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Research Article

Cancer Patients and the Depression: A Case Study of Karachi

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ABSTRACT

The biomedical care for cancer has not been complemented by psychosocial progressions in cancer care. The objectives of the study are to find the prevalence of anxiety and depression amongst cancer patients in a hospital setting. Many patients were suffering from anxiety and depression. It the highest category suffering from depression and cancer. The prevalence of depression amongst cancer patients was high showing that importance should be given to screening and counseling of cancer patients for depression, to help them cope with cancer as a disease and its impact on their mental wellbeing. The frequency of female patients in our research was higher than those of male patients.

Keywords: Karachi, Cancer, Patients, Depression, Case Study, Pakistan.

INTRODUCTION

Cancer is an important cause of morbidity and mortality. Globally 12.7 million new cancer cases and 7.6 million deaths occurred in 2008. Almost 29 million people diagnosed with cancer within the five years previously were alive at the end of 2008. A diagnosis of cancer often leads to variety of symptoms like, shock, anxiety, grief, sadness and even depression(Xu et al., 2017). The rate of depression in cancer patients is estimated to be four times that of the general populations. The world mental Health Survey, an epidemiologic community based study conducted in 28 countries, found a life-time prevalence rate for depression in general population ranged from 3.3% in Nigeria to 21.4% in USA. The survey also revealed higher prevalence of depression in cancer patients as compared to general population the prevalence of depression in cancer patients was differently associated with cancer site(Stewart & Wild, 2017).

Up to 50% of patients with pancreatic cancer, 44% with lung cancer and 44% with breast cancer were depressed. In china up to 67% cancer patients have been reported to have depression. Distinguishing between normal degrees of sadness and depression in cancer patients is essential for delivering quality medical care. For patients to meet criteria for major depression, they must first of all have symptoms of dysphasia and/or anhedonia, defined as loss of interest or pleasure, pervasively for at least a 2-week period. Patients should then have at least four of the following symptoms or at least three of the following symptoms if they have both dysphoria and anhedonia: sleep disorder, appetite change, fatigue, psychomotor retardation/agitation, low self-esteem/guilt, poor concentration/

indecisiveness, and thoughts of suicide/suicidal ideation(Maciejowski & de Lange, 2017).

There are multiple factors which lead to development of depression in cancer patients. Important factors are the emotional impact of a cancer diagnosis, fear of death, disruption of key relationship, dependence, disability, and disfigurement, side effects of treatment, cancer site, stage and cerebral dysfunction associated with carcionmatiosis. Depression adversely affects cancer patients' quality of life, compliance with treatment, and relationship with their caretakers. The coexistence of cancer and depression is also associated with a significantly increased risk of death screening of depression and referrals to mental health specialists should be routinely conducted to reduce suffering and improve cancer patient's quality of life(Kensler et al., 2017).

In Pakistan 139,000 new cases of cancer (all types) were reported in 2008. Depression is reported to be 6% in general population and 20-66% in patients with cancer. Highest prevalence of depression in general population is reported to be in urban Sindh. Karachi, mini Pakistan is the largest city of the country as well as Sindh, inhabitant people from all ethnic and linguistic cultures. City also provides services to patients from all parts of Sindh, both urban and rural. In Pakistan,Pakistani people in general as well as in Sindh, with a better socio economic status get treatment from private hospital and those with low socioeconomic status from samples, taken from both public and private tertiary care teaching hospital of Karachi, with advanced diagnostics and management facilities(Villers et al., 2017).

AIMS AND OBJECTIVES

- To find out the frequency of depression in cancer patients treated in Karachi
- To find out association of socio-demographic profile of cancer patients with depression
- To know the frequency of common cancers in Karachi

RATIONALE OF THE STUDY

Depression adversely affects the quality of life of cancer patient and decrease the compliance with treatment and survival. Internationally large body of text is available on the topic of depression in cancer patients. Nationally and locally very limited studies have been conducted on this topic. Our study will be a valuable add of research on this topic.

SIGNIIFCANCE OF THE STUDY

The results and recommendations of the study will be shared with the hospitals/treatment centers providing care to cancer patients in Karachi. It is hoped that oncologists and related clinicians will develop a protocol for the identification and referral of depressed cancer patients to Psychiatrics.

