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ASSESSMENT OF LEVEL OF ANXIETY AND DEPRESSION AMONG PEOPLE LIVING WITH CANCER IN SELECTED CANCER HOSPITAL KOLKATA, WEST BENGAL

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ABSTRACT

Introduction: A cancer diagnosis can have a wide-ranging impact on mental health. The prevalence of anxiety and depression among people with cancer is high among those with no previous psychiatric history.

Aim: This study aims to find out anxiety and depression among people living with cancer and association between anxiety, depression and selected demographic variables.

Methods: A descriptive study was conducted to detect the level of anxiety and depression and association them with demographic variables. Total 200 participants were selected through non- robability purposive sampling technique. In this study the conceptual framework was based on Rosenstock, Strecher, and Becker Health Belief Model. Data were collected through semi structured questionnaire, GAD-7 Questionnaire and PHQ-9 Questionnaire to assess socio-demographic information, level of anxiety and depression respectively.

Result: Results revealed that 51% people living with cancer had mild anxiety and 10% participants had severe level of anxiety; 31% participants had major depression mild and only 5% had severe level of depression. Chi-square test revealed that there was a significant relationship between anxiety with religion, monthly income and social support and level of depression of people living with cancer were significantly associated with age and social support at the ($P<0.05$) and ($P<0.001$) level of significant.

Conclusion: The people living with cancer had different level of anxiety and depression. Moreover, anxiety of people living with cancer is associated with religion, monthly income and social support and depression is associated with age and social support.

Keywords: Anxiety, Depression, People Living with Cancer

1. INTRODUCTION

Mental health concerns every-one including cancer patient. It affects patient ability to cope with and manage changes. The mental health need of people with cancer, with or without a prior psychiatric history, is often given little attention during and after cancer treatment.

A diagnosis of cancer is associated with heightened risk of common mental disorder, which may adversely affect cancer treatment and recovery, as well as quality of life and survival among patient who have no previous history of mental illness. Zhu et al. (2017)

Cancer patients suffered from various types of psychological problems such as depression and anxiety and can cause an additional burden during their treatment, if neglected, complication of cancer influencing quality of life, making it more challenging in terms of its management and control, compliance during the treatment course, duration of hospital stay, and ultimately survival rate.

Depression has extensively effects on cancer patients and the prevalence of anxiety and depression among people with cancer is high among those with no previous psychiatric history. Pitman et al. (2018), Walker et al. (2013)

Cancer is a serious and potential life-threatening illness which has an effect on physical and emotional wellbeing of patients and their families. The diagnosis of cancer may cause stressful event causing significant psychological distress. Depression in individuals with cancer received the most attention from their family. Massie (2004)

In 2020, for 36 types of cancers among 185 countries, the people who were diagnosed and lives with cancer were estimated 19.3 million new cancer cases. 10.0 million cancer death occurs in 2020. In United States where, cancer survivors is reported to rise exponentially from 15.5 million in 2016 to 26.1 million in 2040. Sung et al. (2021)

In India 1,392,179 estimated cancer patient for the year 2020, and the five common sites are breast, lung, mouth, cervix uterus and tongue. The majority of the patients with cancer were diagnosed at the advanced stage for breast (57.0%), cervix uterus (60.0%), head and neck (66.6%), and stomach (50.8%), whereas in lung cancer, distant metastasis was predominant among males (44.0%) and females (47.6%) and the symptomatic depression 21.3% and 26.7% mild depression of cancer patient.29.3% have mild anxiety, 16.7% have symptomatic anxiety. Mathur et al. (2020)

The burdens of mental and psycho-social distresses are increasing throughout the world.

Mental consequences affect 30-35% of cancer patient. Past evidence-based research shows that cancer has significant consequences both patient and patient family members. Caruso & Breitbart (2020)

Anxiety and depression in cancer patient may be caused by various reasons including psychological reaction caused by diagnosis of cancer, long duration of treatment, side effect of treatment, repeated hospitalizations and disruption in life and diminished quality of life, effect of chemotherapy on psychological distress, anxiety, and depression. Previous study also shows that high psychological morbidity of cancer patients and influence of gender on depression. Pandey et al. (2006) Furthermore some agents act directly on central nervous system causing psychiatric morbidity. Capuron et al. (2000)

2. STATEMENT OF THE PROBLEM

Assessment of level of anxiety and depression among people living with cancer attending selected cancer hospital Kolkata, West Bengal.

