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## **Determination of Psychological Stress among Adult cancer Patients in Regional Center for Cancer Diseases at Baghdad Medical City**

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### **Abstract:**

A descriptive-analytic study design on (100) patients with cancer selected randomly from Teaching tumors Hospital of Medical City Directorate in Baghdad City to assess the levels of psychological stress among adult cancer patients and to find-out the relationship between demographic and medical characteristics with stress. The questionnaire was constructed by the researchers by Modified the Perceived Stress Scale. The results indicate that majority of cancer patients at moderate level of psychological stress with MS :( 2.09). There were significant relation between age, occupation, income, educational levels and psychological stress at  $P.value \leq ( 0.05)$ , there were highly significant relation between stage of cancer, duration of treatment and psychological stress at  $P.value \leq ( 0.01)$ , and there were significant relation between type of treatment and psychological stress at  $P.value \leq ( 0.05)$ . It is important

that a significant need to include courses for equipping nurses' staff with such stress management teaching methods in nursing curriculums to improve the quality of nursing education. Future research can use this study to improve policies and quality standards of care aimed at decreasing stress for patients.

**Key words:(Cancer,Psychological Stress).**

تحديد الكرب النفسي لدى مرضى السرطان البالغين في المركز الإقليمي لأمراض السرطان بمدينة بغداد الطبية

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#### المخلص:

دراسة وصفية تحليلية تم اجرائها على ١٠٠ مريض مصاب بالسرطان وتم اختيار العينة عشوائيا من مستشفى الاورام التعليمي دائرة مدينة الطب التعليمية في مدينة بغداد بهدف تقييم مستويات الكرب النفسي لدى مرضى السرطان البالغين وتم تطوير ميزان ادراك الكرب من الباحثين .ومعرفة العلاقة بين الخصائص الديموغرافية والطبية مع الكرب النفسي لتحقيق اهداف الدراسة. اشارت نتائج الدراسة الى ان غالبية مرضى السرطان بمستوى متوسط من الكرب النفسي مع متوسط حسابي قدره (٢.٠٩) وكانت هناك علاقة معنوية بين العمر والمهنة والدخل والمستوى التعليمي والكرب النفسي ، وكانت هناك علاقة معنوية عالية بين مرحلة السرطان ومدة العلاج (0.05) ≤ P.value عند مستوى معنوي وكانت هناك علاقة معنوية بين نوع العلاج والكرب النفسي (0.01) ≤ P.value والكرب النفسي عند مستوى معنوي (0.05) ≤ P.value عند

لذا من المهم على الكوادر التمريضية مراعاة عدة عوامل عند التعامل مع مرضى السرطان وعائلاتهم لهذا هناك حاجة كبيرة لإدراج دورات تدريبية لتزويد الممرضات بأساليب ادارة الكرب النفسي وازادتها في مناهج تدريس التمريض لتحسين جودة تعليم التمريضي. يمكن للبحث المستقبلي استخدام هذه الدراسة لتحسين سياسات وجودة معايير الرعاية التي تهدف إلى تقليل الكرب لدى المرضى.

الكلمات المفتاحية: (تكيف ، السرطان، الكرب النفسي).

## Introduction

Psychological stress has been emerging as one of the key factors associated with cancer initiation, growth, and metastasis. Accumulating data, however, has mainly focused on cancer progression due to the inconsistent results of cancer etiology caused by emotional stress (Visser, 1999). Cancer can be a very stressful life event, waiting for a diagnosis, hearing that have cancer, coping with treatment and side effects, being anxious about work and finances, and worrying about what the future holds can add up to a large amount of stress in life ( Jemal, 2008). Psychological stress in patients with cancer and their families is an expected reaction that may vary from patient to patient. Individuals usually demonstrate a remarkable ability to adapt to both the cancer diagnosis and the treatment (Linden, 2012). Understandably, a certain level of stress response accompanies the diagnosis of cancer, the shock, fear, and uncertainties, including fear of pain, suffering, disfigurement, and possible death, are similar for most individuals (Aziz, 2007). Emotional reactions of anger and sadness related to having one's life dramatically interrupted and the need to face the challenge of making meaningful adjustments also are common (Pam Stephan, 2012). These reactions may be troubling but normally are resolved as patients and families are able to renegotiate and balance their lives. When a patient's reaction or distress interferes with his or her ability to participate in treatment or to function adaptively, immediate intervention may be needed to ensure that the patient receives optimal care ( Folkman , Lazarus ,1996). Tumor growth, progression, and metastasis have also been correlated with stress, anxiety, depression, and numerous other psychological and behavioral abnormalities (Lillberg et al. 2003).