LITERATURE REIVEW

On a sample of 50 males and fifty females, a cross sectional study conducted in Lahore revealed higher level of depression in cancer patients. There was no significant difference between genders. The study used HADS scale. The sample for the study was obtained from the Mayo Hospital, Inmol Hospital and Sheik Zayed Hospital in Lahore. The purposive sampling strategy was used. In a cross sectional study conducted between May 2006 and January 2007 to examine the frequency of depression and anxiety in patients with cancer on chemotherapy, in an outpatient department of a tertiary care hospital in Pakistan. HADS scale was used. It includes 60 diagnosed cancer patients. Fifty-two person patients have anxiety, depression or both. These disorders were twice more common in females(Khalid & Hanif, 2017). In a study (33%) one third of cancer patients were found to be depressed mainly affecting those who were receiving multimodality treatment or facing financial issues. Religious help was the main coping strategy for them(Rashid, Muhammad, Amin, Loya, & Hamann, 2017).

INTERNATIONAL STUDIES

The prevalence of major depression in cancer patients was reported to range from 6 to 42%. It reflects various cancer related variables, such as pain and low performance status as well as risks

for major depression. Be effective for depression. The world Mental Health Survey, an epidemiologic community based study conducted in 28 countries, found a life-time prevalence rate that ranged from 3.3% in Nigeria to 21.4% in the US. With regard to persons with cancer the rate of depression seems to be differently associated with cancer site. For example: it is higher in pancreatic cancer (33%-50%) and lung (11%-44%), and it is lower in lymphoma (8%-19%) and colon (13%and 25%)(Rashid et al., 2017).

For breast cancer—likely the most studied cancer site- the prevalence ranges from 1.5% to 46%.A cross sectional study conducted in Kerala, India. A total of 117 patients taking chemotherapy were evaluated for the presence of anxiety and depression. Hospital anxiety and depression scale (HADS) used. The interview was carried out while the patients were waiting in the day care for their chemotherapy. 16% had depression. Higher proportion of depression was observed in men compared to women, the mean age of the patients was 45.4+15.8 year, and there were 62 (53%) males and 5 (47%) females. At the time of interview nearly three forth of the patients were married and over 50% were Hindus. Nearly 45% of the patients were poor and 31% belonged to upper social class. 28% had lympho-proliferative disease and 17% had hematological malignancies. Majority of the patients 30.8% had sage III disease(Faisal et al., 2017), (Yasmeen & Hannan, 2017).

The study was conducted at Department of Hematology/Oncology, Marshfield Clinic-Wausau Center, Wausau, WI 54401, USA. The objective of this study was to compare the effect of depression on the risk of death in adults with and without cancer and by specific cancer site among those with cancer. This was Epidemiologic Follow-up study. In this population-based National Health and Nutrition Examination Survey (NHANES). Data on 10,025 participants analyzed. Started in 1982. (Mateen, Adil, Hashmi, Duraishi, & Abdullah, 2017).

In china, a total of 1,217 cancer patients were interviewed, each participant was asked to complete a self-administered questionnaire. The anxiety status, depression status, disease stage, tumor site, pain status, and performance status of the patients during the week prior to the interview were assessed. Depression prevalence rates 66.72%, the prevalence rates of depression were 60.62% for head and neck cancer, 77.19% for lung cancer, 57.9% for breast cancer, 75.81% for esophagus cancer, 63.40% for stomach cancer, 68.42% for liver cancer, 54.37% for colorectal cancer, and 71.13% for cervix cancer. The factors influencing depression of patients were performance status ($P<0.0001$), pain ($P=0.0003$), age ($P<0.0001$), and education level ($P<0.0001$).).A descriptive analytical study was conducted on a purposive sample of 50 cancer patients (different types of cancer) from both sexes who were admitted to Radiation and Nuclear Medicine Hospital in Baghdad for the purpose of giving chemotherapy for the period from April 4th to June 20th, 2008 e result reveals that that there is no significant difference are found in the level of depression regarding chemotherapy side effects(Amin et al., 2017).

RESEARCH METHODOLOGY

It was a cross sectional descriptive study conducted during August 2013. One hundred diagnosed cancer patients. Fifty from a private sector teaching hospital (Bait-ul-Sakoon of Ziauddin medical university Hospital,Karachi) and fifty from public sector teaching hospital (Jinnah post graduate medical center,Karachi). The patients were recruited from day care centers where patients visit to take their chemo/radio session. Convenient sampling method was used. All patients present at day care center on the interview day were surveyed. Patients already interviewed previously were excluded. Inclusion Criteria:

- Patients 18 years and above
- Only those patients who were agree to participate in the study

Exclusion Criteria:

- Patients who were terminally ill.
- Patients below 18 years
- Patients with impaired cognition and dementia.

