DOI: https://doi.org/10.53350/pjmhs211561986

ORIGINAL ARTICLE

Psychiatric Disorders in New Cancer Patients in Semnan

NILUFAR SAFAIE[1,2], HADI ZEINALI[2], NAZILA GHAHRAMANFARD[1,2], MAJID MIR MOHAMMAD KHANI[1,3], MOHAMMADREZA MOONESAN[4]

[1]Social Determinants of Health Research Center, Semnan University of Medical Sciences. Semnan, Iran
[2]Department of Internal Medicine, Semnan University of Medical Sciences. Semnan, Iran
[3]Department of Epidemiology and Biostatistics, Semnan University of Medical Sciences. Semnan, Iran
[4]Department of Emergency Medicine, Semnan University of Medical Sciences. Semnan, Iran
**Corresponding authors: Mohammadreza Moonesan. Department of Emergency Medicine, Semnan University of Medical Sciences. Semnan, Iran*
Email: Mohammad.reza5332@gmail.com

ABSTRACT

Introduction & Objective: Definitive diagnosis of cancer in patients, the duration of treatment, and grueling treatment methods can provide a basis for psychiatric disorders such as depression and anxiety in patients; accordingly, this study was conducted to evaluate the factors affecting these disorders in patients who were newly diagnosed with cancer.

Materials and Methods: This descriptive-analytical study was performed on 122 cancer patients in 1397 in Semnan, Iran. Data were collected using the HADS questionnaire. In order to compare the subgroups in terms of frequencies, Chi-square test and, if necessary, more accurate Fisher test were used. Numerical variables were compared using T-test or Mann Whitney U test.

Results: In the present study, the mean of total anxiety was about 28.6% and the mean of total depression among patients was 26.2%. 80% of women and 74.3% of people without income had anxiety and there was a significant relationship between gender and income with anxiety in cancer patients (p <0/05). The variables of age, sex, income level, education level were not significantly associated with depression (P> 0.05).

Conclusion: Considering the levels of psychiatric disorders, especially anxiety and depression in cancer patients, to control this issue, providing psychiatric interventions in the treatment program of these patients can be effective.

Key words: Cancer, Anxiety, Depression, Psychiatric disorders

INTRODUCTION

Cancer is one of the most important diseases of the present century and the second leading cause of death after cardiovascular diseases [1-3]. Each year, more than 11 million cancer deaths and 22 million cancer survivors are diagnosed worldwide [4]. However, with the progression of treatments and the increase in the number of people with cancer, mental disorders related to cancer are also increasing [5]. Frequent hospitalizations and constant worries of cancer patients and their families predispose people to mental disorders, and unfortunately between 50 and 85% of cancer patients suffer from psychiatric disorders simultaneously. [4] . Depression and anxiety are the two main symptoms and complaints of cancer patients [6]. Generally, patients have more severe psychological complications such as anger, anxiety, or worry, in comparison with physical complications; some patients even abandon chemotherapy because of psychological problems [3]. Mental disorders severely affect their quality of life and daily functioning [3].

Findings show that patients with moderate socioeconomic levels, educated patients, and married patients with high emotional connections are more likely to suffer from various psychological disorders [7]. There is a strong association between increased cancer pain and stress in the form of mood disorders, anxiety, and depression [8]. According to studies, the most common psychiatric disorders in these patients are adjustment disorder and major depressive disorder, respectively [9]. Cancer crises cause imbalance and inconsistency of mind and body, but the most common condition for the patients in this period is despair and hopelessness [3]. Severe and persistent depressive disorder is four times more usual in cancer patients than in the general population [4]. Therefore, after the diagnosis of cancer, half of the patients showed symptoms of mood swings, anxiety, adaptive disorders, and depression [10].

Various psychiatric interventions have positive effects on the stress, acceptance, and pain of cancer patients [11]. Further and initial treatment support for cancer patients reduces the burden of mental disorders and may increase the life expectancy of patients with advanced disease [12]. Social support can also be an important issue in reducing stress and mental disorders [13], but in general, there are limited strategies for evaluating and managing cancer-related anxiety and depression [14]. Major problems in cancer care include lack of knowledge, diagnosis, and treatment of psychiatric disorders, and the evaluation of these problems is highly important [15].

Considering the role of psychiatric disorders in patients' health and that this depression and anxiety itself complicates the overall process of disease control and treatment, and that the psychological factors affecting cancer have not been measured in Semnan cancer patients, the present study aims to evaluate the psychiatric disorders of new cancer patients.

