Effect of Anxiety, Hope, and Social Support on Quality of Life of Cancer Patient Undergoing Chemotherapy

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ABSTRACT

Background: A cancer diagnosis has a significant impact and consequences for the patient and family. Cancer patients can develop a sense of hopelessness when distress becomes overwhelming and social support may be protective against hopelessness. Furthermore, among cancer survivors, optimism and hope have been linked to better adjustment and growth. **Aim:** The present study aimed to assess effect of anxiety, hope, and social support on quality of life of cancer patient undergoing chemotherapy. **Subjects and Method: Design:** Descriptive cross-sectional design was used. **Setting:** the study conducted in Oncology center in outpatients' clinics in Mogamaa-Elshefaa Hospital in Port Said city. **Subjects:** included a purposive sample of 155 cancer patients undergoing chemotherapy were included in the study. **Tools:** four tools used for data collection consisted of; The Hospital anxiety and depression scale, Adult Hope Scale, Multidimensional Perceived Social Support Scale, and WHO Quality of life scale (WHOQOL-BREF). **The Results**: 91% of the studied patients had high level of anxiety, 67.7% of cancer patients had high hope level. Also, 98.7% of them had high perceived social support levels, 85.8% had moderate level of QOL. Ther was statistically significant relation between level of anxiety, hope, and perceived QOL among cancer patients. **Conclusion**: Anxiety had a negative effect on QOL of cancer patients, while social support and hope had positive effect on them. **Recommendations**: Further research is necessary to design and implement educational programs for cancer patients and nurses regarding strategies of enhancing anxiety and its effect on cancer patients' levels of hope and QOL.

Keywords: Anxiety, Cancer patients, chemotherapy, Hope, Social support, Quality of life.

INTRODUCTION

Cancer is a highly prevalent disorder and a leading cause of death. In 2020, 9.95 million people worldwide died on the grounds of unsuccessful cancer treatment. Growth rates in cancer incidence and mortality are amongst the highest globally. In 2021 (the latest year for which there are global data), more than 10 million people died of cancer worldwide—that is 1 out of every 6 deaths. More than 600,000 cancer deaths occur in the USA each year, about 80,000 deaths occur in Canada, and the rest takes place in countries all over the world. About 7 out of every 10 deaths from the disease occur in low-income or middle-income countries (WHO, 2021).

In Egypt, 366,823 patients with malignant neoplasms were being treated at the states' expense. As estimated by Global Cancer Observatory (GLOBOCAN) the most prevalent cancers in Egypt are (5-year prevalence of all ages): breast (61,160), liver (28,977), bladder (26,986), Non-Hodgkin Lymphoma (19,096), leukemia (14,274), brain, and Central Nervous System (11,470), and prostate (10,523); with a total of 278,165 for all cancers. The highest incidence numbers for specific cancer cases in Egypt in 2020 were: liver (27,895), breast (22,038), bladder (10,655), Non-Hodgkin Lymphoma (7305), lung (6538), leukemia (5231), and prostate (4767); with a total of 150, 578 new cases, and 95,275 number of cancer deaths in 5-year prevalence to year of 2024 (Ferlay, et al., 2024).

A cancer diagnosis has a significant impact and consequences for the patient and family, most cancer patients successfully adjust to cancer diagnosis and treatment, but some initially struggle with a bad mood, feelings of vulnerability, sadness, and anxiety, which are usually followed by inability, weakness, depression, trauma, panic, and worries about existential survival. These feelings and concerns interfere with their normal functioning in daily activities and their quality of life (Daré, et al., 2019). Cancer patients who have higher levels of support and social bonding have a better quality of life and lower mortality rates. At the same time, those who do not have all these types of support have poorer oncologic outcomes, a higher prevalence of cancer progression, and a lower overall survival rate (Corovic et al., 2023).

Anxiety in patients with cancer results in treatment delays and significant decrements in quality of life. In addition, it may have a negative impact on both disease recurrence and survival (Oppegaard, et al., 2021). Fear and anxiety can predispose patient to serious consequences including medication non-adherence to chemotherapeutic drug agents leading to relapse of cancer, metastasis and uncontrolled management (Abdelaziz, Abdo, Abdalgeleel, and Mahmoud, 2022).

