

The Attitudes of Cancer Patients with Nausea and Vomiting Symptoms to Complementary and Holistic Treatments: A Cross-Sectional Study

Bulantı Kusma Semptomu Olan Kanser Hastalarının Tamamlayıcı ve Bütüncül Tedaviye Karşı Tutumları: Bir Kesitsel Çalışma

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ABSTRACT Objective: The study was performed to determine the attitude of cancer patients with symptoms of nausea and vomiting towards complementary and holistic treatment. **Material and Methods:** The study sample included the 138 cancer patients with 3 or more nausea and vomiting according to Visual Analog Scale were included in the study. Information Form, Attitudes towards Holistic Complementary and Alternative Medicine Scale, The Rhodes Index of Nausea, Vomiting, and Retching were used as data collection of this study. **Results:** Cancer patients were found to have a positive attitude towards complementary and holistic therapy. Although cancer patients participating in the study often experienced nausea and vomiting, symptom distress was also low. There was a positive correlation between symptom frequency and the symptom occurrence and holistic health dimensions ($p<0.05$). Moreover, a positive correlation was found between the symptom occurrence of the patients and their attitudes towards alternative medicine ($p<0.05$). **Conclusion:** Cancer patients have a positive attitude towards complementary and holistic therapy in relieving the symptoms of nausea and vomiting. It is recommended to create guidelines for determining effective strategies and using them properly in mixed therapies.

Keywords: Cancer patients; nausea and vomiting; complementary and holistic treatment; attitude evaluation

ÖZET Amaç: Bu araştırma, bulantı ve kusma semptomu olan kanser hastalarının, tamamlayıcı ve bütüncül tedaviye karşı tutumlarını belirlemek amacıyla yapıldı. **Gereç ve Yöntemler:** Çalışma, Vizüel Analog Skalaya göre 3 ve üzerinde bulantı kusması olan ve kanser tanısı alan 138 hastanın katılımı ile gerçekleştirildi. Verilerin toplanmasında Sosyodemografik Bilgi Formu, Bütüncül Tamamlayıcı ve Alternatif Tıbbı Karşı Tutum Ölçeği ve Rhodes Bulantı, Kusma ve Öğürme İndeksi kullanıldı. **Bulgular:** Kanser hastalarının tamamlayıcı ve alternatif tıbbı karşı tutumlarının pozitif olduğu belirlendi. Çalışmaya katılan kanser hastalarında bulantı ve kusma görülme sıklığı yüksek olsa da semptom sıkıntısı düşüktü. Semptom deneyimleri ve semptom oluşumlarıyla bütüncül sağlık boyutu arasında pozitif korelasyon belirlendi ($p<0,05$). Ayrıca hastaların semptom oluşumlarıyla tamamlayıcı ve alternatif tıbbı karşı tutumları arasında pozitif korelasyon saptandı ($p<0,05$). **Sonuç:** Bu çalışmada, bulantı ve kusma semptomu olan kanser hastalarının, tamamlayıcı ve bütüncül tedaviye karşı tutumlarının olumlu olduğu belirlendi. Tamamlayıcı ve bütüncül tedaviye yönelik etkili stratejiler belirlemek ve bunları farmakolojik tedavilerle birlikte doğru kullanmak için kılavuzlar oluşturulması önerilir.

Anahtar Kelimeler: Kanser hastaları; bulantı ve kusma; tamamlayıcı ve bütüncül tedaviler; tutum değerlendirmesi

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Cancer is a health problem that increasingly becomes common all around the world. The number of newly diagnosed cancer patients and deaths from cancer increases each year in the whole world. There were an estimated 18.1 million new cases of cancer and 9.6 million deaths from cancer worldwide in 2018.¹

