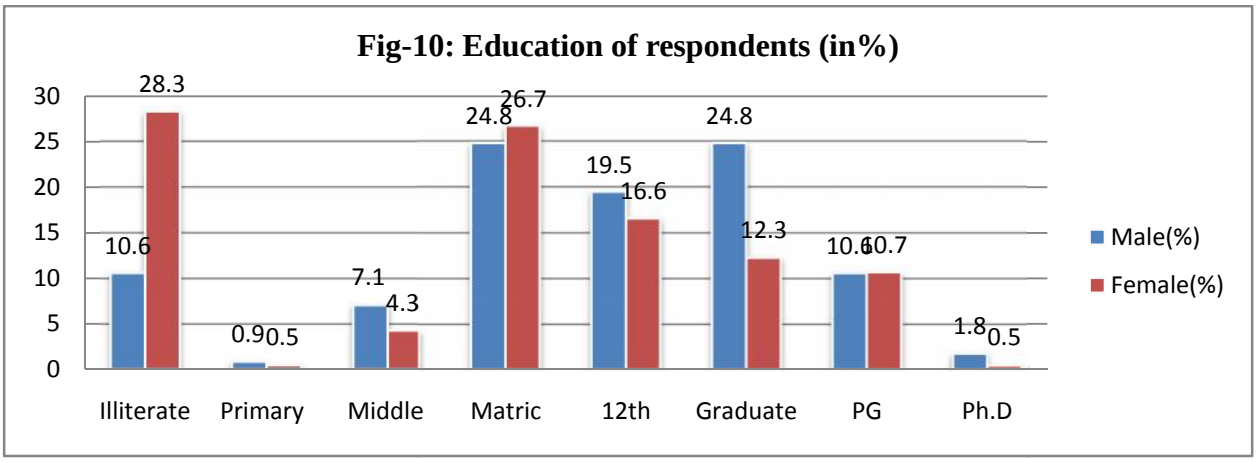
Out of three hundred(300) respondents, 33.7 respondents lies in the age group of 31-44 years in which 113(30.97) are male and 187(35.29) are female respondents. In this age group 52(21.2) male respondents and 98(30.6) respondents from district Ganderbal whereas 61(39.3) male and 89(40.4) female respondents from district Pulwama (table-7). Moreover, out of the total

respondents, 81(27.0) respondents lies in the age group of < 30 years in which 26(23.0) are male and 55(29.4) are female respondents (Fig-09).



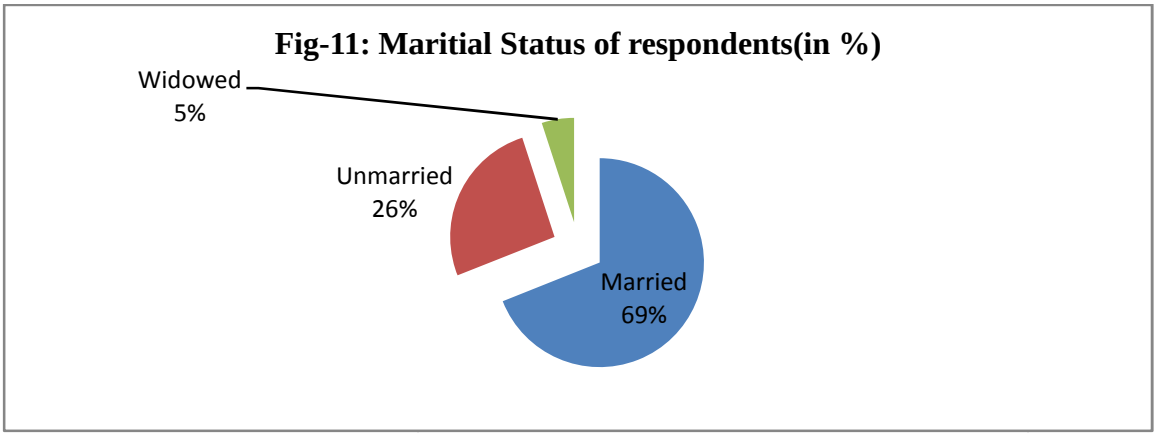
Education of the respondents:

Table 7 shows that out of total respondents, 78(26.0) respondents are matriculate in which 28(24.8) are male and 50(26.7) are female while as 32(10.7) respondents are Postgraduate in which 12(10.6) are male and 20(10.7) are female respondents (Fig-10).



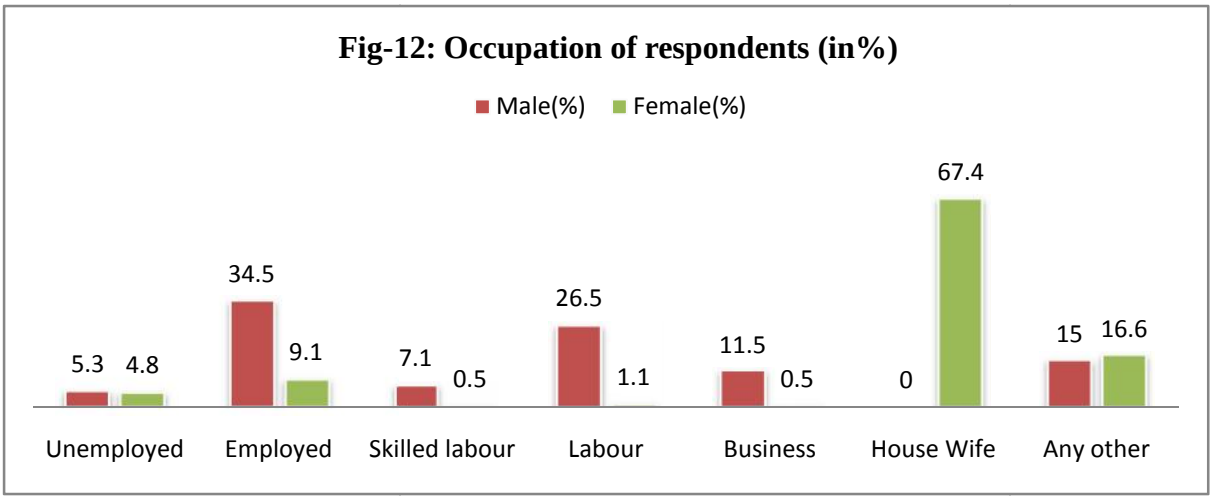
Marital Status of respondents

Table 7 shows that 218(72.7) respondents are married and 70(23.3) respondents are unmarried. Of the married respondents, 82(37.61) are male and 136(62.7) are female whereas of the unmarried respondents, 30(72.6) are male and 40(72.7) are female respondents (Fig-11).



Occupation of respondents

Out of the 300 respondents, 42 of the respondents are house wifes and 18.7 are employed while as only 3 respondents are skilled labours (table-7). Of the 113 male respondents, 5.3 are unemployed and 34.5 are employed while as only 11.5 are engaged in business and 7.1 respondents are skilled laboures. Of the 187 female respondents, 67.4 are house wifes and 0.5 are engaged in business while as only 0.5 are skilled labour and 9.1 are employed (Fig-12).

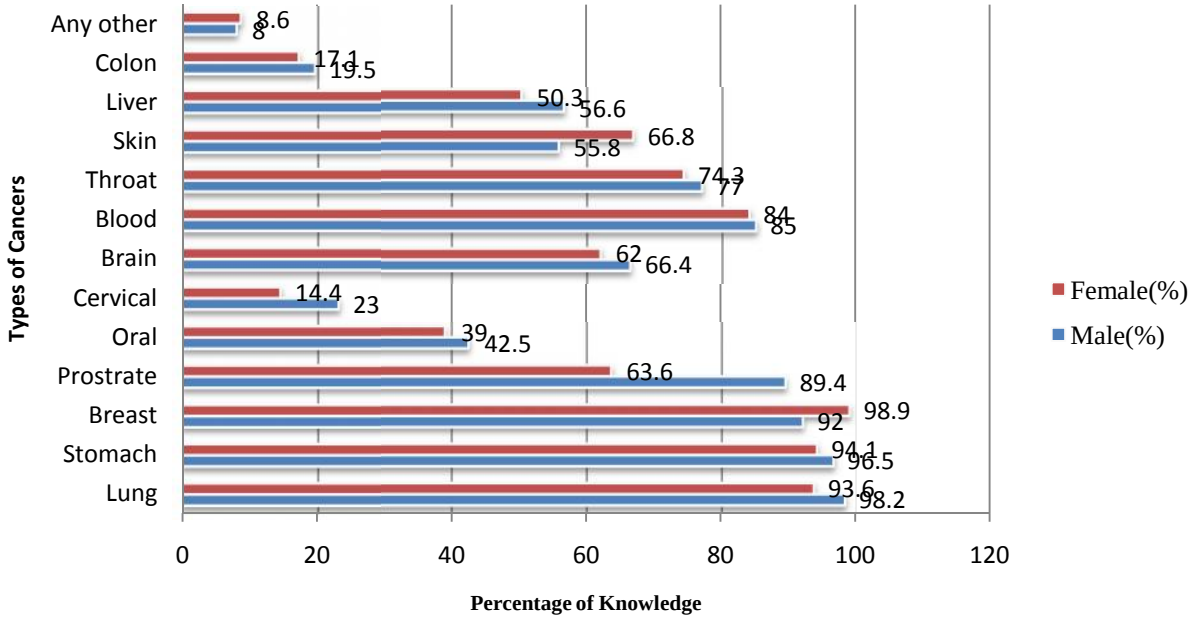


Knowledge of respondents about various types of Cancers

In Table 8, it has been shown that almost 98.2 of male and 93.6 of female respondents have knowledge about Lung Cancer while as only 23.0 male and 14.4 female respondents have knowledge about the Cervical Cancers. Moreover, almost 19.5 male and 17.1 female respondents have knowledge about Colon Cancers while as 89.4 male and 63.6 female respondents have knowledge regarding Prostrate Cancers (Fig-11). However, in district Ganderbal 11.5 male and 13.3 female respondents have knowledge regarding Cervical Cancers whereas in district

Pulwama 32.8 male and 15.7 female respondents have knowledge about Cervical Cancers. Moreover, in district Ganderbal, 96.2 male and 98.0 female respondents have knowledge about Breast Cancer whereas in district Pulwama 88.5 male and 100 female respondents have knowledge regarding Breast Cancer (Table 8).

Fig-11: Knowledge of respondents about various types of Cancer(in %)



Respondents by the Source of Knowledge about Cancers

In Table 9, it has been shown that almost 8.8 male and 1.6 female respondents have received the knowledge from Religious leader whereas 38.1male and 20.3 female respondents have received the knowledge from Print Media. Moreover, 2.7 male and 5.9 female respondents received knowledge from ASHA/ANM/AWW and only 36.3 of male and female respondents received knowledge from the Doctors/Health Professional as well as from Health Campus which simply indicates that health departments of these two districts does not have major role in providing awareness and knowledge to the population about various types of Cancers. In district Ganderbal, out of the total respondents only 3.8 male and 9.2 female respondents received the knowledge from ASHA/ANM/AWW whereas in district Pulwama only 1.6 male and 2.2 female respondents received the knowledge from the ASHA/ANM/AWW which depicts that front line workers like ASHAs in district Ganderbal are better performing compared to district Pulwama. However, it has also been deduced from table-9 that almost 89 of male and female respondents have received the information from relatives and friends (Fig-12).

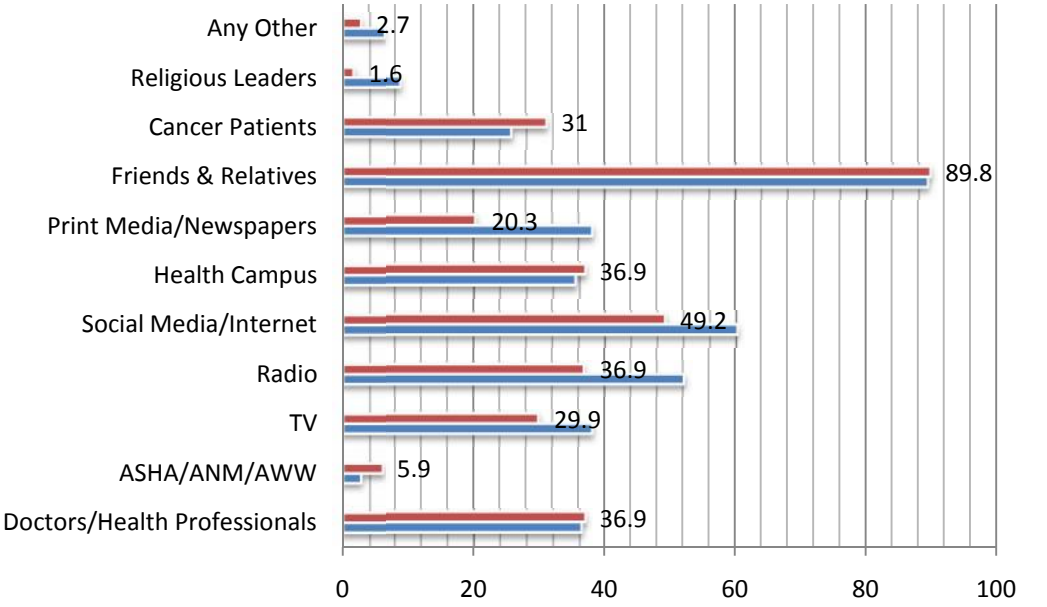
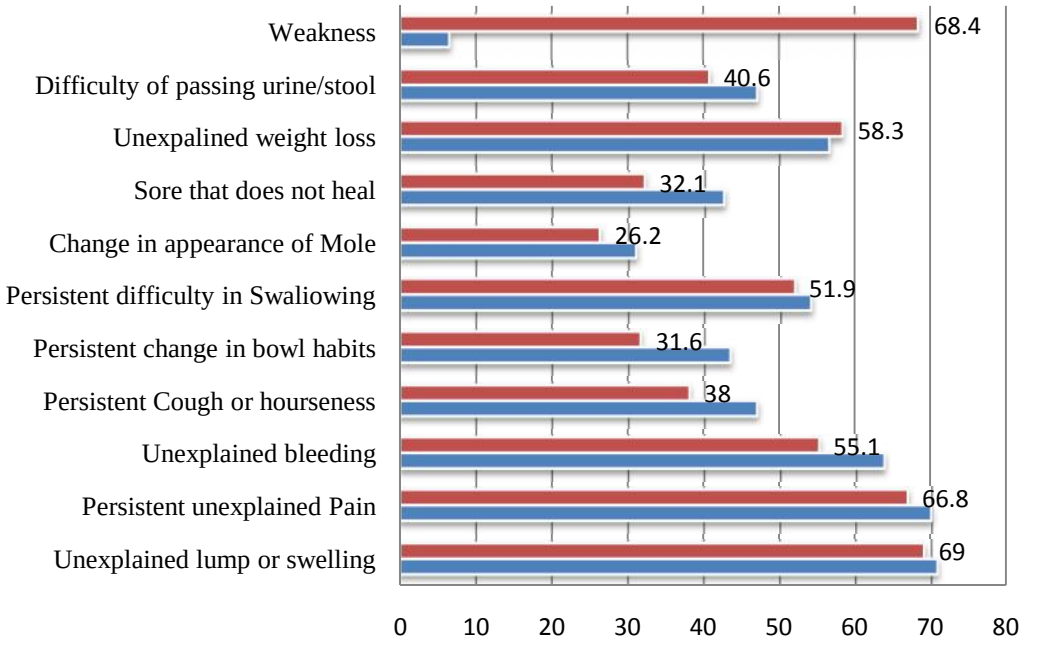


Fig-12: Respondents by Source of Knowledge(in %)

Knowledge about Symptoms of Cancers

In Table-13, it has been shown that 31.0 male and 26.2 female have knowledge about the symptoms of changing in the appearance of Mole whereas 46.9 male and 31.6 female respondents have knowledge about the persistent change in bowl habits. Moreover, 42.5 male and 32.1 female respondents have knowledge regarding the Sour that does not heal whereas 70.8 male and 69.0 female respondents have knowledge about the unexplained lump or swelling. It has also been shown in table-10 that 80.8 male and 72.4 respondents in district Ganderbal have knowledge about unexplained lump or swelling whereas in district Pulwama 62.3 male and 65.2 female respondents have knowledge about the unexplained lump or swelling. Moreover, 71.2 male and 68.4 female respondents have knowledge about the persistent unexplained pain in district Ganderbal whereas 68.9 male and 65.2 female respondents have knowledge about persistent unexplained pain in district Pulwama.

