

## **Relation between Post- Traumatic Stress Disorders and Hope Level among Patients with Cancer**

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### **ABSTRACT**

**Background:** Post-traumatic stress disorder (PTSD) is a serious psychiatric disease that occurs after a traumatic experience, such as a cancer diagnosis. Hope is regarded as a significant factor impacting the experience and outcomes of cancer therapy. **Aim:** This study aimed to explore the relation between post-traumatic stress disorders and hope level among cancer patients. **Subjects and Method:Design:** A descriptive correlational research design was utilized. **Subjects:** The study subjects included 183 cancer patients; **Setting;** The study was carried out from the inpatients department at Sohag oncology center. **Tools:** Two tools were utilized to collect data which were; Post-Traumatic Stress Disorders Scale, and Herth Hope Index, In addition to personal and clinical data sheet. **Results:** More than two-thirds of the study participants(67.2%) had moderate PTSD, while more than half of cancer patients (54.1%) had moderate hope, according to the findings . **Conclusion:** There was a highly statistically significant negative correlation between total PTSD score and total hope score among the studied subjects. **Recommendations:** Develop and implement psychoeducational programs for cancer patients that teach stress management, meditation, and mindfulness-based therapies.

**Key words:** *Cancer patients; Hope level; Post-traumatic stress disorders.*

## **INTRODUCTION**

Cancer is a disease characterized by abnormal cell growth that can spread to other parts of the body and is caused by genetic or epigenetic abnormalities in the body's cells. They are a type of tumor. Neoplasms or tumors are clusters or lumps of cells that grow uncontrollably and may be widespread. By 2025, worldwide demographic factors predict that 420 million new cancer cases will be diagnosed each year, reflecting a yearly increase in cancer incidence (Sitki-Copur, 2019).

Cancer is a physical disease as well as a disease with largely psychosocial effects, involving uncertainty and life-threatening consequences, and causing serious psychological problems in patients. The majority of stressors associated with cancer diagnosis, disease, and treatment are experienced by cancer patients. These pressures have the potential to harm mental health. Cancer has a wide range of effects on individuals and their families. Cancer diagnosis and treatment necessitate changes in one's daily activities, work, relationships, and family roles, and are linked to significant levels of psychological suffering in patients. Anxiety or depression is symptoms of stress (Afrooz et al, 2014; Moosazadeh, Hamzehgardeshi, Elyasi, Janbabai & Rezaei, 2017).

A cancer diagnosis can be a huge stressor in one's life, leading to severe consequences such as depression, anxiety symptoms, and post-traumatic stress disorder. PTSD, or post-traumatic stress disorder, is frequently linked to cancer patients. Following an emotionally upsetting experience involving an actual threat, major injury, death threat, or death to oneself or others, PTSD is described as the development of certain symptoms. Cancer has a horrific quality to it (Abbey, Thompson, Hickish & Heathcote, 2015).

Hope is considered as a significant factor impacting the experience and outcomes of cancer therapy. Hope is defined as a wish to live and positive thinking about the future. Hope, according to some experts, is a necessity for efficient coping and decision-making, as well as having protective benefits against disease's physical and psychological pressures. Hope influences the well-being and dedication to treatment of teens and young adults with cancer. Hope can also help teenagers and young adults with cancer improve their resilience and quality of life (Felder et al, 2019).

Hope becomes essential in clinical treatment as a positive psychological resource. It's a multidimensional, dynamic vitality marked by confident but uncertain hopes for the attainment of some actually possible and personally meaningful future. One

of the most crucial aspects of a cancer diagnosis patient's life is hope, which helps them cope with the sorrow and uncertainty of the diagnosis. Cancer patients' optimism appears to be influenced by a number of factors, including physical ones like pain and energy levels, as well as psychological ones like anxiety and sadness. However, just a few researches have looked at the link between hope and medical, psychological, and demographic characteristics in cancer patients, and many of these studies exclude individuals with low hope ratings (Butt, 2015).

**Significance of the study:**

Cancer is a life-threatening disease that can leave people devastated. Cancer incidence is on the rise as a result of population growth and age, and it can lead to mortality in many cases (Ferlay et al., 2017). Cancer patients may feel psychological discomfort, helplessness, and hopelessness due to the chronic nature of their diagnoses. As a result, determining the level of hope in cancer patients is critical, as hopelessness is a risk factor for anxiety, depression, suicide, and a desire to die sooner. So, the goal of this study was to look into the link between PTSD and levels of hope in cancer patients.

**AIM OF THE STUDY:**

This study intended to explore the relation between post-traumatic stress disorders and hope level among cancer patients.

