Editors Committee

Assessment of Psychological Distress and Mental Adjustment among Cancer Patients

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Abstract

Depression, anxiety and stress are often psychological consequences of living with cancer. Depression is the most common psychiatric illness in patients with cancer. Early identification of patients who are coping poorly is important for compliance with treatment and control of distress. **The study aimed to*:*** Assessment of psychological distress and mental adjustment among cancer patients. **A descriptive research design** was used. The sample included all cancer patients attending the outpatients clinic or in patients departments with the following criteria: non metastatic cancer and during six months period either recent patients or come for follow up and assessed through; the personal data questionnaire, (depression, anxiety, and stress scale) and Mini Mental Adjustment to Cancer scale (Mini MAC). **Results:** The participant consisted of 165 males and females cancer patients aged 18 years and more. Their age range from 17 to 75 years. There are having high level of depression, anxiety and stress. According to Mini MAC scale, patients were depended on their fighting spirit and anxious preoccupation and less extent to use cognitive avoidance. **The study recommended that:** liaison psychiatric nurse should be available to deal with patient's psychological problem. Psych educational and relaxation training should be available to deal with the distress.

Keywords: Psychological Distress, Mental Adjustment & Cancer patients.

Introduction

Cancer is associated with a threat to physical integrity and its sudden, unpredictable, often irreversible features are associated with loss of patient's identity **(Perez & Galdón, 2002)** The coping process originates with the diagnosis of cancer and ends when cancer survivors achieve a new balance. Patients with cancer in the clinical trial have consented to participate with a hope to improve, or to realize stability with it as a result of the treatment **(Chen& Chang 2012)** Patients experience a variety of emotions before and after receiving the diagnosis, and even when considered well-adjusted individuals, they may experience emotions ranging from shock, denial, anger, negotiation, and acceptance to depression, anxiety, and even suicidal attempt (**Schofield et al., 2003).**

Cancer distress is defined as "an unpleasant emotional experience of a psychological (cognitive, behavioral, emotional), social and or spiritual nature that interferes with the ability to adapt effectively with cancer and its treatment", (**Thomas et al., 2002)** This distress can vary from feeling vulnerable, sad and or fearful to problems that have a significant negative effect on quality of life such as depression and anxiety **(Montazeri, 2008)**.

Common psychological problems that can be seen among oncology patients are depression, anxiety disorders, adjustment disorder, posttraumatic stress disorder, sexual dysfunctions (low sex drive, erectile dysfunction, anorgasmia, experience of unattractiveness), delirium and other cognitive disorders. Other problems may also include suicidal thoughts, results of loss of family and social support, personality disorders which causes problems in case of extreme stress, inability to make decisions, mourning, poor quality of life, spiritual and religious questions. **(Kadan, Lottick et al., 2005)**.

In this respect, depression is the most frequently cancer related symptom and is a comorbid disabling syndrome that affects approximately 15-25% of cancer patients (**National Cancer Institute, 2011**). Presence of depression produces complications in treatment may cause poor compliance with treatment resulting in worsening the situation (**O'Mahony et al., 2005)** It is reported that depression in cancer patients may be caused by diagnosis of cancer, long duration of treatment, side effects of treatment, disruption in life and diminished quality of life(**Jadoon et al., 2010, Mystakidou et al., 2005**).

Anxiety is the most common response in the setting of cancer. It is a normal adaptive response to a threat, but it can become maladaptive. Anxiety is manifested by a broad array of physical signs of autonomic activation, changes in thinking (i.e., intrusive thoughts), and behavior **(American Psychiatric**

Association, 2000) The prevalence of anxiety disorders in cancer patients is generally reported to be in the range of 10%–30%. However, the prevalence data are limited due to the use of different scales and criteria for anxiety, a lack of prospective data, and small study sample sizes **(Roy-Byrne et al., 2008)**. Anxiety and distress may affect a patient's ability to cope with a cancer diagnosis or treatment. It may cause patients to miss check-ups or delay treatment. Anxiety may increase pain, affect sleep, and cause nausea and vomiting. Even mild anxiety can affect the quality of life for cancer patients and their families and may need to be treated **(NCI, 2015).**