Fig-13: Knowledge about Symptoms of Cancers(in %)



Most of the households belong to the general category with BPL ration cards. Majority of the households have the excess of piped water, electricity and almost 96 respondents have smart phones with internet facility. Almost 48 respondents have land for growing fruits and 56 have land for growing rice/cereals. On an average 81 households use chemicals/pesticides to their crops, fruits and vegetable and 84 household men are dealing with the preparation and spraying of chemicals in their own lands for the cultivation. Out of these 76 households have knowledge of using mask and 83 households have knowledge to covered head and nose with cloth while spraying. In this background, it has been concluded that majority of the households have the awareness and knowledge regarding the pesticides while spraying.

Majority of the respondents lies in the age group of 31 – 44 years. Most of the respondents are matriculates and are married ones. The majority of the respondents are housewives and unemployed persons. It has been found that most of the respondents have awareness about Lung, Stomach, Breast and Prostate Cancers while as a very small proportion of respondents have knowledge about Cervical, Colon and other type of Cancers. The main sources of knowledge are mostly the friends/relatives, televisions and radios whereas health department has not played a major role as a source of knowledge and awareness. Majority of the respondents have awareness about the symptoms and warning signals of various types of cancers.

CHAPTER – IV

KNOWLEDGE, SYMPTOMS, CAUSES & PREVENTIVE MEASURES OF LUNG CANCER

Introduction

Lung cancer is the most common malignancies throughout world and has diverse clinical presentations and chest complaints in particular. Lung cancers metastasize to every organ in the body, but in isolation, rarely involve skeletal muscles. In one retrospective series, the prevalence of isolated skeletal muscle metastasis (SMM) was seen in 0.16-6. In Kashmir region, lung cancer is reported to be the second most common malignancy. The consumption of tobacco *via*; cigarette smoking, *hookah* smoking, chewing, snuffing is the common cause of Lung cancer and is quite prevalent in Kashmir. The consumption of tobacco causes cancers in oral cavity, pharynx, oesophagus, larynx, lungs and urinary bladder. *Hookah* smoking practiced commonly by males and females in rural Kashmir is common risk factor that causes Lung cancer.

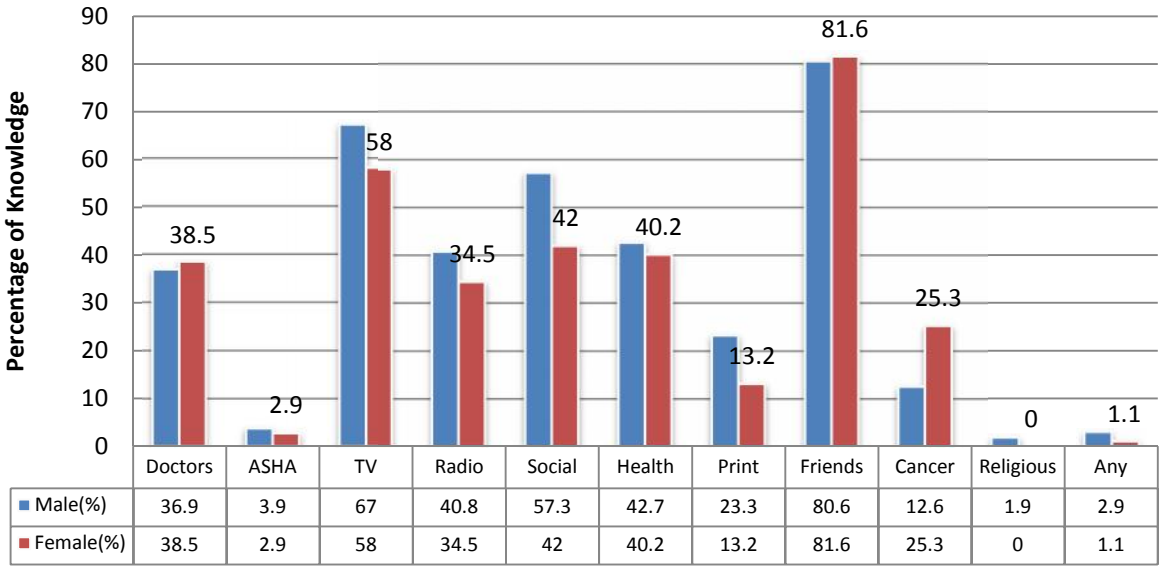
In 2017, 507 Lung cancer patients were registered at Regional Cancer Center, SKIMS, Soura, the only institute to have a hospital-based cancer registry. As per the registry, Lung cancer was at the top among all cancers that year, replacing esophageal cancer, which was recorded as afflicting the highest number of patients prior to this. In 2017, stomach, colon/rectum, and lung cancers were the most common, but the incidence of lung cancer was expected to increase. For lung cancer, the crude and age-standardized incidence rates were 52.7 and 27.1 per 100,000, respectively, in 2017. However, lung cancer was estimated to be the most common cancer in 2021 because the decrease in the incidence of the other types of cancers was more pronounced, while the crude and age-standardized incidence rates of lung cancer were estimated to increase to 62.0 and 27.5 per 100,000, respectively. The present chapter reveals the knowledge, symptoms and preventive measures of Lung Cancers in UT Jammu & Kashmir.

Source of Knowledge about Lung Cancer

Table-11 shows that 36.9 male and 38.5 female respondents heard about the Lung Cancer from Doctors/Health Professionals whereas only 3.9 male and 2.9 female respondents have heard it from ASHAs/ANMs/AWWs which simply indicate that the role of health department is not contributing much in awareness about this particular disease. Moreover, the table 11 reveals that 80.6 male and 81.6 female respondents have heard about the Lung Cancer from friends &

relatives whereas only 1.9 male and 0 female respondents heard it from religious leaders so far. However, in district Ganderbal, only 2.0 male and 2.2 female respondents have heard about the Lung Cancer from ASHAs/ANMs/AWWs whereas in district Pulwama 5.6 male and 3.7 female respondents have heard it from ASHA/ANM/AWWs which indicate that these front line workers are not performing well in the awareness programs regarding non-communicable diseases in these two districts (Fig-11).

Fig-11: Source of Knowledge about Lung Cancer (in %)



	Doctors	ASHA	TV	Radio	Social	Health	Print	Friends	Cancer	Religious	Any
Male(%)	36.9	3.9	67	40.8	57.3	42.7	23.3	80.6	12.6	1.9	2.9
Female(%)	38.5	2.9	58	34.5	42	40.2	13.2	81.6	25.3	0	1.1

Knowledge of Causes of Lung Cancer

Table 12 reveals that 97.1 male and 98.9 female respondents claimed that cause of Lung Cancer is smoking whereas only 52.4 male and 40.8 female respondents claimed that cause of Lung Cancer is the exposure to insecticides/pesticides. Moreover, 50.5 male and 58.0 female agreed that cause of the Lung Cancer is due the use of biomass fuel whereas 44.7 male and 35.1 female respondents contented that cause of Lung Cancer has direct or indirect relations with the family history. However, in district Ganderbal 44.9 male and 32.3 female respondents said that cause of Lung Cancer is the exposure to insecticides/pesticides whereas in district Pulwama 59.3 male and 50.6 female respondents claimed that Lung Cancer is due to the exposure to insecticides/pesticides. Moreover, in district Ganderbal 95.9 male and 100 female respondents agreed that Lung Cancers are due to smoking while as in district Pulwama 98.3 male and 97.5 female respondents said that Lung Cancer is due to smoking (Fig-12).

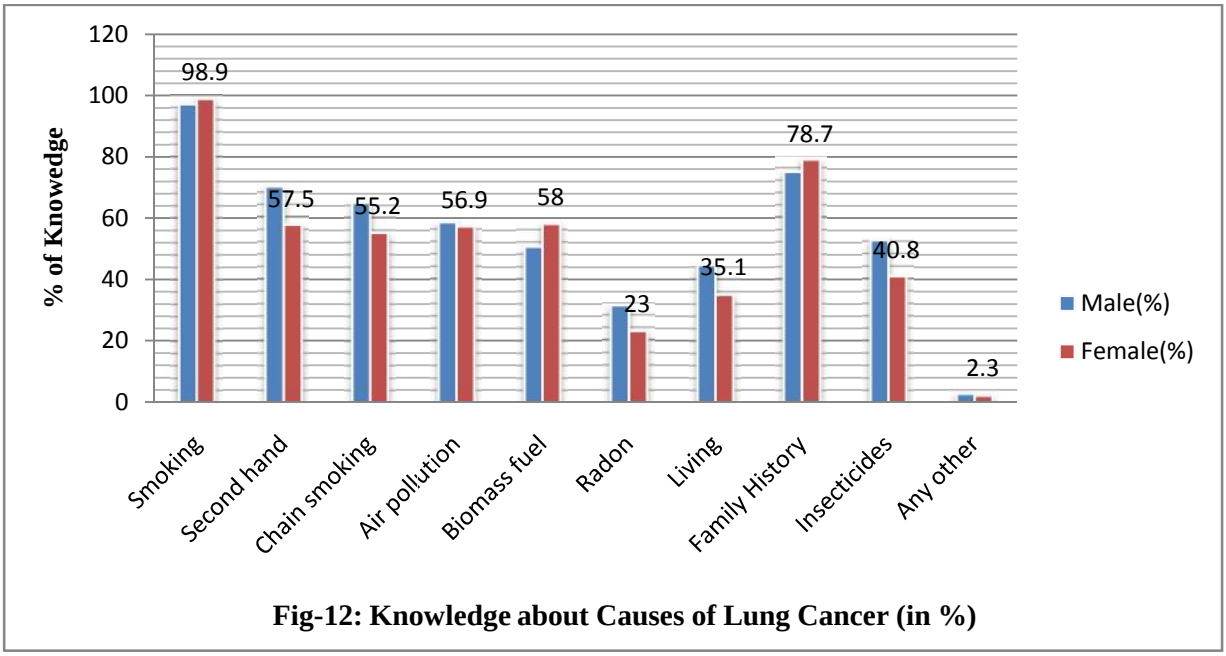
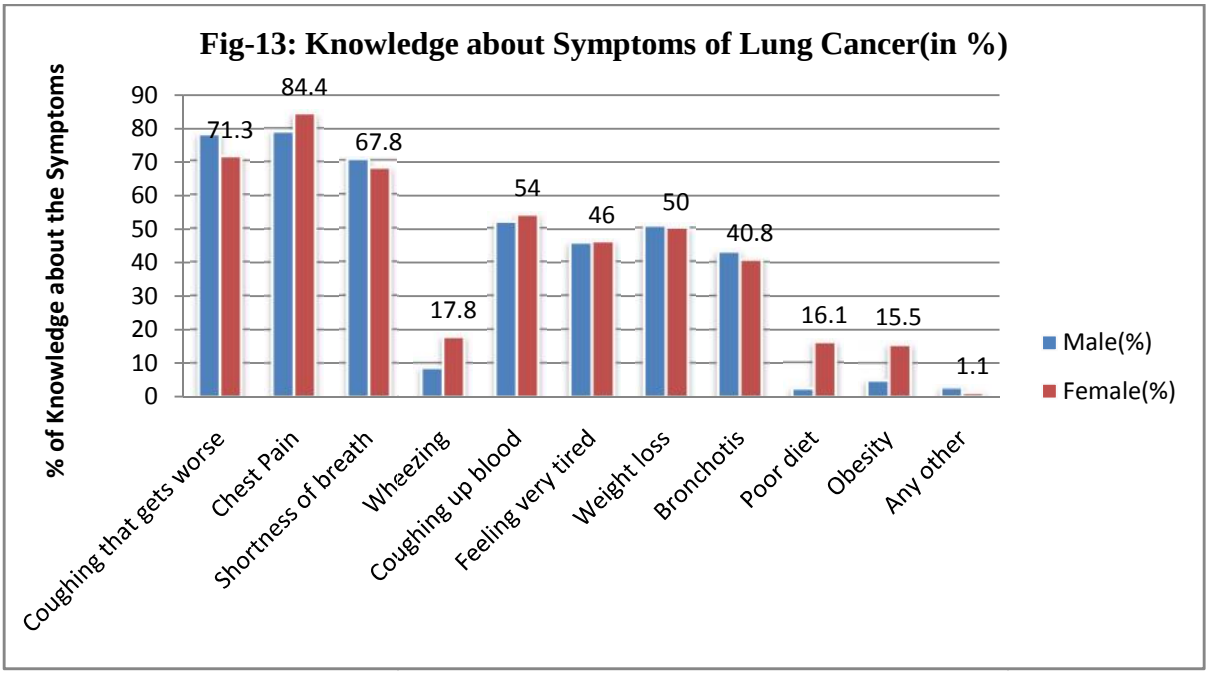


Fig-12: Knowledge about Causes of Lung Cancer (in %)