METHODS

This analytical-descriptive study was performed on cancer patients who referred to the oncology ward of Kosar Hospital in Semnan from March to December 2019. 122 patients were entered into the study using the available sampling method and after reviewing the inclusion and exclusion criteria, the cases were assessed in terms of variables affecting psychological disorders using the HADS questionnaire.

Inclusion and exclusion criteria: Inclusion criteria included consent to participate in the study, a maximum of 6 months after the diagnosis of cancer, and patients with acceptable listening and speaking ability. Exclusion criteria included not completing the questionnaire, suffering from other chronic

diseases and physical disability, unwillingness to continue participating in the study, uniform response to items, and not understanding the questions of the questionnaire despite the researcher's explanations.

Data collection: The Hospital Anxiety and Depression Scale (HADS) was completed by patients. The Hospital Anxiety and Depression Scale was developed by Zigmond and Snaith (1983). This checklist is designed to assess mood swings, especially anxiety and depression. In this scale, seven questions are related to anxiety symptoms (questions 12, 9, 8, 5, 4, 1, and 13) and seven questions are related to depressive symptoms (questions 11, 10, 7, 6, 3, 2, and 14). This questionnaire is graded based on a four-point scale (3, 2, 1,0). The method of scoring and interpreting the questionnaire is such that the authors suggest a score of 11 as the cut-off point, and higher scores are clinically important. High scores on the depression scale indicate that in addition to coping with anxiety, other treatments should be considered.

It would take approximately less than 10 minutes to complete this questionnaire and it was completed at the same time as the assessment interview of the patients. Often, during the screening interview, the therapist might look at the completed questionnaire and match the process of his/her questions, or approve specific answers.

Data analysis: The number and percentage of patients with psychiatric disorders in general and by subgroups (sex, age, etc.) were reported in form of frequency distribution tables. Chi-square and Fisher tests were used to compare the subgroups in terms of frequency. Comparison of numerical variables was performed by T-test, using SPSS software version 25. Levels less than 0.5 were considered significant in all tests.

Ethical considerations: After receiving approval from the University Research Council, the method of study was explained to the subjects, and patients were entered into the study with their permission and consent. All information obtained from this study will remain confidential.

RESULTS

Out of 122 people, 69 (56%) were women and 53 (44%) were men. The average age was about 58 years. 62% had a diploma or lower education. Among these people, 24% were employed and 76% were unemployed or housewives, and 52% had no income (Table 1).

The rate of anxiety was about 28.6% and the rate of depression among patients was 26.2% (Table 2). 59.4% of patients with depression were women and 40.6% were men. No significant relationship was observed between gender and depression (P = 0.09). 80% of patients with anxiety were women and 20% were men. There was a significant relationship between gender and anxiety (P = 0.01). The rate of depression in patients was not related to their education (P = 0.12). Also, the level of education was not significantly associated with anxiety (P = 0.11). (Table 2). The prevalence of depression was not related to age (P = 0.25). Also, the level of anxiety at different ages was not significantly different (P = 0.14). There was no significant difference between depression and anxiety, and the occupation of the patients (P> 0.5).

According to the statistical analysis, there was no significant difference between patients' depression rates and their income. (P = 0.08). In addition, there was a significant relationship between income and anxiety, so that the highest levels of anxiety (74.3%) were observed in patients without income (P = 0.01). In general, differences were observed between variables of education and depression, but they were not statistically significant (Table 2).

Table 1. Demographic findings

Demographic features	
Gender	Female
	Male
Level of education	Higher education
	Diploma
	Lower than diploma
	Illiterate
Employment conditions	Employed
	Unemployed
Level of income	Higher than 20 million IRR
	Between 10 and 20 million IRR
	Lower than 10 million IRR
	Without income
Type cancer	Lung cancer
	Breast cancer
	Colon cancer
	Prostate cancer
	Gastric cancer
	Others

Table 2. Frequency of factors related to anxiety and depression

Parameters		Anxiety	Depression
	Mean	28.6%	26.2%
Gender	Male	20%	40.6%
	Female	80%	59.4%
	P value	0.012	0.095
Age (years)	<20	5.7%	0%
	20-39	17.1%	18.7%
	40-59	60.1%	50%
	>61	17.1%	31.3%
	P value	0.14	0.25
Education	Higher education	11.4%	15.6%
	Diploma	37.1%	31.3%
	Lower than diploma	28.6%	34.4%
	Illiterate	22.9%	18.8%
	P value	0.11	0.12
Employment conditions	Employed	17.1%	21.9%
	Unemployed	82.9%	78.1%
	P value	0.08	0.34
Level of income	Higher than 20 million IRR	8.6%	12.5%
	Between 10 and 20 million IRR	17.1%	34.4%
	Lower than 10 million IRR	0%	0%
	Without income	74.3%	53.1%
	P value	0.01	0.09

