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GENDER DIFFERENCES IN ANXIETY AND DEPRESSION AMONG PAKISTANI CANCER PATIENTS

The present research examined gender differences in degree of anxiety and depression among Pakistani cancer patients. The sample consisted of 100 patients (Male = 50, Female = 50) within age range of 19-48 years. The sample for the study was obtained from the Mayo Hospital, Inmol Hospital and Sheikh Zayed Hospital. The purposive sampling strategy was used because the patients were selected on the basis the inclusion - exclusion criteria such as: 1) age range within 19-48 years; 2) willingness to participate in the current research project; 3) suffering from lungs cancer in first stage; and 4) being treated in outdoor settings of public hospitals of Lahore city. The Hospital Anxiety and Depression Scale (Urdu version) was used. Written permission was granted by the authors of HADS for use of this scale in the current research. Independent sample t-test was performed using SPSS (11.5 version) to determine gender differences in level of anxiety and depression cancer patients. The results indicate no significant gender differences in level of anxiety and depression among cancer patients; probably because the life-threatening illness of cancer takes toll on both men and women equally ($t = .02$, $df = 98$, $p > .05$ and $t = -.99$, $df = 98$, $p > .05$, respectively). These findings have implications for understanding the psychological problems of male and female cancer patients in Pakistani society.

Introduction

The term cancer covers more than 100 different medical conditions all involving the abnormal and excessive divisions of cells. Cancer is also known as 'malignant disease'. Tumor and growth are alternative terms which are sometimes used for cancers (Barraclough, 2000).

Cancer is caused by the abnormal growth of cells. It is a group of many different types of diseases that have arise in cells, the body's basic unit of life. For the normal functions of body the cells continuously regenerate and die. But sometimes the body cells become cancerous which cause tumor and growth as a result of abnormal and uncontrollable growth rate of cells. Tumor or growth can be benign or malignant (Cooper, 1997).

There are several types of cancer. Lung cancer, head and neck cancer are for the individuals who smoke cigarette. Some studies suggest that 30 common causes of death for both males and females. The majority of lung cancer is preventable. It is estimated that 70-80 percent of lung cancer deaths are attributable to smoking. The risk of the lung cancer extends percent of cancers that develop in people who do not smoke are due to effect of positive smoke inhalation. Other risk factor for lung cancer is exposure to radon (Stern & Sekeres, 2004).

Everything connected with cancer imposes considerable emotional strain on the patient. The stressful and menacing situations experienced by the patients arise mainly from the doubtful nature of the prognosis and the vast number of forms may take. The insensitive of these situations is however largely determined by the individual personalities of these patients (Barraclough, 2000).

According to the Macmillan cancer support (2007) the most common cancers that are found or reported by patients are breast cancer, bowel cancer, lung cancer, prostate cancer, bladder cancer, stomach cancer, esophageal cancer, leukemia and ovarian cancer. Scientific studies have proved that cigarette smoking causes lung cancer as well as number of other diseases.

Smoking destroys the special cells that keep harmful or dust particles from entering into the lungs. Without these cells the lungs are more susceptible to irritants that cause cancer (Doll & Peto, 1981).

When the patient first receiving the diagnosis of cancer these emotional responses may evoke: shock, fear and anxiety, depression, sadness and despair, anger, guilt and shame, a sense of challenge and acceptance and this research also shows this that when the patients receive the diagnosis of cancer then they feel anxiety and depression. (Barraclough, 2000).

The most obvious feature of many cancers is the development of a new growth, a module or a tumor in the tissue of their origin. The tumor is usually hard and firm to feel, which gets fixed to the surroundings tissues and is not movable in them There are two types of tumor benign and malignant (Parvez, 1989).

Cancer is one of the major crises in Pakistan so more researches has done about the causes and affects of the cancer. However there is a little works that how people cope with it positively and in which ways they manage such as challenging diseases.

“A state of emotional tension characterized by apprehension and fearfulness"(Coleman, 1964, p. 657).

The symptoms which occur in the state of the anxiety are heart palpitation, rapid breathing, shortness of breath, lump in the throat, and loss of appetite, nausea, insomnia, sweating and restlessness (Beck & Steer, 1993).

Anxiety is the apprehension cued off by a threat to some value that the individual holds essential to his/her existence as a personality. The threat may be to physical life (the threat of death) or to psychological existence (the loss of freedom meaningless) (Barraclough, 2000).

There are two types of anxiety state anxiety and trait anxiety**.** State anxiety is caused by the particular situations and trait anxiety represents the basic characteristics of individual (Mehboob, 1991).

Anxiety is a universal problem. Normal anxiety includes those anxious moments which create a sense of helplessness when one is unable to find the solution of the problem (Gilmer, 1975).

The differences in the personality of men and women are also an important factor in considering the anxiety level. Social environment plays an important role in creating a gender differences in anxiety (Eman, 2005).

