The association of Depression in Patients with kidney Failure & Cancer with some Variables:
A case study of patients at Al-Jazeera Hospital for kidney Diseases & Surgery
Hospital of the National Institute for cancer, Wad Madany, Sudan
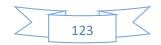
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Abstract

The study aimed to study the association of depression in patients with kidney failure and cancer with some variables. A case study of patients at Al-Jazeera hospital for kidney diseases and surgery hospital and the National institute for cancer in Wad Madany, Sudan(May 2015).The researchers used the descriptive analytical method based on field study and Aaron Beck Scale of depression adapted to Sudanese environment and a primary data form prepared by the researchers. The research sample consisted of (300 patients) selected by simple random method (150) with kidney failure) (150) cancer. The data manipulated by (SPSS) (T-test and Pearson correlation coefficient and one-way analysis of variance (V) test), the main results were:

1- There are no statistically significant differences in depression according to the type of disease (kidney failure and cancer) (0.167).

2- There are no statistically significant differences in the incidence of depression in people with kidney failure according to type (male and female), whether there are statistically significant differences according to cancer in favor of males.

3- There are no statistically significant differences between depression in patients with kidney failure and cancer according to the educational level.

4-There are no statistically significant differences between groups in the incidence of depression in people with kidney failure according to (age), whether there are statistically significant differences between groups according to cancer.

Key words：Depression, kidney failure, cancer, variables.

Introduction

There are many physical diseases afflict a person, some are easy to treat and transient and others are chronic, doctors find difficulties to treat and need continuous treatment. These diseases affect persons with depressive episodes, obsessive-compulsive disorders, fears and other mental disorders. There are some studies that deal with the relationship of some chronic diseases to some mental illnesses, Basheer (2003) and Fatima (2004), the first dealt with depression and cancer and the second dealt with depression and kidney disease.

The researchers believe that there is an urgent need for more research in this regard and that diseases of kidney failure and cancer have increased in recent time in a striking way, and these diseases may correlate with depression and some other mental illness.

Problem of the study:

Kidney failure and cancer are among the chronic organic diseases that may be associated with some mental disorders, which in turn may increase the severity of the disease, extend its duration and reduce the effectiveness of treatment.

In recent years, the incidence of kidney failure and cancer increased, as a report from the Statistics office of Al Jazeera hospital for kidney diseases and surgery indicated that in (2007) the total number of cases received during this year that required regular hemodialysis (651) cases , (512 males, 75.1%), (100 females,24.9%), but in (2003) (845) cases. (622 Males) (223 females), but there were no accurate percentages for the following years since 2007.

As for cancer, the researchers did not have accurate statistics about the number of patients who attended hospitals. These previous reports indicate an increased incidence of kidney failure, and may apply to cancer and progressively.

For this reason, the study problem can be summarized as the following questions

1- Are there any relationship between the incidence of depression and kidney failure and cancer?

2- Are there any differences in the incidence of depression in patients with kidney failure and cancer depending on the type of disease (kidney failure and cancer)?

3- Are there any differences in depression in patients with kidney failure and cancer depending on the type (male and female)?

4- Are there any differences in depression in patients with kidney and cancer failure according to educational level?

5- Are there any differences in depression in patients with kidney failure and cancer according to age?

Importance of the study:

1- The importance of the study stems from the importance of the subject (The association of depression in patients with kidney failure and cancer with some variables) and the study sample

2- This study may come out with results that help patients

Objectives of the study:

1-Studying depression in kidney failure and cancer, and its relationship to some variables for patients attending Al-Jazeera hospital for diseases and surgery of the kidneys and the Institute of nuclear medicine and oncology in Wad Madany.

2- Studying the differences in depression according to the type of disease (kidney failure and cancer).

3- Studying the differences in the incidence of depression in people with kidney failure and cancer according to the type (male and female).
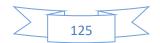
4- Studying the differences in the incidence of depression in people with kidney failure and cancer according to the educational level.

5- Study the differences in the incidence of depression in people with kidney failure and cancer according to the age.

The hypotheses of the study:

1-There are statistically significant differences in depression according to the type of disease (kidney failure and cancer).

2-There are statistically significant differences in the incidence of depression in people with kidney failure and cancer according to the type (male and female).

3-There are statistically significant differences between depression in patients with kidney failure and cancer according to the educational level

4-There are statistically significant differences in the incidence of depression in people with kidney failure and cancer according to the age.