STUDY INSTRUMENT

A validated Urdu version of Patient Health Questionnaire (PHQ-9)

PHQ (patient health questionnaire) is a simple, easy screening and rapid diagnostic tool for assessing the mental health disorders, this questionnaire is designed in such a way that it not only diagnoses the depression but also asses the severity of depression.

If gives the idea about the extent of depressive symptoms such as anxiety, loss of interest in life, feeling low and hopeless and many others by its scoring system. The criterion of scoring was:

0=not at all
1= from several days
2=more than half the days
3=nearly every day

The scoring was from 0 to 27 which show the severity of depression: 0-4=none, 5-9=mild, 6-19= moderate, 20-27=severe

According to this scoring we assess the severity of depression in a patient.

SURVEY METHOD

- Permission from hospital administration was taken.
- Each study participant was approached by the researcher themselves.
  Objectives of the study explained and verbal consent was taken. They were interviewed and their responses were directly entered in already pre tested questionnaire.
- In JPMC Survey was conducted in morning hours from 9am to 2pm. In Bait-ul-Sakoon, Ziauddin university Hospital during evening hours from 5pm to 9pm.
- Survey was completed in 12 working days

PRETEST

Pretest was conducted on twenty-five participants, in OPD patients of Bait-Us-Sakoon, Ziauddin Hospital,Karachi.

DATA MANAGEMENT

- Data was entered, cleaned and analyzed by Statistical package for social scientist program (SPSS-V20)

REPORT WRITING

- Done on personal computer by using MS word program.
- Charts were created MS excel program

RESULTS

Mean age of our study population was 45 years (Table5.1). Our study population consists of 53% males (Fig 5.1) Among our study population, 22% patients were illiterate (Table 5.2). 78% patients of our study population were married (Fig 5.2). 66% patients of our total study population were married (Fig 5.2). 66% patents of our total study population were from Karachi (Fig 5.3). 62% of our Study population had nuclear family (Fig 5.4). 70% of total population had problem meeting the cost of treatment (Fig 5.5). 34% were very religious (Table 5.3). The mean monthly income of our study population was 13262 PKR (Table 5.4). 94% of our patient stated that their family is supportive. Among our study population, 15% patients were unemployed (Tbale 5.5). Most common cancer among our study population was breast cancer followed by oral cancer (Tbale 5.6). 53% patients of our study population were diagnosed 6 months back (Fig 5.6). Out of total population, 52% patients were on rediotherapy (Fig 5.7)

Total of 65% of our study population was found to have depression out of which 5% patients were very severely depressed (Table 5.8, Fig 5.8). As per PHQ-9 questionnaires the most common symptom was fatigue followed by feeling down/depressed (Table 5.7). problems meeting life expenses and cost of treatment and chemotherapy was significantly difference with regards to other socio demographic variables. Also there was no difference in frequency of depression in public and private hospital patients.

AGE OF THE FPATINETS

TABLE 5.1 Frequency distribution of patient's age

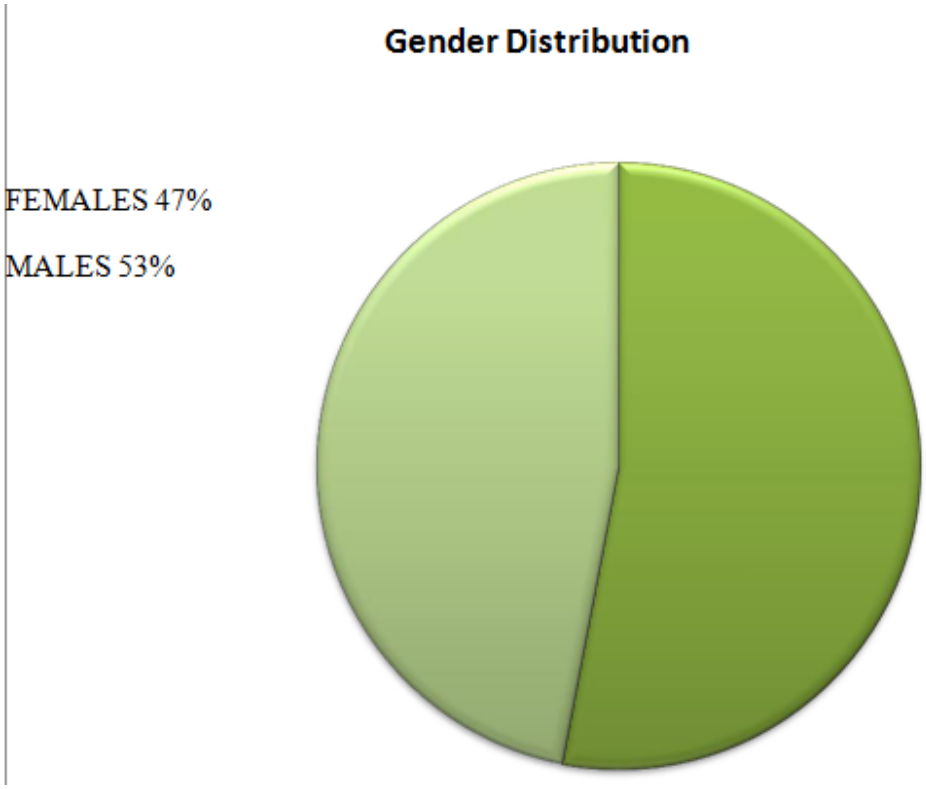
AGE	FREQUENCY
MEAN	45.4
MINIMUM	18
MAXIMUM	80
18-49 YEARS	36
50-64 YEARS	55
65 YEARS AND ABOVE	9