Hope is considered one of the most powerful coping styles when fighting against cancer. Fostering hope is an existential strategy for cancer patients to adjust to, and give meaning to their cancer experience, to maintain and improve well-being, and to anticipate survival. One's level of hope can change over time and depends upon internal and external factors, including personality, relationships, and social support (Seiler, and Jenewein, 2019). Cancer patients can develop a sense of hopelessness when distress becomes overwhelming and social support may be protective against hopelessness. Furthermore, among cancer survivors, optimism and hope have been linked to better adjustment and growth (Hassani, Tizdast, and Zarbakhsh, 2021).

Social support as a complex construct has a positive influence not only on a patient's condition but also on the process of the patient's emotional adjustment to cancer (Corovic, et al., 2023). Social support is very important in helping cancer patients alleviate the negative effects of cancer diagnosis and treatment and improve the consequences of cancer disease. An analysis of population diagnosed with cancer found that patients who experienced more social support had stronger mental health and quality of life (Kadambi, et al., 2020).

The role of nurse is to encourage cancer patients to share thought, feeling and to design and implement effective strategies to manage their fear, anxiety as well as all patients' complains (Abdelaziz, Abdo, Abdalgeleel, and Mahmoud, 2022). Also, it is important that community nurse to be able to accurately identify patient anxiety in order to offer appropriate interventions. Needs based education can contribute significantly to the way we educate cancer patients. Nursing caring interventions that take into account the spiritual element was found to encourage positive ways of religious coping and, therefore, increase the levels of hope among cancer patients undergoing chemotherapy (Costa, Silva, Cavalcanti, Gomes, Vasconcelos, and Carvalho, 2019).

Significance of the study

According to National Cancer Institute (NCI), Cairo University, in year 2020 there were 1148 cases done different surgical procedures and receiving chemotherapy (National Cancer Institute Statistic Department & Medical Record 2020). While, determining these patients' fears and anxiety as well the impact on their adherence to chemotherapy was relevant and missed in Egyptian context (Abdelaziz, et al., 2022).

A progressive cancer diagnosis and the subsequent treatments such as surgery and chemotherapy often create a crisis for patients, as they are confronted with deteriorating physical conditions, impaired functional ability, emotional anguish, psychological distress, and the threat of death. All these adverse effects lead to a serious decline in the quality of life (QoL) of patients, which is a serious burden for individuals, families, and society (Wen, Jiao, Wang, and Hu, 2021).

Patients usually experience various levels of stress and emotional concerns; disturbance of life plans, fear of death, alterations in appearance and self-confidence, and changes in social roles and lifestyle are just a few examples (Kadambi et al., 2020). Therefore, this study aims to assess effect of anxiety, hope, and social support on quality of life of cancer patient undergoing chemotherapy.

The study aimed to

Assess effect of anxiety, hope, and social support on quality of life of cancer patient undergoing chemotherapy.

Objectives

1. Determine the effect of anxiety on quality of life of cancer patient undergoing chemotherapy.
2. Explore the effect of hope on quality of life of cancer patient undergoing chemotherapy.
3. Identify effect of social support on quality of life of cancer patient undergoing chemotherapy.

Research question

What is the effect of anxiety, hope, and social support on quality of life of cancer patient undergoing chemotherapy?

SUBJECTS AND METHOD

A. Technical design:

This design includes a description of the research design, setting, subjects, and tools of data collection.

Study design

A descriptive cross-sectional research design was utilized to meet the aim of this study.

Study setting

The study was conducted in Oncology center in outpatients' clinics in Mogamaa-Elshefaa Hospital in Port Said city which affiliated to the Egyptian Healthcare Authority. It consisted of two floors, first floor consists of two rooms for physical examination, second floor consists of three rooms for chemotherapy treatment with 10 beds.

Subjects

The study subjects were consisted of a purposive sample of (155) cancer patients who undergoing at least 6 months chemotherapy in Mogamaa-Elshefaa Hospital in Port Said city.

Sample size

The calculation of sample size done based on power analysis. The sample size was calculated based on (Sharma et al, 2020).

Sample size (n) = N/1+N*d^2

N = Total population, d = Margin of error or precision.

According to above formula:

N = 220 patient

d = 0.05

n = 220/1+220* $(0.05)^2$= 141

n = 141+14 (considering 10% dropout of study participants).

Sample size (n) = 155 patient

Inclusion Criteria of cancer patients:

1. Age more than 18 years old.
2. Both genders.
3. Diagnosed with mild and moderate degree of cancer.
4. Treated by chemotherapy for at least 6 months.
5. Free from any psychological diseases.