DISCUSSION

In the present study, the rate of anxiety was about 28.6% and the mean of total depression was 26.2%, while in the normal population, the rate of anxiety was about 7.3% [16] and the rate of depression was about 4.1% [17]. A similar study found that severe and persistent depressive disorder was four times more common in cancer patients than in the general population [4], and these rates were close to the rate of depression in patients studied in this research. Other studies have shown that the rate of anxiety in cancer patients can be between 10 and 34% [18]. The results of a study by Salehi et al. also showed the existence of anxiety in the majority of

cancer patients [19]. Other studies in Iran and other parts of the world have shown a significant frequency of depression and anxiety in cancer patients [2, 6, 9, 20].

In the present study, a significant relationship was observed between the level of anxiety in cancer patients and gender, so that the level of anxiety was higher among women than men. Burgess et al. found women to be emotionally more sensitive and stated that young age and non-cancer-related stressful experiences could be effective in increasing psychological disorders, and social support can also be helpful in reducing stress [21]. In a study by Sadoughi et al., it was reported that hope and optimism can help reduce anxiety and depression in women with breast cancer [22]. Acceptance and commitment therapy and couple coping enhancement training have also been accepted as effective strategies to reduce the symptoms anxiety and also to improve the psychological indicators which promote the health of women with breast cancer [23].

In the present study, a significant relationship was also observed between cancer patients' anxiety and income level, so that the level of anxiety in low-income patients was higher. A similar study showed that one of the reasons for psychological problems in cancer patients can be financial and social losses and dependence and disintegration of the family structure [24]. Studies in Iran have shown that cancer increases the likelihood of unemployment and early retirement [25]. In addition to threatening the life and well-being of the individual, the high cost of cancer treatment can jeopardize the financial security of the family [26]. Other studies have also pointed to the role of income in the psychological well-being of people with cancer [27], therefore financial planning for the cancer patients can significantly reduce the anxiety of these patients and consequently lead to increased adherence to treatment, and also improve the effectiveness of drug treatments.

Providing psychological solutions can be effective in reducing psychological problems. A study by Sharifi Saki et al. found that any attachment to God reduces depression in women with breast cancer; While the presence of death anxiety increases depression [28]. Aga Khani et al. also considered the ROYE adaptation pattern to be effective in reducing environmental stress [29]. Other reports have shown that treatments based on acceptance and commitment can reduce depression in people with cancer [24]. Studies have shown that extraversion is associated with a reduction in psychological problems [30]. Emotional malaise and mindfulness have also been reported as important factors involved in depression and anxiety in cancer patients [31]. It has also been reported in a study by Montazer et al. that social support has a positive effect on depression [32]. A study in New York showed that the level of physical activity is also effective in reducing psychological disorders [33]. Clown therapy has also been reported as an effective way to reduce depression in children with cancer undergoing chemotherapy [34]. A study has shown that psychosocial support can significantly improve patients' quality of life as a major factor in oncological care [35].

According to the present study and other articles published in this field, high prevalence of depression and anxiety has been clearly observed among cancer patients. Probably some of the reasons for psychological problems in these cases are the complications of this disease for the patients and their families, which include the possibility of malformation, pain, financial and social losses, dependence and disintegration of the family structure, and even death [24]. Each of the studies in this field has reported methods to control these psychiatric disorders, and planning for the implementation of these methods would obviously be effective in the psychological support of patients and subsequently improves the effectiveness of anti-cancer therapies.

The findings indicate that depressed patients were more prone to metastasis and pain [36]. This shows that attention to the treatment of mental disorders, in addition to improving individual problems, also increases the effectiveness of therapy and should be given more attention.

One of the limitations of the present study was the incompleteness of some questionnaires, which was eliminated by repeating and correcting the incomplete cases.

CONCLUSION

In the present study, the prevalence of anxiety and depression in cancer patients has been high, which indicates the need for more attention to this issue. The level of anxiety of patients is mostly related to the amount of income and gender of individuals and psychiatric interventions are required to control the level of anxiety of cancer patients during their treatment program. On the other hand, none of the parameters of age, level of education, and working conditions had a significant effect on patients' depression. Investigating the effect of interventions to eliminate risk factors such as income level and predicting new psychological interventions to improve patients' psychiatric problems, and also examining the effect of factors such as age, sex, occupation, income and education in cancer patients in a larger population can be effective in providing further treatment strategies in the future