Mental adjustment and coping have been identified as important factors for HRQL and psychological state in cancer patients **(Costanzo et al., 2006)**. Adjustment responses such as Fighting Spirit, described as "a highly optimistic attitude, accompanied by a search for greater information about cancer", have been reported to be beneficial **(Lampic et al., 1994)** whereas responses like Helpless-Hopeless, when patients are devoid of hope and see themselves as gravely ill, have shown a negative impact on HRQL and mental health **(Grassi et al., 2004)** Studies have demonstrated a negative effect of a Helpless-Hopeless response on five and ten year survival **(Watson et al., 2005)** whereas e.g. Fighting Spirit has shown to be beneficial for relapse-free survival **(Tschuschke et al., 2001**) The connection between mental adjustment and survival is however a controversial field and several studies have failed to find any effect of coping or mental adjustment on survival, results further supported by a review article by **Petticrew et al., (2002).**

Although different coping strategies in cancer patients are predominantly designed in order to diminish the distress and to improve their quality of life, all studies did not prove convincing evidence that some psychological coping styles like acceptance, fatalism, denial, helplessness, hopelessness can play a clinically important part in the survival or recurrence of cancer **(Petticrew et al., 2002, Ross et al., 2002)** Studies in literature suggest that there is a relationship between the coping strategies used by patients with cancer and psychological symptoms including anxiety and depression. It has been stated that patients using ineffective coping strategies have higher levels of anxiety and depression and that benefiting from social support results in a marked reduction in the levels of anxiety and depression (**Zabalegui et al., 2005, Matsushita et al., 2005, Reuter, 2006).**

Significance of the study

At several different times during their treatment and recovery, people with cancer may be fearful and anxious. For most of the individual having cancer or having a recurrent cancer resulted of anxiety and worry. Various studies reported that cancer patients were suffering from depression and anxiety with various degree or levels. Also, Studies have shown that various kinds of coping strategies were used in different types and stages of cancer. So the present study tries to identify this psychological distress, coping strategies and reconsequence of the anxiety and worry on the progress or regress of the cancer patients.

Aim of the study

Is to assess the psychological distress and mental adjustment among cancer patients

Research Questions

1-What is the demographic characteristic of the patients at South Egypt Cancer Institute?

2-What is the level of depression and anxiety among patients with cancer?

3-What are the common coping strategies used by cancer patients?

Research design

A descriptive research design was used.

Setting

The study was conducted at South Egypt Cancer Institute at Assiut city. The institute provides services for eight governments: Aswan, Luxor, Qena, Sohage, Assiut, El Minya, New Valley and Red sea. This institute consisted of departments for inpatient department that provide paid and unpaid services. It also includes a one day treatment regimen clinic. For these patients who they were already admitted to receive treatment session and leave back to home.

Sample

Inclusion criteria

Convenient sample consisted of 165 patients (female were 111 participant and male were 54 participant) included all available cancer patients attending the outpatient clinics or were admitted to the inpatient departments at South Egypt Cancer Institute during six months period from August 2015 to January 2016. Accordingly 165males and females cancer patients were included in the study with the following criteria:

1.Non metastatic cancer.

2.Eighteen years and older from both genders.

3.Accept to participate in this study.

4.Patients can read and write.

Exclusion criteria

Patients with impairment in cognitive function or impaired general health that found to affect patient's collaboration.

Tools of data collection

Each participant was evaluated through the following tools:

1-Personal and demographic characteristics assessment sheet which consisted of:

Patient code, gender, age, education, occupation, diagnosis and type of treatment.

2- Depression, Anxiety, and Stress scale (DASS): A scale developed by (Lovibond & Lovibond (1995).