3. OBJECTIVES

- To assess level of anxiety among people living with cancer.
- To assess level of depression among people living with cancer.
- To evaluate the association of level of anxiety and depression with selected demographic variables

4. METHODOLOGY

A descriptive survey conducted at Saroj Gupta Cancer Centre &Research Institute, Thakur Pukur, Kolkata, West Bengal from 07/03/2022 to 02/04/2022. Non- probability purposive sampling technique was used to select 200 respondents (30 to 65 years age group). The present study was carried out after getting all permission from the concerned authority. Informed consent was taken and anonymity was maintained. This study was based on Rosen stock's (1974) Health belief Model. Content validity of three tools was established by 09 experts from the field of Oncology, Psychiatry, Clinical Psychologist, Mental Health Nursing, and Medical Surgical Nursing. Reliability of both the tools was compeuted by Cronbach's alpha method, computed reliability 'r' of GAD-7 was 0.76 and PHQ-9' was 0.75. So, tools were seemed to be reliable. For administration, all tools were converted into Bengali language and linguistic validation was done by linguistic experts. Both descriptive and inferential statistics were used to analysis the data. Data analysis was planned on the basis of objectives of the study using descriptive (frequency and percentage distribution, mean, median, standard deviation, mean percentage) and inferential statistics (chi-square test).Considering the objectives of the study, total three tools were used and data were organized in five sections: Section I- demographic characteristics of the samples;10 items including- age, sex, religion, types of family, education, occupation, monthly income, types of cancer, duration of treatment, social support: Section II- Generalize Anxiety Disorder-7 items (GAD-7) scale was a standardized tool used to assess the anxiety: Section III-The Patient Health Questionnaire - 9 (PHQ- 9) items instrument used to screen presence of depression and it's severity, it is a likert scale ranging from 0-3: Section IV-Findings related to association between anxiety with demographic variables and Section V-Findings related to association between depressions with demographic variables.

5. RESULTS

1) Socio-demographic profile of the respondents

Data in Figure 1 shows 23 % people living with cancer were in the age group of 30 to 39 years, 28.5% people were in age group of 40 -49 years, 29.5% were in age group of 50 -59 years and 19 % people were in age group of 60 to 69 years.

Data presented in Figure 2 shows that 40.50% participant were male and 59.50 % were female; in Figure 3 shows that 72% participant belonged to Hindu religion and 28% participants belonged to Muslim; Figure 4, shows that 39.5% people living with cancer belonged to nuclear family and 60.5% belonged to joint family; Figure 5 shows that 23.5% were illiterate, 7.5% studied up to primary, 45.5% were secondary level, 12.5% were higher secondary passed, and 11% participate were graduate and above; Figure 6, shows that 11.5% people living with cancer were Govt. employee, 2.5% were in private sector job, 14.5% were businessman, 15% were labour, 11.5% people living with cancer were farmer and 45% were home maker; Figure 7 shows that 27% of participant had monthly income Rs <10000,

while 54% participant had monthly income ranging from Rs 10000 to Rs 20000 and 19% respondents' monthly income above Rs 20,000; Figure 8, shows that 34% of participants were suffering from head and neck cancer, 20.5% breast cancer, 19% participant suffering from colorectal carcinoma, 8% lung , 5.5% were uterus cancer, 4% were cervical cancer, 3% had liver cancer, 2% Leukaemia, 1% suffering from G. bladder, ovary and 0.5% were Kidney, Prostrate, Testis, Pancreas cancer; in Figure 9 shows that 76.5% respondents were under treatment ranging from 1 - 3 years, and 23.5% >3 years. Data in Figure 10 shows that 52.5% people living with cancer had social support and 47.5% had no social support; it also shows that 15.23% respondents get support from spouse, 41.90% from children and 42.85% from relatives including father and mother.

