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The depression among cancer patients during chemotherapy and its relation to demographic and social data

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ABSTRACT

Depression considers one of the most common symptoms associated with malignancy that is difficult to detect and therefore treat. It consists of a significant psychological disorder, which worsens during chemotherapy and can continue after the end of chemotherapy or in the recurrence of treatment and adversely affect the quality of life. Depression often accompanies many symptoms, such as fatigue, weight loss and food disorders widely accepted as a result of cancer. The current study was to designed investigate depression symptoms among cancer patients during chemotherapy and its association with socio-demographic data. However, the difficult economic conditions and financial problems were the most obvious reasons and the unrecognised social problems of people who lost a partner or living alone who contributed to depression in the cancer patient. The treatment of patients with another type of cancer in another organ of the body or originally infected with Chronic diseases condition increases the patient's ill-being, lack of medication, supplies and frequent visits of the hospital, especially for visitors from villages outside cities, number of chemotherapy cycle Especially when the patient is responsible for the family. Patients during chemotherapy usually have symptoms as a result of their cancer or treatment side effect. These symptoms have been affected by the physical and emotional conditions of the patients and also have a negative effect on treatment. Cancer patients may be subject to psychological disorder during the clinical course of their illness.

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INTRODUCTION

Cancer is the second leading cause of death globally and is responsible for an estimated 9.6 million deaths annually, while it is emergent into the main reason of death in the elderly. Currently, the rate of cancer is increasing rapidly and is considered a major cause of mortality. (Miaskowski, 2004; Sivesind and Baile, 2001). Breast cancer is the second leading cause of death in women after lung cancer, according to the modern studies, while in male prostate cancer is the second leading cause of death (Mezher *et al.,* 2017; Trask, 2004). One of the most common methods of treating cancer or controlling it from spreading throughout the body is surgery, chemotherapy and radiation therapy (Kush *et al.,* 2007). Chemotherapy is treatment with drugs to annihilate cancer cells. Patients during chemotherapy usually have symptoms as an effect of their cancer or due to the treatment side effects. These symptoms have been affected by the physical and emotional conditions of the patients and also have a negative effect on treatment (Mezher *et al.,* 2017). Life expectancy of cancer patients has increased by advanced diagnostic methods and new improved treatment strategies (Trask, 2004). Depression the most public symp-

toms related to cancer, which involves a psychiatric disorder of great importance. Becomes distressing through chemotherapy, continues long after the ending of chemotherapy, and is furthermore revealed in the return of the illness (Kush *et al.,* 2007). That a high percentage of patients with malignancy at any stage of the disease has encountered with psychological and social disorder according to studies of psycho-social psychology (Cleland *et al.,* 2000; Kathleen *et al.,* 2007). The cancer patient usually suffers from depressive symptoms (Kim *et al.,* 2006). Depression symptoms include Persistent sad, anxious, loss of interest in things once pleasurable including sex, disturb sleep and appetite, nervousness, reduced self-esteem and self-confidence, slow physical, reduced concentration and attention, feeling guilty, frequent idea of self-harm or suicide; so, this study was designed to investigate depression symptoms among cancer patients during chemotherapy and its association with socio-demographic data. Usually, the focus is on physical problems only in treatment because the goal is to save the patient or increase the chance of survival, but recently, the importance of screening and treatment of depression in malignancy has been developed.

PATIENTS AND METHODS

This study was conducted among cancer patients at the Diwaniyah Teaching Hospital using a well-established questionnaire to confirm the symptoms of depression, including demographic and social data 144 of cancer patients undergoing chemotherapy. The questionnaire was directed to 144 cancer patients undergoing chemotherapy depending on the diagnosis of depression according to a semi-structured interview of ICD10. Inclusion criteria for cancer patients include those who Undergoing chemotherapy, able to complete the interview or the self-reporting questionnaire and who was more than 18 years of age. All data has been kept confidential and used only for academic purposes. The current study used the survey as a tool for data collection. All patients have fulfilled the questionnaire without any help or pressure and scored according to this scoring system:

- Score < 4: normal
- Score 4: mild depression
- Score 5-6: moderate depression
- Score7 and more: severe depression