Anxiety is a normal reaction to cancer. One may experience anxiety while undergoing a cancer screening test, waiting for test results, receiving a diagnosis of cancer, undergoing cancer treatment, or anticipating a recurrence of cancer. Anxiety associated with cancer may increase feelings of pain, interfere with one's ability to sleep, cause nausea and vomiting, and interfere with the patient's (and his or her family's) quality of life. If left untreated, severe anxiety may even shorten a patient's life (Barraclough, 2000).

The definition of clinical depression is defined as the indicative symptoms of depression meets the Diagnostic and Statistical manual-IV criteria for depressive disorder. In DSM-IV the term depression is not a normal, a temporary mood caused by life events or grieving. A person is diagnosed depressed on the basis of the criteria for the clinical depression (DSM-IV, 1994).

According to DSM-IV-TR (2000) the symptoms of depression are depressed mood, loss of energy, disturbance of appetite, difficulties in thinking, feeling of worthlessness and guilt, recurrent thoughts of death or suicide, psychomotor retardation or cognition, sleep disturbance and loss of pleasure or interest in usual activities.

Clinical depression is common in cancer patients. Surveys shows that up to 50% of the patients report some depressive symptoms, with 20% having a definite depressive illness. Depression is four times more in cancer patients than other population (Barraclough, 2000).

There is convincing evidence of a gender differences in the prevalence of effective disorders. Women have a greater lifetime risk for the depression as compared to men. Still we have poor evidence that how immune system work against cancer (Comeron, 1987).

Recent studies have documented an increased risk of depression in cancer patients, although it has not always been found. The incidence of mood change appears to be more common in some cancers than in others and it sometimes occur before the cancer diagnosis is made. Once the diagnosis is known the depression and other psychological reactions are common (Barraclough, 2000).

In observing link between emotion and cancer it must be remembered that stress does not create cancer cells. It rather effects their growth by weakening the body's natural defenses against a few proliferating malignant cells. Although relaxed hopeful state may enhance these defenses, cancers are not likely to be derailed by avoiding stress or by relaxed but determined spirit (Mayers, 1994).

The existence of a relationship between depression and pain in patients with cancer has been always known. Evidence from a study conducted by Spiegel et al (1994) indicated that pain may induce clinical depression. Researchers examined both current and lifetime psychiatric diagnosis among patients with cancer who had high and low pain symptoms to examine the strength of the relationship between depression and cancer pain (Spiegel, Bloom & Gotthier, 1994).

According to Dr. Aaron Beck (1967-1970) negative thoughts, generated by dysfunctional beliefs are typically the primary cause of depressive symptoms. A direct relationship

occurs between the amount and severity of someone's negative thoughts and the severity of their depressive symptoms. In other words, the more negative thoughts you experience, the more depressed you will become. Beck also asserts that there are three main dysfunctional belief themes (or "schemas") that dominate depressed people's thinking: 1) I am defective or inadequate, 2) All of my experiences result in defeats or failures, and 3) The future is hopeless. Together, these three themes are described as the Negative Cognitive Triad. When these beliefs are present in someone's cognition, depression is very likely to occur (if it has not already occurred) (Beck, 1967). This theory of Aaron Beck shows that our negative thoughts cause depressive symptoms, individual think that he is defective, failure and hopeless about future. When a person is suffering from depression, his/her thinking becomes negative and he just thought about defeat. This thesis research also shows that he/she obtain depression due to cancer.

According to Freud's theory of reality anxiety, it is a painful emotional experience, resulting from the perception of the drugs in the emotional world. A danger in many conditions of the environment which threatens to harm the person and in this research the same thing shows that when the person receives the diagnosis of cancer then he/she feels anxiety. (Hall, 1963).

The constructs of repressive adaptive style and avoidant coping (blunting) were assessed as possible explanatory factors for previously reported findings of lower self-reported depression in children with cancer. Pediatric oncology patients (n = 107) and healthy control participants (n = 442) completed measures of depressive symptoms, trait anxiety, defensiveness, and approach and avoidant coping. Oncology patients scored significantly lower on measures of depression and trait anxiety, and higher on defensiveness. Applying the adaptive style paradigm, the oncology group showed a significant excess of repressors. Depressive symptoms differed as a function of adaptive style, with repressors demonstrating the lowest levels of self-reported depression (Phipps, Sean, Srivastava & Kumar, 1997).

Depression is the psychiatric syndrome that has received the most attention in individuals with cancer. The study of depression has been a challenge because symptoms occur on a broad spectrum that ranges from sadness to major affective disorder and because mood change is often difficult to evaluate when a patient is confronted by repeated threats to life, is receiving cancer treatments, is fatigued, or is experiencing pain. Depression is highly associated with or pharyngeal (22%–57%), pancreatic (33%–50%), breast (1.5%–46%), and lung (11%–44%) cancers. A less high prevalence of depression is reported in patients with other cancers, such as colon (13%–25%), gynecological (12%–23%), and lymphoma (8%–19%). This report reviews the prevalence of depression in cancer patients throughout the course of cancer (Morse, Kendell, & Barton, 2005).