Figure 1 n=200

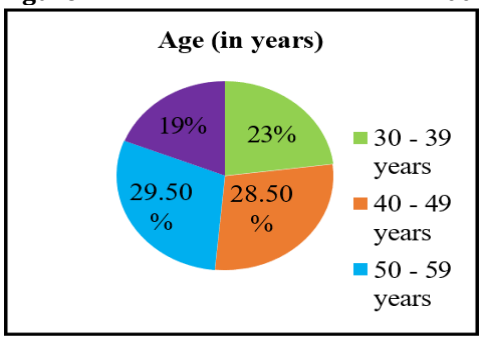

Figure 1 Pie Diagram on Age Distribution of Respondents

Figure 2 n=200

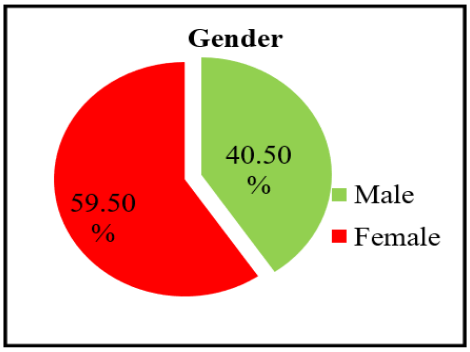

Figure 2 Pie Diagram on Gender Distribution of Respondents

Figure 3 n=200

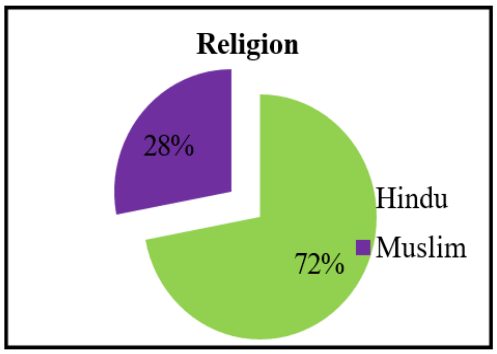

Figure 3 Pie Diagram on Religion of Respondents

Figure 4 n=200

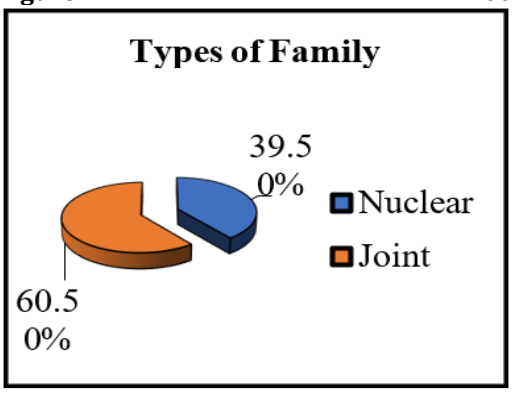

Figure 4 Pie Diagram on Types of Family of Respondents

Figure 5 n=200

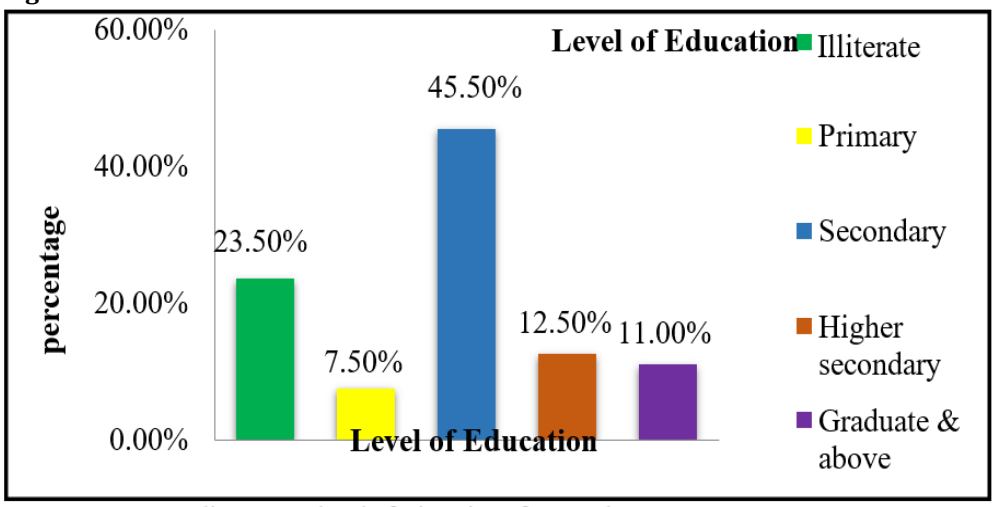

Figure 5 Bar Diagram on Level of Education of Respondents

Figure 6 n=200

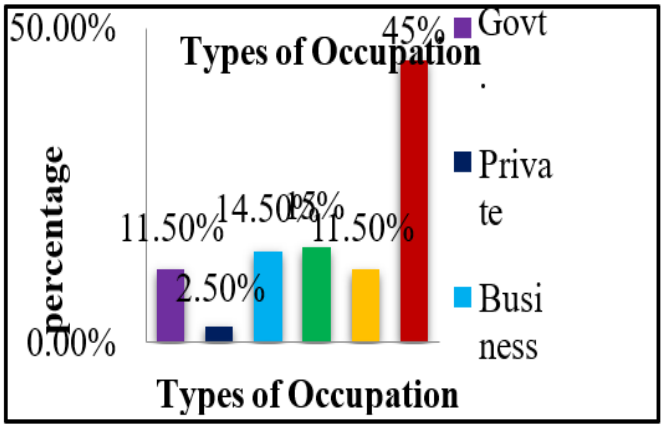