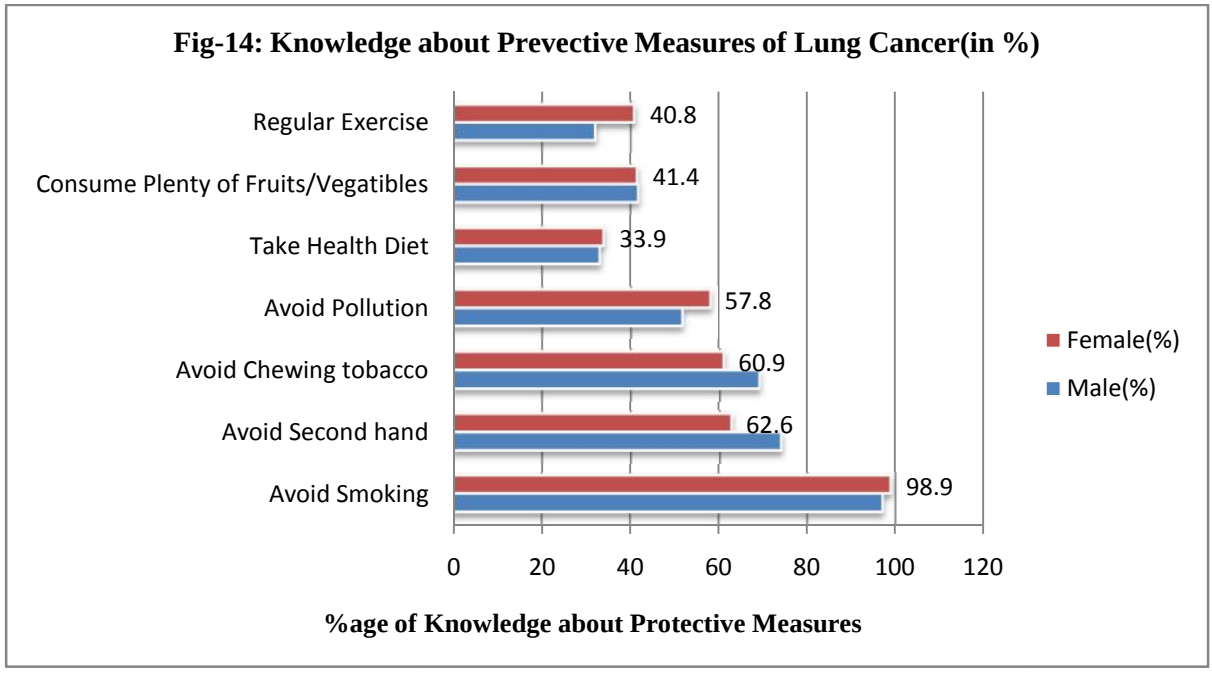
Knowledge of Symptoms of Lung Cancers

Table-13 depicts that 82.5 male and 71.3 female respondents claimed that coughing that gets worse is the symptom of Lung Cancer whereas only 87.4 male and 84.4 female respondents said that Chest pain is the symptom of it. Moreover, 17.5 male and 16.1 female claimed that poor diet is the symptom of Lung Cancer whereas only 20.4 male and 15.5 female respondents claimed that obesity is the symptom of it. However, in district Ganderbal, 81.6 male and 65.6 female respondents said that coughing that gets worsen is the symptom of the Lung Cancer while as in district Pulwama 83.3 male and 77.8 female respondents contended that coughing that gets worsen is the major cause of it. Moreover, 24.5 male and 28.0 female respondents in district Ganderbal claimed that poor diet is the symptom of Lung Cancer whereas only 11.1 male and 2.5 female respondents in district Pulwama said that poor diet is the symptom of the said disease. In district Ganderbal 24.5 male and 24.7 female respondents argued that obesity is the symptom of Lung Cancer whereas only 16.7 male and 4.9 female respondents deliberated that obesity is the symptom of it (Fig-13).



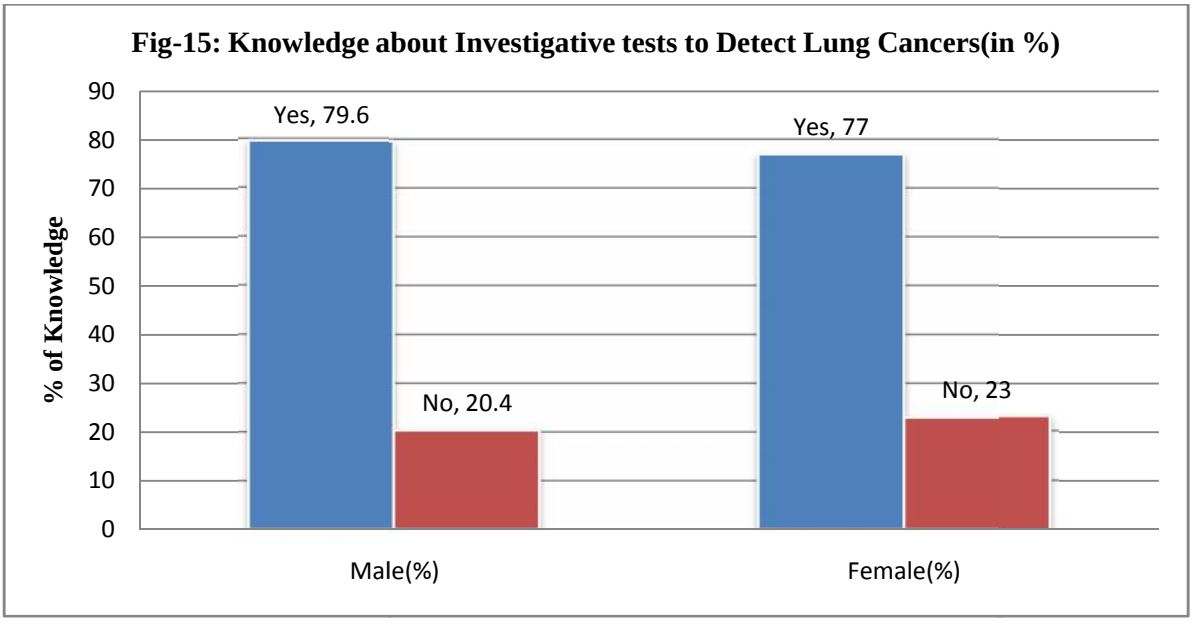
Knowledge of Protective Measures of Lung Cancers

Table-14 reveals that 97.1 male and 98.9 female respondents claimed that one can protect him/herself from the Lung Cancer by avoiding smoking/hukkah/cigar whereas only 41.7 male and 41.4 female believed that one can protect him/herself from it by taking plenty of fruits & vegetables. Moreover, 32.0 male and 40.8 female respondents opinioned that one can protect him/herself from Lung Cancer by having regular exercise whereas 33.0 male and 33.9 female respondents said that one can protect him/her self from it by taking health diet. However, in district Ganderbal, 30.6 male and 46.2 female respondents believed that one can protect him/herself from Lung Cancer by taking regular exercise whereas in district Pulwama 33.3 male and 34.6 female respondents opinioned that one can protect him/herself from it by doing regular exercise. Moreover, 95.9 male and 97.8 female respondents in district Ganderbal believed that one can protect him/her self from Lung Cancer by avoiding smoking/hukkah/Cigar while as 98.1 male and 100 female respondents in district Pulwama claimed that one can protect him/herself from it by avoiding smoking/hukkah/cigar(Fig-14).



Knowledge of any investigation to detect Lung Cancer

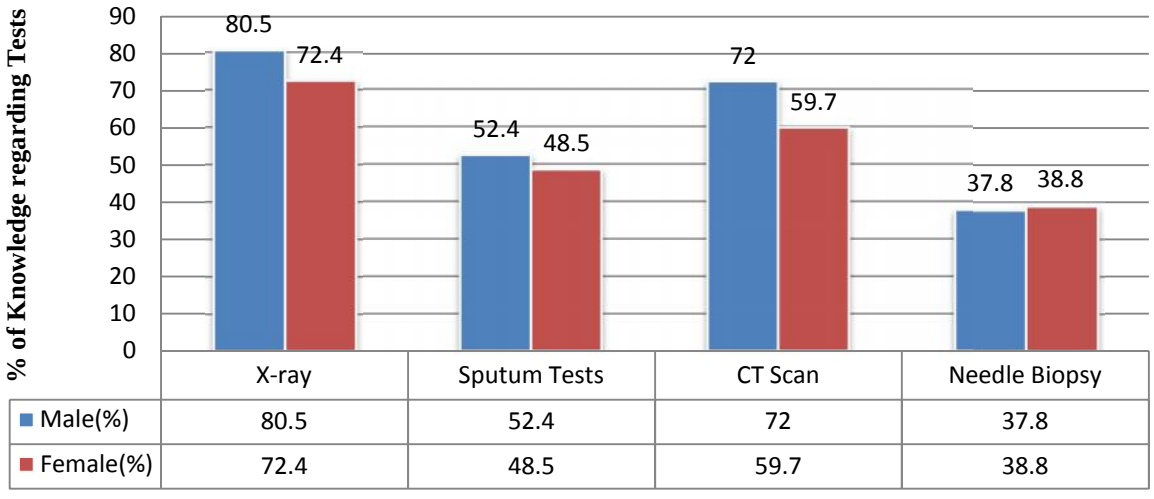
In Table 15 it has been shown that 79.6 male and 77.0 female respondents have heard about the investigation/Laboratory tests which are used to detect the Lung Cancer. However, in district Ganderbal 83.7 male and 74.2 female respondents have heard about the investigative tests which is used to detect the Lung Cancer whereas in district Pulwama 75.9 male and 80.2 female respondents have heard about the investigative tests which is used to detect the Lung Cancer (Fig-15).



Knowledge about Investigation to Detect Lung Cancer

Table-16 reveals that 80.5 male and 72.4 female respondents know about X-ray to detect the Lung Cancer whereas 37.8 male and 38.8 female respondents know about needle biopsy tests to detect the Lung Cancer. However, in district Ganderbal 48.8 male and 40.6 female respondents know about the Sputum test to detect the Lung Cancer whereas in district Pulwama 56.1 male and 56.9 female respondents know about the Sputum test to detect it. Moreover, 75.6 male and 65.2 female respondents in district Ganderbal know about the CT scan to detect the Lung Cancer whereas 34.1 male and 38.5 female respondents in district Pulwama know about CT scan to detect it (Fig-16).

Fig-16: Knowledge of any Investigation to Detect Lung Cancer (in %)



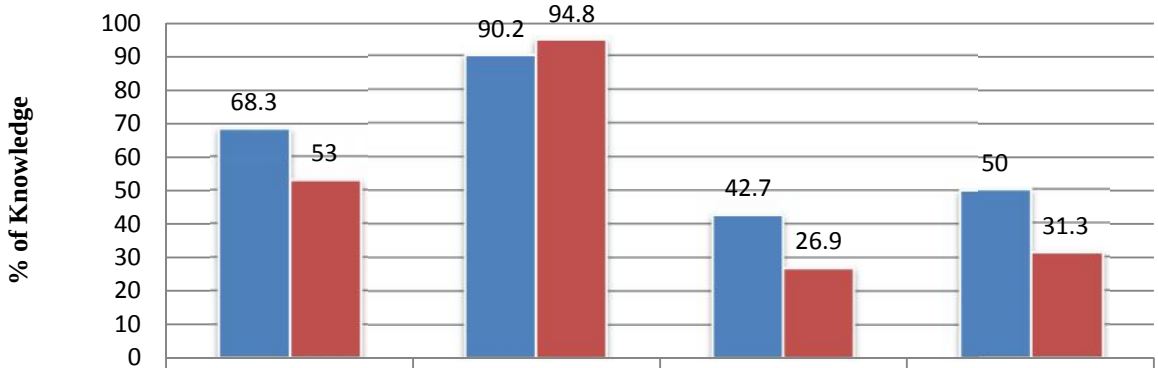
	X-ray	Sputum Tests	CT Scan	Needle Biopsy
Male(%)	80.5	52.4	72	37.8
Female(%)	72.4	48.5	59.7	38.8

Knowledge about Place of Investigations to Detect Lung Cancer

Table 17 reveals that 68.3 male and 53.0 female respondents have knowledge about SMHS hospital's investigation tests whereas 90.2 male and 94.8 female respondents have knowledge about SKIMS hospital's investigation tests which are used to detect the Lung Cancers. Moreover, only 50.0 male and 31.3 female respondents have knowledge about Private Laboratory's investigation test. However, in district Ganderbal 75.6 male and 47.8 female respondents have knowledge about SMHS hospital's investigation tests whereas in district Pulwama 58.5 male and 68.3 female respondents have knowledge about the Investigation tests of the same. Moreover, 92.7 male and 95.7 female respondents in district Ganderbal know about the SKIM's investigation tests whereas 87.8 male and 93.8 female respondents have knowledge about the investigation test of the same. Further, in district Ganderbal only 39.0 male and 24.6

female respondents know about the District hospital's investigation test whereas 46.3 male and 29.2 female respondents know about the District Hospital's investigation tests (Fig-17).

Fig-17: Knowledge about Investigation to Detect Lung Cancer(in%)



	SMHS Hospital	SKIMS	District Hospital	Private Labortary
Male(%)	68.3	90.2	42.7	50
Female(%)	53	94.8	26.9	31.3

Summary & Conclusion

The study reveals that most of the respondents have heard about Lung cancer from the friend/relatives and few of them have heard it from the health doctors/health professionals while as some have heard it from radio and televisions. Most of the respondents believed that the cause of same is the smoking and only few of them said that exposure to insecticides/pesticides is the cause of the same while as few female respondents have claimed that use of bio mass fuel is the major of Lung Cancer. Regarding the symptoms, majority of the male as well as female respondents believed that coughing that gets worse is the symptom of Lung cancer while as few respondents claimed that chest pain and Obesity is the symptom for the same. Most of the respondents believed that Lung cancer can be protected by avoiding the smoking while as some believed that it can be protected taking plenty of fruits & vegetables and doing regular exercise. Majority of the respondents have knowledge of some investigation tests to detect the lung cancer and they have knowledge of availability of these diagnostics. Most of them know that these tests are available at SKIMS Sour and SMHS hospital Shrinbagh, Srinagar.