GENDER OF THE PATIENTS

Study include 100 individuals with 53% Males and 47% Females

Graphical representation of Gender distribution

Fig 5.2



EDUCATIONAL STATUS OF PATIENTS:

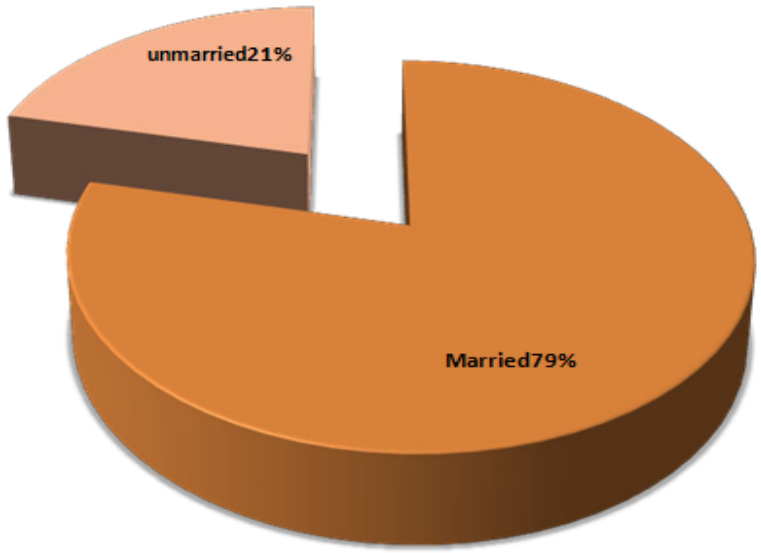
Table 5.3

Frequency distribution of education status

Education status	Frequency	Percentage
Illiterate	22	22%
Under graduate	67	67%
Graduate	11	11%

MARITAL STATUS OF PATIENTS

Fig. 5.4 Graphical representation of material status of patient.