Substantial evidence indicates that psychological stress can influence the incidence and progression of cancers, and adequate psychotherapies are beneficial to cancer patients (Antoni, 2006). Psychological stress can worsen physical manifestation of cancer (Desaive, Ronson , 2008). Cancer diagnosis and treatment has been conceptualized as a stressor (Andersen, 2002). Stress as an etiological factor in cancer is

not well supported in the literature, but stress as a factor in cancer progression and mortality does in fact have significant positive research (Yang, 2014).

The important of this study comes from that nurses are in a strategic position to assess and intervene in the psychosocial needs of patients with cancer and must understand to assess the level of stress in patients and be able to intervene to provide symptom relief and guidance to enhance an extended quality of life.

## Patients and Methods

**Research Design:** A descriptive-analytic study design was conducted from January 1, 2023 to April 12, 2023 on patients with cancer.

**Administrative Arrangements:** The administrative permission had been obtained from the Teaching tumors Hospital of Medical City Directorate in Baghdad City; to approve the research protocol, and to carry out the study in the hospitals.

**Population:** Patients with cancer.

**Setting:** Teaching tumors Hospital of Medical City Directorate in Baghdad City.

**Sampling technique:** Purposive (non-probability) sampling technique.

**Sample size:** 100 adult patients with cancer.

**Method of data collection:** Self-administered rating scale.

**Tools for data collection:** Modified the Perceived Stress Scale (14 items) – Cohen et al, 1983. Translation validity was achieved through the process of forward and backward translation and forward to the expert from College of Languages / University of Baghdad. The questionnaire included two parts which were distributed as follows:

**Part I: Characteristics:** it included

Demographic characteristics concerning the patients which include: age, gender, Occupational status, educational level, economical level, marital status.

Medical characteristics which include: types of cancer, stage of cancer, types of treatment, place of treatment, and duration of treatment.

## **Part II: Perceived Stress Scale**

This questionnaire concerning the stress of patient; consisted of ( 14 ) items, these items perceived patients stress ( Cohen et al, 1983).

All items were rated according to four points-likert scale as [Always, Some time, Never].The result of patients stress items was calculated according to the following mean of score (< 1.5) low, (1.5-1.9) Mild, (2- 2.9) moderate, and (3-3.9) high. The result of coping responses items was calculated according to the following mean of score (< 1.5) low, (1.5-1.9) Mild, (2- 2.9) moderate, and (3-3.9) high.Face validity of the questionnaire was determined initially through the panel of experts in the different specialty related to the field of present study. They were asked to provide the investigator with their suggestions for clarity and adequacy of the contents of the instrument in order to achieve the present study objectives. The reliability was assessed by calculating alpha Cronbachs' coefficient ( $r= 0.88$ ).

**Pilot Study:**Before starting on the fieldwork, a pilot study was carried out at the period from the 1st February to the 14 th February 2023 on (10) patients selected purposively from Teaching tumors Hospital of Medical City Directorate in Baghdad City.

**Methods of data analysis and presentation:** The investigator used appropriate statistical technique for data analysis and present in the form of tables and graphs. The data analyzed by using descriptive and inferential statistics test.

### **Descriptive statistics:**

1-Demographic variables will be analyzed using frequency and percentage distribution

2- Inferential statistics :Level of psychological stress will be analyzed by using mean, and standard deviation, Chi-Square tests for the relationship between psychological stress and the medical characteristics.

## Results

**Table 1: Distribution of Patients Demographic Characteristics**

PATIENTS CHARACTERISTICS	F	%
<b>1. Age (years)</b>		
• 18-27	9	9.0
• 28-37	26	26.0
• 38-47	29	29.0
• 48-57	18	18.0
• 58-67	18	18.0
Mean= 45.18 , SD ( 13,25 )		
<b>2. Gender</b>		
• Male	44	44.0
• Female	56	56.0
<b>3. Occupation</b>		
• Employee	43	43.0
• Unemployed	57	57.0
<b>4. Educational level</b>		
• Primary	43	43.0
• Intermediate	26	26.0
• Secondary	13	13.0
• University	18	18.0
<b>5. Income</b>		
• Sufficient	13	13.0
• Barely sufficient	70	70.0

● Insufficient	17	17.0
<b>6. Marital Status</b>		
● Unmarried	16	16.0
● Married (still live together)	77	77.0
● Divorced	3	3.0
● Widowed	4	4.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

F= Frequency , % = Percentage

Table (1) indicates that ( 29 %) of adult patient are at age group (38–47) years old, and the majority of them (56 %) are female, most of them (57 %) are Unemployed at Primary level of education (43%). Also the table shows that (70 %) of adult patient have barely sufficient income, and (77 %) of them were married (still live together).