**Objectives:**

1. Determine post- traumatic stress disorders levels among cancer patients.
2. Measures hope levels among cancer patients.
3. Find out the correlation between post-traumatic stress disorders and hope levels among cancer patients.

**SUBJECTS AND METHOD:****Research design:**

A descriptive correlational research design was followed in this study.

**Study setting:**

The research was carried out in the Sohag Oncology Center's inpatient department. The Sohag Oncology Centre is a medical facility that serves the seven provinces. Departments of Center include: Surgery oncology, radiation therapy, inpatient oncology, nuclear medicine, diagnostic radiology and transection, medical laboratory, pathological

laboratory, and pain management units are among the center's departments. The inpatient department has a total of 62 beds, including 19 beds in the female ward, 18 beds in the male ward, 8 beds in the children's ward, 8 beds in the intensive care unit, 7 beds in the chemotherapy ward, and 2 beds in the isolation room.

### Study subjects:

A purposive sample of cancer patients seen in the Sohag Oncology Center inpatient department was included in the study. The following criteria were used to select them for the study:

1. Aged over 18 years.
2. Diagnosed with cancer and undergoing curative and/or palliative chemotherapy.
3. Able to communicate effectively and hadn't any an apparent cognitive impairment, or bad general health status that interfere with patient's cooperation.

### Sample size:

The sample size was estimated using the 2019 census report from the Sohag Cancer Center inpatient unit from the previous year. There were a total of 183 patients. The Sloven formula was used to calculate the sample size.

$$\text{Sample size (n)} = \frac{Z^2 * (p) * (1-p)}{c^2}$$

### Where:

**Z** = Z value (e.g. 1.96 for 95% confidence level).  
**p** = percentage picking a choice, expressed as decimal (.5 used for sample size needed)  
**c** = confidence interval, expressed as decimal (e.g., .04 = ±4)

### Correction for Finite Population

$$\text{new Sample size} = \frac{\text{Sample size}}{1 + \frac{\text{Sample size} - 1}{\text{pop}}}$$

**Where:** pop = population

No. of population = 350 and Confidence interval =95% →

Sample size needed = **183 patients.**

**Tools of data collection:**

To collect data for this study, the following tools were used:

**Tool I: Post-traumatic Stress Disorder Scale:**

Edna and Sandy developed the Arabic version of the post-traumatic stress disorder scale (2013). It was utilized to figure out how much PTSD the study participants had. There are 19 items in total. With a Cronbach's alpha coefficient of 0.81, the scale demonstrated validity and acceptable internal consistency. A panel of specialists validated the scale and deemed it to be accurate (Edna & Sandy, 2013).

**Scoring System:**

The responses of the study subjects rated on a five point likert scale ranged from (0 =Not at all) to (4= 6 or more times a week / severe), with a total score ranging from 0 to 76. Post-traumatic stress disorder was considered to be high if the total score ranged from 57 to 76, moderate if the total score was from 35 to 56 and mild if the total score fluctuated from 19 to 34. While, there was no post- traumatic stress disorder if the total score was less than 19.

**Tool II: Herth Hope Index (HHI):**

It was developed by Herth (1992). Which researchers then translated into Arabic. The scale has twelve items that measures hope levels. It was developed with three subscales: (a) Temporality and future (cognitive-temporal dimension), (b) Positive readiness and expectancy (affective-behavioral dimension), and (c) Interconnectedness (affiliative-contextual dimension).

**Scoring System:**

Participants assess each item in the Herth Hope Index on a four-point continuous scale ranging from 1 to 4, with a score of one indicating "strongly disagree" and a score of four indicating "strongly agree". The scoring was reversed in the negative statements (items 3 and 6). Total score ranging from 12 to 48, with a score above 36 refers to a high level of hope, a score ranged from 25 to 36 representing a moderate level, while, a score from 12 to 24 indicating a low level.

The researcher developed this structured sheet in Arabic in addition to the personal and clinical data sheets. Personal characteristics such as age, gender, and marital status, as well as education level, employment status, living condition, and income, are collected on the questionnaire. It also includes clinical data questions, such as cancer kind, disease duration, diagnosis, therapy type, and family history of cancer.

**Tools validity:**

The Herth Hope Index (Tool II) was translated into Arabic by the researcher for the purposes of the current study. The forward and reverse translation processes have been finished. The forward translation was done by two bilingual experts, and the Arabic version of the Herth Hope Index was translated back into English by two other linguists who did not know the original version. The researchers then went over these translations and compared them to the originals to confirm that they were accurate and that there were no discrepancies.