With the increased number of cancer cases, the prevention of complications of systemic chemotherapy administration, early diagnosis of the symptoms, and symptom checking become more important day by day. The chemotherapeutics used in cancer treatment cause some serious problems such as nausea-vomiting, loss of appetite, mouth ulcers, bone marrow suppression, constipation, diarrhea, and alopecia areata (hair loss), and negatively affect the life quality of patients.^{2,3} Especially, nausea and vomiting caused by chemotherapy are the most commonly expressed side effects by patients getting cancer treatment, and their intensity and density change from patient to patient. Despite very effective antiemetic drugs such as serotonin antagonists developed in recent years, nausea and vomiting resulting from chemotherapy are experienced by approximately 38% and 80% of cancer patients getting cancer treatment.⁴⁻⁶ This causes some physiological effects such as fluid and electrolyte imbalance, dehydration, anorexia, and loss of appetite, a decrease in the quality of life of the patient, and significantly affects the commitment of the patient to the treatment.⁷⁻⁹ Patients try complementary and alternative treatments for the symptoms that cannot be completely eliminated with their pharmacological treatments such as nausea and vomiting. More than 50% of the society in Europe, North America, and other industrialized regions use at least one type of complementary or alternative medicine methods.^{5,10} Despite an increased five-year survival rate with traditional cancer treatment methods that are still used, many patients are in search of other treatments. Patients and their families tend to seek other methods rather than traditional treatment methods due to hopelessness, despair, different expectations, and social pressures.^{11,12} The use of herbal therapies is becoming widespread, especially for cancer patients, within the scope of Comple-

mentary and Alternative Medicine (CAM).^{13,14} Patients use CAM to fight cancer and improve quality of life. Patients who use it together with treatment to support treatment use it to cope with the side effects of the treatment, strengthen their immune systems, provide well-being in the body-body, provide physical harmony and spiritual repair, strengthen healthy behaviors and support conventional therapies. Those who use CAM to prevent recurrence of cancer tend to apply CAM applications for more protection, believing that nutritional supplements are beneficial.^{13,14} Detected in their study that the usage rates of CAM in 14 different countries range from 5-60%, and the CAM usage average is 31.4%; and Molassiotis et al. found that an average of 35.9% cancer patients in Europe use CAM.¹⁵ There are many CAM methods used by the patients, especially herbal treatments. However, the interaction of these treatments, especially herbal treatments, with chemotherapy or anticoagulants can lead to many serious toxicities and dangerous cases.¹⁶ For this reason, the health care personnel should build an open, acceptable, and unprejudiced communications with patients using CAM. Also, the patients should get more information about the CAM they use, and distinguish them from the methods that are not scientifically proven when used with safe, scientifically conventional treatments. In this process, it is significantly important to educate the patient, establish effective communication with him/her, and provide psychosocial support.¹⁷ The nurses administering complementary therapy within independent practices are responsible for informing the patient about all treatment options and refer to other health care personnel if required.¹⁸ The attitude of the patients and their families towards CAM use is quite important. Accordingly, health care personnel, especially nurses, should keep in mind while evaluating the patients when they use these methods as an alternative for medical treatment that their beliefs and cultures are effective in their choice of CAM methods.¹⁸⁻²⁰ Within this context, this study is conducted in order to identify the attitudes of cancer patients with nausea and vomiting symptoms towards complementary and holistic treatment.

MATERIAL AND METHODS

STUDY DESIGN-SETTING

The study was conducted in a cross-sectional and descriptive manner to evaluate the attitudes of cancer patients with nausea and vomiting symptoms towards complementary and holistic treatments with patients being treated in oncology and chemotherapy units of two private one state hospitals in İstanbul/Turkey between February 2020-August 2020.

SAMPLE AND PARTICIPANTS

The universe of the study included all of the patients being treated in oncology and outpatient units of two private and one state hospitals between February 2020 and August 2020. The sample of the study, however, consisted of 138 patients who were diagnosed with cancer at least 1 month before, had 3 or more nausea or vomit symptoms according to Visual Analog Scale, who was older than 18, could speak and understand Turkish, and who accepted to participate in the study. The sample size was determined as 74 participants according to the analysis performed in the G-power statistical software with a significance level of 0.05, 95% power (G*Power Version 3.1.9.2 statistical software). The study was completed with a total of 138 patients.

Data Collection Tools: “Sociodemographic Information Form”, “Attitudes towards Holistic Complementary and Alternative Medicine Scale”, “The Rhodes Index of Nausea, Vomiting, and Retching (RINVR)” were used as data collection tools of this study. The data were collected by the researches via face to face interview method.