That contained a forty two items. It is inventory used to assess depression, anxiety and stress. This screening and outcome measure reflects the past 7 days inpatients life. Measured on 4 points (0-3). The scale is rated at the end as the severity- rating index. According to this subscale subject are classified as the following:

For the depression scale which included 14 questions; those who scored between 0-9 were considered having no depression, 10-13 were considered having mild depression, 14-20 were considered having moderate depression, 21-27 were considered having severe depression and those with score equal to or more than 27 were considered having extremely severe depression.

As for anxiety scale which included 14 questions; those who scored between 0-7 were considered having no anxiety, 8-9 were considered having mild anxiety, 10-14were considered moderate anxiety, 15-19 were considered severe anxiety and score equal to or more 20 were considered extremely severe anxiety.

In speaking of stress scale which included 14 questions; those who scored between 0-14 were considered having no stress, 15-18 were considered having mild stress, 19-25 were considered moderate stress 26-33 were considered severe stress and score equal to or more than 34 were considered have extremely severe stress.

Arabic version reliability of this scale was found to be 0.93 for depression, 0.92 for anxiety and 0.94 for stress **(Mohamed et al., 2009**).

3- Mini Mental Adjustment to Cancer scale (Mini MAC): A scale developed by (Watson et. al., 1988):

The Mini-MAC included 29 items and the psychometric properties of it have been proved satisfactory. The Mini-MAC subscales are graded on a 1-4 point and assess patient's experiences at present. The Mini-MAC is a revised version of the commonly used Mental Adjustment to Cancer scale **(Watson et. al., 1988)**. The Mini- MAC covered five main domains: Helpless-Hopeless e.g. "I feel completely at a loss about what to do" 8 items, cognitive avoidance e.g. "I distract myself when thoughts about my illness come into my head" 4 items, fighting spirit e.g. "I try to fight the illness" 4 items, anxious preoccupation e.g. "I worry about the cancer returning or getting worse" 8 items and fatalism e.g. "I've had a good life; what's left is a bonus" 5 items.

High scores of each domain means higher endorsement of this mental adjustment. The scale was translated to Arabic language and should be back translated by the researcher and revised by jury of 5 professors in the field of psychiatry and psychiatric mental health nursing. The Mini-MAC reliability was calculated by used Cronbaech's alpha coefficient test ranged between 0.62– 0.88 for different domains.

Pilot Study

Conducted on 15 patients to estimate the time required to fill out the form. Also for the visibility of the questionnaire and scales.

Procedure

1- An approval of the study by the ethical committee of the faculty of nursing of Assiut University as well as the Dean of South Egypt Cancer Institute was secured.
2- In patients and outpatients of the study setting were screened to detect the eligible patients.
3- The aim of the study was explained to each patient before conducting study.
4- Informed consent (written or oral) was obtained from each patient who was reassured about the confidentiality of the collected data.
5- The depression, anxiety, and stress scale (DASS) and Mini MAC scale were applied on eligible patients through interview each patient.

Ethical considerations

1- Research proposal was revised by Ethical Committee of the Faculty of Nursing of Assiut University.
2- There is no risk for study subjects because of application of the research.
3- The study follows basic ethical principles in clinical research.
4- Informed consent was taken from patients who participated in the study, after clarifying the nature and purpose of the study.
5- Data confidentiality and patients privacy were assured and maintained.
6- Patients were informed that they have the right to reject or participate in and withdrawn from the study at any time.

Statistical Analysis

The data were computerized and verified using the SPSS (Statistical Package for Social Science) version 16.00 to made tabulation and statistical analysis. Quantitative variables were represented by mean and standard deviation, while qualitative variables were represented in frequency and percentages.

Result

Table 1: Demographic characteristics of the studied patients (n=165).