Hosaka & Aoki (1996) investigated the frequency of co-morbidity and to demonstrate the best method for assessing depression among cancer patients. The subjects were 50 (25 male and 25 female) cancer patients and 50 (25 male and 25 female) medically ill patients. All subjects were interviewed by psychiatrists and were administered psychological tests such as SAS (self-rating anxiety scale), SDS (self-rating depression scale), POMS (Profile of Mood States), HADS (Hospital Anxiety and Depression Scale) and DRP (Depression-related personality traits). The psychiatric interview revealed that 44% of cancer patients and 38% of the medical patients had mental disorders according to DSM-IV. The most frequently observed disorder was depression, which was seen in 28% of the cancer patients and 30% of the medical patients. The cancer patients with depression scored significantly higher on the DRP and the Anger mood state of POMS than did the medically ill patients with depression. In addition, most psychological tests employed had no discrimination between depressed and normal subjects among the cancer and the medical patients. However, it was found that the Depression scale in HADS (HADS-D) split depressed patients from normal subjects since the HADS-D was composed of items that were not concerned with physically ill conditions.

Nine hundred eighty-seven patients from three palliative treatment trials conducted by the Medical Research Council Lung Cancer Working Party formed the study sample. 526 patients (53%) had poor prognosis small-cell lung cancer (SCLC) and 461 patients (47%) had good prognosis non–small-cell lung cancer (NSCLC). Hospital Anxiety and Depression Scale data and QOL items from the Rotterdam Symptom Checklist were analyzed, together with relevant demographic and clinical factors. Depression was self-rated in 322 patients (33%) before treatment and persisted in more than 50% of patients. SCLC patients had a three-fold greater prevalence of case depression than those with NSCLC (25% *v* 9%; $P < .0001$). An increased rate for women was found for good performance status (PS) patients (PS of 0 or 1) but the sex difference reduced for poor PS patients (PS of 3 or 4) because of increased depression rates for men (χ^2 for trend, $P < .0001$). Depression is common and persistent in lung cancer patients, especially those with more severe symptoms or functional limitations (Hopwood, & Stephens, 2000).

The purpose of this investigation was to compare anxiety and depression in Taiwanese cancer patients with and without pain. A convenience sample of 203 hospitalized cancer patients, 77 with pain and 126 without pain, were assessed for anxiety and depression using the Hospital Anxiety and Depression Scale (HADS). Disease-related factors such as performance status, disease stage and perceived treatment effect were also assessed and controlled for their effect on anxiety and depression. The prevalence of both anxiety and depression in the pain group was significantly higher than that for the pain-free group. Cancer patients' anxiety can be predicted significantly by functional status and perceived treatment effect. In addition to pain status, cancer patients' depression can be predicted by their functional status (Chen, Ling, Kun & Hsing, 2000).

Methodology

Research Design:

The survey research design was used in this research.

Sampling Strategy

The purposive sampling strategy was used because the patients were selected on the basis of following inclusion - exclusion criteria:

I. Age range between 19-48 years

II. Only out door patients were included who were suffering from lungs cancer and were in first stage of lung cancer.

III. Participants' willingness to participate in the current research.

Sample

The sample was composed of 100 patients (male = 50, female = 50) who met the inclusion-exclusion criteria and participated in this research. Sample was drawn from the Inmol hospital, Mayo hospital and Sheikh Zayed hospital with the endorsement of the MS of the hospitals.

Instrument

Hospital Anxiety and Depression Scale was used to collect data pertaining to demographic variables and level of anxiety and depression among cancer patients. The scale was copyrighted and the permission was taken from the Prof Dr Riaz Bhatti Director of Psychiatry Department Mayo Hospital Lahore. Urdu version of the HADS was used. It was based on the symptoms of anxiety and depression.

Demographic Information Form

Demographic information form was used to gather information about age, gender, education, occupation, marital status and monthly income.

Cancer

Diagnosis made by oncologists preceding hospitalization of the patients suffering from the first stage of the lung cancer.

Anxiety

The anxiety is operationally defined as the scores obtained on item numbers 1, 3, 5, 7, 9, 11 and 13 on HADS. The higher the score on HADS, more the anxiety level.

Depression

The depression is operationally defined as the scores obtained on item numbers 2, 4, 6, 8, 10, 12 and 14 on HADS. The higher the score on HADS, more the depression level.