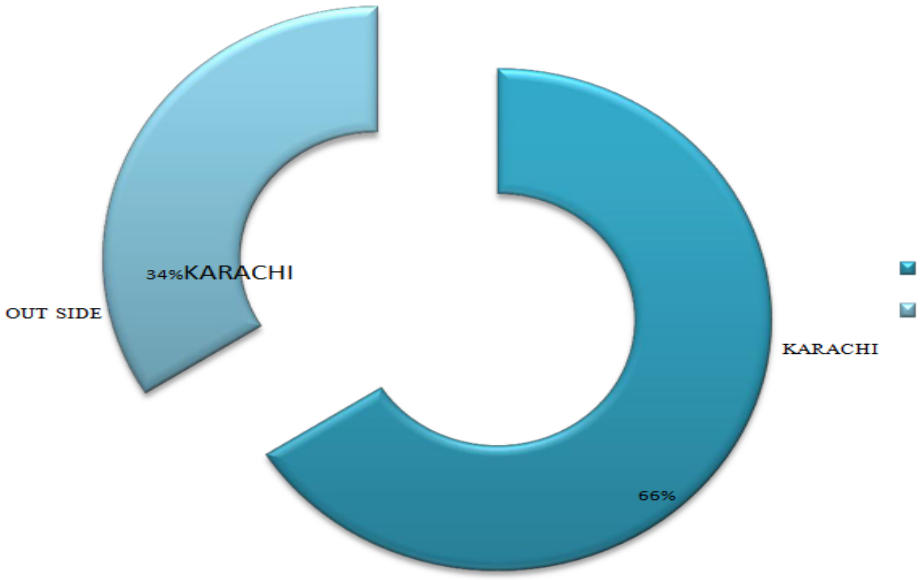
PATIENT'S LEVEL OF RELIGIOUSNESS

Table 5.5 Frequency distribution of religiousness of patients

RELIGIOUSNESS	FREQUENCY	PERCENT
VERY RELIGIOUS	34	34%
RELIGIOUS TO SOME EXTENT	63	63%
NO COMMENTS	3	3%

RESIDENCE OF STUDY POPULATION

Fig. 5.6 Graphical representation of Residence of patients



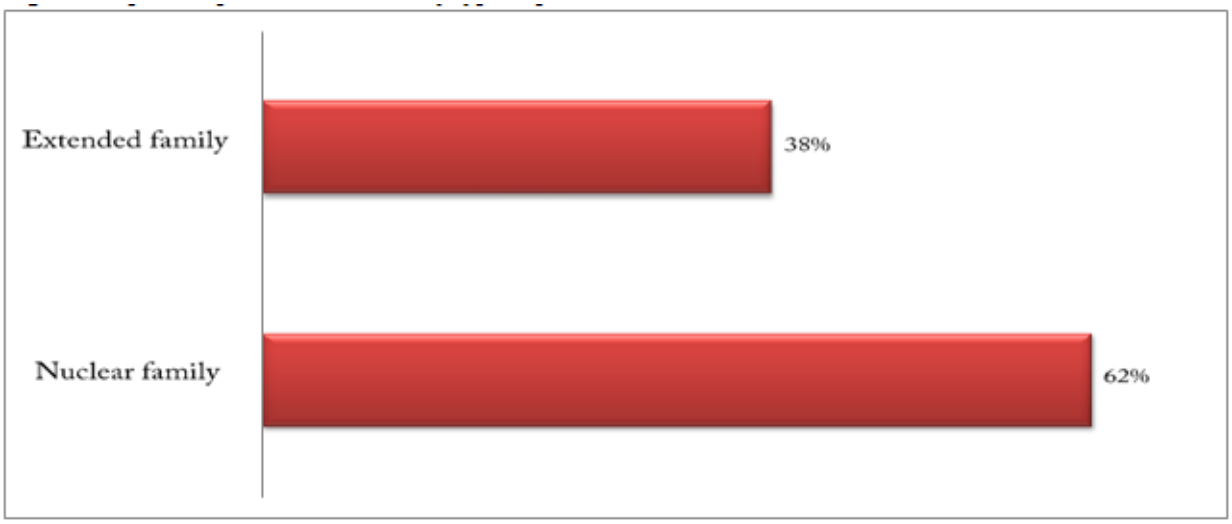
MONTHLY INCOME OF PATIENTS:

TABLE 5.7

MONTHLY INCOME	Amount in PKR
Mean	13,262
Minimum	2500
Maximum	70,000
Frequency distribution of income	
Less than 10,000	44%
10,000 – 20,000	46%
More than 20,000	10%

FAMILY TYPE OF THE PATIENTS:

Fig. 5.8 Graphical representation of family type of patients



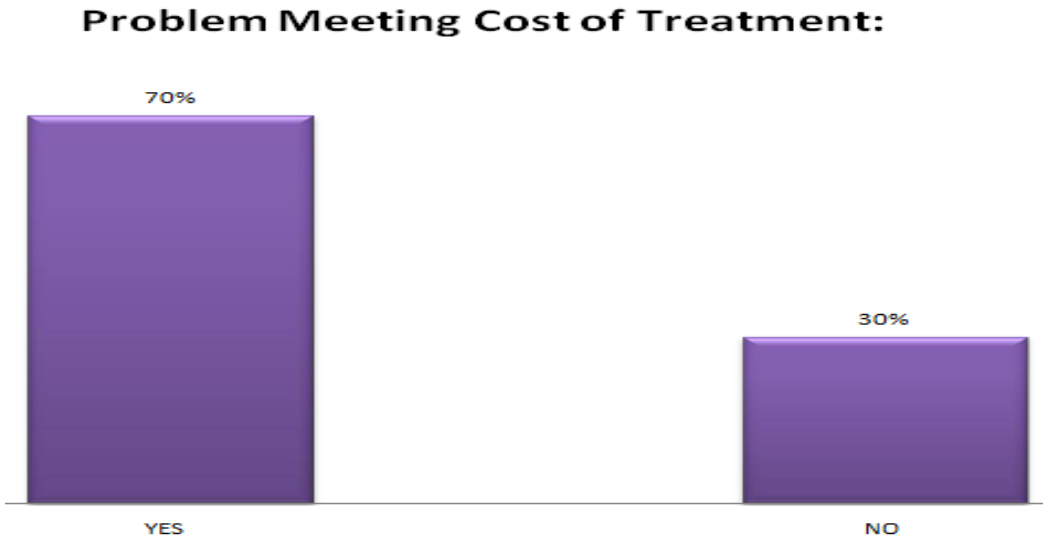
OCCUPATIONAL STATUYS OF PATIENTS

Table 5.9 Frequency distribution of occupation of patients:

OCCUPATION	Frequency	Percent
HOUSE WIFE	41	41%
PRIVATE BUSINESS	21	21%
SERVICE	23	23%
UNEMPLOYED	15	15%

PATIENTS FACING PROBLEM MEETING COST OF TREATMENT

Fig 5.10 Graphical representation of problem meeting cost of treatment:



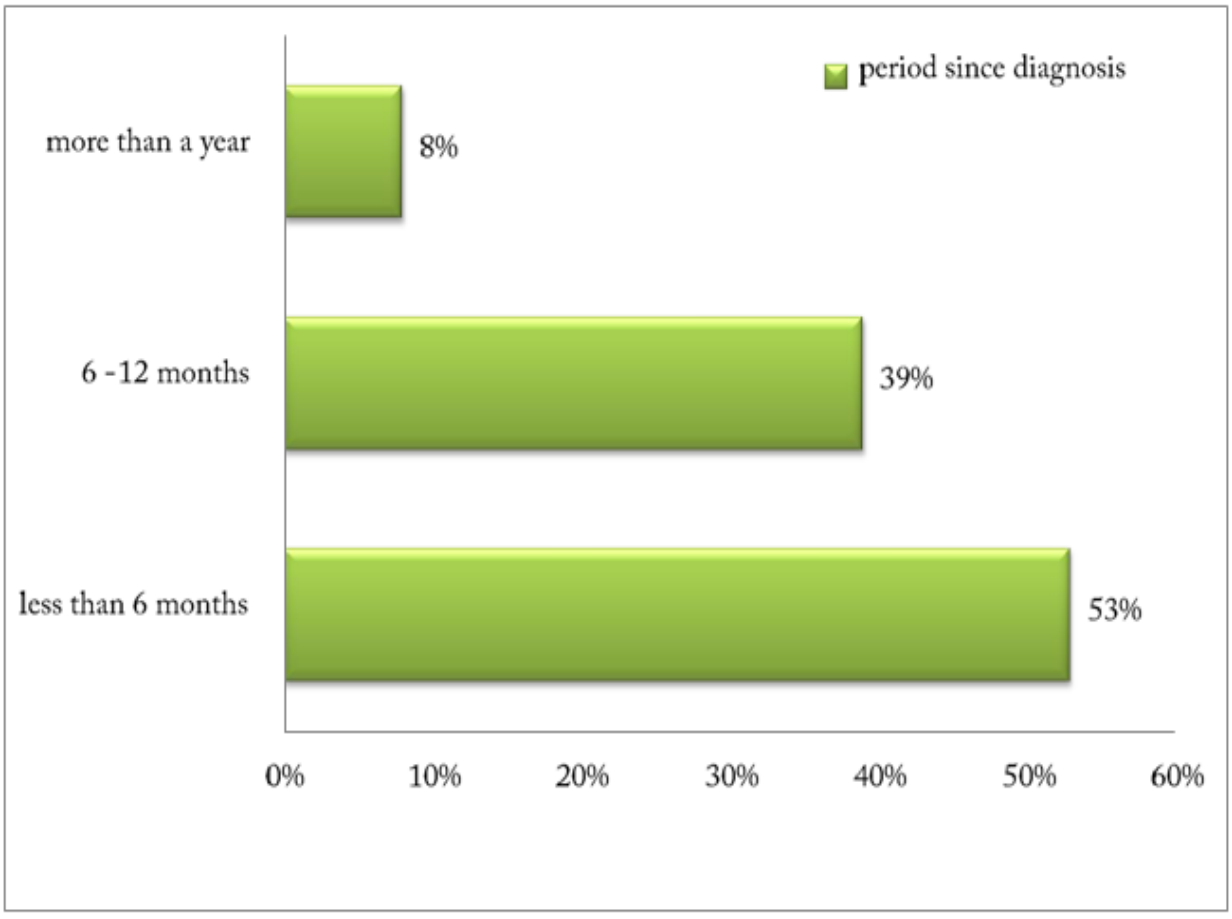
COMMON SITE OF CANCER AMONG OUR STUDY POPULATION