A team of five specialists also examined the final Arabic version, finding the translated tool was valid. A panel involved one assistant professor, from Psychiatric Nursing and Mental Health department, Faculty of Nursing, Assuit University, Two assistant professor from the Department of Psychiatric Nursing and Mental Health, Faculty of Nursing, Suez Canal University, and two lecturers from the Department of Psychiatry, Faculty of Nursing, Sohag University. Their observations concern the structure, clarity, significance, and breadth of translation tools. Modifications were made in accordance with their findings. The legitimacy of the translation tool will be checked for one month.

**Reliability:**

Reliability of an Arabic version of Herth Hope Index (**Tool II**) was proven by Cronbach Alpha. It was evidenced to be reliable as  $\alpha = 0.79$ . The period of ascertaining reliability continued for one week.

**Pilot study:**

Before enrolling in the main study, 10% of the participants (18 cancer patients) took part in a pilot study. Its goal is to evaluate the tools' clarity, applicability, and feasibility, as well as the time required to finish them. According to the findings of the pilot study, the tool remains basic and simple. As a result, patients who took part in the pilot trial were

not excluded from the main sample of the study. Between December 1, 2020, and December 30, 2020, a pilot research was undertaken.

**Field work:**

Data was collected twice a week (Sunday and Wednesday). Data will be collected for six months, beginning January 1, 2021 and ending June 30, 2021. To ensure privacy and confidentiality of the data obtained, the data collecting method utilizes face-to-face interview techniques and is conducted on an individual basis in secluded parts of the inpatient unit. Researchers fill out the tools. From 10 a.m. until 1 p.m., three to four cancer patients were interviewed. Depending on the subject's response, each interview lasted 30 to 45 minutes. When the tool is finished, the researcher double-checks that all of the statements are correct. After that, I'd want to express my gratitude to the cancer patients who were examined for their cooperation and generosity of time and effort.

**Administrative design:**

Preliminary, an official letter was sent from the Dean of the Faculty of Nursing, Port Said University to the undersecretary of the Ministry of Health in Sohag city requesting his permission and collaboration to conduct the study after clarifying the intention of the study, and to obtain the actual number of patients of the above mentioned setting to determine the sample size. Subsequently, an official letter directed from the undersecretary of the Ministry of Health in Sohag city to the director of the above mentioned setting to get his/her agreement and cooperation to conduct the study.

**Ethical considerations:**

The Scientific Research Ethics Committee of the Faculty of Nursing, University of Port Said (code NUR (9/3/2020) first approved the research proposal (15). Second, the chosen institution gave its approval. Third, the examined subjects' verbal consent was obtained, followed by a clear overview of the study's purpose, fourth, to ensure anonymity and voluntary participation in the study, fifth, that the data collection process did not disrupt the harmony of the work in the above setting, and finally, all participants in the study are kept confidential, and the researchers clarified that the information will only be used for research purposes.

**Statistical analysis**

The IBM SPSS 20.0 program was used for all statistical analyses. Prior to statistical

analysis, the Anderson-Darling test was used to check for normality and homogeneity of variance. Continuous data are represented by means and standard deviations, and categorical variables are characterized by frequencies and percentages. Categorical variables are compared using Chi-square testing. The Pearson coefficient test was also used to look at the relationship between variables. The significance level is determined by the P value. P-values less than 0.05 were considered statistically significant, whereas P-values greater than 0.01 were regarded highly statistically significant.

## RESULTS:

**Table 1**, shows the frequency and percentage distribution of personal characteristics among the studied cancer patients. As for their age, less than half of them (47.5%) were in the age group from 50 to more than 50 years. More than half of them (57.9%) were males. In relation to religion, almost two thirds of the studied cancer patients (67.8%) were Muslims. Looking to their level of education, 23.5% were not read and write. Regarding marital status, slightly less than two thirds (62.3 %) of the studied patients were married. 42.1% of them were skilled worker. Concerning living status, slightly less than three quarters of the studied patients (73.2%) were living with their families. 61.7% of them stated that their monthly income was not enough from participant point of view.

**Table 2**, illustrates clinical characteristics of the studied cancer patients. 39.9% of them had breast cancer. In relation to duration of illness, less than two thirds of the studied cancer patients (61.2%) had duration of illness three years and more. Regarding the type of treatment, 34.4% of them received chemotherapy. More than two thirds (70.5%) of them had not a family history of cancer.

**Figure 1**, describes the distribution of post-traumatic stress disorders levels among the studied cancer patients. It was clear that, more than two thirds of the studied patients (67.2%) had a moderate level of post- traumatic stress disorder, 24.0% of them had a high level, while only 8.7% had a mild level.