Item	Mean ±SD	
Age (in years) 17 – 75 years		
Mean± SD	46.4±14.6	
Age (in years)	**No.**	**%**
<30 years	28	17
30-<60	102	61.8
60 and older	35	2.2
Sex		
Male	54	32.7
Female	111	67.3
Marital status		
Single	22	13.3
Married	130	78.8
Divorced	4	2.4
Widowed	9	5.5
Residence		
Rural	139	84.2
Urban	26	15.8
Education		
Illiterate or read and write	134	81.2
Secondary	26	15.8
University	5	3.0
Occupation		
Not working	28	17
Farmer	21	12.7
Unskilled worker	18	10.9
Employee	1	0.6
House wife	97	58.8

Table (2): Clinical characteristic of the studied patients.

Clinical data	No	%
Treatment type		
Pharmacotherapy	27	16.4
Chemotherapy	124	75.1
Radiotherapy	1	0.6
Mixed	13	7.9
Appetite		
No change	28	17.0
Less than before	131	79.4
More than before	6	3.6

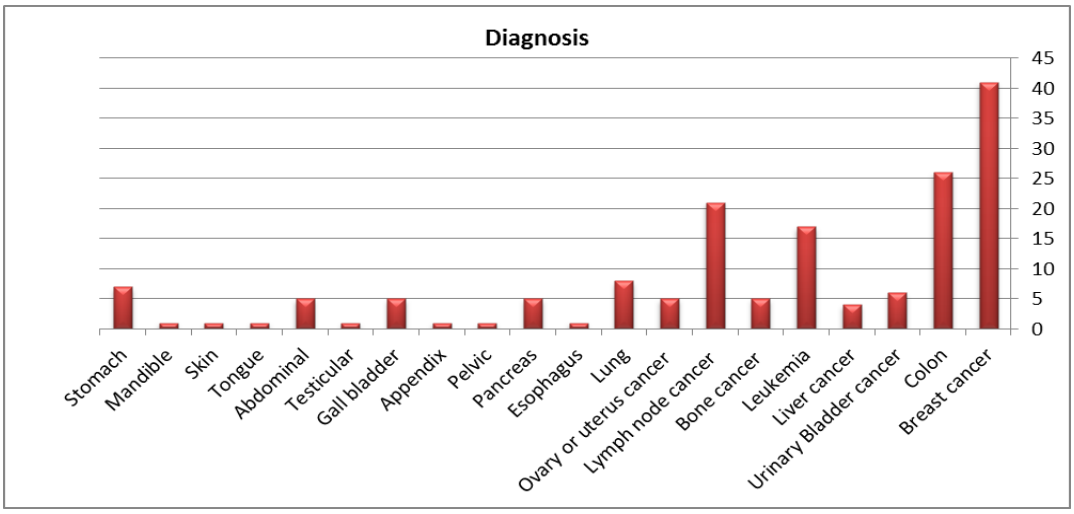

Figure (1): Frequencies of diagnosis.

Table (3): Studied patients DASS scores.

DASS scale domain	Patients scored	Mean ±SD
Depression (total score=42)	**3-39**	**24.7±7.7**
Anxiety(total score=42)	**2-34**	**16.9±7.8**
Stress(total score=42)	**3-40**	**24±7.8**

Table (4): Studied patient's level of DASS domains according to the severity noting index (n=165).

DASS scale domains and degree of severity	No.	%
Depression		
Normal (0-9)	3	1.8
Mild (10-13)	12	7.3
Moderate (14-20)	36	21.8
Severe (21-27)	53	32.1
Extremely Severe (28-42)	61	37.0
Anxiety		
Normal (0-7)	25	15.1
Mild (8-9)	11	6.7
Moderate (10-14)	32	19.4
Severe (15-19)	32	19.4
Extremely Severe (20-42)	65	39.4
Stress		
Normal (0-14)	20	12.2
Mild (15-18)	15	9.1
Moderate(19-25)	43	26.0
Severe (26-33)	76	46.0
Extremely Severe(34-42)	11	6.7

Table (5): mean scores of Mini-MAC scale on the studied patients (n=165).