CHAPTER – V

KNOWLEDGE, SYMPTOMS, CAUSES & PREVENTIVE MEASURES OF STOMACH CANCER

Introduction

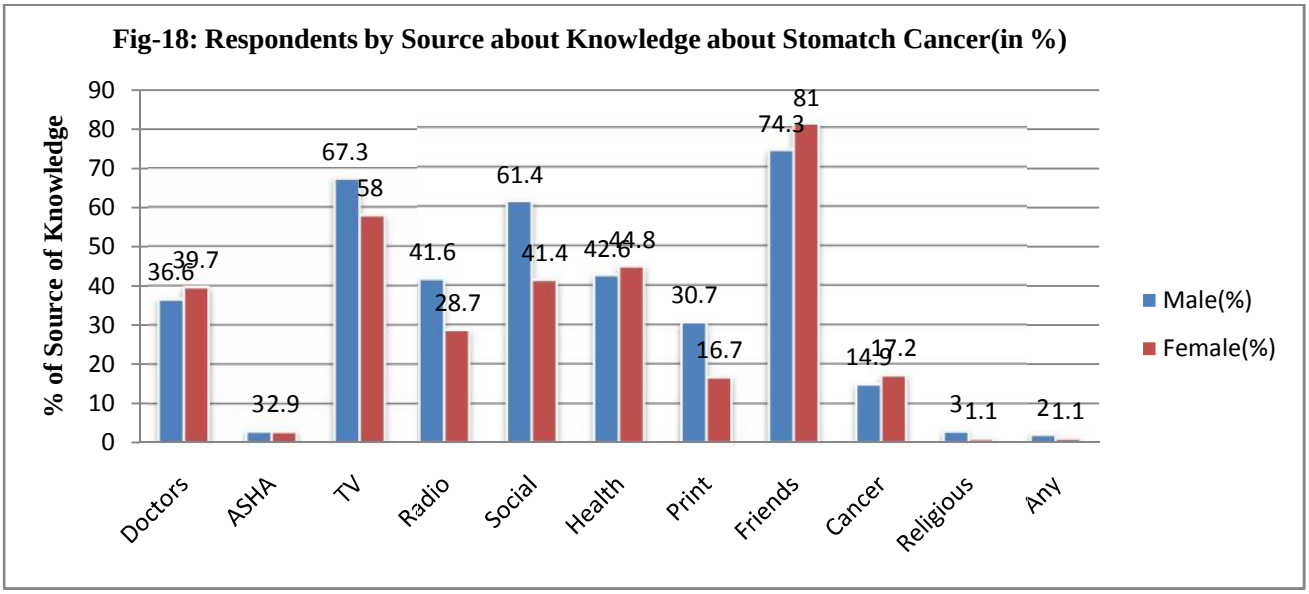
Gastric Carcinoma (GC) is one of the most common malignancies, which accounts for 6.8 of total cancer population worldwide. In India, the northeastern region has the highest gastric cancer incidence, and the Kashmir Valley has a very high incidence of gastric cancer as compared to other parts of Northern India. It exceeds 40 of total cancers with an incidence rate of 3-6-fold higher than other metro cities of India. Gastric cancer is a heterogeneous disease where most of the cases are sporadic, and <15 are due to obvious familial clustering. The heterogeneous nature of the disease can be associated with differences in genetic makeup of an individual. A better understanding of genetic predisposition toward GC will be helpful in promoting personalized medicine. Stomach cancer is also amongst the first five cancers in the Kashmir having preponderance in male populations (Male: Female-3.17:1). A dietary habit is the main reason for the high incidence of this type of cancer. In Kashmir valley, gastric cancer incidences are very high and together with esophageal carcinoma accounts for about 60 of all cancers, which is higher than in other parts of the region. It has been reported that the incidence of gastric cancer in Kashmir valley exceeds up to 40 of all cancers, and the incidence is 3-6 times higher than that at various metropolis cancer registries in India. In this background, the present chapter is an effort to understand the knowledge, awareness, symptoms and preventive measures of lung cancer among men and women of rural Kashmir.

Source of Knowledge about Stomach Cancer

Table 18 shows that 36.6 male and 39.6 female respondents have heard the Stomach Cancer from doctors/health professionals whereas only 3.0 male and 2.9 female respondents have heard about the Stomach Cancer from ASHA/ANMs/AWWs. Moreover, 42.6 male and 44.8 female respondents have heard about the Stomach Cancer from health campuses whereas 14.9 and 17.2 female respondents have heard it from the relatives & friends. However, in district Ganderbal 39.6 male and 40.0 female respondents have heard the Stomach Cancer from doctors & health professionals whereas in district Pulwama 77.4 male and 39.3 female respondents have heard it from the same. Moreover, 4.2 male and 4.4 female respondents in district Ganderbal have heard

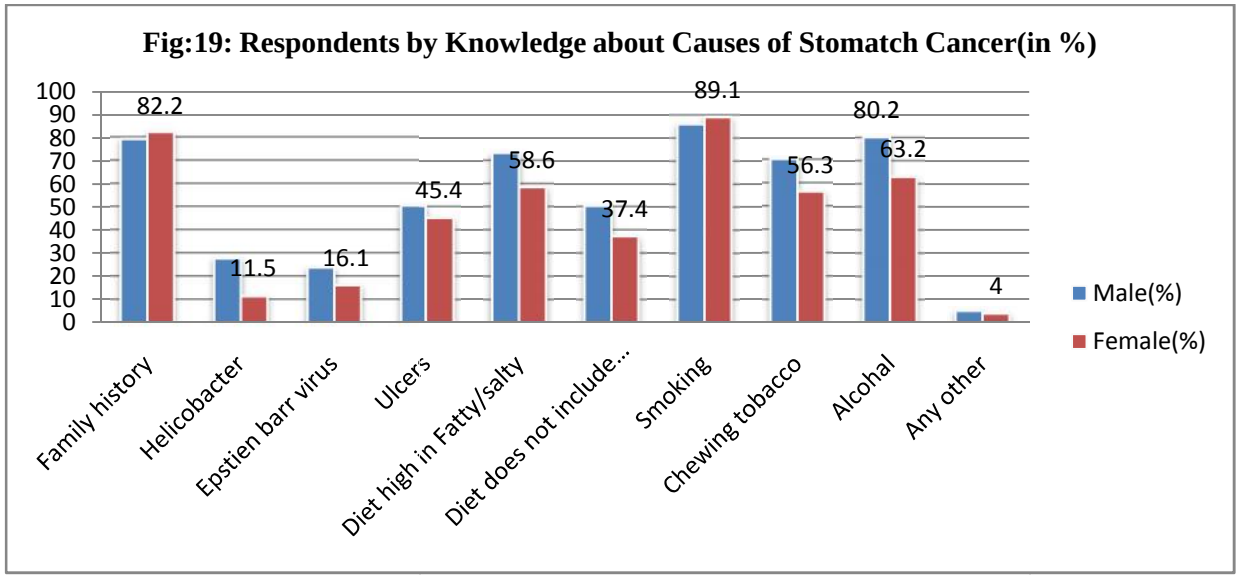
about the stomach Cancer from ASHAs/ANMs/AWWs whereas only 1.9 male and 1.2 female respondents have heard about it from the same which simply indicates that these front line workers does not have major role in the awareness programs regarding the Stomach Cancers in both of the surveyed districts (Fig-18).

Fig-18: Respondents by Source about Knowledge about Stomatch Cancer(in %)



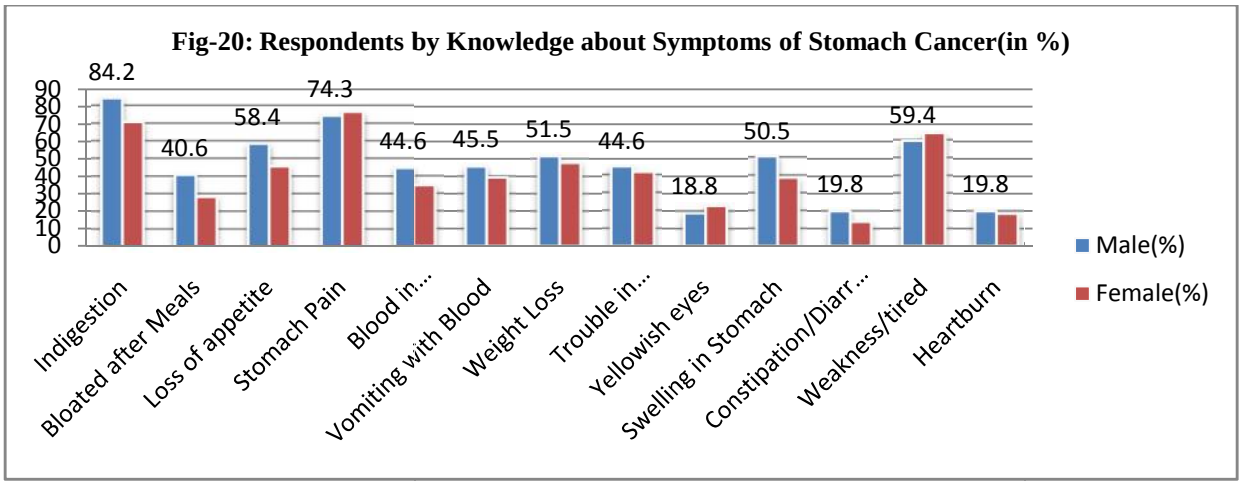
Respondents by Knowledge about Causes of Stomach Cancer

Table-19 shows that 79.2 male and 82.2 female respondents believed that cause of stomach Cancer is because of family history whereas 86.1 male and 89.1 female respondents believed that cause of Stomach Cancer is too much smoking. Moreover, 73.3 male and 58.6 female respondents said that the cause of Stomach Cancer is due to the diet in high fatty/salt/smoked or with pickled foods whereas only 50.5 and 37.4 female respondents believed that the cause of Stomach Cancer is the diet that does not include many fruits and vegetables. However, in district Ganderbal 81.3 male and 84.4 female respondent believed that family history is the cause of Stomach Cancer whereas in district Pulwama 77.4 and 79.8 female respondents believed on the same. Moreover, 70.8 male and 58.9 female respondents claimed that diet high in fatty/salty/smoked or pickled food is the cause of Stomach Cancer whereas in district Ganderbal 75.5 male and 58.3 female respondents believed on the same. Moreover, 41.7 male and 38.9 female respondents in district Ganderbal said that diet that does not include many fruits and vegetables are the cause of Stomach Cancer while as 58.5 male and 35.7 female respondents in district Pulwama believed on the same (Fig19).



Respondents by Knowledge about Symptoms of Stomach Cancer

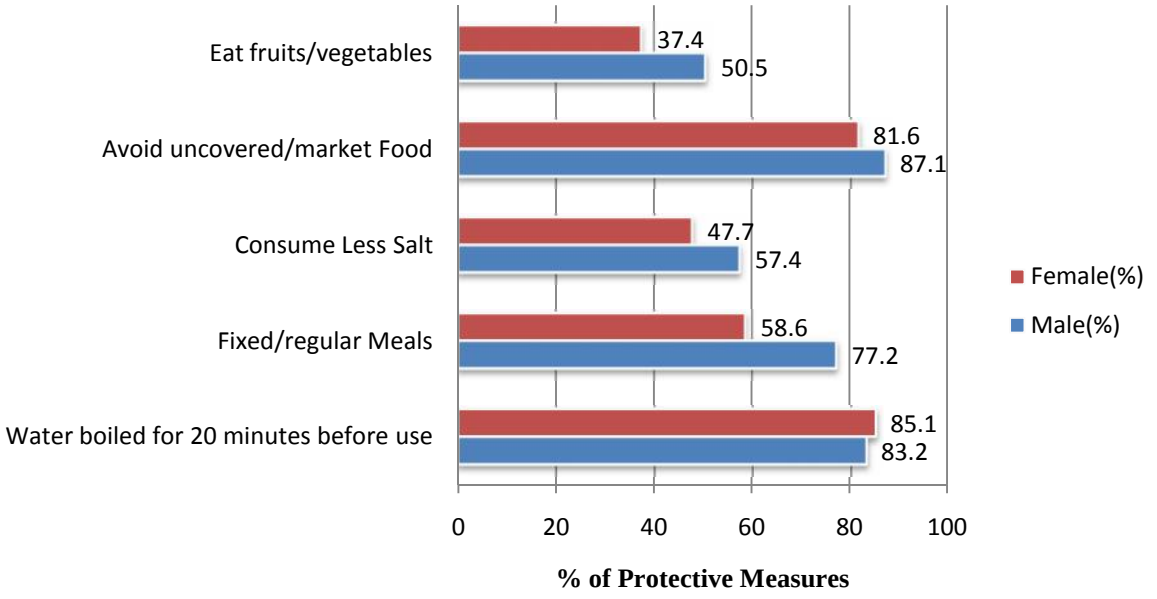
Table 20 reveals that 84.2 male and 70.7 female respondents believed that indigestion is normally the symptom of Stomach Cancer whereas only 50.5 male and 38.5 female respondents believed that swelling in the Stomach is the cause of Stomach Cancer. Moreover, 58.4 male and 45.4 female respondents believed that loss of appetite is the cause of Stomach Cancer whereas 74.3 male and 76.4 female respondents claimed that Stomach pain is the cause of the same. However, in district Ganderbal 37.5 male and 24.4 female respondents believed that feeling bloated after a meal is the cause of Stomach Cancer whereas in district Pulwama 43.4 male and 32.1 female respondents believed the same. Moreover, 50.0 male and 35.6 female respondents in district Ganderbal said that swelling in stomach is the cause of Stomach Cancer whereas 50.9 male and 41.7 female respondents in district Pulwama believed on the same (Fig-20).



Knowledge about Protective measures of Stomach Cancer

Table 21 reveals that 83.2 male and 85.1 female respondents believed that one can protect him/herself from the Stomach Cancer by the use of water boiled for 20 minutes before use whereas 87.1 male and 81.6 female respondents believed that one can protect him/herself from Stomach Cancer by avoiding all the uncovered and marketed food. Moreover, 57.4 male and 47.7 female respondents believed that one can protect him/herself from the Stomach Cancer by the use of less salt whereas 50.5 male and 37.4 female respondents claimed that one can protect him/herself by taking plenty of fruits and vegetables (Fig-21).

Fig-21: Knowledge about Protective measures of Stomach Cancer(in %)



So far as the stomach concerned, majority of the respondents have heard it from the relatives/friend and a few of the respondents have heard it from the doctors/health professionals while as a minority of the respondents have heard it from the front line workers like ASHAs/ANMs. Most of the respondents believed that family history is the cause of the same whereas some of the respondents believed that Obesity and foods habits are the cause of stomach cancer in J&K. Moreover, majority of the respondents believed that indigestion as well as swelling is normally the symptom for the same. In order to protect from Stomach cancer, majority of the respondents believed that regular exercise and avoiding the uncovered and marketed food can prevent one from the stomach cancer in the valley.