Table 5.11 Frequency distribution of site of cancer

CANCER SITE	FREQUENCY	PERCENTAGE
BREAST	28	28%
ORAL CAVITY (including lips)	24	24%
GIT	19	19%
HEAD AND NECK (excluding oral cavity and lips)	11	11%
LUNG	6	6%
OTHERS	12	12%

PERIOD SINCE DIAGNOSIS

Fig. 5.12 Graphical representation of period since diagnosis of cancer



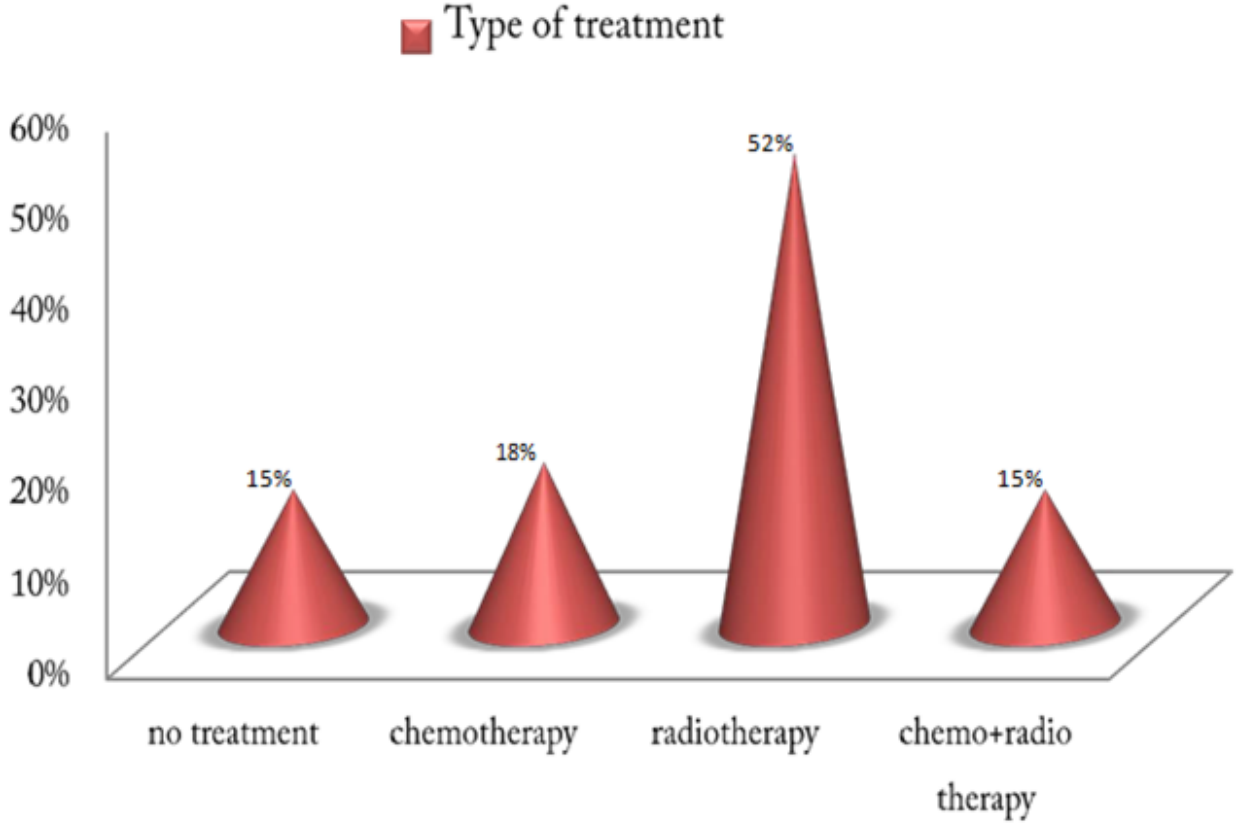
DEPRESSION SYMTOMS AS PER PHQ QUESTIONNAIRE

Tabel 5.13 Frequency of distribution of depression symptoms as per PHQ-9 questionnaire

Frequency Of Depression Symptoms As Per PHQ-9 Questionnaire	Percent
Loss of interest in doing things	57%
Feeling down/depressed	65%
Trouble in sleep	71%
Feeling tired	85%
Altered eating habits	70%
Feeling failure	62%
Trouble in concentration	60%
Suicidal thoughts	18%
Slow activity/restlessness	60%