Method of the study:

The researchers adopted the descriptive analytical method based on field study.

Procedures of the field study:

Study Population:

The study population consists of patients attending Wad Medany hospital for kidney diseases and surgery and Wad Madany hospital for nuclear medicine and diagnosis and treatment of tumors (January-May-2015).

Study sample:
The study sample consisted of (300 patients) selected by simple random method (150) with kidney failure (150) cancer, from the patients attending the hospitals mentioned above.

Study tools:
Primary data form includes variables (gender, educational level and age) and Aaron Beck scale of depression adapted to Sudanese environment.

Statistical method:
The data manipulated by (SPSS) (T-test, Pearson correlation coefficient and one-way analysis of variance (V) test)).

Limitations of the study:
Objectivity Limits: The association of depression in patients with kidney failure and cancer with some variables Location Limits: Al-Jazeera hospital for kidney diseases and surgery and the national cancer institute hospital in Wad Madany Duration: January-May-2015

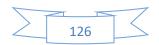**Theoretical framework:**
Depression:
Definition: A mental illness characterized by a change in mood from a feeling of sadness ranging from mild depression to extreme, it is relatively constant and continuous for days or even years and associated with changes in behavior.
 It can occur in many physical, psychological illnesses and distinctive natural feeling of mourning and sadness (El Ashry, Tawfik, 2001).
WHO (1999) defined it in taxonomic guide to mental disorders ICD10 that(It is an emotional disorder that appears with psychological and physical symptoms that reflect the patient's suffering and mood disorder and interferes in the occurrence of that disorder environmental, cultural, personal, biochemical and genetic factors).
Beck (1979) defines depression as a condition of a specific change in mood (sadness, loneliness and indifference), a negative self-concept with a desire to escape and death and a decrease in the level of general activity.
The Diagnostic and statistical manual of psychological and mental diseases, Fourth Edition DSM4 (American psych-association, 1994) (Depression is a widespread disorder that needs treatment, its

prevalence ranges from (2%) in Taiwan to (5%) in America, and above (15%) in France and Lebanon. WHO statistics indicate that the percentage reaches (5%) of the total world population who suffer from depression).

Classification of depression: WHO (1999) mentioned in the tenth revision of the International classification of diseases classifies depression within affective disorders as an emotional disorder into

1-Mild depressive seizure: It requires the presence of two of the most typical and common symptoms. He finds it difficult to continue his work and practice various activities, but he often never stop performing completely.

2-**Moderate major depressive episode:** There should be three of the most typical symptoms in addition to three (preferably four) of the others and he suffers from a depressive episode is only able to continue its daily activities with great difficulty (ibid).

3-**A severe depressive episode**: That is not accompanied by psychotic symptoms: In this episode, the person usually shows severe distress or irritation, motor deficiency is a prominent feature and suicide is a confirmed risk in particularly severe cases, in addition to mild and moderate symptoms, the symptoms must be severe and the seizure should normally last for at least two weeks.

4-**Severe depressive seizure accompanied by psychotic symptoms**: The previous episode in addition to delusions, hallucinations or depressive stupor. Delusions usually include thoughts of guilt, poverty, or anticipating disasters and auditory and olfactory hallucinations that are in the form of accusing him or dirty smells and hallucinations.

5-**Recurrent depressive disorder:** It is characterized by the occurrence of depressive episodes and is diagnosed with the presence of diagnostic evidence for a depressive episode with a history of depressive episodes without a history of manic episodes.
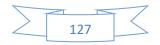
 Causes of depression:

 1-**Genetic factors:** Corell W.et al (2003) stated that (There is some evidence for the effect of biological factors in the tendency to major depression disorder (major depression disorder of monozygotic twins is estimated at 50% while it is estimated to occur in dizygotic twins about 35%).

 2-**Biochemical factors**: Abdul Basit (2000) stated that (Many studies indicated that the mood is regulated by a group of chemicals called neurotransmitters and that individual's natural behavior requires the balance of these chemicals, while their disorder plays an important role in causing emotional impairment which is represented by a decrease in nor epinephrine and serotonin.

 3-Psychological factors: Jack W.MC Aninchk (2004) mentioned experiences that could be a contributing factor to depression such as

 1-Severe deprivation that leads to low self-concept, loss of self-confidence.

2-Children went through an experience of isolation due to disability and lack of learning social skills that leads to a feeling of inferiority.

3-The mismatch between the concept of a realistic self, which includes the individual's view of his physical, values and beliefs with the concept of social and ideal self.