Tools for data collection:

Four tools were used for data collection:

Tool 1: **Hospital Anxiety and Depression Scale (HADS):** it included two parts:

The first part: Socio-demographic data:

This part was adopted by (Terkawi et al., 2017), it included two categories, the first category included 8 items related to demographic data of the studied cancer patients as: (age, sex, marital status, educational level, occupation, …… etc.), second category included (6) items to assess medical history as diagnosis, duration of disease, duration of treatment…. etc.

Second part: The Hospital anxiety and depression scale (HAD):

This scale was developed by Zigmond and Snaith in 1983, and adopted & translated by (Terkawi et al., 2017) (Arabic version) to assess the levels of anxiety among patients. It consists of 14 items, as, feeling of fear; low self-care; feeling of panic attack… etc.

Scoring system: participants respond were rated on a 4-point Likert-type (0 = not at all, 1 = several days, 2 = more than half the days, 3 = nearly every day). The total scores in each subscale were computed by summing the corresponding items, with maximum scores of 21 for items. The scores of the anxiety scale were classified as follow: A score of 0 –7 is considered as normal, 8–10 as a borderline case, and 11–21 as a case of high anxiety.

Tool II: Adult Hope Scale (AHS):

The adult hope scale developed by Snyder,et al, 1991,and adopted and translated by (Alali, 2017) (Arabic version) to assess patients' trait levels of hope .It consisted of 12 statements divided into two subscales comprising Snyder's cognitive model of hope: (1) Agency (i.e., goal-directed energy) and (2) Pathways (i.e., planning to accomplish goals). Among the 12 items, 4 are part of the Agency subscale (2,9,10,12) and 4 are part of the Pathways subscale (1,4,6,8) and the remaining 4 items are fillers. The items such as, I can think of many ways to get out of jam; I feel tired most of time; I worry about of myself …etc.

Scoring system: Each item was answered using an 8-point Likert-type scale **(**1 = Definitely False, 2 = Mostly False, 3 =Somewhat False, 4 = Slightly False, 5 = Slightly True, 6 = Somewhat True, 7 = Mostly True, 8 = Definitely True). Reponses to all items were computed to generate a total score ranging from 8 and 64 points. The total scores of the hope scale were classified as follow: Low = 8 < 26 points, Moderate = 27 < 44 points, High = 45 points or more presents higher scores representing greater hope.

Tool III: Multidimensional Perceived Social Support Scale (MPSSS):

Multidimensional Perceived Social Support Scale developed by Zimet , Powell, Farley, Werkman, Berkoff, and (1990) adopted and translated by (Merhi and Kazarian, 2012) (Arabic version). It consists of 12 items to measure of perceived adequacy of social support from three sources: family, friends, & significant other. Such as items I can count on my friends when things go wrong; my family really tries to help me; I can talk about my problems with my family.

Scoring system: A 7-point Likert-scale ranging from 1= very strongly disagree, 2= strongly disagree, 3= mildly disagree, 4= neutral, 5= mildly disagree, 6= strongly

agree, 7=agree. The total score was obtained by summing up the scores of all the items, higher scores indicating higher perceived social support (ranging from 12 to 84 total points). The total scores of the scale are classified as follow: Low = 12 < 24 points, Moderate = 25 < 49 points, High = 50 points or more.

Tool IV: Quality of life scale (WHOQOL-BREF):

The World Health Organization Quality Of Life (WHOQOL- BREF) developed by WHO (2010) (Arabic version). It consists 26 items covering four domains physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items). it also contains QOL and general health item.

Scoring system: Each item of the WHOQOL-BREF was scored from 1 to 5 on a response scale, which is stipulated as a five-point ordinal scale. The scores are then transformed linearly to a 0–100-scale. The score the quality of life ranging from 0 to 100 points. The scores are classified as follow: Low = 0 < 30 points, Moderate = 31 < 60 points, High = 61 points or more (Vahedi, 2010).