**Table2: Distribution of Medical Characteristics**

MEDICAL CHARACTERISTICS	F	%
<b>1. Type of Cancer</b>		
● Breast	27	27.0
● Blood	20	20.0
● Stomach	15	15.0
● Pancreas	24	24.0
● Prostate	7	7.0
● Other	17	17.0
<b>2. Stage of Cancer</b>		
● Stage 1	28	28.0
● Stage 2	58	58.0
● Stage 3	8	8.0
● Stage 4	6	6.0

<b>3. Type of Treatment</b>		
● Surgical	4	4.0
● Chemotherapy	81	81.0
● Radial	13	13.0
● Double Therapy	2	2.0
<b>4. Duration of treatment</b>		
● 6-12 Months	81	52.0
● 18 Months	10	10.0
● 24 Months	19	19.0
● 30 Months and more	19	19.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

F= Frequency , % = Percentage, SD=Standard Deviation

Table 2 shows that (27 %) of adult patients are with Breastcancer, (58 %) at the second stage of cancer, and (81 %) under Chemotherapy, (81 %) about (6-12) Months.

**Table 3: Distribution of the Level of Adult Patients Psychological Stress with Cancer by Mean of Score**

No.	Response Psychological Stress items	MS	Level
1	Upset because of something that happened unexpectedly	2.33	Moderate
2	Unable to control the important things in my life	2.16	Moderate
3	Nervous or agitated	2.22	Moderate
4	Dealing successfully with day-to-day problems and annoyances	2.08	Moderate
5	Effectively coping with important changes that are occurring in my life	1.97	Mild
6	Confident about my ability to handle my personal problems	2.11	Moderate
7	Confident about things are going my way interest	1.89	Mild
8	Not coping with all the things I have to do	1.91	Mild



9	Able to control irritations in my life	2.01	Moderate
10	Able to control on top of things	2.01	Moderate
11	I feel anger because of things that happened that are outside of my control	2.23	Moderate
12	Think about the things I have to do	2.01	Moderate
13	Able to control the way I spend my time in it	1.95	Mild
14	Difficulties are piling up so high that I cannot overcome them	2.07	Moderate
<b>Total</b>		<b>2.09</b>	<b>Moderate</b>

F= Frequency, % = Percentage, MS=Mean of score, (< 1.5) low, (1.5-1.9) Mild, (2- 2.9) moderate, and (3-3.9) high]

Table (3) shows items regarding the psychological stress of patients with cancer; the item NO. (1) upset because of something that happened unexpectedly with MS :( 2.33) at moderate level of psychological stress, and the majority with MS :( 2.09) at moderate level of psychological stress.

**Table 4: Chi-Square Tests for the Relationship between Psychological Stress and the Demographic Characteristics of Cancer Patients.**

No.	Psychological Stress	Value	df	P.value	Sig.
1	Gender	.288	2	.866	N.S
2	Age	9.166	2	.010	S
3	Occupation	8.095	2	.017	S
4	Income	4.067	1	.044	S
5	Educational levels	14.569	6	.024	S
6	Marital Status	1.507	2	.471	N.S
<b>No. of Valid Cases</b>				<b>100</b>	

From table 4; it is noted that there were significant relation between age, occupation, income, educational levels and psychological stress at  $P.value \leq (0.05)$ .

**Table 5: Chi-Square Tests for the Relationship between Psychological Stress and the Medical Characteristics.**

No.	Psychological stress	Value	df	P.value	Sig.
1	Type of Cancer	11.997	6	.625	N.S
2	Stage of Cancer	18.159	4	.001	H.S
3	Type of Treatment	14.673	3	.003	S.
4	Duration of treatment	15.469	2	.001	H.S
<b>No, of Valid Cases</b>				<b>100</b>	

From table 5; it is noted that there were highly significant relation between stage of cancer, duration of treatment and psychological stress at  $P.value \leq (0.01)$ , and there were significant relation between type of treatment and psychological stress at  $P.value \leq (0.05)$ .