4-**Personal reasons**: Biological, chemical, environmental and psychological factors interact with personal factors to determine the extent, response and severity (Introverted personality).

5-**Cultural reasons**: Kamal (2001) pointed out that many scientific studies have shown a clear disparity between percentage of depression in different countries according to cultural, social and religious aspects. These studies have shown that some cultures help to root the concepts of pain and sadness in the hearts of individuals and thus it rewards feeling of depression as an aspect of the emotional life of its members, and this is clear in styles of poetry, music, dance, singing and other forms of art.

Chronic illnesses: Lioyd G. G, (1999) mentioned that individual's affliction with a chronic organic disease is one of the main causes of mental illness, and he called it (Predisposing factors). He also mentioned the same reason when speaking about reinforcing reasons for the persistence of mental illnesses while the occurrence of severe organic disease and exhaustion of forces is a precipitating factor these chronic diseases such as cancerous tumors, AIDS, heart disease, kidney failure and typhoid.

Diagnosis of depression: WHO (1999) indicated that there are main symptoms of diagnosing depression, lack of focus, attention, difficulty in thinking, low self-esteem, feeling losing value and feeling guilt for an unworthy cause, pessimism , negative outlook for the future, suicidal thoughts or attempts to self-harm, sleep disturbance and anorexia.

Treatment of depression: Prevention through mental health and strengthening spiritual aspects or treatment by drug therapy with anti-depressants, ECT and psychotherapy.
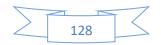
Kidney failure:

Merck (1997) mentioned that (Kidney failure is the occurrence of deficiencies in the kidney process and functions, which leads to a general imbalance in the human body) and he referred to two types of kidney failure:

1-**Acute kidney failure:** Appears quickly because of several reasons that the kidney may not be related to. Its causes are known and can often be prevented and treated.

Kidney insufficiency: It is a clinical condition caused by a number of pathogens that lead to disruption or deficiency in the function of the kidney, usually the period is short and the artificial kidney may help the patient during this period of kidney failure.

Causes of kidney failure: Farhat (1998) mentioned that there are primary diseases that cause kidney failure (Infections, the most common is what is called cystitis, which affects the internal

membranes of the bladder, and here shows the importance of periodic examination of urine, diabetes, high blood pressure, schistosomiasis, and hereditary diseases such as polycystic kidney disease and misuse of analgesics.

Saleh (2012) divided kidney failure into two types:

1-Acute renal failure: The causes of this condition are healthy, but severe kidney failure occurs because of severe low blood perfusion (lack of blood or liquid plasma). In this case, the kidneys are healthy but the injury is caused by a blockage in the urethra (bladder - ureters). This blockage is caused by a gallstone in the urethra, a cancerous tumor, fibrosis or an enlarged prostate, that the kidneys are exposed to severe inflammation and then the occurrence of severe deficiency in their functions from the causes leading to severe inflammation of the kidneys.

2-Chronic renal failure due to the effect of kidney tissues on diseases, whereby purification units are gradually destroyed that lead to a deficiency in the work of the kidney and its functions, which leads to an imbalance in the human body.

Chronic kidney failure is the decline in normal kidney function and is the end-stage in kidney failure; the most important causes are schistosomiasis, urinary obstruction, diabetes.

Diagnosis of kidney failure:

Farhat (1998) pointed to some ways of diagnosing kidney failure

1-Clinical examination of the patient, blood pressure, the condition of blood supply in his body and knowledge of the causes of urinary retention or decreased.

2-Microscopy and a blood sample is taken from the patient to analyze the ratio of urea or creatinine.

3-Examination of the abdomen with the sonar apparatus (ultrasound) and the urine pressure or osmolality,If the cause of renal insufficiency is due to the pre-kidney reasons, the azmolality is high (500 mm Uzmol) while the urine concentration is (300 mm Ozbol) in the case of duct retention urine.

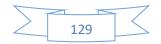4-Take a sample from the kidney and examine it if the secretion is still vague.

5-Analysis of urea in the blood. Urea is the product of extracting proteins in the body that comes out with the urine of a natural person, but rises in the blood in the case of kidney failure.

Treatment of kidney failure:

According to Farhat (1998), treatment of kidney failure includes industrial kidney, kidney transplant and peritoneal or bloody washing and for chronic kidney failure includes

1-Diet: Reducing the amount of proteins (found in eggs, meat, and legumes) that he consumes and compensate for them with sugars, carbohydrates or fats, as well as reducing the amount of salt and potassium (found in nuts, bananas, oranges, mandarin, and grapefruit).