RESULTS

From the 144 patients pair respondents in the study, 42 (29%) were male and 102 (70.8%) were female, ranging from (20–92) years of age 14 (9.7%) patients in this study with age over 70 years, followed by 70 (48.6%) patients from (50-69) years and 40 (27.8%) patients from (30-49) years and 20(13.9%) patients from (18-29) years. On the social situation, 16 (11.1%) were unmarried, 102 (70.8 %) were married, 2 (1.4 %) divorced and 24 widowed by 16.7 %. 50 with 34.7 living in the city and 94.6% living outside the city. Sixty tows (43 percent) were illiterate, 46 were 32%, 28 were 19.4%, and 8 were 5.6 Primary, secondary and tertiary education respectively. Based on the chemotherapy cycles, 23.6% was in the 1st cycle, 27.8% in the 2nd cycle, 29.2 % in the 3rd cycle, and 19.4% were in the 4th cycles and above. The number of patients who received chemotherapy before surgery (44) was 30.6%, but those who received treatment after surgery (100) was 69.4%. Different types of cancer of the affected patients recorded the highest rates of breast and uterine cancers, colorectal cancer and stomach in addition to other types of cancer. Twenty-two (15) percent of patients had another type of cancer in the body.

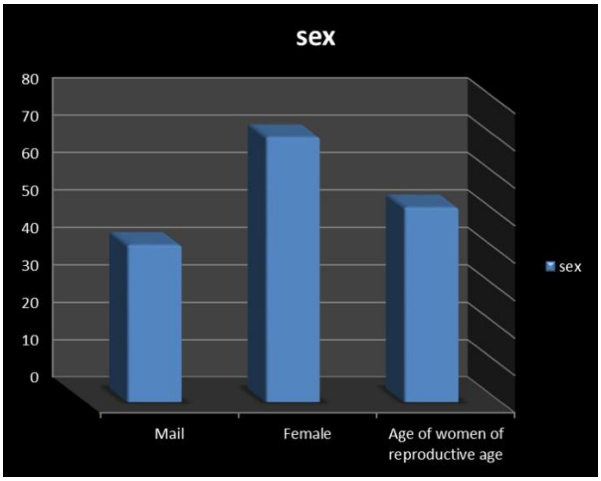

Figure 1: Demographic data according to sex

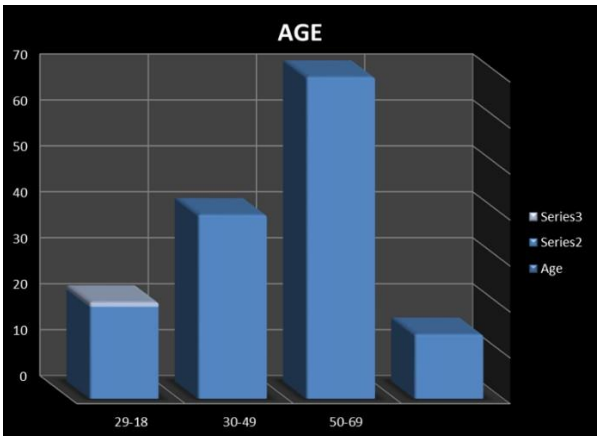

Figure 2: Demographic data according to the age

The number of patients suffering from other chronic diseases in addition to their cancer (42) was 29.1%, such as asthma (6), high blood pressure (12), high blood sugar (12), (8) viral hepatitis and cardiovascular disease (4) Health and psychological.

The results of depression showed as follows:

54, (37.5%) for severe cases, 48 , (33.3%) for moderate cases, 25 (36%) for the few cases and 6 (4.2%) for normal.