**Figure 2**, it was demonstrated that, more than half of the studied cancer patients (54.1 %) had a moderate level of hope, 40.4 % had a low level, while only 5.5 % of them had a high level.

**Table 3**, describes the relation between post-traumatic stress disorders levels among the studied cancer patients and their personal characteristics. It was evidenced that



there were highly statistically significant relations between levels of post-traumatic stress disorders and personal characteristics of the studied cancer patients in relation to age, educational level, marital status, and living status at  $P \leq 0.01$ . As well, there was a statistically significant relation between levels of post-traumatic stress disorder and monthly income whereby  $P \leq 0.05$ .

**Table 4**, displays the relation between post-traumatic stress disorders levels among the studied cancer patients and their clinical characteristics. It was evidenced that there were statistically significant relations between levels of post-traumatic stress disorder and clinical characteristics of the studied cancer patients in relation to type of cancer, and duration of illness whereby  $P \leq 0.01$ .

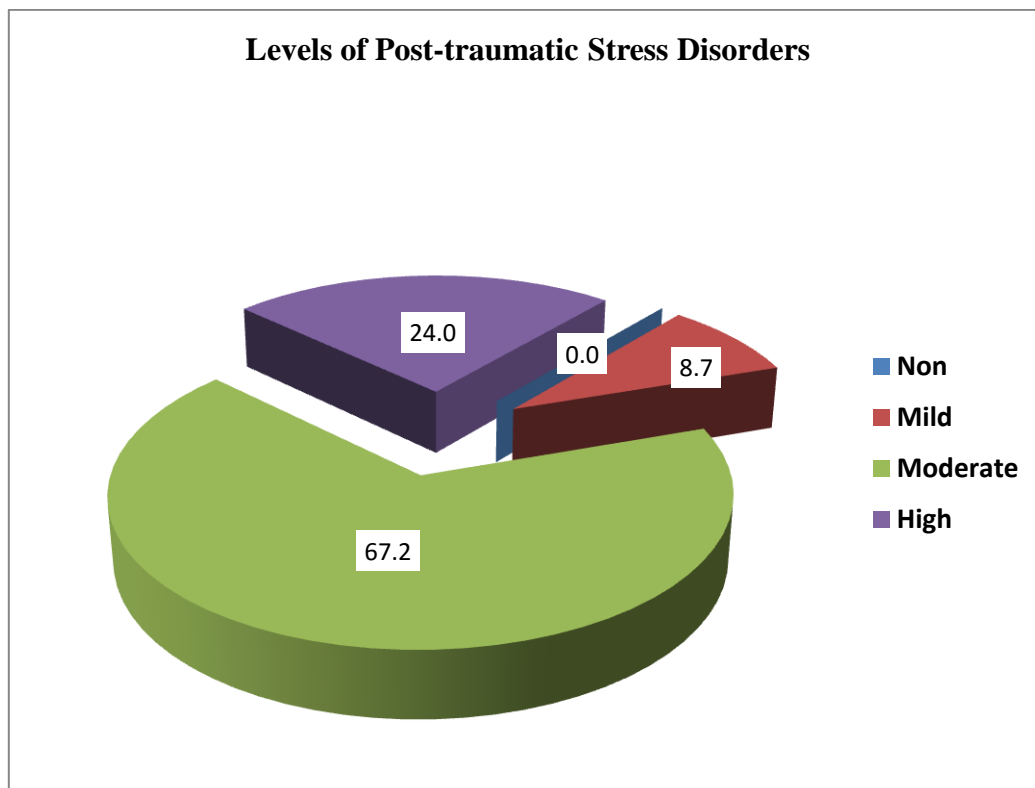
**Figure 3**, reveals that, there was a highly statistically significant negative correlation between total scores of post-traumatic stress disorders and hope level among the studied cancer patients of as ( $r = -0.328$ ) at  $p \leq 0.001$ . By means of, when the hope level increases, subsequently, the total score of post-traumatic stress disorders decreases.