Sociodemographic Information Form: The literature and studies related to the subject were analyzed and prepared by the researchers. Sociodemographic features such as age, gender, marital and economic status, and features related to disease-treatment such as the stage of the disease, method, and duration of the treatment were included in the form.

Attitudes towards Holistic Complementary and Alternative Medicine Scale: It was developed by Hy-

land et al. in 2003. Its validity and reliability were made by Erci in 2003. Cronbach alpha reliability value of the scale is 0.72. The scale has two subscales: CAM and Holistic Health. It is a Likert scale consisting of 11 questions. A minimum of 11 and a maximum of 66 points can be obtained from the scale. As the score of the scale decreases, the positive attitude towards CAM increases.^{21,22}

The Rhodes Index of Nausea, Vomiting, and Retching: Index of Nausea, Vomiting, and Retching was developed by Rhodes and McDaniel, and its validity and reliability were confirmed by Rhodes and McDaniel.²³ Articles 1, 3, 6, and 7 are reversed to score RINVR. For each answer, the scores calculated as 0 equals at least 46 levels of distress, and 4 equals maximum distress. Nausea and vomiting frequency of the patient from each of the eight articles are calculated. The maximum value possible is 32, and it means the score of the most severe symptom. The internal consistency coefficient of RINVR is 0.98. The adaptation of the scale to the Turkish society was made by Genç, and the internal consistency coefficient of the scale was found as 0.95.²⁴ The RINVR Cronbach alfa internal consistency coefficient of this study was found as 0.89.

STATISTICAL ANALYSIS

SPSS (Statistical Package for Social Sciences, version 26.0, SPSS Inc; Chicago, IL, USA) package program was used for the evaluation of the data. In the analysis of the data, variables were defined as mean, standard deviation (SD), and median with frequency and percentages, and the Chi-square test was used to compare frequencies and percentages. Sharpio-Wilk test was used for the normality analysis of the data. A correlation test was used for the detection of the relationship between the scores of RINVR and Attitudes towards Holistic Complementary and Alternative Medicine. All results were found to be significant at $p < 0.05$ and 95% confidence intervals.

ETHICAL CONSIDERATIONS

Ethics committee approval for the study was obtained from the Haliç University Ethics Committee on

31.01.2020 (No: 07). In addition, verbal and written informed consent was obtained from the participants after they were informed about the study. The study was conducted in accordance with the Declaration of Helsinki.

RESULTS

When the sociodemographic characteristics of the patients were analyzed, it was found out that their average age was seen as 60.71 ± 11.57 years, most of them were male (67.4%, $n=93$) and 90.6% ($n=125$) were married, 49.3% ($n=68$) were primary school graduates, and 90.2% of them were unemployed due to being sick or retired. 49.3% ($n=68$) of the patients reported that their income covered their expenses (Table 1).

When the characteristics regarding the diagnosis and treatments of the patients were analyzed, it was found that most of them had lung cancer (39.1%, $n=54$), 63.1% ($n=87$) of them were at stage I-II, and 50.7% ($n=70$) were taking chemotherapy treatment; 34.8% ($n=48$) of the patients had been followed up with a cancer diagnosis for more than four years (Table 2).

When the patients' mean scores of Attitudes towards Holistic Complementary and Alternative Medicine and RINVR were analyzed, it was found out that the mean score of attitudes towards CAM was 27.90 ± 4.40 , and the participants had positive attitudes towards CAM. When the mean scores of the symptom frequency of the patients were analyzed (24.92 ± 2.80), it was seen that their symptom frequency was high. Despite this, their symptom distress (8.70 ± 1.94) was low (Table 3).

When the relationship between the Attitudes towards Holistic Complementary and Alternative Medicine Scale and RINVR scores was analyzed, it was found that there was a positive correlation between symptom frequency and the occurrence and holistic health dimensions ($p < 0.05$). Moreover, a positive correlation was found between the symptom occurrence of the patients and their attitudes towards alternative medicine ($p < 0.05$) (Table 4).

