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## ORIGINAL ARTICLE

## COMPLEMENTARY AND ALTERNATIVE MEDICINES USED BY CANCER PATIENTS TO COPE WITH NAUSEA

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**Abstract**

**Background:** Cancer is a common health problem in the world. Nausea is one of the most common symptoms in cancer patients. Cancer patients often apply to complementary and alternative medicines (CAM) in symptom management.

**Aim:** The aim of this study was to determine the CAM methods used by cancer patients to cope with nausea.

**Material and Method:** The study has a descriptive design and its data were collected in an adult oncology unit of a university hospital between July and September 2019. A total of 205 patients diagnosed with cancer for at least 6 months were included in the study. Data were collected by using the Individual Identification Form and Attitude Scale against Holistic Complementary Medicine. Data were analyzed with SPSS 25.0 package program. Written permission was obtained from the relevant ethics committee, hospital and participants to conduct the study.

**Results:** Sixty and a half percent of the subjects were female and the mean age was  $50.64 \pm 15.27$ . While 31.7% of the patients had information about CAM, the main source of information was the internet and social media (64.6%). It was found that 14.63% of the patients applied to a CAM to cope with nausea. The most commonly used method is phytotherapy with 86.67%. The total score environment of the Holistic Complementary Medicine Attitude Scale was  $33.49 \pm 4.63$ .

**Conclusions:** It was found that the rate of using CAM in coping with nausea in cancer patients was lower than other symptoms in the literature and the most commonly used method was phytotherapy. Patients' attitudes towards CAM were found to be positive.

**Key words:** Complementary and alternative medicine, cancer, nausea, attitude.

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## INTRODUCTION

Cancer is a common health problem worldwide.<sup>1-3</sup> Cancer itself and the side effects of the treatment significantly decrease the quality of life of individuals. There are many symptoms reported in the literature caused by cancer itself and its treatment.<sup>4,5</sup>

The gastrointestinal system is the system that symptoms mostly reported in.<sup>6</sup> Nausea is one of the most commonly reported symptoms in the gastrointestinal system, and decrease the quality of life of the patients. Despite the considerable progress achieved in recent decades, more than half of the cancer patients experience nausea. Severe nausea is reported by 20.5-29.2% of the patients receiving chemotherapy.<sup>7,8</sup>

Nausea is a subjective and unobservable phenomenon and defined as an unpleasant feeling. As a result of nausea and vomiting, dehydration and malnutrition may occur and this causes serious metabolic and electrolyte disturbances. Furthermore, It affects negatively the daily living activities. Nausea is affecting the overall wellbeing and quality of life of cancer patients.<sup>9</sup>

The most common drugs to prevent and management nausea are antiemetics. Despite the extensive use of antiemetics, nausea is reported by many patients receiving chemotherapy. There are many side effects of antiemetics reported in the literature such as hypotension, headache, diarrhea constipation, sedation, and extrapyramidal side effects.<sup>10</sup>

The patients commonly use complementary and alternative medicine (CAM) to cope with symptoms. CAM usage is also common among cancer patients. The main reason for this usage is that they believe CAM is safer than modern medicine. CAM usage varies between 9% and 88% in cancer patients in the world and the average is around 40%.<sup>11</sup>

According to regions, this prevalence is 34% in Europe, 40% in Australia and New Zealand, and 46% in North America.<sup>7</sup> In Turkey, this ratio is about 48%.<sup>11</sup> However, there is a gap in the literature regarding the frequency of CAM use to cope with nausea in cancer patients.

Thus, the **aim** of the present study was to evaluate the frequency of CAM usage and the methods used to cope with nausea in cancer patients.

## MATERIAL AND METHOD

### Sample and Setting

This is a descriptive study. All patients who admitted to the oncology department of a university hospital between February and September 2019, had cancer diagnosis for at least 6 months and had received chemotherapy for at least 3 months were enrolled in the study. A convenience sample of patients was obtained from patients meeting the inclusion criteria. The studied sample consisted of 203 patients.

### Data Collection

Data collection was performed by a patient identification form which was specially developed by the research team and the Holistic Complementary and Alternative Medicine Attitude Scale.

**Patient Identification Form:** This form consists of 10 questions including the patient's age, gender, marital status, income level, education level, disease duration, CAM usage, and herbal methods.

**Holistic Complementary and Alternative Medicines Questionnaire (HCAMQ):** This is an 11 item, the self-completed questionnaire that measures attitudes to complementary and alternative medicine and holistic health beliefs. The questionnaire is valid and reliable for Turkish society. The lowest score in this questionnaire is 11 and the highest score is 66. A lower score indicates a more positive attitude towards holistic health belief and CAT.<sup>12</sup>

### STATISTICAL ANALYSIS

IBM SPSS 25.0 program was used for data analysis. Descriptive data of the study are presented in frequencies (n), mean values and percentages (%). The t-test and one-way analysis of variance (ANOVA) were used to compare the total scores and sub-dimensions of the scale between groups.

### Ethics

Written permission was obtained from the Medical Research Ethical Committee of the relevant university (Protocol: 19-6.1T / 54), the hospital (54148036-100) and informed consent from participants to conduct the study.