**Table 1: Frequency and percentage distribution of the studied cancer patients according to their personal characteristics (n=183)**

Personal Characteristics	No	%
<b>Age (years)</b>		
< 30	13	7.1
30 -< 40	30	16.4
40 - < 50	53	29.0
50 and more	87	47.5
<b>Min-Max</b>	18-68	
<b>Mean <math>\pm</math>SD</b>	84.44 $\pm$ 12.73	
<b>Gender</b>		
Male	106	57.9
Female	77	42.1
<b>Religion</b>		
Muslim	124	67.8
Christian	59	32.2
<b>Educational level</b>		
Not read and write	43	23.5
Read and write	33	18.0
Basic education	38	20.8
Secondary education	35	19.1
University education	34	18.6
<b>Marital status</b>		
Single	17	9.3
Married	114	62.3
Divorced	20	10.9
Widowed	32	17.5
<b>Working status</b>		
Working	121	33.9
Not working	62	66.1
<b>Occupation of working patients (N= 121)</b>		
Employee	44	36.4
Skilled worker	77	63.6
<b>Not working patients (N= 62)</b>		
Student	8	12.9
House wife	54	87.1
<b>Income (month)</b>		
Enough	70	38.3
Not enough	113	61.7
<b>Living status</b>		
With family	134	73.2
Alone	49	26.8

**Table 2: Frequency and percentage distribution of the studied cancer patients according to their clinical characteristics (n=183)**

Clinical Characteristics	No	%
<b>Type of cancer</b>		
Colorectal cancer	57	31.1
Breast cancer	73	39.9
Lung cancer	34	18.6
Stomach cancer	19	10.4
<b>Duration of illness (years)</b>		
< 3	71	38.8
≥ 3	112	61.2
<b>Min-Max</b>	1-3	
<b>Mean ±SD</b>	1.61±0.49	
<b>Type of treatment</b>		
No specific treatment	26	14.2
Chemo therapy	63	34.4
Radio therapy	35	19.1
Surgical	15	8.2
Mixed	44	24.0
<b>Family history of cancer</b>		
Yes	54	29.5
No	129	70.5

**Figure 1: Distribution of Post-traumatic stress disorders levels among the studied cancer patients**

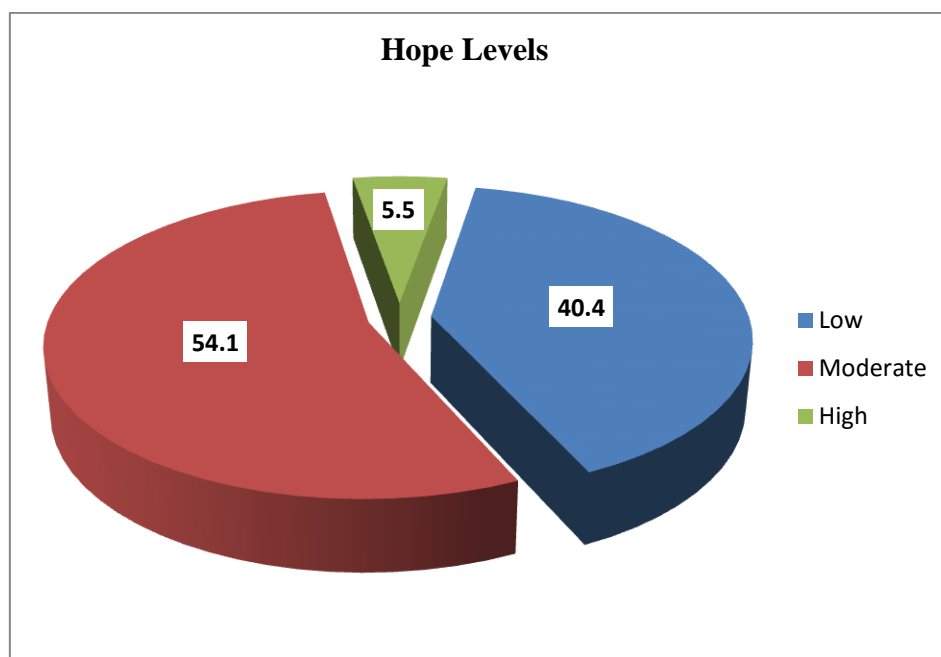


Figure 2: Distribution of hope levels among the studied cancer patients

Table 3: Relation between post-traumatic stress disorders levels among the studied cancer patients and their personal characteristics (n=183)

Personal Characteristics	Post-traumatic Stress Disorder Levels						x <sup>2</sup>	P
	Mild n=16		Moderate n=123		High n=44			
	No	%	No	%	No	%		
<b>Age (years)</b>								
< 30	0	0.0	10	8.1	3	6.8	35.62	<0.001**
30- <40	0	0.0	14	11.4	16	36.4		
40 - <50	0	0.0	39	31.7	14	31.8		
50 and more	16	100.0	60	48.8	11	25.0		
<b>Gender</b>								
Male	11	68.8	68	55.3	27	61.4	1.34	0.513
Female	5	31.3	55	44.7	17	38.6		
<b>Religion</b>								
Muslim	11	68.8	89	72.4	24	54.5	4.71	0.095
Christian	5	31.3	34	27.6	20	45.5		
<b>Educational level</b>								
Not read and write	10	62.5	30	24.4	3	6.8	27.39	0.001**
Read and write	3	18.8	25	20.3	5	11.4		
Primary education	1	6.3	25	20.3	12	27.3		
Secondary education	1	6.3	24	19.5	10	22.7		
University	1	6.3	19	15.4	14	31.8		
<b>Marital status</b>								
Single	0	0.0	12	9.8	5	11.4	29.30	<0.001**