CHAPTER – VI

KNOWLEDGE, SYMPTOMS, CAUSES & PREVENTIVE MEASURES OF PROSTATE CANCER

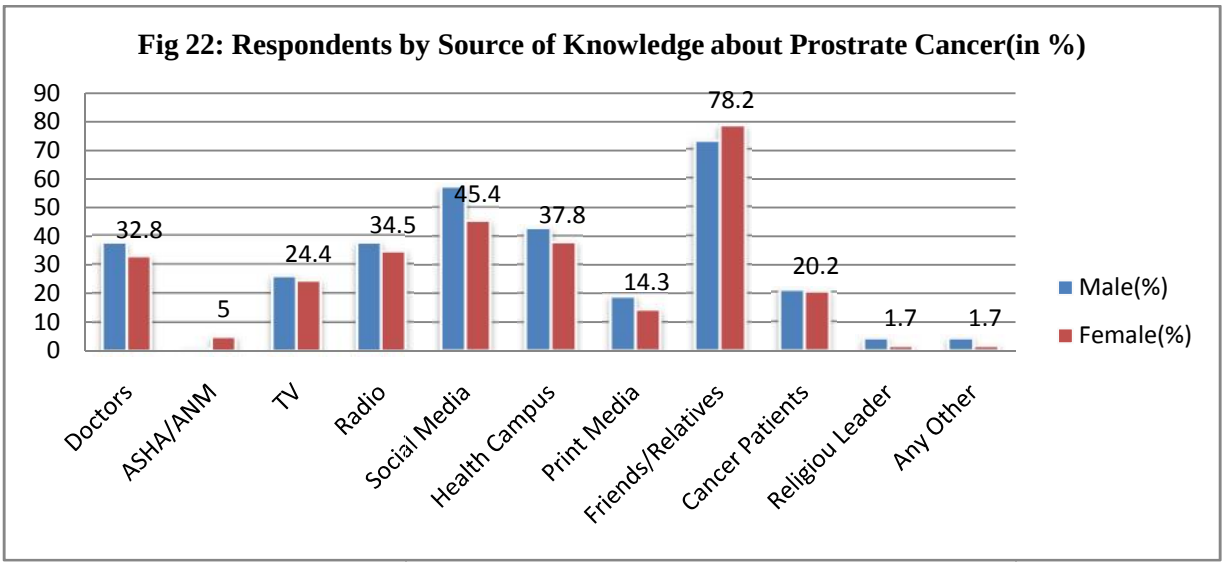
Introduction

Prostate cancer is one of the top ten leading cancers in the country. It usually affects men in the age group of 65+ years. However, recently there has been an increase in reports of cancer in younger men in the age group of 35-44 and 55-64 residing in metropolitan cities. Old age, obesity, improper diet, and genetic alterations have been identified as some of the main contributing factors towards an increased cause of prostate cancer. The present chapter deals with the knowledge, symptoms, causes and preventives measures of prostate cancer among men of rural Kashmir.

Source of Knowledge about Prostate Cancer

Table-22 shows that almost 37 male and 33 female respondents reported that they have heard the Prostrate Cancer from doctors/health professional and only 1 male and 5 female have heard it from ASHAs/ANMs/AWWs. Again 26 male and 24 female heard it from TV and 37 male and 34 female have heard it from radio. Moreover, 57 male and 45 female respondents heard it from social media/internet. Almost 43 male and 38 female were get aware about the same through health camps. Moreover, 19 of male and 14 female were get knowledge from print media and news papers about this disease. Almost 73 male and 78 female have heard it from their friends and relatives. It again shows in table that 21 male and 20 female were get their knowledge from cancer patients. Only 4 male and 2 female get knowledge from religious leaders (Fig-22).

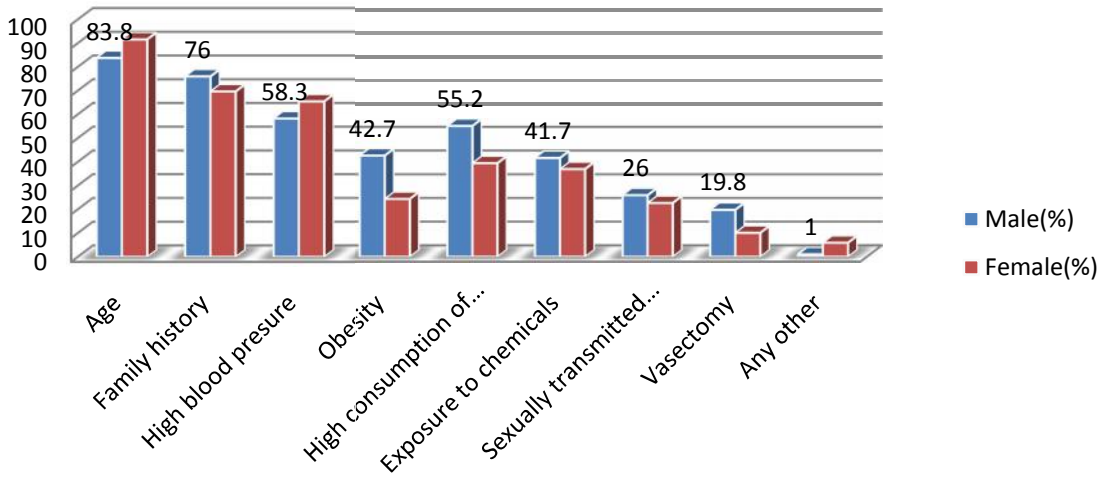
Fig 22: Respondents by Source of Knowledge about Prostrate Cancer(in %)



Knowledge about Causes of Prostate Cancer

Table 23 shows that 94 male and 91 female are of this opinion that age is the cause of prostate cancer while as 76 male and 70 female respondents believed that cause of Prostate Cancer is family history. Moreover, almost 58 male and 65 female respondents said high blood pressure is the cause of the same whereas 43 male and 24 female respondents opinioned that obesity is the cause of Prostate Cancer. Further, 55 male and 39 female respondents believed that high consumption of animal fat is the cause of Prostate Cancer while as almost 42 male and 37 female respondents acknowledged that exposure to chemicals may be the cause of the same. However, 26 male and 23 female respondents believed that Prostrate Cancer is due to the cause of sexually transmitted infections while as, only 20 male and 10 female respondents opinioned that this disease is because of vasectomy (Fig-23).

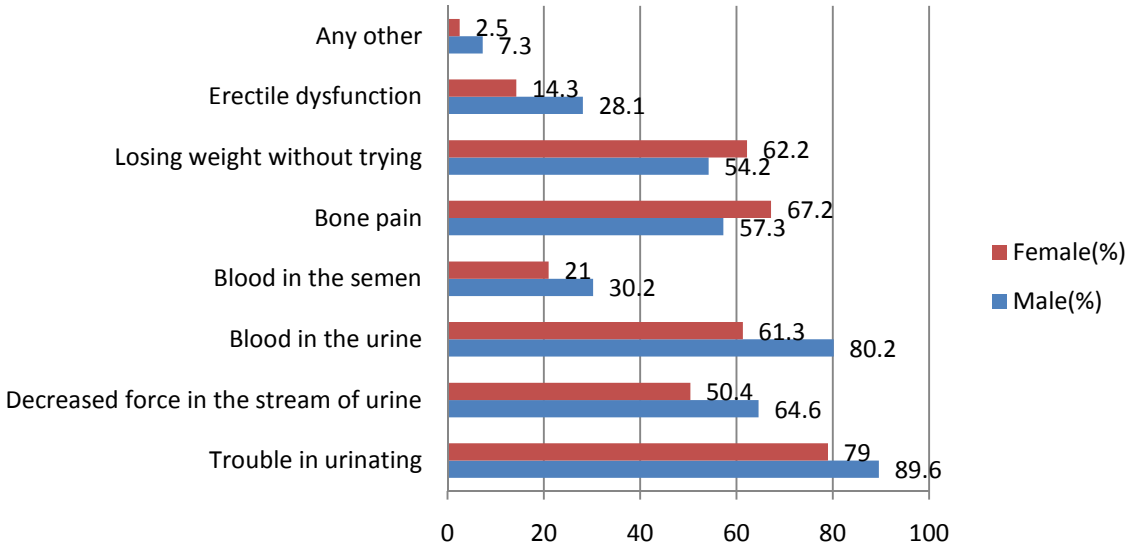
Fig -23: Knowledge about Causes of Prostate Cancer(in %)



Knowledge about Symptoms of Prostate Cancer

Table-24 shows that 89 male and 79 female respondents believed that trouble in urinating is the symptom of prostate cancer while as 64 male and 50 female respondents also believed that 'decreased force in the stream of urine' is the symptom of the same. Moreover, 80 male and 61 female respondents claimed that blood in the urine is the symptom of Prostate Cancer whereas 30 male and 21 female respondents believed that blood in the semen is the symptom of this type of cancer. Further, 57 male and 67 female respondents argued that bone pain is the symptom of Prostate Cancer while 54 male and 62 female respondents believed that losing weight without trying is the symptom of it (Fig-24).

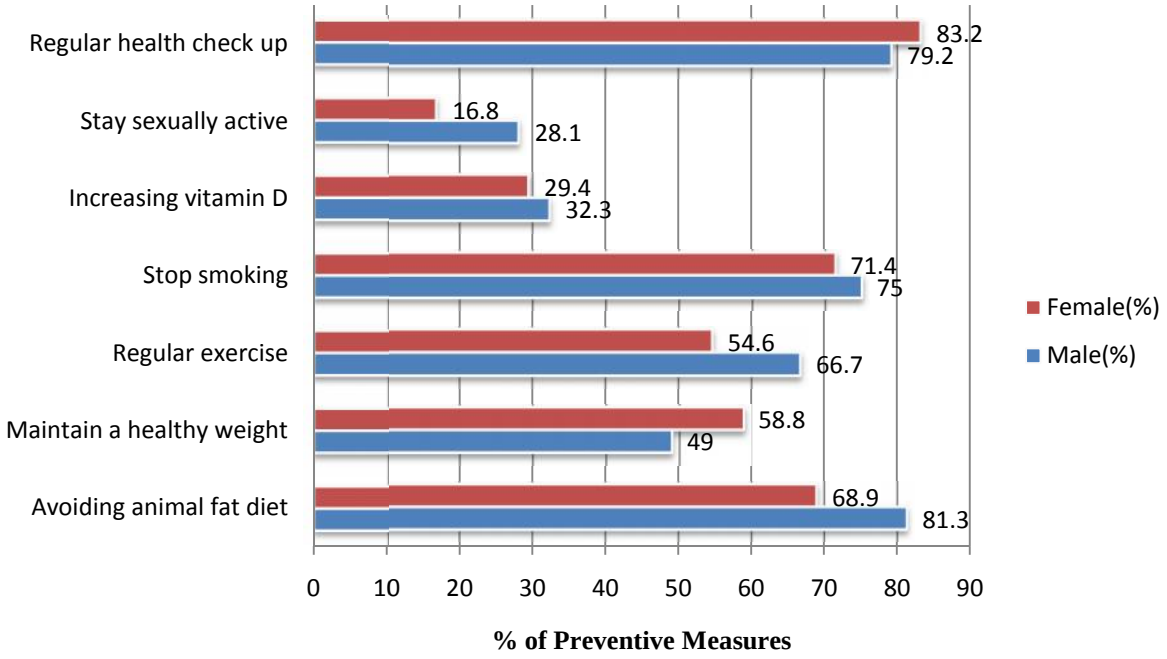
Fig-24: Knowledge about Symptoms of Prostate Cancer(in%)



Knowledge about Preventive Measures to avoid Prostate Cancer

Table 25 presents that 81 male and almost 69 female respondents are of this opinion that one of the preventive measure is to avoiding animal fat diet whereas 49 male and 58 female respondents are of this opinion that one can be prevented from prostate cancer by maintaining a healthy weight. Regular exercise is the opinion of almost 67 male and 55 female. Further table shows that 75 male and 71 female are in this opinion that one can be prevented from prostate cancer by stopping smoking. Again 32 male and 29 female respondents said that increasing vitamin D is one of the preventive measures of prostate cancer. Only 28 male and 17 female respondents are of the view that one can prevent him/herself to prostate cancer to stay sexually active. One of the preventive measures is the regular health checkup said by 79 male and 83 female respondents to avoid prostate cancer (Fig-25).

Fig-25:Knowledge about Preventive Measures to avoid Prostate Cancer(in %)



Summary & Conclusion

Majority of the respondents have heard the prostate cancer from the doctors/health professional and a few of the respondents have heard it from television and radio while as most of the respondents have heard it from the friends/relatives. Most of the respondents believed that age and animal fat is the cause for the same while a few believed that high BP is the cause of the prostate cancer. Normally trouble in urinating and blood in urine is the major cause of Prostate claimed by most of the respondent's whiles as few believed that blood in the semen is the symptom for the same. Most of the respondents claimed that avoiding animal fat diet and regular exercise can prevent one from the prostate cancer.

CHAPTER – VII

KNOWLEDGE, SYMPTOMS, CAUSES & PREVENTIVE MEASURES OF BREAST CANCER

Introduction

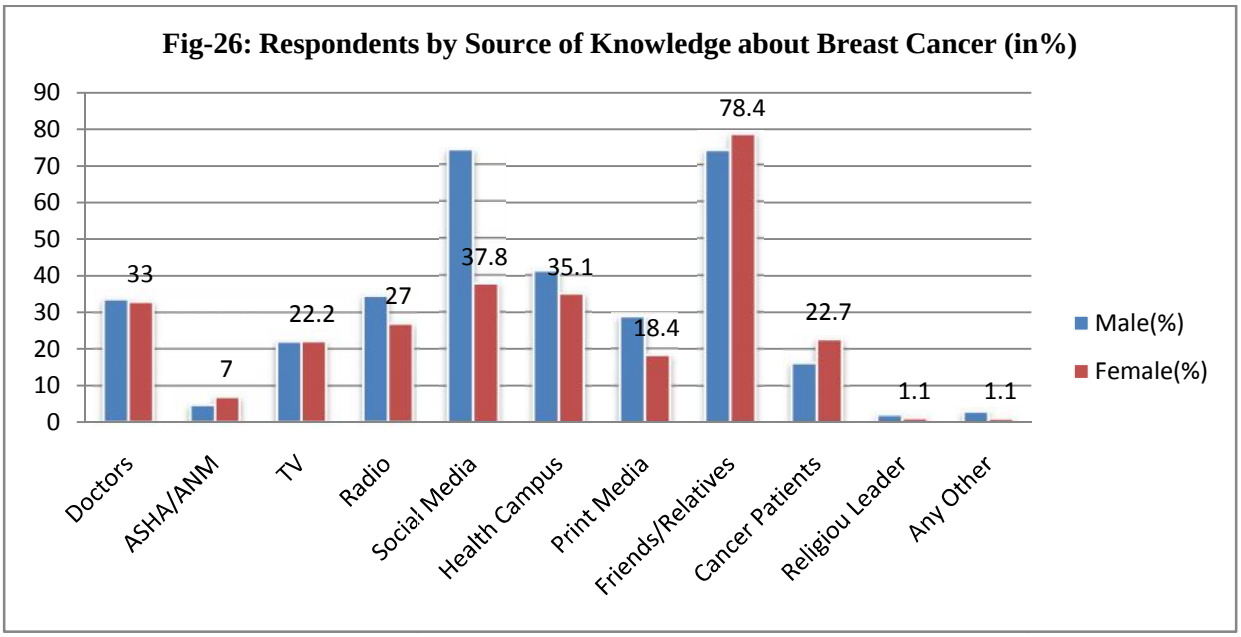
Breast cancer, the most frequent cancer of women in the world is the second leading site of cancer in females in Kashmir province. Overall in both males and females, it is the second most common cancer present in the Valley. Although the disease is mainly postmenopausal in western population, but the picture in Kashmir is no different than the rest of the country where the burden of breast cancer due to early onset cases is increasing at an alarming rate. As per official records, during 2007-08, the number of cancer patients registered at SMHS hospital, Srinagar was 352, but during 2014-15, the number stood at 3687. In 2015, 4001 new cancer patients were registered in Regional Cancer Center while as in 2016, the number of new registrations shot up to 4336. On an average, 15 new cases get registered everyday in SKIMS. The overall figures in the region are most certainly higher due to many unreported cases. Many cancer patients in Kashmir fail to receive immediate healthcare attention due to a lack of awareness and poor health education. An average of 3,000 cancer patients afflicted with various malignancies visit SKIMS every year and the number seems to be increasing day by day. In this regard, the present chapter is an effort to understand the knowledge, symptoms, causes and preventive measures of breast cancer among women in rural Kashmir.