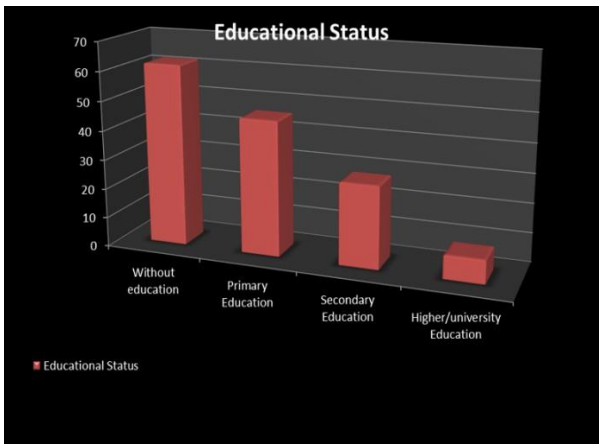

Figure 3: Demographic data according to Educational Status

Figure 4: Demographic data according to Marital Status

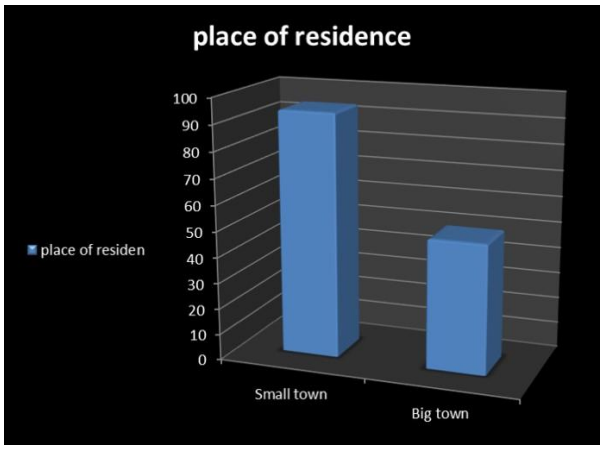

Figure 5: Demographic data according to Residence

DISCUSSION

The prevalence of depression in females and males is approaching but increases in females of childbearing age. This is an agreement with previous studies that revealed that there was no statistically significant difference in depression between male and female and believed that the depression level affects men and women equally (Farooqi and Ahsan, 2009; Goodwin *et al.,* 2004; Inaba *et al.,* 2005; Linden *et al.,* 2012; Polikandrioti *et al.,* 2008).

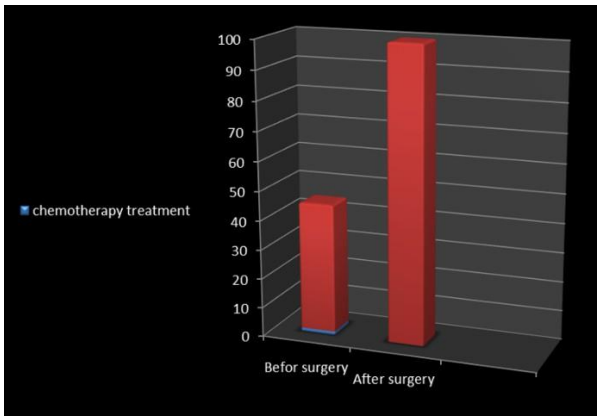

Figure 6: Distribution of patients pre and post-surgery

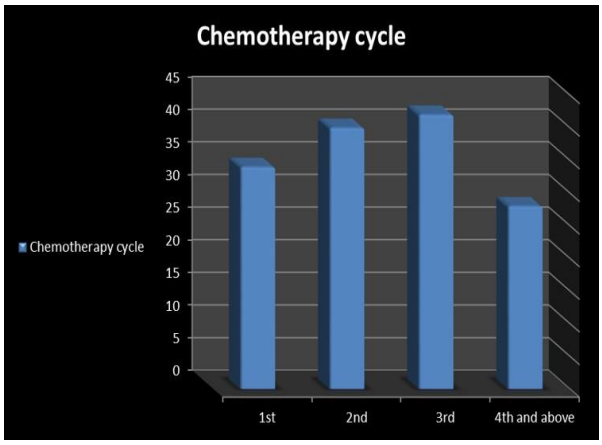

Figure 7: Distribution of patients according to Chemotherapy cycle

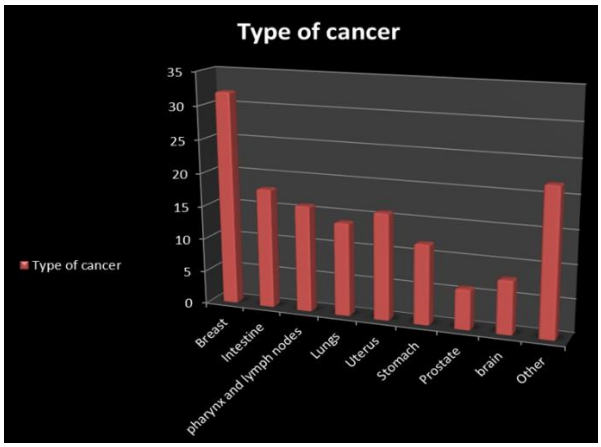

Figure 8: Distribution of patients according to cancer type

The current study suggests that the symptoms of depression in young people are higher than the elderly, this is agreement with a previous study (Kim *et al.,* 2006; Linden *et al.,* 2012) that revealed there was a higher rate of depression level among younger age patients in comparison with older age cancer patients.