## Discussion of the Results

### Discussion of Demographic and Medical Characteristics

Approximately 100 adult patients were completed the questionnaire, ( 29 %) of adult patient are at age group (38–47) years old, and the majority of them (56 %) are female, most of them (57 %) are unemployed at primary level of education (43%). Also the table shows that (70 %) of adult patient have barely sufficient income, and (77 %) of them were married (still live together), This table shows that (27 %) of adult patients are with Breast cancer , (58 %) at the second stage of cancer, and (81 %) under Chemotherapy, (81 %) about (6–12) Months ( table 1 and 2).

These results are consistent with those found in study of 111 women; 87% were diagnosed with stage 2 disease. At the time of the initial assessment, all had been

surgically treated (lumpectomy = 41%; mastectomy = 59%) within the preceding 3 months and were awaiting the start of adjuvant treatment (e.g., chemotherapy, radiation). Demographic description of the sample was as follows: age (M = 51 years, SD = 10, range 31 to 84), marital/ partner status (76% with a partner), and years of education (M = 15.41; SD = 2.66; Mode = 16.00). Distribution of annual family income was barely sufficient (Deanna et al., 2004).

More than half (approximately 60 percent) of individuals who have ever been diagnosed with cancer are age 65 or older; 39 percent are young and middle-aged adults aged 20–64; and 1 percent are age 19 or younger (National Cancer Institute, 2004).

As a result of advances in early detection and treatment, in the past two decades the 5-year survival rate for the 15 most common cancers has increased for all ages— from 43 to 64 percent for men and from 57 to 64 percent for women (Jemal et al., 2004).

Slavka et al.( 2014) included that 60 individuals (44 male and 16 female) suffering from malignant gastrointestinal tract diseases. The participants' age ranged from 48 to 87 (mean (M) 68.70, standard deviation (SD)=9.20) years. According to education level, 29 subjects had secondary school, 22 primary school, five college and four university degree. Most participants were retired (n=53), which was conditioned partially by the shift towards an older age in the sample and partially by the diagnoses. Fifty-five (91.7%) study subjects were married. Fifty-six (93.3%) subjects suffered from colon or rectum cancer, two from stomach cancer, and two from pancreatic cancer. In 55 participants, the diagnosis was adenocarcinoma. All participants had undergone surgery. The average interval between surgery and examination was 3 years and 4 months (ranging from 11 months to 13 years). Seventeen patients had a stoma. In most study subjects (70%), regional lymph nodes were not affected, while tumors had not penetrated the intestine wall in 88.3% of cases.

The average age of the women in this study was in the fifth and sixth decade, which is also the highest age associated with the occurrence of female breast cancer. The incidence of breast cancer was relatively rare before the age of 35 (Instituto Nacional Do Câncer, 2011).

### **Discussion of the Level of Adult Patients Psychological Stress with Cancer:**

The findings pointed that psychological stress of patients with cancer; the item NO. (1) upset because of something that happened unexpectedly with MS :( 2.33) at moderate level of psychological stress, and in general patients stress with MS :( 2.09) at moderate level of psychological stress (Table 3).

This results are consistent with results of (Deanna et al., 2004) who found that total mean score at the initial assessment of their study was 17.55 (SD = 6.72) perceived stress.

Mi (2017) reported that of the 6783 cancer survivors, 26.9% and 8.7% reported having stress and depressive symptoms, respectively, and 27.7% and 5.9% of family members of cancer survivors reported having stress and depressive symptoms, respectively.

The psychological stress of living with a diagnosis of cancer and its treatment, fear of recurrence, and the distress imposed by living with the day-to-day physical problems described above can create new or worsen preexisting psychological distress for people living with cancer. Physical and psychological impairments can also lead to substantial social problems, such as the inability to work or fulfill other normative social roles (Berwick, 2002).

In one United States comprehensive cancer center's study of nearly 4,500 patients aged 19 and older, the prevalence of significant psychological distress ranged from 29 to 43 percent for patients with the 14 most common types of cancer (Zabora et al., 2001).

In subsequent studies of diverse populations with cancer that have reported high rates of psychological symptoms meeting criteria for such clinical diagnoses as depression,

adjustment disorders, and anxiety (Spiegel and Giese-Davis, 2003; Carlsen et al., 2005; Hegel et al., 2006).