B- Operational design

The study field of work was carried out through the following phases:

Tools validity

For first tool, construct validity measured by item-scale correlations ranged from 0.540 to 0.804 and were always higher for each item with its factor (anxiety or depression). For second tool hope scale ,the squared multiple correlations values ranged from 0.60 to 0.97 thus supporting the construct validity of the tool ,for third tool construct validation was ranged from 0.75 to 0.93, for the fourth tool, The convergent validity results indicated that the correlation coefficients values for all scale domains are significantly correlated at $\alpha < 0.01$ (these validity were from the original tools)

Tools reliability

The reliability of tools used in this study by the Cronbach's alpha coefficient test to assess the internal consistency of the study tools. The internal consistency reliability for the Hospital Anxiety and Depression Scale (HADS) was 0.83, and for the Hope scale,

Internal consistency was satisfactory for the AHS (Cronbach's alpha = 0.83) for males and (Cronbach's alpha = 0.81) for females. while the Social Support scale, the internal consistency of the scale was good, with a Cronbach's alpha of 0.87, and Quality of life questionnaire was (0.84). The WHOQOL-BREF had good internal consistency as Cronbach's alpha coefficient for the overall scale was 0.91(these reliabilities were from the original tools).

Field work

An official written permission to conduct the study was obtained from the director of the study setting (Mogamaa-Elshefaa Hospital) and oral consent was obtained from each participant (cancer patients) to be included in the study after the researcher introduced himself and explaining clarification of the nature and purpose of the study. The data have been collected over a period of three months the beginning of April (2023) to the end of June (2023). The researcher interviewing patients two days per week (Monday, and Thursday) to collect data of the study, every tool was took about 10-15 minutes. The average number of cancer patients token per day was 5-7 at each time of data collection. Then the data collected were categorized by the researcher, checked, and revised at July (2023) and then data were statistically analyzed from the beginning of August (2023) to the beginning of October (2023).

Pilot study

A pilot study was conducted before starting the actual data collection. The pilot study was carried out on 16 patients (10%) of study sample of the cancer patients. These were not excluded from the main study sample. The purpose of the pilot study was to test the clarity, feasibility and applicability of the study tools and estimate the time needed to complete the tools. It also helped to find out any obstacles and problems that might interfere with the data collection process.

C- Administrative design

Official letters were directed from the Dean of the faculty of Nursing to the director of the Egyptian Healthcare Authority requesting their cooperation and permission to conduct the study, after explaining the aim of the study. Also, patients' oral consent was obtained before starting data collection.

Ethical considerations:

An approval was taken from the Research Ethics Committee of the Faculty of Nursing, Port Said University code no. (NUR 7/7/2024) (1). The purpose of the study was explained to the participants before obtaining the written consent to share in the study. A brief explanation of the aim of the study was given to assure participants that the information obtained is confidential and used only the purpose of the study, stressing on confidentiality of the collected information. The researcher emphasized that the participations were absolutely voluntary and that each patient had the right to withdraw from the study at any time without explaining any reasons, as well as confidentiality was assured.

D. Statistical design

Data collected through the questionnaire were coded, entered and analyzed using Statistical Package for the Social Sciences (SPSS version 20). Qualitative data were described using number and percent. The Kolmogorov-Smirnov test was used to verify the normality of distribution Quantitative data were described using range (minimum and maximum), mean, standard deviation and median Significance of the obtained results was judged at the 5% level. Pearson coefficient was used to correlate between two normally distributed quantitative variables. Linear Regression test was used to detect the most affecting factor for affecting QOL.

RESULTS

Table (1): shows that, 71.6% of the studied cancer patients were female, 67.7% of them were more than 48 years old, 75.5% of them were married. Regarding educational level, 50% of the studied cancer patients had middle education. While, 81.3% of them their family size was 3:5 members. Moreover, 96.1% of them were working, and 94.8% had enough monthly income.

Figure (1) clarifies total score of anxiety levels among the studied cancer patients. The figure indicates that the majority of the studied cancer patients (91%) had high anxiety levels, while the minority of them (4.5%) had normal and borderline anxiety levels.

Figure (2) presents total score of hope level among the studied cancer patients. The figure reveals that more than two-thirds of the studied cancer patients (67.7%) had high hope levels while less than one third (32.3%) of them had moderate hope level.

Figure (3) portrays total score of perceived social support level among the studied cancer patients. The figure shows that, the majority of the studied cancer patients (98.7%) had high perceived social support levels, while the minority of them (0.6%) had low and moderate levels

Table (2): highlights the total QOL level among the studied cancer patients. The table revealed that, the most of the studied cancer patients (85.8%) had moderate QOL level with mean ± SD 55.43 ± 7.32.

Table (3): presents correlation between anxiety and QoL domains. As represented in the table there was strong statistically significant correlation between the studied cancer patients' anxiety level and QOL domains scores ($p< 0.001, 0.006$).

Table (4): clarifies correlation between perceived social support level and QoL domains. As shown in the table there was strong statistically significant correlation between the studied cancer patients perceived social support level and QOL domains scores except in physical health domain ($p=0.342$).