Personal Characteristics	Post-traumatic Stress Disorder Levels						$\chi^2$	P	
	Mild n=16		Moderate n=123		High n=44				
	No	%	No	%	No	%			
Married	6	37.5	72	58.5	36	81.8			
Divorced	1	6.3	16	13.0	3	6.8			
Widowed	9	56.3	23	18.7	0	0.0			
<b>Occupation</b>								8.01	0.237
<b>Occupation of working patients</b>									
Employee	3	18.8	25	20.3	16	36.4			
Skilled worker	10	62.5	52	42.3	15	34.1			
<b>Not working patients</b>									
Student	0	0.0	6	4.9	2	4.5			
House wife	3	18.8	40	32.5	11	25.0			
<b>Income (month) "from participant point of view"</b>								6.17	0.046*
Enough	2	12.5	47	38.2	21	47.7			
Not enough	14	87.5	76	61.8	23	52.3			
<b>Living status</b>								9.74	0.008**
With family	7	43.8	90	73.2	37	84.1			
Alone	9	56.3	33	26.8	7	15.9			

$\chi^2$ : Chi square test for qualitative data between the two groups

P: p value for association between different categories

\*Significant at  $P \leq 0.05$

\*\*Significant at  $P \leq 0.01$

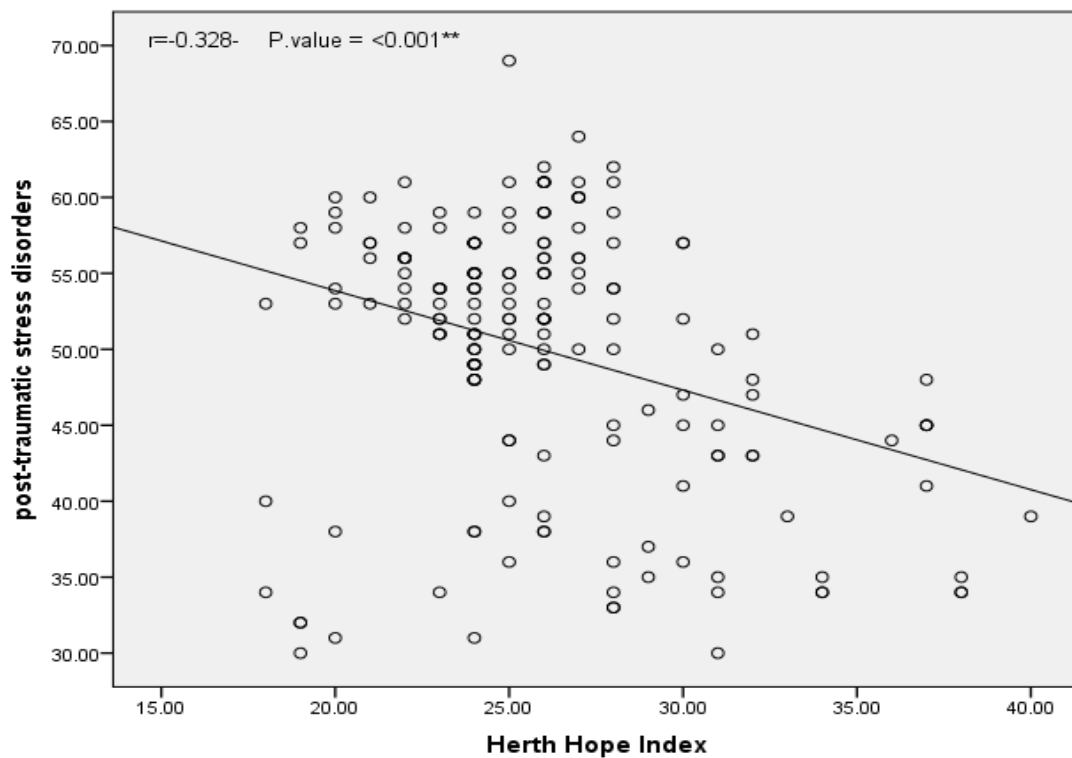
**Table 4: Relation between post-traumatic stress disorders levels among the studied cancer patients and their clinical characteristics (n=183)**