Studies have also documented the presence of symptoms meeting the criteria for post-traumatic stress disorder (PTSD) and post-traumatic stress symptoms (PTSS) in adults and children with cancer, as well as in the parents of children diagnosed with the illness (Kangas et al., 2002; Bruce, 2006).

Even patients who do not develop clinical syndromes may experience worries, fears, and other forms of psychological stress that cause them significant distress. Chronic illness can bring about guilt, feelings of loss of control, anger, sadness, confusion, and fear (Stanton et al., 2001). Anxiety, mood disturbance, fear of recurrence, concerns about body image, and communication and other problems with family members are common in cancer patients as well (Kornblith, 1998).

Patients may also experience more generalized worry; fear for the future; inability to make plans; uncertainty and a heightened sense of vulnerability; and other worries, such as about the possible development of a second cancer, changes in sexual function and reproductive ability, and changes in one's role within the family and other relationships (Institute of Medicine and National Research Council, 2006).

Moreover, cancer patients can face spiritual and existential issues involving their faith, their perceived relationship with God, and the possibility and meaning of death. Some cancer survivors report feelings of anger, isolation, and diminished self-esteem in response to such stress (NCI, 2004).

The physical and psychological problems can be exacerbated by or produce significant new social problems. Financial stress resulting from low income, the cost of health care, or a lack of health insurance, as well as reduced employment and income, can result in substantial stress. While the fundamental resolution of such social problems is beyond the abilities of health care providers, evidence described below and in the next chapters shows why attention to these problems is an integral part of good-quality health care and

how they can be addressed within the constraints of clinical practices (Boberg et al.,2003).

Stress comes from the fact that, as soon as the cancer diagnosis is made of a disease that is known to generate suffering and worry, there is an imbalance, not only in the diagnosed woman, but also in her family, in that members are faced with an extremely stressful situation and usually this almost immediately motivates a change in behavior (Yang, 2008).

### **Discussion of the Relationships between Demographic and Medical Characteristics with Psychological Stress.**

It is noted that there were significant relation between age, occupation, income, educational levels and psychological stress at  $P.value \leq (0.05)$ , there were highly significant relation between stage of cancer, duration of treatment and psychological stress at  $P.value \leq (0.01)$ , and there were significant relation between type of treatment and psychological stress at  $P.value \leq (0.05)$  ( table 4, 5).

Mi (2017) Stress was associated with gender, age, education, smoking, number of chronic disease, unmet needs for health care, and utilization of community health service in cancer survivors. Depressive symptoms were associated with gender, marital status, smoking, alcohol drinking, number of chronic diseases, and unmet needs for health care in cancer survivors. Similar associations were shown in family members of cancer survivors

Studies across different types of cancers and populations have consistently shown that significant portions of individuals (7 to 70 percent across studies (Spelten et al., 2002) stop working or experience a change in employment (reduction in work hours, interruption of work, change in place of employment) after being diagnosed or treated for cancer (Institute of Medicine and (National Research Council, 2006).

Yabroff et al., (2004) reported that data from the 2000 reveal that in the United States, adults aged 18 and older with a prior diagnosis of cancer were less likely than individuals of similar age, sex, and educational levels to have had a job in the past month, were more likely to have limitations in the amount or type of work they could do because of health problems, and (among those with jobs) had fewer days of work in the past year.

Analysis of data from 1998–2000, 17 percent of individuals with a history of cancer reported being unable to work, compared with 5 percent of those without such a history (Hewitt et al., 2003).

A retrospective cohort study carried out in five medical centers in Pennsylvania and Maryland with 1,435 cancer survivors aged 25–62 who were working at the time of their diagnosis in 1997–1999 found 41 and 39 percent of males and females, respectively, stopped working during cancer treatment. Although most (84 percent) returned to work within the 4 years after diagnosis (73 percent within the first 12 month after diagnosis), a significant minority (16 percent) did not do so. Of those who returned to work in the first year, 11 percent quit for cancer-related reasons within the next 3 years. Overall, 13 percent quit working for cancer-related reasons within 4 years of diagnosis (Short et al., 2005).

Individuals whose jobs require manual labor or make other physical demands and those with head and neck cancers, cancers of the central nervous system, and stage IV blood and lymphatic cancers appear to be especially at risk for reductions in employment (Spelten et al., 2002; Short et al., 2005).