REFERENCES

1. Saeedi Z, Bahrainian SA, Ahmadi SM. Effectiveness of positive psychology group therapy in reducing depression, stress and death anxiety in patients with cancer undergoing chemotherapy. Journal of Fundamentals of Mental Health. 2016;18(Special Issue):547-52.
2. Salehi F, Mohsenzade F, Arefi M. Prevalence of death anxiety in patients with breast cancer in Kermanshah, 2015. 2016.
3. Pedram M, Mohammadi M, Naziri G, Aeinparast N. Effectiveness of cognitive-behavioral group therapy on the treatment of anxiety and depression disorders and on raising hope in women with breast cancer. Quarterly Journal of Women and Society. 2010;1(4):34-61.
4. Khezri L, Bahreyni M, Ravanipour M, Mirzaee K. The Relationship between spiritual wellbeing and depression or death anxiety in cancer patients in Bushehr 2015. Nursing of the Vulnerables. 2015;2(2):15-28.
5. Li M, Hales S, Rodin G. Adjustment disorders. Psycho-oncology. 2010;297:302.
6. MALEKIAN A, ALIZADEH A, AHMADZADEH GH. Anxiety and depression in cancer patients. 2007.
7. El-Hadidy MA, Elnahas W, Hegazy MA, Hafez MT, Refky B, Wahab KM. Psychiatric morbidity among Egyptian breast cancer patients and their partners and its impact on surgical decision-making. Breast cancer (Dove Medical Press). 2012;4:25-32. doi.10.2147/bctt.s29890.
8. Fischer DJ, Villines D, Kim YO, Epstein JB, Wilkie DJ. Anxiety, depression, and pain: differences by primary cancer. Supportive care in cancer : official journal of the Multinational Association of Supportive Care in Cancer. 2010;18(7):801-10. doi.10.1007/s00520-009-0712-5.