Source of Knowledge about Breast Cancer

Table 26 reveals that 33.7 male and 33.0 female respondents have heard the Breast Cancer from Doctors & health professionals whereas 4.8 male and 7.0 female respondents have heard it from ASHAs/ANMs/AWWs. Moreover, 74.0 male and 78.4 female respondents have heard the Breast Cancer from friend & relatives whereas 41.3 male and 35.1 female respondents have heard it from the health campuses. However, in district Ganderbal 38.0 male and 30.2 female respondents have heard the Breast Cancer from doctors & health professionals whereas in district Pulwama 29.6 male and 36.0 female respondents have heard it from the same sources. Moreover, 6.0 male and 10.4 female respondents in district Ganderbal have heard the Breast Cancer from ASHA/ANM/AWW whereas only 3.7 male and 3.4 female respondents in district Pulwama have

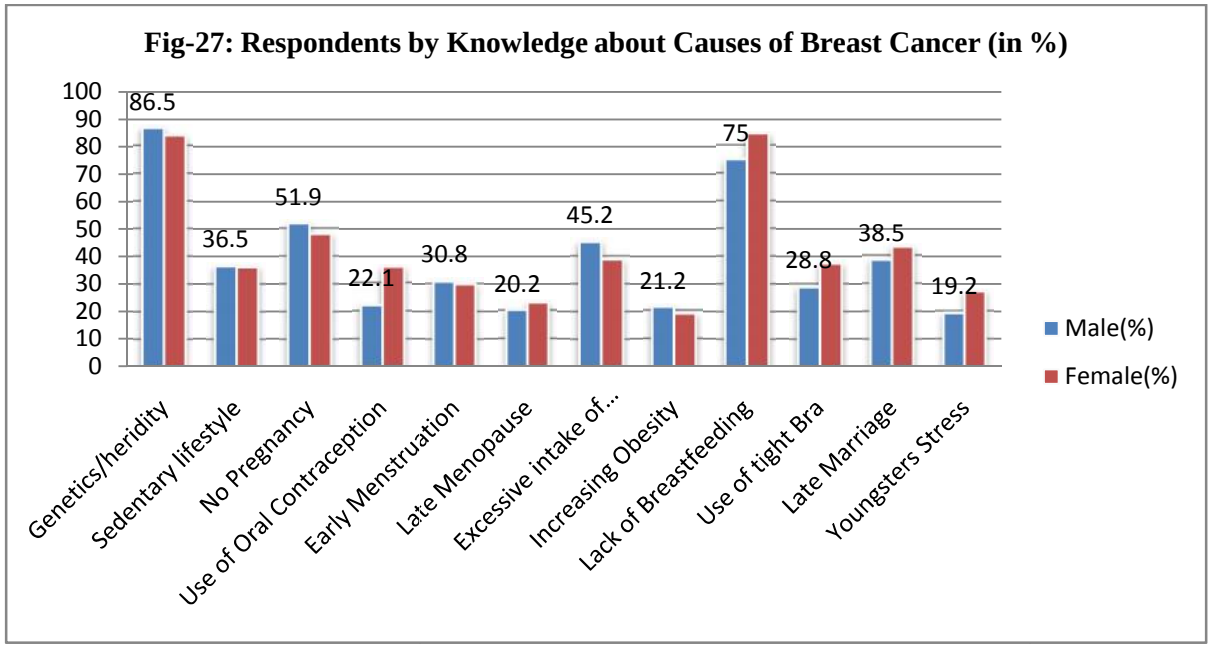
heard it from the same source which simply indicates that the front line workers like ASHAs does not have contributed much in the awareness regarding the Breast Cancers in both of the surveyed districts. Further, 64.0 male and 72.9 female respondents in district Ganderbal have heard it from the friends & relatives whereas 83.3 male and 84.3 female respondents have heard it from the same sources (Fig-26).

Fig-26: Respondents by Source of Knowledge about Breast Cancer (in%)



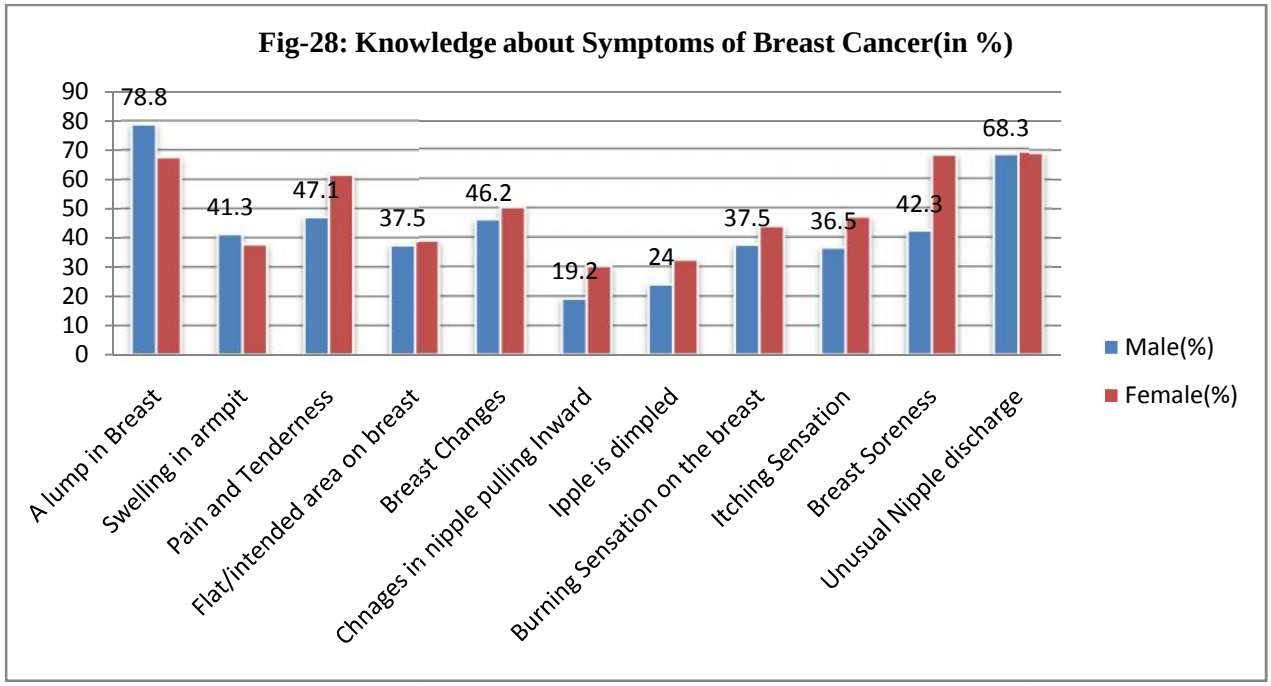
Knowledge about Causes of Breast Cancer

Table 27 reveals that 86.5 male and 83.8 female respondents believed that genetics and heredity is the cause of Breast Cancer whereas 51.9 male and 48.1 female respondents said that late or no pregnancy is the cause of the same. Moreover, 22.1 male and 35.7 female respondents argued that use of oral contraception is the cause of the Breast Cancer whereas only 21.2 male and 18.9 female respondents believed that increasing obesity is the cause of Breast Cancer. Further, 75.0 male and 84.3 female respondents claimed that lack of breastfeeding is the cause of Breast cancer. However, in district Ganderbal 90.0 male and 83.3 female respondents believed that genetics and heredity is the cause of Breast Cancer whereas in district Pulwama 83.3 male and 84.3 female respondents claimed the same. Moreover, 28.0 male and 32.3 female respondents in district Ganderbal claimed that sedentary lifestyle is the cause of Breast Cancer whereas 44.4 male and 40.4 female respondents in district Pulwama has claimed the same argument. Further, 76.0 male and 87.5 female respondents in district Ganderbal believed that lack of breastfeeding is the cause of Breast Cancer whereas 74.1 male and 80.9 female respondents in district Pulwama acknowledged the same statement (Fig-27).



Knowledge about Symptoms of Breast Cancer

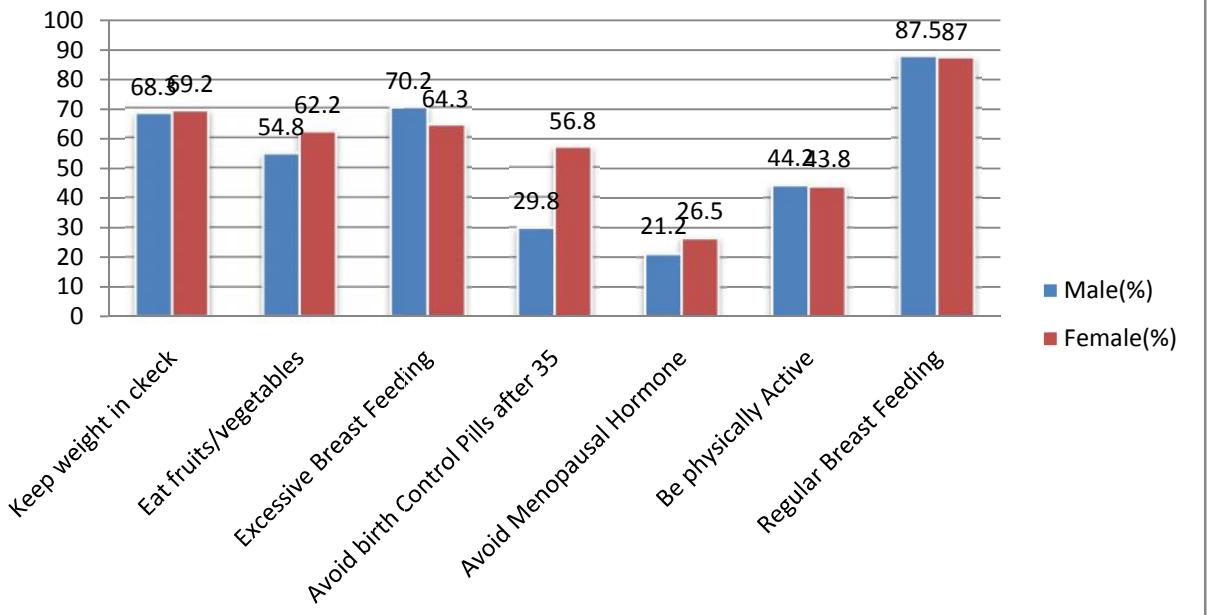
Table 28 reveals that 78.8 male and 67.6 female respondents believed that a lump in breast or underarm that does not go away is the symptom whereas 47.1 male and 61.6 female respondents believed that pain and tenderness is the symptom of Breast Cancer. Moreover, 68.3 male and 69.2 female respondents believed that unusual nipple discharge is the symptom of Breast Cancer whereas 42.3 male and 68.1 female respondents believed that breast soreness is the symptom of the same. However, in district Ganderbal 78.0 male and 78.8 female respondents claimed that a lump in breast or underarm that does not go away is the symptom of Breast Cancer whereas in district Pulwama 79.6 male and 64.0 female respondents believed on the same statement. Moreover, 50.0 male and 61.5 female respondents in district Ganderbal opined that pain and tenderness is the symptom of Breast Cancer whereas 44.4 male and 61.8 female respondents in district Pulwama believed on the same argument. Further, 64.0 male and 70.8 female respondents said that unusual nipple discharge is the symptom of Breast Cancer whereas 72.2 male and 67.4 female respondents acknowledged the same argument (Fig-28).



Knowledge about Preventive Measures to avoid Breast Cancer

Table 29 reveals that 63.3 male and 69.2 female respondents believed that one can protect him/herself from breast Cancer by keeping weight in check whereas 87.5 male and 87.0 female respondents believed that regular physical breast examination can protect one from the Breast Cancers. Moreover, 70.2 male and 64.3 female respondents said that excessive breast feeding can protect one from the Breast Cancer. However, in district Ganderbal 68.0 male and 67.7 female respondents believed that excessive breast feeding can protect one from the Breast Feeding whereas in district Pulwama 72.2 male 60.7 female respondents believed on the same statement. Moreover, 40.0 male and 43.8 female respondents in district Ganderbal believed that be physically active can protect from the Breast Cancer whereas 48.1 male 43.8 female respondents in district Pulwama believed on the same statement. Further, 90.0 male and 83.3 female respondents in district Ganderbal believed that 85.2 male and 91.0 female respondents acknowledged the same statement (Fig-29).

Fig-29: Knowledge about Preventive Measures to avoid Breast Cancer (in %)



Majority of respondents have heard Breast cancer from their relatives/friends and Cancer patients whereas as a few of the respondents have heard it from the doctors/health professional and front line works like ASHAs/ANMs. Genetics and heredity is the cause of Breast Cancer said by the majority of the patients while as a few of the respondents believed that no pregnancy is the cause of breast cancer. Regarding symptoms, majority of the respondents contented that a lump in breast or underarm that does not go away is the symptom of breast cancer whereas others said that unusual nipple discharge is the symptom for the same. Majority of the respondents believed that one can protect from Breast cancer by doing regular exercise and regular examination of breasts.

CHAPTER – VIII

SUMMARY AND FINDINGS

Main Findings

The number of registered cancer patients with Regional Cancer Centre has increased from 12675 in 2019 to 13012 in 2020 and 13354 in 2021. Almost 22,000 persons have died due to cancers from 2018 to 2021 in Jammu & Kashmir. Out of these 22,002 deaths, 986 (4%) persons died in 2018, 6824 (31%) patients died in 2019 and in 2020 the number of deaths rose to 7003 (32%) whereas the fatalities surged to 7189 (33%) in 2021, thus showing an upward trend.

It has been found that most of the respondents have awareness about Lung (93%), Stomach (96%), Breast (99%) and Prostate Cancers (89%) while as a very small proportion of respondents have knowledge about Cervical, Colon and other type of Cancers. The main sources of knowledge are mostly the friends/relatives, television and radio. Only 3% male and 6% female respondents have acquired the knowledge from ASHAs/ANMs about various types of cancers especially breast cancer. About one-third of respondents mentioned to have received information about cancers from doctors/health professionals and health campus which simply indicates that the role of health department is marginal.