Table (5): clarifies correlation between hope level and QoL domains. As noted in the table there was statistically significant correlation between the studied cancer patients hope level and QOL domains scores.

Table (6): Presents a multivariate linear regression analysis regarding the effect of different parameters on QOL among the studied cancer patients. As evidenced in the table, gender, family size, monthly income, and anxiety were negative predictors of the quality of life among the studied cancer patients. While, hope, and perceived social support were positive predictors on the quality of life among the studied cancer patients.

Table (1): Distribution of the studied cancer patients according to personal characteristics (n=155).

Items	No.	%
Gender		
Male	44	28.4
Female	111	71.6
Age		
18:27	2	1.3
28:37	8	5.2
38:47	40	25.8
>48	105	67.7
Mean ± SD.	46.04 ± 5.18	
Social status		
Single	3	1.9
Married	117	75.5
Divorced	5	3.2
Widowed	30	19.4
Education level		
Can't read or write	26	16.8
Basic education	17	11.0
Middle education	78	50.3
University education	34	21.9
Family size		
<3	19	12.3
3:5	126	81.3
>5	10	6.5
Work condition		
Working	149	96.1
Not working	6	3.9
Monthly income		
Enough and saving	8	5.2
Enough	147	94.8

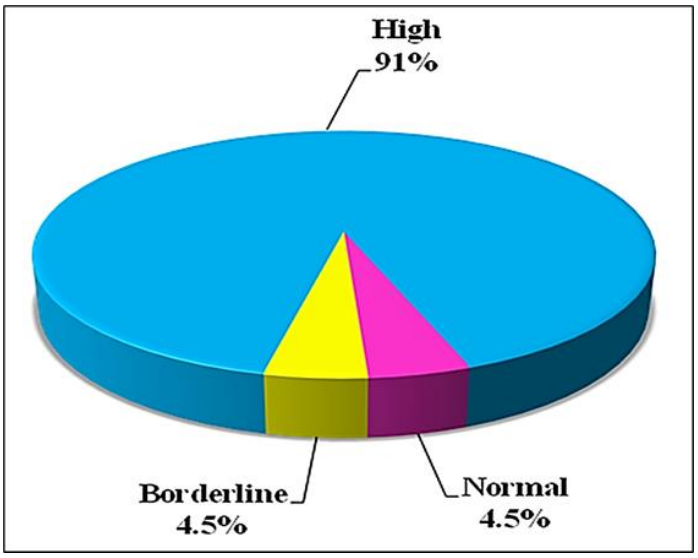

Figure (1): Total score of anxiety levels among the studied cancer patients (n=155).

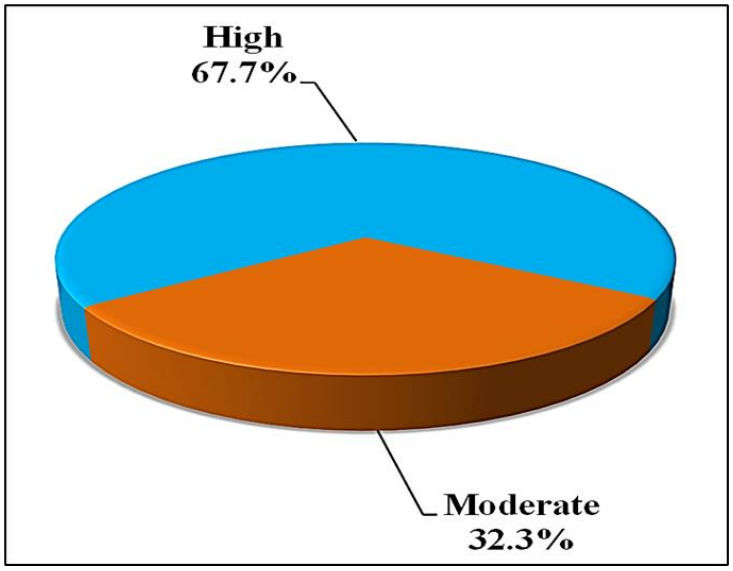

Figure (2): Total score of hope level among the studied cancer patients (n=155).