The late effects of the illness or its treatment in survivors of childhood cancer can also prevent many from working (Ness et al., 2005). However, many individuals with cancer report that changes in their employment or their ability to work are a function of changes in their health resulting from their cancer diagnosis (IOM and NRC, 2006).

Financial needs can arise from the high costs of medical treatment, drugs, and other health support needs, such as medical supplies that are not covered by insurance and/or

are beyond an individual's income level. This financial stress is compounded when a patient suffers a job loss, is not working during periods of treatment, or lacks health insurance (de Boer et al., 2006).

In 2003, nearly one in five (12.3 million) people with chronic conditions<sup>9</sup> lived in families that had problems paying medical bills (Tu, 2004); 63 percent of these individuals also reported problems in paying for rent, their mortgage, transportation, and food as a result of medical debt (May and Cunningham, 2004). Consistent with these findings, Cancer Care, a nonprofit agency supporting individuals with cancer, reports that of those to whom it provides financial grants to pay for transportation, 18 and 11 percent, respectively, cited skipping medications or canceling a medical appointment in the past 3 months because of financial problems.

The 2006 National Survey of U.S. Households Affected by Cancer also found that one in four families in which a member of the household had cancer in the past 5 years said the experience led the patient to use up all or most of his or her savings; 13 percent had to borrow money from their relatives to pay bills; and 10 percent were unable to pay for basic necessities such as food, heat, or housing. Seven percent took out another mortgage on their home or borrowed money, and 3 percent declared bankruptcy. Eight percent delayed or did not receive care because of the cost. As would be expected, the financial consequences were worse for those without health insurance: more than one in four delayed or decided not to get treatment because of its cost; 46 percent used all or most of their savings to pay for treatment; 41 percent were unable to pay for basic necessities; and 6 percent filed for bankruptcy (USA Today et al., 2006). About 5 percent of the 1.5 million American families who filed for bankruptcy in 2001 reported that medical costs associated with cancer contributed to their financial problems (Himmelstein et al., 2005).

The prevalence of psychological distress varies by type of cancer, time since diagnosis, degree of physical and role impairment, amount of pain, prognosis, and other variables.



In one U.S. comprehensive cancer center's study of nearly 4,500 patients aged 19 and older, the prevalence of significant psychological distress ranged from 29 to 43 percent for patients with the 14 most common types of cancer (Zabora et al., 2001).

Evidence also indicates that patients' wide range of information needs (e.g., information specific to their type and stage of cancer, treatment, prognosis, rehabilitation, achievement and maintenance of maximal health, coping, and financial/legal concerns) change over time, for example, during and after treatment (Rutten et al., 2005; Epstein and Street, 2007).

Jin (2017) showed that the significant characteristics belonging to the group with consistently high distress compared with belonging to the group with low-decreasing distress was old age ( $\chi^2 = 17.89, p < .001$ ), did not have spouse ( $\chi^2 = 4.83, p = .028$ ), and had menopause ( $\chi^2 = 3.98, p = .046$ ).

Michael (2016) found that Thirty-four percent of women reported frequent or continuous stress and 74 % at least one adverse life event over the preceding 5 years, ranging from 2.5 % for widowhood to 46.7 % for 'other life event that they found very stressful'. Women reporting frequent or continuous stress were more likely to have had an adverse life event.

### **Conclusions and Recommendations:**

The findings pointed out that the psychological stress of patients with cancer at moderate level, and it is noted that there were significant relations between age, occupation, income, educational levels and psychological stress, also there were highly significant relations between stage of cancer, duration of treatment and psychological stress, and there were significant relation between type of treatment and psychological stress at  $P.value \leq (0.05)$ .

Determining the levels of psychological stress and its impact on people, especially patients with cancer, is very important and vital because it will determine their quality of life, including their behavior and influential communication with their families and children at various age and school levels, and the quality of education is closely linked to healthy behaviors and the ability to adapt to and control psychological stress.

This study explored the psychological stress which was suffered by cancer patients. Cancer patients have several learning needs to cope with psychological stress that results from the disease and s nurses should consider several factors when engaging with cancer patients and their families. There is a significant need to include courses for equipping nurses' staff with such stress management teaching methods in nursing curriculums to improve the quality of nursing education. Future research can use this study to improve policies and quality standards of care aimed at decreasing stress for patients.

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