Procedure

Official permission was sought from the MS of the above mentioned hospitals for data collection. Before administration of the questionnaire, the participants were briefed about the nature and purpose of the study. Rapport was established by assuring them the confidentiality about their personal information to elicit their true responses. They were ensured that their information would be used for research purpose only. A consent form was also obtained from each participant individually and the HADS was administered individually.

Statistics

The SPSS (Statistical Package for Social Sciences) version 11.5 was used to perform independent sample t-test to find the gender differences in anxiety and depression among cancer patients.

Results

Table 1 indicate Descriptive characteristics of sample by gender (N=100). (See Table 1).

The results in Table 2 ($t = .02$, $df = 98$, $p > .05$) show that there are no significant gender differences in level of anxiety and depression among cancer patients**.** (See Table 2).

The results in Table 3 ($t = .97$, $df = 98$, $p > .05$) indicate that there are no significant gender differences in level of anxiety reported by the cancer patients on HADS. (See Table 3).

The results in Table 4 ($t = -.99$, $df = 98$, $p > .05$) show that there are no significant gender differences in the level of depression among cancer patients. (See Table 4).

Discussion

The present study examined the gender differences in anxiety and depression among cancer patients. The findings of the current research suggest that there are no significant gender differences in anxiety and depression among cancer patients. The findings of the current research are consistent with the prior research findings of (Tavoli, 2007; Nordin, 2002; Aass, Fossa, Dahl & Aloe, 1997).

The results of Tavoli's (2007) research also supported the results of this research. He conducted a cross sectional study of anxiety and depression with cancer patients by using HADS. 142 patients were studied. Overall 47.2% and 57% of patients scored high on both anxiety and depression. There were no significant differences between gender, educational level, marital status, cancer site and anxiety and depression scores whereas those who knew their diagnosis showed a significant higher degree of psychological distress and in current research there is also no significant gender differences in anxiety and depression among cancer patients.

Nordin (2002) in their studies of gastrointestinal cancer patients have shown that overall 17% of gastrointestinal patients suffer from anxiety and 21% experience depression and current research also denotes that the cancer patients experience anxiety and depression.

The aim of the Aass, Fossa, Dahl & Aloe (1997) study was to investigate the prevalence of anxiety and depression in cancer patients seen at the Norwegian Radium Hospital, using the Hospital Anxiety and Depression Scale (HADS). The

prevalence of anxiety and depression among 716 valuable patients was 13% and 9% respectively, as assessed with HADS. Age or gender had no influence on the occurrence of depression and anxiety on patients suffering from cancer and the results of this research are same that there are no significant gender differences in anxiety and depression among cancer patients.

Cancer is such a deadly disease that man and women get equally affected from it. They suffer the same complications mentally as well as physically and get the treatment of same sort that's why their level of depression and anxiety remains equal. Though the result is quite unpredictable but may get an idea of deep human emotional bonding which is of same level. Gender doesn't discriminate or effect the depression or anxiety level.

However there are certain limitations in the present research. For example, the sample was considerably small to analyze the phenomena of gender differences in anxiety and depression among cancer patients. Therefore, these results can not be generalized to the rest of the population.

The findings of this research have implications for understanding the gender differences in anxiety and depression among cancer patients so that the future therapeutic interventions would consider the significance of anxiety and depression among cancer patients.

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Table 1 : Descriptive characteristics of the sample by gender (N=100)

Characteristics	Total sample (N=100)		Male (n=50)		Female (n=50)	
	percent	Freq	Percent	Freq	Percent	Freq
Age						
19-28	47	47	33	66	14	28
29-38	42	42	12	24	30	60
39-48	11	11	5	10	6	12
Marital Status						
Married	84	84	37	74	47	94
Unmarried	16	16	13	26	3	6
Qualification						
Illiterate	27	27	6	12	21	42
Below metric	19	19	5	10	14	28
Metric	29	29	16	32	13	26
Intermediate	12	12	12	24	0	0
Graduation	7	7	5	10	2	4
Masters	6	6	6	12	0	0

Income (rupees)						
1000-10000	52	52	20	40	32	64
11000-20000	38	38	22	44	16	32
20000-30000	9	9	7	14	2	4
31000-40000	1	1	1	2	0	0

Table 2: Gender differences in scores of cancer patients on HADS

	Mean	**SD**	**SE_{DX}**	**t**
Male (n=50)	34.12	4.71		
			.84	.02
Female (n=50)	34.10	3.68		

t = .02, df = 98, p > .05

Table 3: Gender differences in anxiety among cancer patients

	Mean	**SD**	**SE_{DX}**	**t**
Male (n=50)	18.00	3.02		
			.59	.97
Female (n=50)	17.42	2.95		

t = .97, df = 98, p > .05

Table 4: Gender differences in depression among cancer patients

	Mean	**SD**	**SE_{DX}**	**t**
Male (n=50)	16.12	2.98		
			.57	-.99
Female (n=50)	16.68	2.68		

t = -.99, df = 98, p > .05