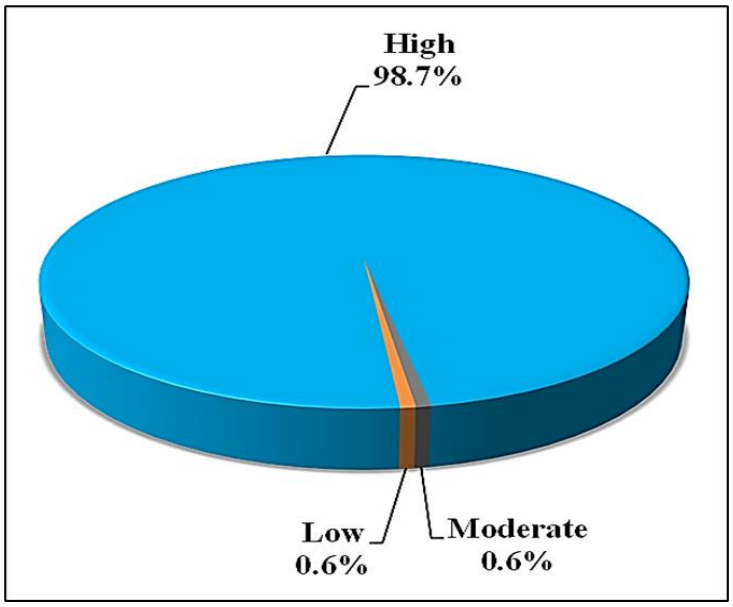

Figure (3): Total score of perceived social support level among the studied cancer patients (n=155).

Table (2): Total quality of life level among the studied cancer patients (n=155).

Total quality of life level	**No.**	**%**
Low = 0 < 30	0	0.0
Moderate = 31 < 60	133	85.8
High = 61 points or more.	22	14.2
Min. – max.	35.42 – 83.33	
Mean ± sd.	55.43 ± 7.32	
Median	54.17	

Table (3): Correlation between anxiety and quality of life domains (n=155).

Quality of life domains	Anxiety	
	R	P
Physical health	-0.388*	<0.001*
Psychological health	-0.525*	<0.001*
Social relations	-0.221*	0.006*
Environment	-0.299*	<0.001*
Overall	**-0.501***	**<0.001***

Table (4): Correlation between Social Support (MPSSS) and quality of life domains (n=155).

Quality of life domains	Social support (mpsss)	
	R	P
Physical health	0.077	0.342
Psychological health	0.233*	0.004*
Social relations	0.529	<0.001*
Environment	0.354*	<0.001*
Overall	**0.367***	**<0.001***

Table (5): Correlation between hope level and quality of life domains (n=155).

Quality of life domains	Adult hope scale	
	R	P
Physical health	0.250*	0.002*
Psychological health	0.422*	<0.001*
Social relations	0.206*	0.010*
Environment	0.210*	0.009*
Overall	**0.371***	**<0.001***

Table (6): Univariate and multivariate linear regression analysis regarding effect quality on life (n=155).

	Univariate		#Multivariate	
	p	**B (LL – UL 95% C.I)**	**p**	**B (LL – UL 95% C.I)**
Gender				
Male	0.078	-2.201 (-4.657 – 0.254)		
Female	0.078	2.201 (-0.254 – 4.657)		
Age	0.145	0.160 (-0.055 – 0.374)		
Social status [Married]	0.651	0.596 (-2.002 – 3.194)		
High Education Level	0.157	0.198 (-2.299 – 2.695)		
Family size [>5]	0.998	-0.003 (-2.612 – 2.606)		
Work condition [Working]	0.847	0.568 (-5.228 – 6.364)		
Monthly Income [Enough]	0.032*	-5.443(-10.422–-0.464)	0.428	-1.685 (-5.876 ± 2.506)
Anxiety	<0.001*	-0.682 (-0.871 –-0.494)	<0.001*	-0.570(-0.754 ± -0.386)
Adult Hope Scale (AHS)	<0.001*	0.476 (0.286 – 0.666)	0.047*	0.193 (0.003 ± 0.384)
Multidimensional Perceived Social Support Scale (MPSSS)	<0.001*	0.337 (0.200 – 0.473)	0.003*	0.208 (0.074 ± 0.343)

DISCUSSION

Improvement of quality of life (QOL) has been one of goals in health care for people living with cancer. Besides the general impacts of demographic and clinical differences, psychological and social states also influence the QOL (Zhang, et al., 2020). The diagnosis of cancer and its subsequent treatment might increase patients' emotional disturbance and decrease their levels of hope. On the other hand, hope provided individuals a positive resource for combating psychological issues as depression and anxiety while protecting against perceptions of vulnerability and unpredictability (Nierop- van et al., 2020). Moreover, Lack of social support resulted in maladaptive coping responses to cancer, further to weak fighting spirit of cancer patients (Scandurra, et al., 2022). Studies on cancer patients have shown that social support can mediate the relationship between hope and anxiety (Zhu, et al., 2023). In this respect, the present study was conducted to assess effect of anxiety, hope, and social support on quality of life of cancer patient undergoing chemotherapy.