2-Medications: The patient is given the following medications: (D-vitamin), aluminum hydroxide syrup (Erythropoietin) to treat anemia, blood pressure lowering drugs.

3-Dialysis: Purifying the blood from toxic substances by treating it with a dialyzing fluid (its composition is similar to plasma synthesis).

4-Kidney transplantation: Has great benefits for those with terminal (chronic) kidney failure. An implanted kidney can replace the endocrine gland function as well as emptying function of the normal kidney, and this allows a cycle to restore the formation of red blood cells.

Kidney diseases in Sudan:

The number of treatment centers in the year (2011) reached 56, the number of patients (4521) the number of deaths (849), kidney transplantation (198).

There is an increase in the number of patients, who continue to have hemorrhagic clearance from (3332) in (2006) to (5370) in (2011),

Number of emergency patients increased from (3292) in the year (2008) to (9500) In (2011), accompanied by opening of (13 centers) in Khartoum, an increase of (54%) and (18 centers) in the states, an increase of (66%), with the addition of (353 machines), an increase of (57%), and that was accompanied by new models from Swedish (Qambro) –AK96), (100 machines). For the first time, (B Brown) machines (100 machines) enter the public sector centers in the year (2009).

Previous studies:

Many studies were studied by the researchers dealing with renal failure and its relationship to some mental disorders at the local level made by:

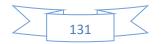Abdel-Fattah (2002) aimed to measure the effectiveness of the self-care program as a guiding method for patients with kidney failure (Ibn Siena - Khartoum).

The results indicated that the self-care program has a statistically significant effectiveness in raising the level of self-care for kidney failure, but it is not affected by the gender variable.

 The self-care program used is statistically effective in improving attitudes towards patients and oneself, and the self-care program used has statistically significant effectiveness in improving the form and nature of life for a patient with kidney failure.

Al-Bushra (2010) studied depression in patients with kidney failure and its relationship to some other variables.

The level of depression in males reached (48%) and in females (52%), and there are statistically significant differences in the incidence of depression depending on the gender in favor of females, and according to age for the benefit of the age group of (21-30) years, and according to the educational level in favor of the low educational level,

Bashir (2002) entitled depression among cancer patients and its relationship to some variables, and the most important results of the study that there are differences in the degrees of depression according to the type.

Al-Hassan (2004) aimed to know depression in women with cancer and its relationship to some variables.

The most important results, the presence of a statistically significant proportion of patients suffering from depression at levels above average, the absence of a relationship between the length of illness and depression, the absence of a correlation between age and type of treatment and depression.

Al-Wasilla (2008) entitled psychiatric anxiety in patients with kidney failure, and the most important results. There is a statistically significant relationship between the incidence of psychological anxiety and the incidence of kidney failure and other diseases.

There are statistically significant differences in the different levels of anxiety among individuals of the sample due to educational level; there are statistically significant differences in different levels of anxiety among individuals of the sample due to the benefit of females.

Arab and International studies:

Gudex (1995) studied the quality of life for patients with kidney failure according to different forms of treatment; he found that patients who performed kidney transplantation less disruptive than patients with dialysis with regard to organic disease did and patients who performed kidney transplants less disorder than patients with dialysis with regard to mental illness do.

Furla (1998) studied psychosocial factors for patients with dialysis and washing.

Among the most important results of the study was that psychosocial services reduce the negative effects of patients with kidney failure.

Al-Amrani and Bilal (2001) King Khalid university hospital center, Abha city aimed to determine the factors that affect the process of adaptation with washing, such as the economic situation, extended family regularity and the purpose of the study is to know mental disorders caused by dialysis in order to develop new concepts that help to improve quality of patient health, among the most important results of the study:

Depression is the most common disease associated with kidney failure among patients, 71% according to DSM4 (American psych-association, 1994).

Abdel-Karim (2009): Measured the effectiveness of the self-care program as a guiding method for patients with kidney failure (Ibn Siena - Khartoum).

The sample consisted of (15) patients presenting kidney failure at Ibn Sina specialized hospital for the year 2006, who were partially chosen through the block, male and female, who were not subject to any guidance intervention or independent psychological treatment. The results were as follows: the self-care program used has a statistically significant effectiveness in raising the level of self-care for kidney failure.

The effectiveness of the self-care program is not affected by the gender variable.