Clinical Characteristics	Post-traumatic Stress Disorders Levels						$\chi^2$	P
	Mild n=16		Moderate n=123		High n=44			
	No	%	No	%	No	%		
<b>Type of cancer</b>								
Colorectal cancer	6	37.5	38	30.9	13	29.5	19.89	0.003**
Breast cancer	4	25.0	59	48.0	10	22.7		
Lung cancer	6	37.5	16	13.0	12	27.3		
Stomach cancer	0	0.0	10	8.1	9	20.5		
<b>Duration of illness (years)</b>								
< 3	5	31.3	57	46.3	9	20.5	9.57	0.008**
≥ 3	11	68.8	66	53.7	35	79.5		
<b>Type of treatment</b>								
No specific treatment	3	18.8	15	12.2	8	18.2	6.58	0.582
Chemo therapy	6	37.5	43	35.0	14	31.8		
Radiation therapy	1	6.3	25	20.3	9	20.5		
Surgical	1	6.3	8	6.5	6	13.6		
Mixed	5	31.3	32	26.0	7	15.9		
<b>Family history of cancer</b>								
Yes	6	37.5	40	32.5	8	18.2	3.74	0.154
No	10	62.5	83	67.5	36	81.8		

$\chi^2$ : Chi square test for qualitative data between the two groups  
different categories

\*Significant at  $P \leq 0.05$

P: p value for association between  
\*\*Significant at  $P \leq 0.01$



r=Pearson correlation

\*\* Highly significant at  $P \leq 0.001$

**Figure 3: Correlation between total scores of post-traumatic stress disorders and total scores of hope among the studied cancer patients**

## DISCUSSION

Cancer is a terrible disease that leaves people feeling hopeless and insecure. Unmanageable pain, therapeutic side effects, frequent hospitalizations, financial and social loss, loss of personal control, and inability to give care are all possibilities for patients. In addition to these issues, patients' psychological discomfort, helplessness, and depression are exacerbated by cancer's poor prognosis and the belief that they will die soon (Larbi, Lartey, & Osafo, 2017). So, current study tries to explore the correlation between post-traumatic stress disorders and hope level among cancer patients, through determining post- traumatic stress disorders levels, measuring hope levels, and finding out the correlation and between post-traumatic stress disorders and hope level among cancer patients.

According to the present statistics, more than two-thirds of cancer patients have moderate post-traumatic stress disorder; this could be attributed to the fact that cancer is a

life-threatening disease. Individuals face the real possibility of dying without treatment or dying as a result of treatment when they are diagnosed, an occurrence that is intrinsically life-threatening and has been shown to impair psychological adjustment. As a result, people strive to avoid thinking about, feeling about, or doing things that remind them of it. Cancer sufferers fight to stay alive and avoid ideas or events that could trigger a recurrence of their bad experiences with the disease. The majority of cancer patients, according to Richardson, Morton, and Broadbent (2016), have PTSD. Furthermore, Nipp, El-Jawari, Fishbein, Eusebio, and Stagl (2018) found That, cancer patients have a higher prevalence of PTSD and depression.

The results of the previous study revealed a statistically significant relation between the severity of PTSD and the age of the cancer patients studied. This finding could be explained by the fact that, younger patients are more concerned about their future, life events, and disease progression, but older patients are less concerned about disease since they believe they have reached the end of their lives and are more concerned with living. This data is backed up by Kangas, Henry, and Bryant (2015), who discovered that PTSD symptoms are more common among patients under the age of 40. However, according to Cordova, Riba, and Spiegel (2017), there was no significant link between psychological distress and patient age.

There was no meaningful relationship between PTSD and the gender of the patients in this study. Cordova et al. (2017) found no significant relation between psychological distress and patient gender. The findings of this study contradict those of Pitman, Suleman, Hyde, and Hodgkiss (2018), who reported that women had a higher prevalence of PTSD symptoms and anxiety than men. One explanation could be that women are more likely to perceive and express emotional anguish, hence male patients may underreport symptoms of psychological distress, resulting in undiagnosed and untreated psychiatric diseases.

According to recent research, there is a very statistically significant link between levels of PTSD and education among cancer patients. Moreland and Santacroce (2018) found that those with a college diploma or higher had the lowest PTSD ratings. This is because patients with a higher level of education may have a better understanding of their disease, which can help to lessen disease uncertainty, which has been linked to PTSD symptoms.



According to the current research, there is a statistically significant link between PTSD severity and cancer kind. This finding is in line with that of Mehnert and Koch (2017), who discovered the incidence of PTSD symptoms in breast cancer patients.