TABLE 1: Sociodemographic characteristics of the patients.

Characteristics	Minimum-Maximum	$\bar{X} \pm SD$
Age	26-94	60.71 ± 11.57
	n	%
Gender		
Female	45	32.6
Male	93	67.4
Marital status		
Married	125	90.6
Single	13	9.4
Education level		
Illiterate	2	1.4
Literate	5	3.6
Primary school graduate	68	49.3
Secondary school graduate	4	2.9
High school graduate	22	15.9
Associate and undergraduate	37	26.8
Employment status		
Employed	10	9.8
Unemployed	92	90.2
Income		
Income covers expenses	68	49.3
Income equals expenses	65	47.1
Income does not cover expenses	5	3.6

SD: Standard deviation.

TABLE 2: Characteristics of patients regarding diagnosis and treatment.

Characteristics	n	%
Diagnosis		
Lung cancer	54	39.1
Laryngeal cancer	23	16.7
Breast cancer	20	14.5
Multiple myeloma	27	19.6
Prostate cancer	14	10.1
Disease stage		
Stage I and II	87	63.1
Stage II and IV	51	36.9
Treatment		
Chemotherapy	70	50.7
Radiotherapy	46	33.3
Chemotherapy+Radiotherapy	22	15.9
Disease and treatment duration		
0-6 months	26	18.8
6 months-1 year	31	22.5
1-3 years	33	23.9
4 years and over	48	34.8

TABLE 3: Patients' mean scores of Attitudes Towards Complementary and Alternative Medicine and the Rhodes Index of Nausea, Vomiting, and Retching.

Scale and Sub-scales		$\bar{X} \pm SD$
Sub-scales	Attitudes towards Complementary and Alternative Medicine	27.90±4.40
	Complementary and alternative medicine	15.44±2.87
	Holistic health	12.46±2.82
Rhodes Index of Nausea, Vomiting, and Retching Sub-scales		$\bar{X} \pm SD$
Sub-scales	Symptom frequency	24.92±2.80
	Symptom occurrence	16.21±2.14
	Symptom distress	8.70±1.94

SD: Standard deviation.

DISCUSSION

It was determined in this study that cancer patients with nausea and vomiting symptoms have a positive attitude towards complementary and holistic treatment. In addition, it was also found that although the patients participating in the study experienced nausea and vomiting very often, their symptom distress was low.

It was understood that the average age of the patients participating in the study was 60.71±11.57, and most of them were male, married, and unemployed. It was also found that most of them were diagnosed with stage I-II lung cancer, and were being followed up for 4 years and more. In studies investigating symptoms seen in cancer patients in the advanced stage, it was detected that pain, sleeping problems, and depression were more common than nausea and vomiting. Researches attributed this to

the fact that the patients experienced psychosocial stress more than nausea and vomiting since they are younger than 65.²⁵ Although the patients in this study were in the young age group, it is thought that the fact that they did not have advanced-stage cancer may have led to more experiences of nausea and vomiting. Similarly, it is indicated in a different study that cancer patients who are older than 85 have less serious symptom frequency than young adults.²⁶ In another study conducted for symptom frequency seen in cancer patients, it was indicated that the fact that a patient was married or had a partner decreased symptom frequency by increasing perceived social support.²⁷ It is thought that the fact that most of the patients participating in this study are married increases their perceived social support and thus reduces the distress of symptoms they experience.

However, there are different results seen in studies regarding symptom evaluations related to gender. Some of the studies indicated that being a woman is a risk factor for experiencing the nausea-vomiting symptom, and others indicated that it is seen more in men.^{28,29} In this study, it is thought that the underlying reason why most of the patients experiencing nausea-vomiting symptoms was that male might be related to many factors such as treatments applied or their psychosocial status.

Although complementary treatments had been using since the end of the 1700s, in the 1990s, they became more accepted in the traditional medicine community in the UK and the USA as CAM.³⁰ CAM is not used instead of current medical treatments, but are methods used to reduce symptoms

TABLE 4: The relationship between the Attitude Towards Complementary and Alternative Medicine Scale and Rhodes Nausea, Vomiting and Retching Index scores.