Regarding anxiety level among the studied cancer patients, the current results illustrated that the majority of the studied cancer patients had high anxiety level. As

evidence, the most of them reported they often getting sudden anxiety attacks, they can get peaceful and relaxed but not frequently, and they do not pay enough attention to their appearance. The interpretation for this result is may due to an increase in the sources of stress derived from therapeutic interventions as chemotherapy and its side effects. In addition, the increased anxiety can be attributed to the effects of the nature of the disease, length of treatment duration.

This finding is confirmed by Kim, and Park (2021) who conduct study entitled factors affecting anxiety and depression in young breast cancer survivors undergoing radiotherapy and concluded that the studied breast cancer patients were had high anxiety level. Also, agreed with Hajj et al. (2021) who studied clinical and genetic factors associated with anxiety and depression in breast cancer patients and showed that almost half of the patients self-reported high levels of anxiety. Moreover, Cho, and Hwang (2021) who conducted study entitled Association between sleep quality, anxiety and depression among Korean breast cancer survivors and clarified that the anxiety level was higher in those who underwent surgery less than 60 months previously and in those currently receiving hormone therapy.

Concerning the hope level among the studied cancer patients, according the current study findings more than two thirds of the studied cancer patients had high hope level. It may relate to spiritual and religious factors. As mentioned by (Goldzweig, et al., 2022) who studied depression, hope and social support among older people with cancer, the higher levels of general hope among Muslim patients can be partially explained by their high levels of religiosity and the known positive correlation between hope and religiosity in the Muslim community. Furthermore, Amini, Raeisi, Tabari, Rasoolzadeh, and Molaei (2020) who carried out a study entitled prediction of hope based on forgiveness and religious beliefs among leukemia patients demonstrated that there was a positive significant correlation between the mean scores of religious beliefs and hope.

The current findings supported by Tao et al. (2022) who conducted study entitled Hope and depression: the mediating role of social support and spiritual coping in advanced cancer patients. Also, the current findings in the same context with Zhao, Jiang, Xu, and Lin, (2022) who studied that the mediating effect of hope level between social support and benefit finding in patients with advanced lung cancer and reported that the studied cancer patient had high level of overall hope. This result was disagreed with Li et

al. (2021) who studied hope and symptom burden of women with breast cancer undergoing chemotherapy and reported that the hope of the studied cancer patients undergoing breast cancer chemotherapy is at a medium level and needs to be further improved.

Concerning level of perceived social support among the studied cancer patients, the present findings showed that the majority of the studied cancer patients had high social support level. This could be attributed to the fact that family is the bedrock of Egyptian society, and the care and concern of family members are of great importance for cancer patients. These findings were consistent with Zhao, Sun, and Yang (2021) who studied the effects of social support, hope and resilience on depressive symptoms within 18 months after diagnosis of prostate cancer and revealed that the studied cancer patients had high social support.

While the current study results disagreed with Scandurra et al., (2022) who studied social support mediates the relationship between body image distress and depressive symptoms in prostate cancer patients and found that the studied cancer patients mentioned they received inadequate social support from family members, and concluded that social support from family was significantly associated with depressive symptoms. Additionally, due to the changed self-image/body image and altered sexual/urinary function, prostate cancer patients might not ask for support from friends or significant others, and may distance themselves from friends and family members.

Regarding QoL level among the studied cancer patients, the present results showed that the most of the studied cancer patients had moderate level of quality of life. From the researcher point of view, it may due to feeling of anxiety, depression, fear from prognosis of cancer and side effects of chemotherapy. Also, it may be due to changes in relationships, role adjustment, and employment effect on the social wellbeing, sometimes leading to withdrawing from others to avoid communication. The present result agreed with Sharif et al. (2021) who carried out a study entitled spirituality and quality of life in women with breast cancer and clarified that the participated cancer patients who had high hope level were also had high quality of life level with significant positive relation. Whereas, Aydın and Demir (2020) who conducted study entitled illness perception, perceived social support and quality of life in patients with diagnosis of cancer and reported that the included cancer patient had moderate quality of life scores.