Studies dealing with cancer and its relationship to some mental disorders:

Basheer (2002) Depression in cancer patients and its relationship to some variables. The study was conducted on cancer patients in the age group (30 - 80 years) at Al-Jazeera hospital for radiotherapy Wad Madany April 3, 2001 - August 2001. Study sample: (80) patients (28 males - 52 females) and the most important results of the study were:

There is a statistically significant relationship between depression and the low educational level.

There is no relationship between the patient's age and the degree of depression.

There is no relationship between gender (male, female) and degree of depression

Blumberg et al (1954) The Psychological assessment of cancer patients.

The sample was (25) male patients, as they performed a multi-faceted Minnesota scale test for male cancer patients who had multiple types of tumors and then selected (25) patients with a calculated survival time from the date of the first presentation of duration equal to or less than 25% of their expected type of cancer and (25 patients with equal or more than 75% of the patients were expected to be chosen during the calm period.so that the patients were of comparable ages - nationalities - religions, social status, and IQ. The study found that there are very high levels of depression and anxiety in patients with rapid progression and development of the disease.

Akhtar et al (non-medical factors associated with mental disorders in cancer patients).

The study aimed to find out the non-medical orthopedic factors associated with mental disorders of cancer patients is a study conducted for elderly cancer patients

The study was conducted at the Prickly Khanum cancer hospital in Lahore center, Pakistan, in the January to December 1999. For 224 cases. A clinical psychologist interviewed new cancer for older patients and data was collected on non-medical factors (age, gender, social support system, family atmosphere and marital status) and then analyzed with SPSS

The study found that 142 (63.4%) of the cases recorded non-medical factors as causes of mental disorders, and 82 (36.6%) of the cases wrote their reasons as medical.

Ten sources were reported to be the most frequent cause of the unrest.

It was noted that the family support system and the general climate of the family have a significant relationship with these disorders, while other variables (age - gender - marital status) have no significant relationship with non-medical factors

Fatima (2006) Psychological anxiety in cancer patients and its relationship to some variables aimed to know the relationship between psychological anxiety in cancer patients and some other variables.

The study was conducted on cancer patients at Al-Jazeera hospital for radiotherapy - Wad Medany

(112) patients (45) males (67) females. There were no statistically significant differences in the incidence of psychological anxiety in cancer patients according to type (male, female).

Comments:

1-There is a correlation between the education level of cancer patients and the degree of depression.

2- Cancer is progressing rapidly with an increased rate of depression for patients.

3-The variables (age, gender and marital status) had no relationship with mental disorders (depression).

 Method and procedures of the field study:

It contains a primary information questionnaire designed by the researchers, contains the study variables and Beck depression scale (1961) adapted to Sudanese environment.

Methodology: The researchers used the descriptive method that is suitable for this study because it leads to describe and interpret the behavior (Cohen 1990).

Study population: consists of patients at Al-Jazeera hospital for kidney diseases and surgery

Hospital of the National institute for cancer Wad Madany.

Study sample: Abu Allam (2003) defined it as a subset of society with common characteristics. The researchers used simple random method to select (300 patients) (150 with kidney failure) (150 cancer. The data manipulated by (SPSS) (T-test, Pearson correlation coefficient and one-way analysis of variance (V) test).

Table (1)

Kidney failure

Variables		dimensions
Gender	1	Male
	2	Female
Age	1	18-30 years old
	2	31-45
	3	46-55
	4	56 and more
Academic level	1	Illiteracy
	2	Quranic
	3	Primary
	4	Secondary
	5	University
	6	Postgraduate education

Table (2)
Cancer

Variables		dimensions
Gender	1	Male
	2	Female
Age	1	18-30 years old
	2	31-45
	3	46-55
	4	56 and more
Academic level	1	Illiteracy
	2	Quranic
	3	Primary
	4	Secondary
	5	University
	6	Postgraduate education

Frequency table (3)

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.3	.3	.3
	1	32	10.7	10.7	11.0
	2	45	15.0	15.0	26.0
	3	74	24.7	24.7	50.7
	4	60	20.0	20.0	70.7
	5	88	29.3	29.3	100.0
	Total	300	100.0	100.0	

Table (4)

educa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	63	21.0	21.0	21.0
	2	28	9.3	9.3	30.3
	3	102	34.0	34.0	64.3
	4	49	16.3	16.3	80.7
	5	57	19.0	19.0	99.7
	6	1	.3	.3	100.0
	Total	300	100.0	100.0	

Table (5)

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	163	54.3	54.3	54.3
	2	137	45.7	45.7	100.0
	Total	300	100.0	100.0	

stage

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	99	33.0	33.0	33.0
	2	83	27.7	27.7	60.7
	3	97	32.3	32.3	93.0
	4	21	7.0	7.0	100.0
	Total	300	100.0	100.0	

Data collection tools: The tool is the means or methods used by the researchers in collecting the necessary information to address the problem of study and verify the validity of hypotheses and access to results. The researchers used two forms; a basic information form included the demographic variables of the study and Aaron Beck scale of depression.