Around 97 percent of respondents believed that the cause of lung cancer is the smoking and only few of them said that exposure to insecticides/pesticides is the cause of the lung cancers. A few female respondents have also mentioned that use of bio mass fuel is the major cause of lung cancer. Regarding the symptoms, 71 percent of male as well as female respondents believed that coughing that gets worse is the symptom of Lung cancer while as few respondents reported that chest pain and obesity is the symptom for the same.

Around three fourth (74%) of respondents believed that Lung Cancer can be prevented by avoiding the smoking while as some believed that it can be minimiized by taking plenty of fruits & vegetables and doing regular exercise. A total of 79 percent of respondents have knowledge of some investigation tests to detect the lung cancer and they have knowledge of availability of these diagnostics. Almost two third of the respondents know that these tests are available at SKIMS Soura and SMHS hospital Srinagar.

So far as the stomach cancer is concerned, around two-third of the respondents believed that change in diet pattern is the main cause of stomach cancer and 74 percent of respondents believed that indigestion as well as swelling is normally the symptom for the same. In order to protect from getting stomach cancer, 59 percent of respondents believed that regular exercise and avoiding the uncovered and marketed foods can prevent one from the stomach cancer in the valley.

Around 94 percent of respondents who have heard about the prostate cancer believed that age and animal fat is the cause for the same while a few believed that high BP is the cause of prostate cancer. Normally trouble in urinating and blood in urine is the major symptom of prostate cancer

opined by most of the respondents while as few believed that blood in the semen is the symptom for the same. A total of 81 percent of respondents believed that avoiding animal fat diet and regular exercise can prevent one from the prostate cancer.

Half of the respondents have heard about breast cancer from their relatives/friends and cancer patients whereas only a few have heard it from the doctors/health professional and front line works like ASHAs/ANMs. Genetics and heredity as a cause of breast cancer was reported by 52% of the patients while as a few of the respondents believed that no pregnancy is the cause of breast cancer. Regarding symptoms, 68 percent of the respondents expressed that a lump in breast or underarm that does not go away is the symptom of breast cancer whereas others said that unusual nipple discharge is the symptom for the same. Almost 87 percent of the respondents believed that one can protect herself from breast cancer by doing regular exercise and regular examination of breasts.

Recommendations

It is suggested that a comprehensive campaign is needed to educate people particularly those involved in horticultural/agricultural activities about the causes of cancers and preventive measures to be taken while dealing with pesticides/insecticides/chemicals.

The pesticides/insecticides/fertilizer manufacturing and marketing companies as part of their Corporate Social responsibility should contribute in organizing cancer awareness programmes and educate the consumers or users about the precautions to be taken while spraying insecticides/pesticides. Further these companies and their distributors may provide consumers some apparatus like gloves, masks, goggles as preventive measures. Further, the instructions written on the pesticides/chemical bags need to be neat and clear, so that one can easily read and understand.

In Kashmir valley, dedicated cancer screening clinics are non-existent and hence increased cancer awareness among general population can be one of the measures to prevent cancer. Many of the myths associated with cancers among people in rural Kashmir like breast cancer being infectious, non-treatable and non-curable, and the fear of breast removal need to be removed. Awareness camps by female experts about BSE in remote areas will also help in early detection of the disease and hence decreasing the mortality rate of patients. Mobile mammography clinics can also play an important role in this process.

Although HWCs are expected to play an important role in spreading awareness, screening, referral, continuum of care and follow-up of cancers but it seems that their potential has not yet been used to achieve these objectives. It is suggested that there is a need to evaluate the performance of H&WCs and identify the challenges and bottlenecks, due to which they are unable to realize their potential.

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Reference:

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Appendices – I

Table-1: Distribution of Households by Background Household Characteristics.							
Background Household Characteristics		Total		District			
				Ganderbal		Pulwama	
		No.		No.		No.	
Source of drinking water	Piped water	237	79.0	131	87.3	106	70.7
	Tube well	45	15.0	2	1.3	43	28.7
	Spring Water	14	4.7	14	9.3	0.0	0.0
	Water Purifier	2	0.7	1.0	0.7	1.0	0.7
	Others	2	0.7	2	1.3	0.0	0.0
Type of toilet facility	Flush	272	90.7	137	91.3	135	90.0
	Pit latrine	28	9.3	13	8.7	15	10.0
Fuel Used	Electricity	224	74.7	102	68.0	122	81.3
	LPG	68	22.7	46	30.7	22	14.7
	Wood	8	2.7	2	1.3	6.0	4.0
Type of House	Pucca	234	78.0	109	72.7	125	83.3
	Semi-pacca	58	19.3	40	26.7	18	12.0
	Kachha	8	2.7	1.0	0.7	7	4.7
Type of Ration card	APL	127	42.3	57	38.0	70	46.7
	BPL	167	55.7	87	58.0	80	53.3
	No Card	6	2.0	6	4.0	0.0	0.0
Designated area for hand washing	Yes	162	54.0	87	58.0	75	50.0
	No	138	46.0	63	42.0	75	50.0
Caste	ST OBC	37	12.3	21	14.0	16	10.7
	General Caste	263	87.7	129	86.0	134	89.3
Total		**300**	**100.0**	**150**	**100.0**	**150**	**100.0**

Table-2: Distribution of Households by Household Consumer Items.						
Household Consumer Items	Total		District			
			Ganderbal		Pulwama	
	No		No		No	
TV	191	63.7	86	57.3	105	70.0
Fridge	226	75.3	112	74.7	114	76.0
Computer	60	20.0	28	18.7	32	21.3
Internet	274	91.3	139	92.7	135	90.0
Smart Phone	289	96.3	142	94.7	147	98.0
Motorcycle	107	35.7	50	33.3	57	38.0
Car	117	39.0	52	34.7	65	43.3
Tractor	7	2.3	4	2.7	3	2.0
Total	300	100.0	150	100.0	150	100.0

Table-3: Distribution of Households by Ownership of land .

Type of Land	Total		Name of District			
	1	2	Ganderbal		Pulwama	
	No.		No.		No.	
Land for growing rice/cereals	169	56.3	126	84.0	43	28.7
Land for growing fruits	144	48.0	16	10.7	128	85.3
Land for growing vegetables	227	75.7	108	72.0	119	79.3
Total	**300**	**100.0**	**150**	**100.0**	**150**	**100.0**

Table-4: Distribution of use of Pesticides/Insecticide.

Type of Chemicals	Type	Total		Name of District			
				Ganderbal		Pulwama	
		No.		No.		No.	
Use chemicals or pesticides insecticides	Yes	243	81.0	110	73.3	133	88.7
	No	57	19.0	40	26.7	17	11.3
Total		**300**	**100.0**	**150**	**100.0**	**150**	**100.0**

Table-5: Distribution of Households by Person involved in Spraying pesticides/chemicals.

Type of	Total		Name of District			
			Ganderbal		Pulwama	
	No.		No.		No.	
Household men	206	84.8	90	81.8	116	87.2
Household women	71	29.2	37	33.6	34	25.6
Household children	5	2.1		0.0	5	3.8
Hired persons	40	16.5	12	10.9	28	21.1
Total	**243**	**100.0**	**110**	**100.0**	**133**	**100.0**

Table-6: Distribution of Households by Knowledge of precautions while dealing with insecticides/pesticides

Type of Equipments	Total		Name of District			
			Ganderbal		Pulwama	
	No.		No.		No.	
Use gloves	202	67.3	115	76.7	87	58.0
Use Mask	229	76.3	111	74.0	118	78.7
Use Apron	90	30.0	21	14.0	69	46.0
Use spectacles	79	26.3	26	17.3	53	35.3
Cover head and nose with cloth	251	83.7	125	83.3	126	84.0
Other specify	4	1.3	3	2.0	1	.7
Total	**300**	**100.0**	**150**	**100.0**	**150**	**100.0**

Table-7: Distribution of Respondents by Background Characteristics.

Characteristics		Total		Gender				Name of Districts							
								Ganderbal				Pulwama			
		No.		Male		Female		Male		Female		Male		Female	
Se x	Male	120	40.0	No.		No.		52	100			61	100	0	

	Female	180	60.0	0	0	0	0	0	0	98	100	0	0	89	100
Age of respondent	< 30	81	27.0	26	23.0	55	29.4	18	34.6	31	31.6	8	13.1	24	27.0
	31-44	101	33.7	35	31.0	66	35.3	11	21.2	30	30.6	24	39.3	36	40.4
	45-59	73	24.3	29	25.7	44	23.5	13	25.0	22	22.4	16	26.2	22	24.7
	60 and +	45	15.0	23	20.4	22	11.8	10	19.2	15	15.3	13	21.3	7	7.9
Education/ Grade completed	Illiterate	65	21.7	12	10.6	53	28.3	4	7.7	28	28.6	8	13.1	25	28.1
	Primary	2	0.7	1	0.9	1	0.5	1	1.9	1	1.0	0	0	0	0
	Middle	16	5.3	8	7.1	8	4.3	6	11.5	4	4.1	2	3.3	4	4.5
	Matriculate	78	26.0	28	24.8	50	26.7	12	23.1	28	28.6	16	26.2	22	24.7
	12^{th}	53	17.7	22	19.5	31	16.6	9	17.3	14	14.3	13	21.3	17	19.1
	Graduate	51	17.0	28	24.8	23	12.3	14	26.9	14	14.3	14	23.0	9	10.1
	PG	35	11.7	14	12.5	21	11.2	6	11.5	9	9.2	8	13.1	12	13.5
Marital status	Married	218	72.7	82	72.6	136	72.7	32	61.5	69	70.4	50	82.0	67	75.3
	Unmarried	70	23.3	30	26.5	40	21.4	20	38.5	22	22.4	10	16.4	18	20.2
	Widowed	12	4.0	1	0.9	11	5.9	0	0	7	7.1	1	1.6	4	4.5
Occupation	Unemployed	15	5.0	6	5.3	9	4.8	4	7.7	5	5.1	2	3.3	4	4.5
	Employed	56	18.7	39	34.5	17	9.1	15	28.8	7	7.1	24	39.3	10	11.2
	Skilled labour	9	3.0	8	7.1	1	.5	4	7.7	1	1.0	4	6.6	0	0
	Labour	32	10.7	30	26.5	2	1.1	14	26.9	2	2.0	16	26.2	0	0
	Business	14	4.7	13	11.5	1	.5	5	9.6	1	1.0	8	13.1	0	0
	Housewife	126	42.0	0	0	126	67.4	0	0	64	65.3		0	62	69.7
	Any other	48	16.0	17	15.0	31	16.6	10	19.2	18	18.4	7	11.5	13	14.6
Total		300	100	113	100	187	100	52	100	98	100	61	100	89	100

Table-8: Distribution of Respondents Knowledge about various Cancers.

Type of Cancer	Name of District				**Total**	
	Ganderbal		Pulwama			
	Male	Female	Male	Female	Male	Female
Lung	98.1	95.9	98.4	91.0	98.2	93.6
Stomach	96.2	93.9	96.7	94.4	96.5	94.1
Breast	96.2	98.0	88.5	100.0	92.0	98.9
Prostate	92.3	65.3	86.9	61.8	89.4	63.6
Oral	42.3	38.8	42.6	39.3	42.5	39.0
Cervical	11.5	13.3	32.8	15.7	23.0	14.4
Brain	69.2	57.1	63.9	67.4	66.4	62.0
Blood	86.5	79.6	83.6	88.8	85.0	84.0
Throat/food pipe	65.4	65.3	86.9	84.3	77.0	74.3
Skin	53.8	69.4	57.4	64.0	55.8	66.8
Liver	53.8	59.2	59.0	40.4	56.6	50.3
Colon	25.0	16.3	14.8	18.0	19.5	17.1
Any other	11.5	11.2	4.9	5.6	8.0	8.6

Table-9: Distribution of Respondents by Source of Knowledge about Cancers.

Source	Ganderbal		Pulwama		**Total**	
	Male	Female	Male	Female	Male	Female
Doctors/health professional	42.3	34.7	31.1	39.3	36.3	36.9
ASHAs/ANMs/AWWs	3.8	9.2	1.6	2.2	2.7	5.9
T.V	42.3	41.8	34.4	16.9	38.1	29.9

Radio	57.7	52.0	47.5	20.2	52.2	36.9
Social media/internet	59.6	45.9	60.7	52.8	60.2	49.2
Health camps	38.5	34.7	32.8	39.3	35.4	36.9
Print media /News paper etc.,	38.5	19.4	37.7	21.3	38.1	20.3
Friends & Relatives	84.6	84.7	93.4	95.5	89.4	89.8
Cancer patient	32.7	30.6	19.7	31.5	25.7	31.0
Religious leader	9.6	1.0	8.2	2.2	8.8	1.6
Any other	5.8	2.0	6.6	3.4	6.2	2.7

Table-10: Distribution of Respondents by Knowledge about Symptoms of Cancers in General.

Symptoms	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Unexplained lump or swelling	80.8	72.4	62.3	65.2	70.8	69.0
Persistent un explained pain	71.2	68.4	68.9	65.2	69.9	66.8
Unexplained bleeding	63.5	51.0	63.9	59.6	63.7	55.1
Persistent cough or hoarseness	53.8	41.8	41.0	33.7	46.9	38.0
Persistent change in bowel habits	48.1	34.7	39.3	28.1	43.4	31.6
Persistent difficulty in swallowing	59.6	46.9	49.2	57.3	54.0	51.9
Change in appearance of mole	44.2	31.6	19.7	20.2	31.0	26.2
Sore that does not heal	48.1	31.6	37.7	32.6	42.5	32.1
Unexplained weight loss	61.5	64.3	52.5	51.7	56.6	58.3
Difficulty of passing urine /stools	53.8	41.8	41.0	39.3	46.9	40.6
Weakness	73.1	73.5	59.0	62.9	65.5	68.4

Table-11: Distribution of Respondents by Source of Knowledge about Lung Cancer.

Sources	Ganderbal		Pulwama		**Total**	
	Male	Female	Male	Female	Male	Female
Doctor Health professional	40.8	37.6	33.3	39.5	36.9	38.5
ASHA/ANM/AWW	2.0	2.2	5.6	3.7	3.9	2.9
T.V	30.6	31.2	33.3	12.3	67.0	58.0
Radio	44.9	49.5	37.0	17.3	40.8	34.5
Social media/internet	55.1	38.7	59.3	45.7	57.3	42.0
Health camps	42.9	36.6	42.6	44.4	42.7	40.2
Print media/News paper etc	18.4	8.6	27.8	18.5	23.3	13.2
Friends/relatives	73.5	76.3	87.0	87.7	80.6	81.6
cancer patient	22.4	28.0	3.7	22.2	12.6	25.3
Religious leader	2.0	0.0	1.9	0.0	1.9	0.0
Any other	2.1	1.1	3.7	1.2	2.9	1.1

Table-12: Distribution of Respondents by Knowledge about Causes of Lung Cancer .