More than half of the cancer patients tested have moderate hope, according to the current data. Hope is a meaningful life process, as this can be explained. As a result, hope encompasses not just the number of years left to live but also the meaning of existence. According to Mohamed, Hassan, Makki, and Mahmoud's (2019), more than two-fifths of study participants had a low level of hope, while more than a third were in the middle. In this regard, Karabulutlu (2014) discovered that, cancer patients' loss of hope is as dangerous as their limited lifespan.

The findings of this study show a statistically significant negative relationship between total PTSD scores and hope levels in cancer patients. The interaction of hope theory with PTSD symptoms may be the main cause. People with PTSD frequently believe they are unable to cope with challenges in their lives and anticipate unfavorable outcomes when faced with dangerous situations. Hope, on the other hand, can give individuals with positive tools to help them cope with mental health challenges and boost their self-esteem. At the same time; Hope has been demonstrated to assist patients in adjusting to cancer and providing guidance and reasons to live, hence reducing PTSD symptoms. This finding is in line with Gallagher, Long, and Phillips' (2020) findings, which revealed that hope was substantially connected with PTSD symptoms.

## **CONCLUSION**

According to the findings of this study, there is a highly statistically significant negative correlation was found between total scores of post-traumatic disorders and total scores of hope among the studied cancer patients. By means of, when the hope level increases, subsequently, the total score of post-traumatic stress disorders decreases.

## **RECOMMENDATIONS**

**Based on the results of the present study, the subsequent recommendations were suggested:**

1. Formulate and maintain educational program for cancer patients that offer stress management strategies, meditation, and mindfulness-based interventions in order to

encourage positive coping, reassessment, and hope. As a result, post-traumatic stress disorder associated with cancer sequelae can be reduced.

2. Throughout the mentoring process, supportive participation should be provided.
3. It is suggested that this study be replicated with a larger probability sample and different locations.

#### **Conflict of interest**

The authors assert no conflict of interest.

#### **Acknowledgment**

The authors gratefully acknowledge the permission to conduct the existing study from the Ministry of Health's Sohag Oncology Center in Egypt. In addition, the authors would like to convey their heartfelt gratitude to the cancer patients who generously donated their time and energy to assist with the research.

#### **Author contributions**

All authors made significant contributions to the study design, data collection and analysis, and the amendment of the manuscript.

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## العلاقة بين اضطرابات ما بعد الصدمة ومستوى الأمل لدى مرضى السرطان

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### الخلاصة

اضطرابات ما بعد الصدمة هي اضطراب نفسي حاد ، قد يتطور بعد حدث صادم ، مثل تشخيص السرطان ، ويهدد سلامة المريض النفسية و الفسيولوجية. القلق والاكتئاب والاضطراب العقلي أمور شائعة بين مرضى السرطان. **الهدف :** استكشاف العلاقة بين اضطرابات ما بعد الصدمة ومستوى الأمل لدى مرضى السرطان. **طرق وادوات البحث :منهج البحث :** تم استخدام التصميم الوصفي الارتباطي . **عينه الدراسه :** اجريت الدراسه الحاليه على ١٨٣ مريضاً بالسرطان يعانون من اضطرابات نفسية ناتجة عن الصدمات. **مكان الدراسه** الاقسام الداخليه بمعهد الاورام بسوهاج . **الادوات :** تم استخدام أدوات لجمع البيانات وهي مقياس اضطرابات ما بعد الصدمة ، ومؤشر هيرث هوب ، بالإضافة إلى ورقة البيانات الشخصية . **النتائج :** اوضحت النتائج ان اكثر من ثلثي المرضى الخاضعين للدراسة لديهم مستوى معتدل من اضطراب ما بعد الصدمة ، وأكثر من النصف كان لدى مرضى السرطان الذين شملتهم الدراسة لديهم مستوى معتدل من الأمل. **الاستنتاج:** لخصت الدراسة الى وجود ارتباط سلبي ذي دلالة إحصائية بين مجموع الدرجات لاضطراب ما بعد الصدمة ومجموع درجات الأمل بين مرضى السرطان الخاضعين للدراسة . **التوصيات:** تطبيق برامج علاجية وتعليمية - بما في ذلك تقديم المشورة لهؤلاء المرضى المصابين بالسرطان وعائلاتهم ، ومجموعات الدعم النفسى ، والعلاج السلوكي للمرضى الذين يعانون من اضطرابات ما بعد الصدمة .

**الكلمات المرشده:** السرطان و اضطراب ما بعد الصدمة ومستوى الأمل