Mini MAC scales domains	Patients scored	Mean ±SD
Fatalism (5-20)	1-13	7.6±1.9
Fighting spirit (4-16)	0-12	7.4±2.3
Helplessness Hopelessness (8-32)	4-21	10.5±3.1
Anxious preoccupation (8-32)	5-21	12.9±2.8
Cognitive avoidance (4-16)	0-12	6.4±2.7

Table (1): Mean age of patients were 46.4±14.6 years. While 67.3% of participants were females and 58.8% were housewives. Also, 84.2% of participants were living in rural areas, 78.8%were married and majorities (81.2%) were illiterate or can read and write.

Table (2): Shows that, 75.1% of patients received chemotherapy, 79.4 % have loss of appetite than before.

Figure (1): Shows that, more than one third (41%) of patients have breast cancer, 26% have cancer colon, 21% have lymph node cancer, also, 17% of participant have leukemia.

Table (3): Shows that, patients scored means were 24.7±7.7, 16.9±7.8 and 24±7.8 for depression, anxiety and for stress respectively.

Table (4): Illustrate the studied patient's level of DASS domains according to the severity noting index of depression, anxiety and stress levels there were 37.0% , 39.4% as well 6.7% of the participants have extremely severe depression, extremely severe anxiety and extremely severe stress respectively.

Table (5): Shows that mean ±SD for fatalism 7.6±1.9, fighting spritit7.4±2.3, helplessness hoplessness10.5±3.1, anxious preoccupation12.9±2.8 and cognitive avoidance 6.4±2.

Discussion

The mean age of the participants of the current study was 46.4±14.6 range from17 to 75 years of participant also **Kushwaha ,(2014)**found that, age of the participants ranged from 20 to 65 years **,** in agreement with **Jadoon et al., (2010)** they found that, the mean age of patients was 40.85 ±16.46. While, **Jacobsen, et al., (2012)** found that, the mean age of patients were 61.9±11.2.

In the current study, male patients represented one third and female were two third, the majority of participant were housewives, there were more than two thirds of patients were present in rural area, more than two thirds of participants were married and more than two thirds of participants were illiterate or read and write. This may due to that south Egypt cancer institute provide service mainly to unemployed person. In the same respect, **Jacobsen et al., (2012)** found that, more than two thirds of participants were females; more than two thirds have collage education while **Jadoon et al., (2010)** found that, less than half were living in the rural area, the majority of participants were married and less than half were illiterate.

Also **Yoon**, **(2015)** found that, the average age of patients was 62 ± 13.3 years (range, 31-85 years) ,most of patients were females and less than half had university education. Most of patients were not employed. While **Karabulutlu et al., (2010)** found that, males were slightly more than females and most of them were married, slightly they were less than half were literate and most of them were not working. **Yahaya et al., (2015)** reported that, the mean age of the patients was 53.4±12.2, ranging from19 -81 years old, the majority were females married and two thirds had secondary education as the highest level of education and slightly less than half were unemployed.

Most of participants in this study were received chemotherapy**,** also **kushwaha, (2014)** found that, most of participants receive chemotherapy**, Jadoon et al., (2010)** found that, more than one third of participants received chemotherapy **Yoon, (2015)** found that, some were receiving treatment which included chemotherapy less than quarter. Most of participants in the current study have breast cancer (41.0%) followed by cancer colon and lymph node cancer. Most of participants diagnosed with breast cancer, this due to that breast cancer very common in female (most participant were female). **Also, Jacobsen et al., (2012)** found that, most of participants (26.1%) had breast cancer in contrast with **Jadoon et al., (2010)** found that, 32% Urological cancer. Also **Yoon, (2015)** found that, the most common types of cancer were breast, colorectal and stomach , **Yahaya et al.,(2015)** reported that, half of the patients had breast cancer.

In the current study Mean ± SD of DASS scale for depression 24.7±7.7, anxiety was 16.9±7.8 and stress was 24.7±7.3. Also**, Kashani et al., (2012)** found that Mean ± SD score of depression was 20.63 ±6.67, anxiety was13.45 ±6.61 and stress was 24 ±6.53. While **Ashraff et al., (2004)** found that Mean (SD) score of depression was 17.32 ±7.75 and Mean ± SD of anxiety was 37.72 ±8.4. Also, **Yoon, (2015)** found that the mean overall depression score for patients was 14.3 and stress17.0. **Karabulutlu et al., (2010)** found that Mean ± SD for depression 11.44±5.26 and anxiety 11.06±5.08. **kim et al.,(2016)** found Mean ± SD for depression 44.77 ±8.42 and stress was 38.71± 7.15.