Figure 6 Bar Diagram on Types of Occupation

Figure 7 n=200

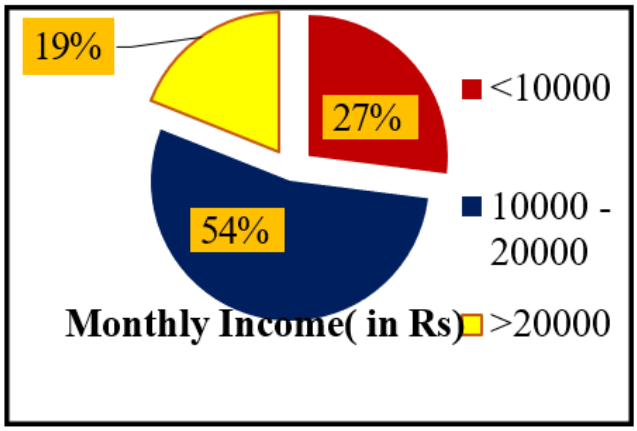

Figure 7 Pie Diagram on Monthly Income

Figure 8 n=200

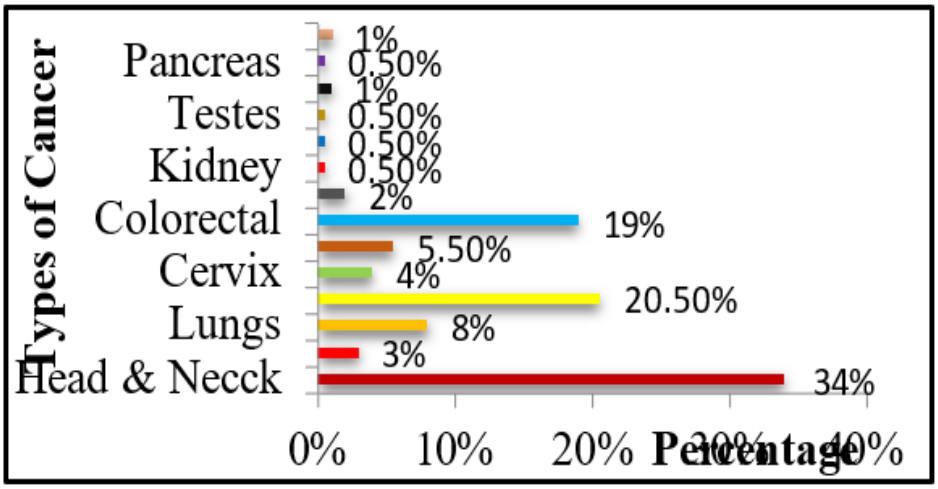

Figure 8 Bar Diagram on Types of Cancer

Figure 9 n=200

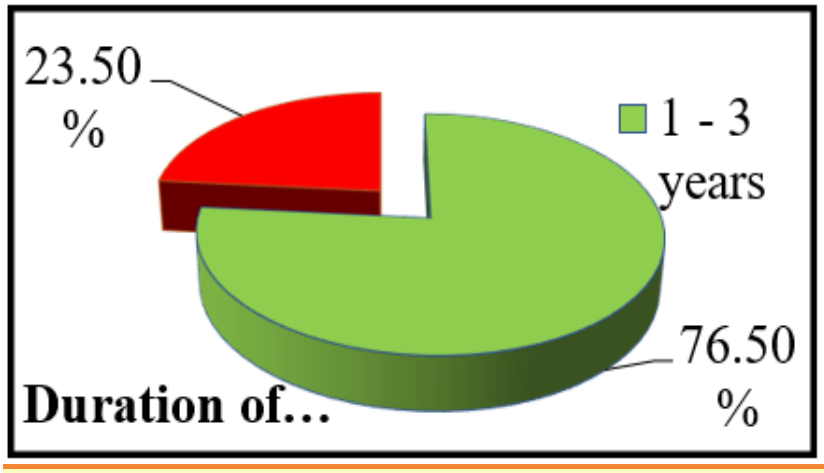

Figure 9 Pie Diagram on Duration of Treatment

Figure 10 n=200

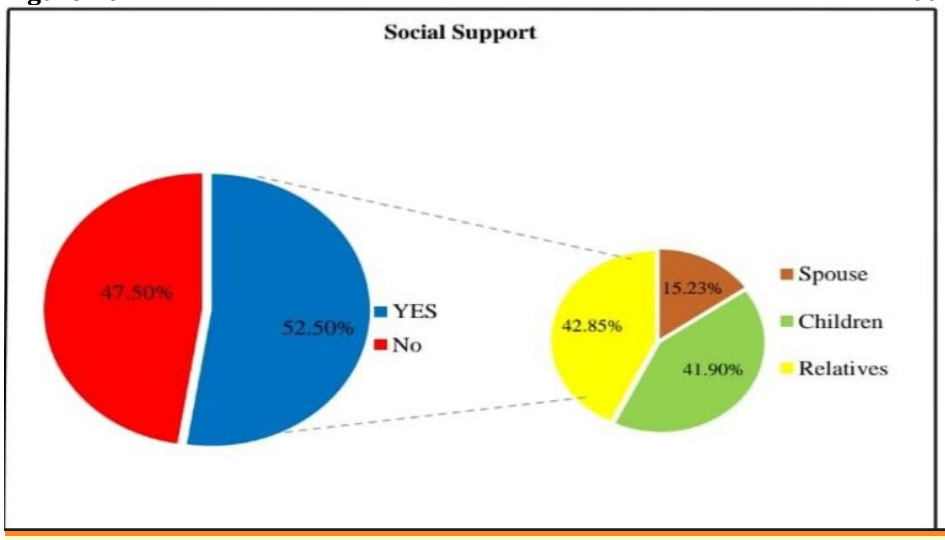

Figure 10 Pie Diagram Showing Percentage Distribution on Social Support

- **Findings related to level of Anxiety among people living with cancer.**

Data presented in Table 1 depicts that 11.5% respondents had minimal symptoms, 51% had mild anxiety, 27.5% had moderate level of anxiety and 10% had severe level of anxiety.

Table 1

Table 1 Frequency Percentage Distribution According to the Level of Anxiety of Respondents **n=200**

Level of Anxiety	Score	Fr.	%
Minimal Symptoms	1 – 4	23	11.5
Mild symptoms	5 – 9	102	51
Moderate symptoms	10 – 14	55	27.5
Severe symptoms	15 – 21	20	10

Data presented in Table 2 depicts that in level of anxiety of people living with cancer, the obtained mean 9.01 with median 9 showing that the data were normally distributed with mild skewness (0.007). The calculated SD was 3.78 showing mild variations among score with mean percentage 47.42.