Causes	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Smoking	95.9	100.0	98.1	97.5	97.1	98.9
Second hand smoking	73.5	55.9	66.7	59.3	69.9	57.5
Chain smoking	69.4	63.4	61.1	45.7	65.0	55.2

Air pollution	51.0	46.2	64.8	69.1	58.3	56.9
Using bio mass fuel	51.0	53.8	50.0	63.0	50.5	58.0
Exposure to Radon	36.7	28.0	25.9	17.3	31.1	23.0
Living condition	42.9	31.2	46.3	39.5	44.7	35.1
Family history	83.7	86.0	66.7	70.4	74.8	78.7
Exposure to insecticides/pesticides	44.9	32.3	59.3	50.6	52.4	40.8
Any other	0.0	3.2	5.6	1.2	2.9	2.3

Table-13: Distribution of Respondents by Knowledge about Symptoms of Lung Cancers .

Symptoms	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Coughing that gets worse DK	81.6	65.6	83.3	77.8	82.5	71.3
Chest pain	91.8	89.1	83.3	79.0	87.4	84.4
Shortness of breath	65.3	65.6	75.9	70.4	70.9	67.8
Wheezing	28.6	25.8	16.7	8.6	22.3	17.8
Coughing up blood	73.5	55.9	59.3	51.9	66.0	54.0
Feeling very tired all the time	44.9	46.2	35.2	45.7	39.8	46.0
Weight loss with no known cause	44.9	49.5	44.4	50.6	44.7	50.0
Bronchotis and pneumonia	38.8	38.7	40.7	43.2	39.8	40.8
Poor diet	24.5	28.0	11.1	2.5	17.5	16.1
Obesity	24.5	24.7	16.7	4.9	20.4	15.5
Any other	2.0	0.0	3.7	2.5	2.9	1.1

Table-14: Distribution of Respondents by Knowledge about Preventive Measures of Lung Cancers .

Preventive Measures	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Avoid smoking/hukkah/cigar	95.9	97.8	98.1	100.0	97.1	98.9
Avoid second hand smoking	77.6	55.9	70.4	70.4	73.8	62.6
Avoid chewing tobacco	73.5	66.7	64.8	54.3	68.9	60.9
Avoid pollution	44.9	53.8	57.4	62.5	51.5	57.8
Take healthy diet	34.7	45.2	31.5	21.0	33.0	33.9
Consume plenty of fruits/vegetables	32.7	41.9	50.0	40.7	41.7	41.4
Regular exercise	30.6	46.2	33.3	34.6	32.0	40.8

Table-15: Respondents by Knowledge about any Investigations to Detect Lung Cancers .

Knowledge of Investigations	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Have you heard about any investigation/laboratory test for detection of Lung Cancer.	83.7	74.2	75.9	80.2	79.6	77.0
	16.3	25.8	24.1	19.8	20.4	23.0

Table-16: Distribution of Respondents by Knowledge about Investigations to Detect Lung Cancer .

Type of Investigation	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
X-ray	82.9	73.9	78.0	70.8	80.5	72.4
Sputum test	48.8	40.6	56.1	56.9	52.4	48.5
CT scan	75.6	65.2	68.3	53.8	72.0	59.7
Needle biopsy	41.5	39.1	34.1	38.5	37.8	38.8

Table-17: Respondents by Knowledge about Place of Investigations to detect Lung Cancer						
Place of Investigation	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
SMHS Hospital	75.6	47.8	61.0	58.5	68.3	53.0
SKIMS	92.7	95.7	87.8	93.8	90.2	94.8
District Hospital	39.0	24.6	46.3	29.2	42.7	26.9
Private laboratory	51.2	31.9	48.8	30.8	50.0	31.3

Table-18: Distribution of Respondents by Source of Knowledge about Lung Cancer .						
Source of Knowledge	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Doctors/Health professional	39.6	40.0	34.0	39.3	36.6	39.7
ASHA/ANM/AWW	4.2	4.4	1.9	1.2	3.0	2.9
T.V	27.1	33.3	28.3	10.7	67.3	58.0
Radio	50.0	44.4	34.0	11.9	41.6	28.7
Social media/internet	58.3	34.4	64.2	48.8	61.4	41.4
Health camps	45.8	45.6	39.6	44.0	42.6	44.8
Print media/News paper etc.,	27.1	12.2	34.0	21.4	30.7	16.7
Friends & Relatives	66.7	73.3	81.1	89.3	74.3	81.0
cancer patient	20.8	21.1	9.4	13.1	14.9	17.2
Religious leader	2.1	2.2	3.8	0.0	3.0	1.1
Any other	0.0	2.2	3.8	0.0	2.0	1.1

Table-19: Distribution of Respondents by Knowledge about Causes of Stomach Cancer .						
Cause of Cancers	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Family history of stomach cancer	81.3	84.4	77.4	79.8	79.2	82.2
Helicobacter pylori infection	29.2	13.3	26.4	9.5	27.7	11.5
Epstein-bar virus infection	25.0	22.2	22.6	9.5	23.8	16.1
History of stomach ulcers or stomach polyp	54.2	46.7	47.2	44.0	50.5	45.4
A diet high in fatty/salty, smoked or pickled food	70.8	58.9	75.5	58.3	73.3	58.6
A diet that does not include many fruits and vegetables	41.7	38.9	58.5	35.7	50.5	37.4
Smoking	87.5	83.3	84.9	95.2	86.1	89.1
Chewing tobacco	75.0	68.9	66.0	42.9	70.3	56.3
Drinking too much alcohol	85.4	67.8	75.5	58.3	80.2	63.2
Any other	4.2	5.6	5.7	2.4	5.0	4.0

Table-20: Distribution of Respondents by Knowledge about Symptoms of Stomach Cancer .						
Knowledge of Symptoms	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Indigestion	87.5	65.6	81.1	76.2	84.2	70.7
Feeling bloated after meals	37.5	24.4	43.4	32.1	40.6	28.2
Loss of appetite	60.4	48.9	56.6	41.7	58.4	45.4
Stomach pain	72.9	75.6	75.5	77.4	74.3	76.4
Blood in your stool/black motion	41.7	38.9	47.2	29.8	44.6	34.5
Vomiting with blood	47.9	40.0	43.4	38.1	45.5	39.1

Weight loss for no reason	58.3	57.8	45.3	36.9	51.5	47.7
Trouble swallowing	43.8	43.3	45.3	39.3	44.6	41.4
Yellowish eyes or skin	20.8	28.9	17.0	16.7	18.8	23.0
Swelling in your stomach	50.0	35.6	50.9	41.7	50.5	38.5
constipation or diarrhea	29.2	24.4	11.3	2.4	19.8	13.8
Weakness or feeling tired	70.8	66.7	49.1	60.7	59.4	63.8
Heartburn	22.9	20.0	17.0	16.7	19.8	18.4

Table-21: Distribution of Respondents by Knowledge about Preventive Measures of Stomach Cancer .

Preventive measure	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Water boiled for 20 minutes before use	85.4	86.7	81.1	83.3	83.2	85.1
Meals should have regular and fixed time	72.9	52.2	81.1	65.5	77.2	58.6
Consume less salt	62.5	53.3	52.8	41.7	57.4	47.7
Avoid all uncovered and market food	95.8	90.0	79.2	72.6	87.1	81.6
Eat plenty of fruits and vegetables	41.7	38.9	58.5	35.7	50.5	37.4

Table-22: Distribution of Respondents by Source of Knowledge about Prostate Cancer .

Source of Knowledge	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Doctor/ Health professional	41.3	28.1	34.0	38.2	37.5	32.8
ASHA/ANM/AWW	0.0	7.8	2.0	1.8	1.0	5.0
T.V	26.1	35.9	26.0	10.9	26.0	24.4
Radio	54.3	43.8	22.0	23.6	37.5	34.5
Social media/Internet	56.5	35.9	58.0	56.4	57.3	45.4
Health camps	39.1	35.9	46.0	40.0	42.7	37.8
Print media/News paper etc	10.9	15.6	26.0	12.7	18.8	14.3
Friends& Relatives, Family members	67.4	67.2	78.0	90.9	72.9	78.2
Cancer patient	28.3	25.0	14.0	14.5	20.8	20.2
Religious leader	6.5	0.0	2.0	3.6	4.2	1.7
Any other	2.2	0.0	6.0	3.6	4.2	1.7

Table-23: Distribution of Respondents by Knowledge about Causes of Prostate Cancer.

Cause of Prostate Cancer	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Age	93.5	92.2	94.0	90.9	93.8	91.6
Family history of prostate cancer	84.8	71.9	68.0	67.3	76.0	69.7
High blood pressure	54.3	59.4	62.0	72.7	58.3	65.5
Obesity	50.0	29.7	36.0	18.2	42.7	24.4
High consumption of animal fat	54.3	42.2	56.0	36.4	55.2	39.5
Exposure to chemicals	45.7	28.1	38.0	47.3	41.7	37.0
Sexually transmitted infections	32.6	26.6	20.0	18.2	26.0	22.7
Vasectomy	26.1	12.5	14.0	7.3	19.8	10.1
Any other	2.2	4.7	0.0	7.3	1.0	5.9

Table-24: Distribution of Respondents by Knowledge about Symptoms of Prostate Cancer.						
Symptom	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Trouble urinating	87.0	75.0	92.0	83.6	89.6	79.0
Decreased force in the stream of urine	63.0	51.6	66.0	49.1	64.6	50.4
Blood in the urine	80.4	62.5	80.0	60.0	80.2	61.3
Blood in the semen	39.1	25.0	22.0	16.4	30.2	21.0
Bone pain	63.0	70.3	52.0	63.6	57.3	67.2
Losing weight without trying	52.2	59.4	56.0	65.5	54.2	62.2
Erectile dysfunction	37.0	14.1	20.0	14.5	28.1	14.3
Any other	13.0	1.6	2.0	3.6	7.3	2.5

Table-25: Respondents by Knowledge about Preventive measures to avoid Prostate Cancer .						
Preventive Measure	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Avoiding animal fat diet	87.0	68.8	76.0	69.1	81.3	68.9
maintain a healthy weight	56.5	54.7	42.0	63.6	49.0	58.8
Regular exercise	69.6	59.4	64.0	49.1	66.7	54.6
Stop smoking	87.0	71.9	64.0	70.9	75.0	71.4
Increasing vitamin D	50.0	39.1	16.0	18.2	32.3	29.4
Stay sexually active	30.4	17.2	26.0	16.4	28.1	16.8
Regular Health checkup	76.1	78.1	82.0	89.1	79.2	83.2

Table-26: Distribution of Respondents by Source about Knowledge of Breast Cancer .						
Source of Knowledge	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Doctor/Health professional	38.0	30.2	29.6	36.0	33.7	33.0
ASHA/ANM/AWW	6.0	10.4	3.7	3.4	4.8	7.0
T.V	30.0	32.3	14.8	11.2	22.1	22.2
Radio	48.0	41.7	22.2	11.2	34.6	27.0
Social media/Internet	46.0	33.3	48.1	42.7	47.1	37.8
Health camps	42.0	33.3	40.7	37.1	41.3	35.1
Print Media/New paper etc	30.0	19.8	27.8	16.9	28.8	18.4
Friends & Relatives, Family member	64.0	72.9	83.3	84.3	74.0	78.4
Cancer patient	28.0	29.2	5.6	15.7	16.3	22.7
Religious leader	4.0	0.0	0.0	2.2	1.9	1.1
Any other	6.0	0.0	0.0	2.2	2.9	1.1

Table-27: Distribution of Respondents by Knowledge about Causes of Breast Cancer (in 5).						
Causes of Brest Cancer	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Genetics and heredity	90.0	83.3	83.3	84.3	86.5	83.8
Sedentary lifestyle	28.0	32.3	44.4	40.4	36.5	36.2
Late or no pregnancy	58.0	50.0	46.3	46.1	51.9	48.1
Use of oral contraception	24.0	37.5	20.4	33.7	22.1	35.7

Early start of menstruation	32.0	32.6	29.6	27.0	30.8	29.9
Late menopause	20.0	27.1	20.4	18.0	20.2	22.7
Excessive intake of alcohol and smoking	34.0	34.4	55.6	43.8	45.2	38.9
Increasing obesity	28.0	25.0	14.8	12.4	21.2	18.9
Lack of breastfeeding	76.0	87.5	74.1	80.9	75.0	84.3
Use of tight bra	30.0	42.7	27.8	31.5	28.8	37.3
Late marriage	52.0	45.8	25.9	40.4	38.5	43.2
Youngsters Stress	18.0	31.3	20.4	22.5	19.2	27.0

Table-28: Distribution of Respondents by Knowledge about Symptoms of Breast Cancer .

Symptom of Breast Cancer	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
A lump in breast or underarm that doesn't go away	78.0	70.8	79.6	64.0	78.8	67.6
Swelling in your armpit or near your collarbone	44.0	41.7	38.9	33.7	41.3	37.8
Pain and tenderness	50.0	61.5	44.4	61.8	47.1	61.6
A flat or indented area on your breast	30.0	41.7	44.4	36.0	37.5	38.9
Beast changes such as a difference in the size, E-contour, texture, or temperature of your breast	46.0	50.0	46.3	50.6	46.2	50.3
Changes in your nipple pulling inward	16.0	30.2	22.2	30.3	19.2	30.3
Nipple is dimpled	30.0	39.6	18.5	24.7	24.0	32.4
Burning sensation on the breast	38.0	45.8	37.0	41.6	37.5	43.8
Itchy sensation on the breast	36.0	49.0	37.0	44.9	36.5	47.0
Develops breast soreness	46.0	69.8	38.9	66.3	42.3	68.1
Unusual nipple discharge	36.0	46.3	18.5	36.0	26.9	41.3
Unusual Nipple Discharge	64.0	70.8	72.2	67.4	68.3	69.2

Table-29: Respondents by Knowledge about Preventive measures to avoid Breast Cancer .

Preventive measures	Ganderbal		Pulwama		Total	
	Male	Female	Male	Female	Male	Female
Keep weight in check	68.0	62.5	68.5	76.4	68.3	69.2
Eat fruits and vegetables	66.0	65.6	44.4	58.4	54.8	62.2
Excusive Breast feeding	68.0	67.7	72.2	60.7	70.2	64.3
Avoid birth control pills after age of 35	34.0	60.4	25.9	52.8	29.8	56.8
Avoid menopausal hormone therapy	22.0	33.3	20.4	19.1	21.2	26.5
Be physically active	40.0	43.8	48.1	43.8	44.2	43.8
Regular physical breast examination	90.0	83.3	85.2	91.0	87.5	87.0

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