Scales	Complementary and Alternative Medicine		Attitudes towards Complementary and Alternative Medicine Scale (Total)			
	r value	p value	Holistic Health r value	p value	r value	p value
Symptom frequency	0.037	0.666	0.192	0.024	0.147	0.085
Symptom occurrence	0.055	0.519	0.235	0.005	0.187	0.028
Symptom distress	-0.008	0.929	0.017	0.840	0.006	0.943

Pearson correlation analysis was used, r correlation coefficient; p<0.05.

caused by disease or treatment.³¹ CAM practices are used for taking under control of many symptoms such as pain, fatigue, sleeplessness, nausea-vomiting with varying severity from patient to patient.³² In this study, it was understood that patients with nausea-vomiting symptoms had positive attitudes towards complementary and holistic treatments. In the study investigating CAM use of cancer patients, it was indicated that 75% of the patients used CAMs during their diseases, and they benefited mostly from B₁₂, inhalation and relaxing, and mindfulness-based stress reductions. Again, in the same study, it was also indicated that having inadequate information regarding CAM use affected attitudes towards CAM negatively.³³ In the last two decades, the suspicious perception against the practices of CAM doctors has decreased and medical doctors have begun to hold a positive attitude against them.³⁰ Moreover, CAM practices have been one of the many methods used to decrease various symptoms of cancer patients. It is known from the literature that the average rate of the CAM use frequency of the cancer patients is 31.4%.³⁴ CAM use of cancer patients in our country; however, changes between 22.1% and 84.1%.³⁵ It is considered that the increased number of studies conducted on CAM practices over the years, the fact that modern medicine is not enough for the diseases such as cancer, and positive attitudes of health personnel towards these practices affect the attitudes of the patients, which also corresponds with the results of this study.

CONCLUSION

It is detected in this study that cancer patients experiencing nausea and vomiting symptoms have a positive attitude towards complementary and holistic treatments. It is also found that nausea and vomiting frequency of the patients are high. Moreover, it is determined that the patients' having and experiencing nausea and vomiting and their attitudes towards CAM affect each other.

Complementary and alternative treatments are not used instead of conventional cancer treatments. However, the ratio of cancer patients applying these

practices increases every day. There is a need for studies on the effectiveness of the traditional methods used for nausea and vomiting in the societies and attitudes towards these methods. Also, it is expected from the health care personnel to develop practices for the use of complementary therapies, determine effective strategies, guide the patients on the use of proved complementary methods, and guide the individuals on the affective and right use of the complementary therapies.

Highlights of the findings and novelties:

- Cancer patients have a positive attitude towards complementary and holistic treatments.
- Cancer patients have experiencing nausea and vomiting and their attitudes towards CAM affect each other.
- Complementary and alternative treatments are not used instead of conventional cancer treatments.
- There is a need for studies on the effectiveness of the traditional methods used for nausea and vomiting in the societies and attitudes towards these methods.
- Health care personnel to develop practices for the use of complementary therapies, determine effective strategies,
- Guide the patients on the use of proved complementary methods, and guide the individuals on the affective and right use of the complementary therapies.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Dilek Yıldırım; **Design:** Dilek Yıldırım, Dilek Baykal, Burcu Dedeoğlu Demir; **Control/Supervision:** Dilek Yıldırım, Dilek Baykal, Burcu Dedeoğlu Demir; **Data Collection and/or Processing:** Dilek Yıldırım, Dilek Baykal, Burcu Dedeoğlu Demir; **Analysis and/or Interpretation:** Dilek Yıldırım, Dilek

Baykal, Burcu Dedeoğlu Demir; **Literature Review:** Dilek Yıldırım, Dilek Baykal; **Writing the Article:** Dilek Yıldırım, Dilek Baykal, Burcu Dedeoğlu Demir; **Critical Review:** Dilek Yıldırım, Dilek Baykal, Burcu Dedeoğlu Demir; **References and Fundings:** Dilek Yıldırım, Dilek Baykal, Burcu Dedeoğlu Demir; **Materials:** Dilek Yıldırım, Dilek Baykal, Burcu Dedeoğlu Demir.

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