Table 1: Demographic data according to study sample

Demographic characteristics	N	%
Sex		
Mail	42	29.2
Female	102	70.8
Age of women of reproductive age	52	50.9
Age		
18-29	20	13.9
30-49	40	27.8
50-69	70	48.6
<70	14	9.7
Educational Status		
Without education	62	43
Primary Education	46	32
Secondary Education	28	19.4
Higher/University Education	8	5.6
Marital Status		
Single/	16	11
divorced /	2	1.4
widowed	24	16.7
Married	70.8	102
Place of residence		
Small town	94	65.3
Big town	50	34.7

Table 2: Distribution of patients according to Chemotherapy cycle

Chemotherapy cycle	No.	%
1st	34	23.6
2nd	40	27.8
3rd	42	29.2
4th and above	28	19.4

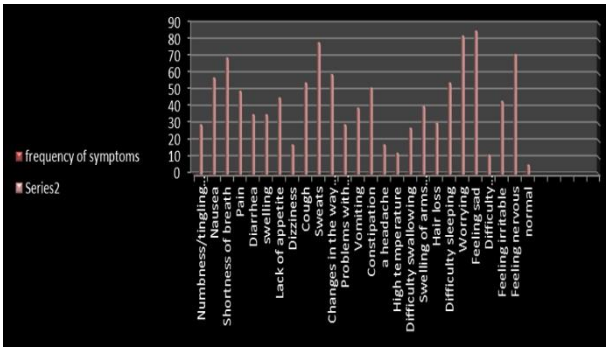

Figure 9: Figure 9: Percentage and frequency of symptoms during chemotherapy for cancer patients, a patient can score more than one symptom

We noted in his study that the higher risk of depression in younger patients, especially in the first year after diagnosis of breast cancer (Fann *et al.,* 2008). The investigators supposed that older people might accept the disease because of a lack of physical functions also due to religious reasons, adult pt have more faith than younger pt while depression rates are high in young people due to the disruption of daily life or because of the different lifestyle (Linden *et al.,* 2012; Polikandrioti *et al.,* 2008), but other researchers have other opinions and hypotheses and showed that younger patients are less depressed than older patients (Suzana *et al.,* 2006). A number of researchers in their studies reported no direct correlation between the level of depression and age (Chang *et al.,* 2010; Polikandrioti *et al.,* 2008) and another study showed no significant difference between the cancer patient age and depression (Chang *et al.,* 2010). This present study showed the patients who reached the third cycle began to lose hope of treatment, especially after they reached the fourth cycle and more became almost despair and frustration. This contradicts the previous studies that mentioned there was no relationship between chemotherapy cycle and depression (Beyer; 2009; Pandey *et al.,* 2006; Suzana *et al.,* 2006). The result is agreement with other researchers who have indicated that patients do not respond to the treatment felt more depressed than those who had responded to the treatment and investigators also showed the same result where women depression after breast cancer who received chemotherapy reported more psychological suffering and depression associated to those who did not receive chemotherapy, the depression increases on the day of injection (Fann *et al.,* 2008; Jim *et al.,* 2011; Pandey *et al.,* 2006).