Validity: The scale was presented to five colleagues from department of psychology and they pointed out that the scale measures what was prepared for, and the dimensions are clear and measured directly.

Study procedures: The scale was applied by the researchers (field study) 2015.

Statistical analysis: After collecting data, the researchers coded the variables of the study and then unloaded and tabulated, and subjected to statistical analysis, where all data entered into the memory of the computer using the statistical package of social science (SPSS) using the explanation provided by Abu Allam (2003) for statistical analysis.

Results of the study, discussion and interpretation:

The findings of the study are presented through the data collection tools used by presenting each hypothesis and the results related to it, and then commenting on them and the results of the current study are:

1-Presentation and discussion of the first hypothesis (There are statistically significant differences in depression according to the type of disease (kidney failure, cancer).
To study this hypothesis, the researchers used T- test for the two independent groups. The result of the analysis showed the following table:

Table (7)

T-Test to know the differences in depression in patients according to the type of disease

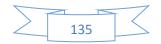| Variables	type	number of cases	Theoretical Mean	Standard deviation	T value	value	statistical significance
Depression	kidney failure	150	15.61	9.01	1.38	0.167	There were no are statistically significant differences between the two groups
	Cancer	150	17.33	12.20			

There are no are statistically significant differences between the two groups (0.167)

The study differed with Blumberg (1954) result that showed (having very high levels of depression and anxiety in patients with developing cancer).
Study made by Iqbal and others (1999) indicated that (63%) of the cases recorded non-medical factors as the causes of mental disorders among them (depression) and only a few (37%) of the cases had medical causes.

The study also differed with what Alwasila (2008) went to with regard to some mental disorders (psychological anxiety) entitled psychiatric anxiety in patients with kidney failure, and the most important results (There is a statistically significant relationship between the incidence of psychological anxiety and the incidence of kidney failure and other diseases).

The study also differed with Al-Amrani and Bilal (2001) King Khalid university hospital center, Abha city (Depression is the most common disease associated with kidney failure among patients, (71%) according to DSM4 (American psych-association, 1994).

The researchers see no differences due to the fact that the complications of these diseases (socio-psychological, physical and economic) are similar and thus affect the patient in a convergent manner, which may lead to similarity in symptoms and thus the absence of statistically significant differences.

2-Presentation and discussion of the second hypothesis :(There are statistically significant differences in the incidence of depression in people with kidney failure according to type (male and female) and to verify the validity of this hypothesis, the researcher used T-test for independent groups.

The result of this procedure showed the following table

Table (8)

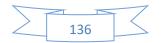**T- Test to know the differences in depression and kidney failure according to type**

Variables	Gender	number of cases	Theoretical Mean	Standard deviation	T value	value	statistical significance
Depression	male	100	15.20	9.31	0.659	0.511	There were no statistically significant differences between the two groups
	female	50	16.30	8.42			

There are no statistically significant differences between the two groups

The study agreed with Basheer (2002)) (The most important results of the study is that there is no relationship between gender (male, female) and degree of depression).

The study differed with Al-Bushra's study (2010) on depression in patients with kidney failure and its relationship to some other variables, the level of depression in males reached (48%) and in females (52%), and there are statistically significant differences in the incidence of depression depending on the gender in favor of females.

3-Presentation and discussion of the third hypothesis: This hypothesis states that (There are statistically significant differences in the incidence of depression in people with cancer according to type (male and female) and to verify the above hypothesis, the researchers used T-test for independent groups., this procedure showed the following results.

Table (9)

T-Test to know the differences in depression in cancer patients according to the type

Variables	Gender	no of cases	Theoretical Mean	Standard deviation	T value	value	
Depression	male	63	13.90	9.60	2.95	0.004	There are statistical significance differences between the two groups in favor of males
	female	87	19.70	12.30			

There are statistical significance differences between the two groups in favor of males.

It differed with

1-Bashirs study (2002) showed there was no difference in the incidence of depression depending on the gender variable.