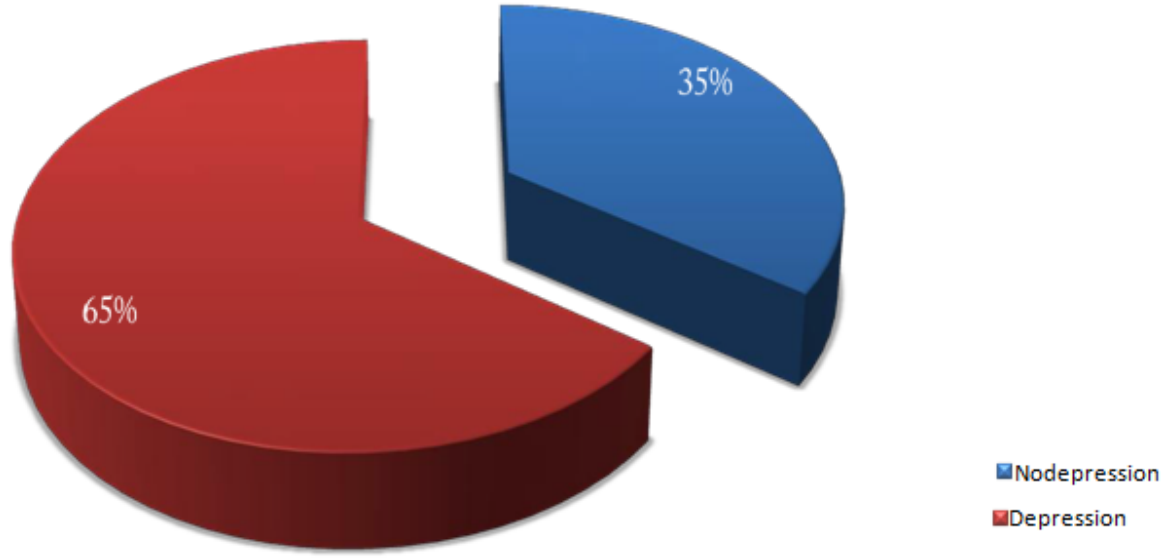
TYPE OF TREATMENT

Fig 5.14 Graphical representation of type of treatment



FREQUENCY OF DEPRESSION IN CANCER PATIENTS

Fig 5.15 Graphical representation of depression in cancer patients



SEVERITY OF DEPRESSION IN CANCER PATIENTS

Table 5.16 Frequency distribution of Depression severity

DEPRESSION SEVERITY	FREQUENCY	PERCENT
NO	35	35%
MILD TO MODERATE	28	28%
SEVERE	32	32%
VERY SEVERE	5	5%

DISCUSSION

In our study breast cancer was the leading cancer followed by oral cavity and lips cancer. These results are in consistence with world health organization report. Because of pan, beetle nut and tobacco chewing habit of people in Pakistan as well as in India, oral cancer has superseded the lung cancer. Sixty-five percent of our patients had depression ranging from mild to severe depression. These results are consistent with earlier studies in china as well as in Pakistan. in china 55 – 67% cancer patients had depression in one-day study in Pakistan 66% cancer patients had depression prevalence of depression in general population of urban areas if Sindh is reported to be 16 %. Several studies in past has reported that depression in cancer patients is four times higher than in general population. Based in this fact estimated prevalence of depression in cancer patients in our population would be up to 64%. This is in accordance with the results of our study. Financial strain: low income is an established risk factor for depression in general population. This also hold for cancer patients as evident by our study and earlier study where faith of depression in cancer patients with financial strain was higher than those patients who were financially sound and able to meet the life and treatment

experiences. Fatigue: most of the earlier studies both globally, nationally and in our study as well, have found a consistent relationship with depression and fatigue in cancer patients. Fatigue is the side effect of both chemotherapy as well as radiotherapy. Additionally, fatigue is a common complaint of all chronic diseases including cancer. So the association if fatigue with depression in cancer patients are to be interpreted very cautiously.

Chemotherapy: in our study all patients undergoing chemotherapy had depression. Chemotherapy and other cancer treatment were responsible for 40-60% distress. In another study higher proportion of breast cancer patients with more than 3 chemotherapy sessions were depressed as compared with less than 3 chemotherapy cycles. In this study there was also a statistically significant difference in depression rate were reported between those who with responded to responded to treatment as compared to those who did not responded to chemo therapy.

CONCLUSIONS AND RECOMMENDATIONS

Cancer of the breast was the leading cancer followed by oral cavity cancer in both sexes. Frequency of depression (65%) was very high. A problem meeting life expenses and cost of treatment and chemotherapy was significantly associated with occurrence of depression in our patients. there was no significant difference with regards to other socio demographic variables including gender and cancer site. also there was no difference in frequency of depression in public and private hospital patients. oncologist need to establish the culture of routinely screening and properly treating depression in cancer patients by a psychologist/ psychiatrist.

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