Table 3: Distribution of patients according to cancer type

Type of cancer	No.	%
Breast	32	22.22
Intestine	18	12.5
pharynx and lymph nodes	16	11.11
Lungs	14	9.72
Uterus	16	11.11
Stomach	12	8.33
Prostate	6	4.16
Brain	8	5.55
Other	22	15.24

The presence of chronic diseases with cancer or history of another type of cancer in the body may increase in the anxiety levels of patients. Another study reported that living with another disease increases levels of depression because it worsens the patient's health and leads to a high level of depression (Pasquini *et al.,* 2007). The current study showed patients with a brain tumour associated with higher level of depression in comparison with another type of cancer such as pancreatic cancer. Because these cancers directly affect the nervous system (Inaba *et al.,* 2005). This present study showed that the rate of depression increases among uneducated and illiterate patients in comparison to more educated and this is agreement with the other researcher that Considered patients of primary education experienced a higher level of

depression compared to those of secondary or higher educations (Polikandrioti *et al.,* 2008).

Table 4: Percentage and frequency of symptoms during chemotherapy for cancer patients, A patient, can score more than one symptom

Symptoms	No.	%
Numbness/tingling in hands/feet	30	20.8
Nausea	58	40.3
Shortness of breath	70	48.6
Pain	50	34.7
Diarrhoea	36	25
swelling	36	25
Lack of appetite	46	31.9
Dizziness	18	12.5
Cough	55	38.2
Sweats	79	54.9
Changes in the way food tastes	60	41.7
Problems with urination	30	20.8
Vomiting	40	27.8
Constipation	52	36.1
a headache	18	12.5
High temperature	13	9.02
Difficulty swallowing	28	19.4
Swelling of arms and legs	41	28.5
Hair loss	31	21.5
Difficulty sleeping	55	38.2
Worrying	83	57.6
Feeling Sad	86	60
Difficulty concentrating	12	8.3
Feeling irritable	44	30.6
Feeling nervous	72	50
normal	6	4.2

Table 5: Distribution of patients according to the Comorbidities (treatment, other types

Comorbidities	No.	%
Asthma	6	4.1
Hypertension	12	8.3
High blood sugar	12	8.3
viral hepatitis	8	5.6
cardiovascular disease	4	2.8
Total	42	29.1
Cancer in other organs	22	15.3%

Table 6: Distribution of patients pre and post-surgery

Chemotherapy	No.	%
Before surgery	44	30.6
After surgery	100	69.4

The results of this study agreement with the previous study: Based on that unmarried person, low income, or occupational prestige have the higher risk for depression than married, and higher socioeconomic (Hann *et al.,* 2002; Pasquini *et al.,* 2007). Married patients receive support from family members more than single or those who have lost their partner. Social support is very important in alleviating depression among cancer patients (Hann *et al.,* 2002; Pasquini *et al.,* 2007; Polikandrioti *et al.,* 2008). Cases of cancer patients undergoing chemotherapy who live in villages have shown an increase in depression in comparison with those living in major cities because the patients from distant villages have difficulty in transport from distant villages and the patient needs frequent review, and this is an additional insult to the patient and his family. This finding is inconsistent with a previous study, which reported that there were no statistically significant differences between cancer patients undergoing chemotherapy and living in large cities or villages (Polikandrioti *et al.,* 2008).

Table 7: Distribution of patients according to the interview organisation of depression according to the tenth global classification

Classification of depression depressive symptoms	No.	%
High depressive symptoms	54	37.5
Average depressive symptoms	48	33.3
Low depressive symptoms	36	25
normal	6	4.2
Total	144	100

Patients undergoing chemotherapy suffer from depression, which is a satisfactory reaction to the loss of normal life, Depression is diagnosed when symptoms of severe grief continue; characterised by depression, accompanied with reduced functional status, low self-esteem and suicidal tendencies (Goodwin *et al.,* 2004; Pasquini *et al.,* 2007). Side effects appear among cancer patients who receive chemotherapy can lead to a high level of distress (Fann *et al.,* 2008; Suzana *et al.,* 2006). As for the prevalence of symptoms, the average prevalence of symptoms in this study for more common symptoms is psychological feelings of grief (86, 60%) and anxiety (83, 57.6%). The previous study showed that the symptoms of side effects appear between Cancer patients receiving chemotherapy. Symptoms such as fatigue, loss of appetite, dry mouth, nausea and sleep disorders can lead to a high level of distress (Fann *et al.,* 2008; Pandey *et al.,* 2006).

CONCLUSION

We conclude from this study that cancer patients have been evaluated symptoms of depression were given server, taking into account Some of them also make symptoms of depression on average or depressive symptoms low.

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