2- Blumberg et al (1954) (The psychological assessment of cancer patients) while other variables (ages) have no significant relationship with non-medical factors.

3-Fatima (2006). Her study was about anxiety as a mental disorder associated with cancer and included (112) patients (45) males (67) females. There were no statistically significant differences in the incidence of psychological anxiety in cancer patients according to type (male, female).
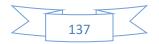
4-The presentation and discussion of the forth hypothesis :(There are statistical significance differences between depression in patients with kidney failure according to the educational level) and to verify the validity of the hypothesis above, the researcher used the Pearson correlation, the result of this procedure showed the following results:

Table (10)

	Sum of Squares	DF	Mean Square	F	Sig.
Between Groups	539.338	4	134.834	.919	.455
Within Groups	22012.559	150	146.750		
Total	22551.897	154			

There are no statistical significance differences between depression in patients with kidney failure according to the educational level.

5-The presentation and discussion of the fifth hypothesis :(There are statistically significant differences between depression in patients with cancer according to the educational level) and to verify the validity of the hypothesis above, the researcher used the Pearson correlation, the result of this procedure showed the following results:

Table (11)

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	501.338	4	126.834	.911	.443
Within Groups	22060.559	150	152.750		
Total	22561.897	154			

There are no statistical significance differences between depression and cancer according to the educational level.

Kamal (2001) pointed out that many scientific studies have shown a clear disparity between the percentage of depression in different countries according to cultural, social and religious aspects. These studies have shown that some cultures help to root the concepts of pain and sadness in the hearts of individuals and thus it nourishes the feeling of depression as an aspect of the emotional life of its members, and this is clear in the styles of poetry, music, dance, singing and other forms of art.

Al-Bushra (2010) pointed out that there are statistically significant differences in the incidence of depression depending on the educational level in favor of in favor of the low educational level.

Basheer (2002) pointed out that (There is a statistically significant relationship between depression and the low educational level).
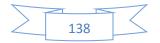
It differed with Basheer (2002) mentioned (There is a statistically significant relationship between depression and low educational level).

It also disagreed with the study of Abdul Basit (2000) which confirmed the high level of anxiety and depression among students.

The researchers' belief that the educational level has an effect in reducing level of depression because it increases knowledge and awareness related to the disease and its prognosis, which may reduce the severity and complications of the disease.

However, the results indicated that there are no statistically significant differences, and this may be attributed to the size of the sample and its representation or the conditions for applying the sample are beyond the researchers' control.

6-The presentation and discussion of the sixth hypothesis :(There are statistically significant differences between depression in patients with kidney failure according to the age) and to verify the validity of the hypothesis above, the researcher used one-way analysis of variance (V) test to find out the differences between more than two averages, and the result of this procedure showed the following results:

Table (12)

Test of mono-contrast analysis to determine the differences according to the age (18-25, 26-35, 36-45, 46-55, over 56 years)

Variables	source of contrast	Sum of squares	D F	Average of squares	F value	the value Probability	statistical significance
Depression	Between groups	75.86	2	37.9	0.464	0.630	There were no significant differences between the groups in depression
	Within groups	12023.7	47	81.79			
	total	12099.5	49				

There were no statistically significant differences between groups in depression in patients with kidney failure according to age

Al-Bushra (2010) mentioned that there are statistically significant differences in the incidence of depression depending on the gender in favor of females, and according to age for the benefit of the age group of (21-30) years.
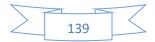
It differed with Basheer (2002) (There was no difference in the incidence of depression according to the variable of age).

7- Presentation and discussion of the seventh hypothesis :(There are statistically significant differences between depression in patients with cancer according to the age) and to verify the validity of the hypothesis above, the researcher used one-way analysis of variance (V) test to find out the differences between more than two averages, and the result of this procedure showed the following results:

Table (13)

Test of mono-contrast analysis to determine the differences according to the age (18-25, 26-35, 36-45, 46-55, over 56 years)

Variables	source of contrast	Sum of squares	Degree of freedom	Average of squares	F value	the value Probability	statistical significance
Depression	Between groups	4922.6	3	1640.8	13.6	0.001	There were significant differences between the groups in depression
	Within groups	17510.65	146	119.93			
	total	22433.3	149				

There are statistically significant differences in depression in cancer patients according to the age. Differences between more than two averages. The result of the analysis showed the following table:

Table (13) shows (There are statistically significant differences between groups in depression. It differed with Blumberg et al (1954) (The psychological assessment of cancer patients)

Gender has no significant relationship with non-medical factors.