9. A MR, T MG, Gorji M. Survey the anxiety and depression among breast cancer patients referred to the specialized Isfahan hospital of cancer, Iran. Journal of Health System Research. 2015;10(1):39-48.
10. Sajadian A, Dokanei Fard F, Behboodi M. HER3 Gene Expression Study by RT-PCR in Patient with Breast Cancer. Iranian Quarterly Journal of Breast Disease. 2016;9(2):43-51.
11. Merckaert I, Libert Y, Messin S, Milani M, Slachmuylder JL, Razavi D. Cancer patients' desire for psychological support: prevalence and implications for screening patients' psychological needs. Psychooncology. 2010;19(2):141-9. doi.10.1002/pon.1568.
12. Rosenstein DL. Depression and end-of-life care for patients with cancer. Dialogues in clinical neuroscience. 2011;13(1):101-8. doi.10.31887/DCNS.2011.13.1/drosenstein.
13. Andersen BL, Farrar WB, Golden-Kreutz DM, Glaser R, Emery CF, Crespin TR, Shapiro CL, Carson WE, 3rd. Psychological, behavioral, and immune changes after a psychological intervention: a clinical trial. Journal of clinical oncology : official journal of the American Society of Clinical Oncology. 2004;22(17):3570-80. doi.10.1200/jco.2004.06.030.
14. Mei Hsien CC, Wan Azman WA, Md Yusof M, Ho GF, Krupat E. Discrepancy in patient-rated and oncologist-rated performance status on depression and anxiety in cancer: a prospective study protocol. BMJ open. 2012;2(5). doi.10.1136/bmjopen-2012-001799.
15. Ogawa A, Shimizu K, Akizuki N, Uchitomi Y. Involvement of a psychiatric consultation service in a palliative care team at the Japanese cancer center hospital. Japanese journal of clinical oncology. 2010;40(12):1139-46. doi.10.1093/jjco/hyq147.
16. Baxter AJ, Scott KM, Vos T, Whiteford HA. Global prevalence of anxiety disorders: a systematic review and meta-regression. Psychological medicine. 2013;43(5):897-910. doi.10.1017/s003329171200147x.
17. Sadeghirad B, Haghdoost AA, Amin-Esmaeili M, Ananloo ES, Ghaeli P, Rahimi-Movaghar A, Talebian E, Pourkhandani A, Noorbala AA, Barooti E. Epidemiology of major depressive disorder in iran: a systematic review and meta-analysis. International journal of preventive medicine. 2010;1(2):81-91.
18. Lima MP, de Oliveira DS, Irigaray TQ. Symptoms of depression and anxiety in cancer outpatients: predictive variables. Psicooncología. 2018;15(2):373.
19. Salehi F, Mohsenzade F, Arefi M, Salehi Zahabi S, Amirifard N. Death anxiety in patients with cancer in Kermanshah. Iranian Journal of Cancer Nursing (ijcn). 2019;1(1):24-9.
20. Singer S, Das-Munshi J, Brähler E. Prevalence of mental health conditions in cancer patients in acute care--a meta-analysis. Annals of oncology : official journal of the European Society for Medical Oncology. 2010;21(5):925-30. doi.10.1093/annonc/mdp515.
21. Burgess C, Cornelius V, Love S, Graham J, Richards M, Ramirez A. Depression and anxiety in women with early breast cancer: five year observational cohort study. BMJ (Clinical research ed). 2005;330(7493):702. doi.10.1136/bmj.38343.670868.D3.
22. Sadoughi M, Mehrzad V, MohammadSalehi Z. The Relationship between Anxiety, Depression, and Quality of Life among Breast Cancer Patients in Seyedoshohada Hospital in Isfahan in 2016: The Mediating Role of Resilience. Journal of Rafsanjan University of Medical Sciences. 2017;16(5):395-408.
23. Soleimani E, Mokarian F. THE EFFICACY OF ACCEPTANCE AND COMMITMENT THERAPY AND COUPLES COPING ENHANCEMENT TRAINING ON HEALTH ANXIETY AND HEALTH PROMOTING LIFESTYLES IN WOMEN WITH BREAST CANCER: A QUASI-EXPERIMENTAL STUDY. Studies in Medical Sciences. 2019;30(2):140-54.
24. Farokhzadian AA, Andalib L, Yousefvand M. The effectiveness of acceptance and commitment therapy on reducing depression in Cancer Patients. Clinical Psychology and Personality. 2020;17(1):45-52.
25. Daroudi R, Zendehdel K, Sheikhy-Chaman M. Designing and Validity and Reliability Assessment of Change in Employment Status and Income and Supportive Mechanisms in Cancer Survivors. Iranian Journal of Cancer Care (ijca). 2020;1(4):1-9.
26. Longo CJ, Deber R, Fitch M, Williams AP, D'Souza D. An examination of cancer patients' monthly 'out-of-pocket' costs in Ontario, Canada. European journal of cancer care. 2007;16(6):500-7. doi.10.1111/j.1365-2354.2007.00783.x.
27. Sharp L, O'Leary E, O'Ceilleachair A, Skally M, Hanly P. Financial Impact of Colorectal Cancer and Its Consequences: Associations Between Cancer-Related Financial Stress and Strain and Health-Related Quality of Life. Diseases of the colon and rectum. 2018;61(1):27-35. doi.10.1097/dcr.0000000000000923.
28. Saki SS, Alipour A, AghaYousefi A, Mohammadi MR, Bonab BG. Relationship of Attachment Styles to God and Depression with Death Anxiety as a Mediator among Women with Breast Cancer.
29. Aghakhani N, Hazrati Marangaloo A, Vahabzadeh D, Tayyar F. The effect of Roy's adaptation model-based care plan on the severity of depression, anxiety and stress in hospitalized patients with colorectal cancer. Journal of hayat. 2019;25(2):208-19.
30. Mobaraki Asl N, Mirmazhari R, Dargahi R, Hadadi Z, Montazer M. Relationships among personality traits, anxiety, depression, hopelessness, and quality of life in patients with breast cancer. Iranian Quarterly Journal of Breast Disease. 2019;12(3):60-71.
31. Narimani M, Jani S, Rezaei R. The role of alexithymia and mindfulness in predicting depression and anxiety in women with cancer. Shenakht journal of psychology & psychiatry. 2020;7(1):78-89.
32. Montazer M KM, SefidmooyAzar A, Mobaraki-Asl N, Dorosti A. The Relationship Between Social Support and Depression in Patients with Breast Cancer. Iranian Quarterly Journal of Breast Diseases. 2019;12(1):58-66.
33. Breitbart W, Rosenfeld B, Pessin H, Kaim M, Funesti-Esch J, Galietta M, Nelson CJ, Brescia R. Depression, hopelessness, and desire for hastened death in terminally ill patients with cancer. Jama. 2000;284(22):2907-11. doi.10.1001/jama.284.22.2907.
34. Nikkhah-Bidokhti A, Najafi F, Ghaljaei F. The Effect of Clown Therapy on Depression of Children with Cancer Undergoing Chemotherapy. 2020.
35. Weis J, Schumacher A, Blettner G, Determann M, Reinert E, Rüffer J, Werner A, Weyland P. Psychoonkologie. Der Onkologe. 2007;13(2):185-94.
36. Ciaramella A, Poli P. Assessment of depression among cancer patients: the role of pain, cancer type and treatment. Psychooncology. 2001;10(2):156-65. doi.10.1002/pon.505.