Table 2

Table 2 Range, Mean, Median, S D, Mean % of Level of Anxiety of Respondents

Variable	Range*	Mean	Median	SD	Mean %
Anxiety	2-19	9.01	9	3.78	47.42

*Range= obtained range, Minimum score-1, Maximum score-21

- **Findings related to level of depression among the people living with cancer.**

Data presented in Table 3 shows that 51% of people living with cancer had minimal symptoms, 31% had minor depression ++/ Dysthymia/ major depression mild, 13% hadmajor depression; moderately severe and only 5% had experienced major depression, severe level of depression.

Table 3

Table 3 Frequency Percentage According to The Level of Depression of Respondents

Rovisional Diagnosis	Score	Frequency	Percentage (%)
Minimal Symptoms	5-9	102	51
Minor Depression++/ Dysthymia/ Major depression, Mild	10 – 14	62	31
Major depression, moderately severe	15 - 19	26	13
Major Depression, Severe	>20	10	5

Data presented in Table 4 shows the obtained mean was 10.01 with a calculated median 9 showing that the data were almost normally distributed with moderate skewness (0.67). The Table 7 also depicts that the calculated SD was 4.46 showing mild variations among scores with mean percentage 45.5.

Table 4

Table 4 Range, Mean Median, Standard Deviation and Mean Percentage of Depression Score of Respondents

Variable	Range*	Mean	Median	SD	Mean%
Depression	5 – 22	10.01	9	4.46	45.5

*Range=Obtained range, Minimum score- 5, Maximum score- 27

- **Findings related to association between level of anxiety with selected demographic variables.**

Chi-square computed between the level of anxiety with selected demographic variable was statistically significant like religion, monthly family income and social support at 0.05 level of significance Table 5, Table 6.

Table 5

Table 5 Association Between Levels of Anxiety with of Age, Sex, Religion

	Level of Anxiety			
Variables	**≤Median**	**> Median**	**Total**	**χ^2**
Age (in years)				
30 -49	65	41	106	0.16
> 50	55	39	94	
Gender				
Male	48	33	81	0.43
Female	76	43	119	
Religion				
Hindu	100	44	144	12.09 ***
Muslim	24	32	56	
df= 1(3.841)	p > 0.05	df=1 (10.827)	p < 0.001***	

Table 6

Table 6 Association Between Levels of Anxiety with Monthly Income, Duration of Treatment and Social Support **n=200**

	Level of anxiety			
Variables	**≤Median**	**>Median**	**Total**	**χ^2**
Monthly income (in Rs)				
≤ 10000	40	44	84	13.98 ***
>10000	85	31	116	
Duration of Treatment (in years)				
1-3	91	61	152	1.87
>3	34	14	48	
Social support				
Yes	57	48	105	6.36 *
No	68	27	95	
df= 1(3.841)	df=1(10.827)	p < 0.001 ***		

- **Findings related to association between depression with selected demographic variables.**

Chi-square computed between level of depression of people living with cancer and demographic variable was statistically significant like age and social support at 0.05 level of significance Table 7, Table 8.

Table 7

Table 7 Association Between Levels of Depression with Age, Sex, Religion **n=200**

	Level of depression			
Variables	**≤Median**	**>Median**	**Total**	**χ^2**
Age (in years)				
30 -49	50	53	103	4.16*
> 50	61	36	97	
Gender				
Male	38	43	81	0.51
Female	62	57	119	
Religion				
Hindu	76	68	144	0.33
Muslim	27	29	56	
df= 1(3.841)	p > 0.05	p < 0.05 *		

Table 8

Table 8 Association Between Levels of Depression with Monthly Income, Duration of Treatment and Social Support **n=200**

Monthly income (in Rs)				
≤ 10000	57	52	109	0.06
>10000	46	45	91	
Duration of Treatment (in years)				
1-3	80	67	147	0.82
>3	25	28	53	
Social support				
Yes	47	58	105	4.01*

No	56	39	95
df= 1(3.841) p > 0.05	p < 0.05 *		

6. DISCUSSION

1) Discussion related to demographic variables:

In present study, 28.5% people were in age group of 40 -49 years, 29.5% and 19 % of 60 to 69 yearsof 50 – 59 years; 59.5% were female; 72% respondent belong to Hindu religion and 60.5% live in joint family and 45.5% studied up-to secondary level of education; 11.5% were farmer, and 45% were home maker and 54% having monthly income Rs. 10000 - 20000/-. 34% had head and neck cancer,20.5% had breast cancer; 76.5% treatment duration ranging from 1year to 3 years and 42.85% having support from their relatives.