In the present study there were 37.0% of participant have severe extremely depression, 39.4% have extremely severe anxiety also, 46.0% have severe stress. Also **Kashani et al., (2012)** found that, 41.66%, 29.2%, and 33.3% of the participants felt depression, anxiety and a moderate stress, respectively. **Mosher et al., (2015)** found that 32 % of participants have anxiety.

In the current study, there were severe depression, moderate anxiety and severe stress. Cancer diagnosis may impose a psychological burden on cancer patients. They feel anxious about their family, children as well as their illness also, they fear from metastasis and death. Intense feeling of tension,

nervousness and worry, i.e state anxiety, is an expected and well known psychological response to malignant disease and it related to diagnosis, anticipated prognosis, treatment and its side effect. In the same range with **Kashani et al., (2012)** found that, there were severe depression, moderate anxiety and severe stress. **Kim et al., (2016)** found that, participants had extremely severe stress and depression. Disagreed with **Ashraff et al., (2004)** who found that, participants had moderate depression and extremely severe anxiety in the group. **El sheshtawy et al., (2014)** found that more than one third have patients mild depression, less than half of patients didn't have anxiety, also **Karabulutlu et al., (2010)** & **Yoon,(2015)** they found that, participants had moderate depression and anxiety. Most of cancer patients may experience feelings of anxiety and depression **Lim et al., (2011)** According to Mini MAC scale common mental adjustments used by various cancer patients were anxious preoccupations, helplessness hopelessness or fighting spirit in this study. The use of coping is motivated by how we cognitively appraise a situation and it could be assume that these patients would appraise their situation by this mental adjustment. Cancer is perceived as a serious and chronic disease which contains hopelessness and uncertainties. Anxious preoccupation and helplessness hopelessness response has a negative impact on well-being, irrespective of phase of illness also patients use these coping because of worrying about disease prognosis, metastasis and death. Agreeing with **Jeong-Ho Seok et al., (2013)** they found that, many patients use anxious preoccupations, helplessness hopelessness or fighting spirit as mental adjustment with cancer. **Dastan & Buzlu, (2012)** found that, there were decrease in fighting spirit coping strategies there were increase in helplessness and hopelessness, anxious preoccupation, fatalism were and no change in avoidance/denial. Also, **Czerw et al., (2016)** they found that, most patients use fighting spirit and anxious preoccupation as adjustment response.

Conclusions

Based on the results of the present study, it can be concluded that:

- In the current study, participant age range from17 to 75 years, male patients represented one third and female were two third, the majority of participant were housewives, there were more than two thirds of patients were present in rural area, more than two thirds of participants were married and more than two thirds of participants were illiterate or read and write. Most of participants were received chemotherapy and have breast cancer
- Oncology patients have high level of depression, anxiety and stress.
- According to mini MAC scale it was found that most of cancer patients depend on anxious preoccupation, helplessness and hopelessness and fighting spirit as a way of coping with cancer and to less extent to use cognitive avoidance and less.

Recommendations

Based on findings of the present study, the following recommendations are suggested:

1- Liaison psychiatric nurse must be available to deal with psychological distress and impaired mental adjustment of cancer patients, also help patient to cope with cancer, improve their quality of life and ensure the safety and stability of the patients within the medical setting.

2- South Egypt Cancer Institute should conduct and implement psychoeducational interventions (which include information about disease, causes and symptoms of depression, anxiety and distress and problem solving process) for cancer patients who have depression, anxiety and or stress or impaired in mental adjustment.

3- Relaxation training may be helpful to cancer patients who have depression, anxiety and or stress.

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