Concerning correlation between the study variables, the current findings illustrated that there was statistically significant negative correlation between the studied cancer patients' anxiety level and quality of life domains. These outcomes supported with study by Kugbey, Oppong and Meyer-Weitz, (2020) who studied depression, anxiety and quality of life among women living with breast cancer in Ghana and revealed that there were significant direct negative effects of anxiety on overall quality of life, which suggests that high anxiety level is related with low quality of life.

The present results elaborated that there was a statistically significant correlation between the studied cancer patients social support and quality of life domains scores except physical health domain. This finding confirmed with Kugbey, Oppong and Meyer-Weitz, (2020) who found social support to have significant and positive relation with the overall quality of life among the studied cancer patients, and asserted that the increased social support significantly associated with concomitant increase in overall quality of life of the participants. The current results indicated that there was strong statistically significant correlation between the studied cancer patients hope level and QOL domains scores except physical health domain with agency domain. This may due to the physical disability and fatigue of cancer patients that cause low hope and setting future objectives to achieve. This result agreed with Zhang, et al. (2020) who concluded that there was positive significant statistically relation between quality of life and hope level of cancer patients.

CONCLUSION

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

Anxiety had a negative effect on quality of life of cancer patients, while social support and hope had positive effect on them.

RECOMMENDATIONS

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

- Conduct counseling sessions based on psycho-social interventions to reduce anxiety and increase level of hope among cancer patients.

- Provide skill building and empowerment for caregivers of cancer patients to improve perceived social support for their patients.
- Further research is necessary to design and implement educational programs for patients & nurses regarding strategies of enhancing anxiety and its effect on cancer patients' levels of hope and QOL.

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أثر القلق والأمل والدعم الإجتماعي على نوعيةحياة مرضى السرطان الخاضعين للعلاج الكيماوي

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الـخـلاصــة

الإصابة بالسرطان حدث صادم يعمل على تغيير عالم المصاب بما ينتج عنه من تغيرات سلبية تؤثر في حياته وحياة الأسرة على جميع المستويات. خاصة المستوى النفسي والاجتماعي. كما يؤدي العلاج الكيماوي إلى آثار جانبية فسيولوجية ونفسية مختلفة. تشمل الآثار الجانبية النفسية التوتر والقلق والاكتئاب. وترتبط نوعية الحياة ارتباطا إيجابيا بالحاجات النفسية والاجتماعية. وهناك عدة عوامل يمكن أن تؤدي إلى خفض نوعية الحياة، وتتضمن تلك العوامل عدم وجود الدعم الاجتماعي الكافي. ولذلك، تهدف هذه الدراسه إلى تقييم أثر القلق والأمل والدعم الاجتماعي على نوعيه حياه مرضى السرطان الخاضعين للعلاج الكيماوي. تم استخدام دراسة وصفية ترابطية لإجراء الدراسة بمستشفى مجمع الشفاء بمحافظة بورسعيد؛ شملت الدراسة 155 مريض بالسرطان ممن يخضعون للعلاج الكيماوي. وقد أظهرت نتائج الدراسة أن 91% منهم لديه مستوى عالي من القلق،67.7% من المرضى لديهم مستوى عالي من الأمل وأوضحت أن 98.7% منهم يتلقون مستوى عالي من الدعم الأجتماعي و 85.8% منهم لديهم نوعية حياة متوسطة. كما أوضحت النتائج وجود علاقة احصائية بين مستوى القلق و الدعم الاجتماعي و الأمل مع مستوى نوعية الحياة لدي مرضى السرطان. وقد خلصت الدراسة إلى ,وجود علاقة سلبية للقلق على جودة الحياة لدى مرضى السرطان بينما يوجد علاقة ايجابية للدعم الاجتماعي والامل علي مرضى السرطان. وأوصت الدراسة بتنفيذ جلسات تعليمية لمقدمي الرعاية لمرضى السرطان عن دور تقديم الدعم الاجتماعي في خفض مستوى القلق وزيادة الامل وأثر ذلك على نوعية الحياة لديهم، كما أوصت بتقديم برنامج تدريبي للتمريض عن استراتيجيات تقليل مستوى القلق وتحسين مستوى الامل لدى مرضى السرطان.

الكلمات المرشدة: الأمل، الدعم الاجتماعي، العلاج الكيماوي، القلق، مرضى السرطان، نوعية الحياة.