Conclusion of the study:

Summary of the most important results:

1- There are no statistically significant differences in depression according to the type of disease (kidney failure, cancer) (0.167).

2- There are no statistically significant differences in the incidence of depression in people with kidney failure according to type (male and female)**.**Whether there are statistically significant differences in the incidence of depression in people with cancer according to type between male and female in favor of males.

3- There are no statistically significant differences between depression in patients with kidney failure and cancer according to the educational level.

4-There are no statistically significant differences between groups in the incidence of depression in people with kidney failure according to (age), whether there are statistically significant differences between groups according to cancer.

Recommendations:

1-Conducting a counseling program for hospital staff of cancer, kidney failure and patients families on how to deal with the disease and relieve the associated psychological disorders.

2-Devoloping a counseling program for patients families and support for psychological research in this aspect.

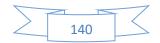**Suggestions:**

1-Conducting a study for children under 18 years.

2-Designing a counseling program and psychological treatment for patients with kidney failure and cancer who suffer from associated depression.

References:

List of references:
1- Abdel-Karim Ream Ibrahim (2009). Effectiveness of manual-concentrated treatment solution for treatment of conformity disorder in patients with hemodialysis in Khartoum state, unpublished doctoral dissertation. University of Khartoum.
2- Al-Bishri Muhammad (2010). Depression in patients with kidney failure and treatment of some variables, unpublished master thesis. University of Gezira College of education. Hantoop.

3-Al-Hassan, Souad Mohamed (DT). Depression in cancer patients and its relationship to some variables, an applied study at the National center for radiotherapy and nuclear medicine, unpublished master thesis. University of Al Neelain, college of graduate studies.

4- Al-Wasila Al-Tayeb (2008). Anxiety among people with kidney disease at Al-Jazeera hospital for kidney diseases and surgery.

5- American psychiatric association (1994).Diagnostic and statistical criteria DSM4.Third edition. Washington.

6-Basheer, Tagrid Ibrahim, (2002). Depression in cancer patients and its relationship to some variables, unpublished master thesis in the department of health psychology, college of applied medical sciences. University of Gezira.

7- Beck, A. T. (1979). Cognitive theory of depression .New York: Guilford press.

8- Blumberg, E. T., West, P. M , & Ellis, F. W.(1954). A possible relationship between psychological factors and human cancer. Psychosomatic Medicine, 1954, 16, 277.

9- Croell W.et al (2003). Major depression in clinical sample .Demographic and clinical risk factor for first one set. Archives of general psychiatry-Oxford university press.

10- El-Ashry Tawfik (2006). Contemporary mental health, Beirut. Lebanon.

11- Farhat, Hikma Abdul Rahim (1998). Al-Wajeez in physiology, 2nd floor. Amman: Dar Al-Bashir.

12- Gudex-CM (1995), Quality of life of renal failure patients with different types of treatment.

13- Iqbal et al. (1999) Non-medical factors associated with cancer Lahore, Pakistan, Shawkat Khanum cancer hospital.

14- Jack w. MCAninch, (2004). Disorder of the penis and male urethra. In lange Smith's General Urology 16th the New York 2004.

15. Kamal, Ali (2001). The psych, its emotions, diseases, and its treatment. The Arab house, house Center.

16- Lioyd G. G (1999). Principles of medical psychiatry in Davidson's principle.

17-Louis Cohen (1990). Research methods in the social and educational sciences. Translated by Kawthar et al .First edition. Cairo: The Anglo-Egyptian Library.

18- Merck (1997). Facilitated medical encyclopedia for diagnosis and treatment. Translated by Hassan Ahmad Qumaiha, Contemporary technical center.

19- Mohamed, Abdel-Fattah Abdel-Moneim (2002). Measuring the effectiveness of the self-care program as a guiding method for patients with kidney failure at Ibn Sina hospital, Khartoum, unpublished master's thesis, University of Khartoum.

20- Raja, Abu Allam (2003). Statistical analysis of data using the SPSS program. Cairo: Publishing house for university.

21- Saleh, Zakaria Adam (2012).Mental health among kidney failure patients Jiyad hospital, unpublished master thesis, College of applied medical sciences, University of Gezira.

22- World health organization (1999). International classification of diseases, classification of mental and behavioral disorders, Guidelines and diagnostic standards, regional office for the Eastern Mediterranean. 118 -140.