Another study conducted by Chaudhury et al. (2021) to assess stress, anxiety, depression, and resilience in the cancer patients on chemotherapy of department of psychiatry AFMC, Pune Maharashtra, India; the results showed that mean age of the patient was 53.06 (±8.67) years, maximum participants were female, belongs to Hindu, and occupation was farmers. Most common cancer was breast followed by head and neck and cervix. Chaudhury et al. (2021)

The present study is supported by in terms of demographic variables, sampling technique and social support conducted by Mohite et al. (2014) on the Level of Anxiety among Cancer patients; finding showed that 84% respondent belongs to above 45 years of age; 64% respondents are studied up to secondary education; 82% of participant belongs to Hindu community Mohite et al. (2014).

Above demographic profile were quite similar with the demographic profiles of another study conducted by Sharma N, 2019 on Prevalence of anxiety and depression in cancer patients during radiotherapy in Army hospital, New Delhi, India. The study found that 34% were from 50 to 60 years of age group, 62% were female and house wives, in male majority 65.8% were farmer; 78% were staying in joint family. Out of 100 patients 32% had head and neck. Sharma & Purkayastha (2021)

- **Discussion related to level of anxiety**

The present study result revealed that 51% people living with cancer had mild anxiety, 27.5% had moderate and 10% had severe level of anxiety. The present study was quite similar to the study conducted by Naser AY (2021) on depression and anxiety in patients with cancer shows that in outpatient setting (n=612) 8.3% severe anxiety by using GAD-7 Scale.13 The present study contrasted by the Vaishali Mohite (2014) study to assess the Level of Anxiety among Cancer patients 74% cancer patients experience moderate level of anxiety, where as 24% had severe level of anxiety. Mohite et al. (2014)

- **Discussion related to level of depression**

The present study result revealed that 51% respondents had minimal symptoms, 31% had minor depression ++/ Dysthymia/ major depression mild, 13% had major depression; moderately severe and only 5% had experienced major depression severe in level of depression.

The present study was quite supported in the scoring system and tool of study conducted by Naser et al. (2021) on depression and anxiety in patients with cancer shows that in outpatient setting (n=612) where 46.1% minimal depression, 27% mild depression, 12.4% moderate depression, 9.2% moderately severe depression, 5.4% were severe depression by using PHQ-9 Scale. Naser et al. (2021)

- **Discussion related to association between level of anxiety and depression with selected demographic variables**

In present study computed Chi-square value showed that level of anxiety of people living with cancer was statistically significant like religion (0.001), monthly family income (0.001) and social support (0.05); level of depression was statistically significant with age and social support at 0.05 levels of significant.

The present study was also persistent with the study conducted by Riedl D (2021), the study found that there was a significant association of age, lower income with depression. Riedl & Schüßler (2022) The present study supported by Agarwal N et.al (2018) study conducted with 203 cancer patients receiving chemotherapy at Day Care Centre of the Department of Radiotherapy, Jaipur, study reported statistically significant association of depression with both the age (P = 0.04) and social support. Agarwal et al. (2018)

The Present study not supported by Vaishali Mohite study (2014) on to Assess the Level of Anxiety among Cancer patients, the study shows that there was no significant association between level of anxiety with demographic variables.11 and study of Chaudhury S (2021) anxiety was not associated with age or gender;10 Elghazali T conducted a study (2021) on Prevalence of depression and anxiety among adult patients undergoing chemotherapy shows that, there was a significant association with duration of cancer (p = 0.031) and depression and anxiety (p = 0.000). There was no significant associations were found with age, sex, gender, or level of education. Elghazali et al. (2021)

7. CONCLUSION

From the above findings it can be concluded that, the people living with cancer had different level of anxiety and level of depression. The anxiety and depression level of people living with cancer is associated with age and social support.

8. LIMITATION

Conclusion of study cannot be generalized to a large population, as the sample was relatively small due to inadequate time.

CONFLICT OF INTERESTS

None.

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