## RESULTS

More than half of the participants were female (60.6%), married (83.3%) and their mean age was  $50.38 \pm 15.32$  years. The mean duration of the disease was  $20.93 \pm 28.85$  months. Other socio-demographic characteristics of participants are presented in Table 1.

The only 16.3% of the participants were using any CAM methods to cope with nausea. The main source of the information about CAM methods was other patients (66.6%). The most common method used by patients was phytotherapy (81.7%), and more than half of the patients use these methods as complementary to modern medicine (69.7%) (Table 2).

There weren't any differences between the attitudes towards CAM and variables such as gender ( $p=0.068$ ), education level (0.246), where they are living (0.108), and income level (0.974) (Table 3).

## DISCUSSION

Nausea is one of the most common problems among cancer patients receiving chemotherapy. Despite the advanced in the symptom management in oncology, nausea is still affecting more than half of the patients receiving chemotherapy. Cancer patients commonly use CAM to cope with symptoms.<sup>13</sup> This study conducted with the aim of determining the frequency of CAM usage among cancer patients experiencing nausea and the methods used by them.

In the current study, we found that 16.3% of the patients were using CAM to cope with nausea. In a meta-analysis, Horneber et al.,<sup>11</sup> reported that CAM usage among cancer patients is about 49% after 2000 and it has increased in years. Nagashekhara et al.,<sup>14</sup> reported that 48.6% of cancer patients are CAM users. Wortman et al.,<sup>15</sup> reported that 51% of cancer patients apply to CAM. In their study, Vapivala et al.,<sup>16</sup> reported that 8% of females and 4% of males were using CAM to cope with nausea and vomiting. The prevalence of CAM usage is lower in nausea than overall cancer symptoms. Most of the people using CAM prefer to use it when they do not have any other alternatives or they believe medications are harmful for them.<sup>17</sup> Nausea is one of most distinctly evaluated and managed symptoms in cancer.<sup>8</sup> Precautions and medications of nau-

sea is well-known by health professionals and patients. We thought that this is the reason for the difference between the other symptoms and nausea. On the other hand, in the current study, we evaluated CAM usage among the patients who experienced nausea, but Vapiwala et al.,<sup>16</sup> evaluated the reason for CAM usage among cancer patients. So these studies are not comparable. However, both of these studies provide knowledge that cancer patients are using CAM for nausea at various rates. Our study reflects the literature in this aspect.

In this study, we found that the most frequently used CAM was phytotherapy and followed by yoga, meditation, and music therapy. Paul et al.,<sup>18</sup> in their study reported that medical herbs is the most common method used by both patients and family members. Accordingly, Wortman et al.,<sup>19</sup> reported that yoga and meditation are methods used by cancer patients for symptom management. There are usage and positive effects of music therapy in cancer patients experiencing nausea reported in the literature. The methods found in the current study are similar to the methods reported in the literature.

The attitudes of cancer patients experiencing nausea towards CAM found positive in the current study. The attitudes toward CAM are mostly reported positive and almost half of the cancer patients are using CAM for various reasons.<sup>11</sup> Wode et al.,<sup>20</sup> reported the positive attitudes of cancer patients towards CAM.<sup>14</sup> In this respect, our results are similar to the literature.

## Limitations

The study was conducted with participants diagnosed with cancer, but there was no particular cancer group. The participants were patients admitted to the hospital, the study is not necessarily generalizable.

## CONCLUSIONS

As a result, cancer patients use CAM for the management of nausea. The most common method used by the patients is phytotherapy and followed by yoga, meditation, and music therapy. The attitudes of patients experiencing nausea toward CAM was found positive. However, CAM usage is recommended by other patients more than health professionals or scientific books and papers.

### Funding and Conflict of Interest

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## ANNEX

**TABLE 1:** Sociodemographic and disease-related characteristics of participants

|                          |                                   | n                | %    |
|--------------------------|-----------------------------------|------------------|------|
| Gender                   | Male                              | 123              | 60.6 |
|                          | Female                            | 80               | 39.4 |
| Marital Status           | Married                           | 169              | 83.3 |
|                          | Single                            | 34               | 16.7 |
| Education Level          | Illiterate                        | 4                | 2.0  |
|                          | Primary school                    | 100              | 49.3 |
|                          | High School                       | 45               | 22.2 |
|                          | University                        | 54               | 26.5 |
| Income Level             | Income less than the expense      | 51               | 25.1 |
|                          | Income is equal to the expense    | 110              | 54.2 |
|                          | Income is higher than the expense | 42               | 20.7 |
| Living in                | Village                           | 17               | 8.4  |
|                          | Town                              | 23               | 11.3 |
|                          | City                              | 50               | 24.6 |
|                          | Metropolitan                      | 113              | 55.7 |
|                          |                                   | $\bar{X} \pm SS$ |      |
| Age                      |                                   | 50.38±15.32      |      |
| Disease Duration (Month) |                                   | 20.93±28.85      |      |

**TABLE 2:** The characteristics of participants about CAM

|                              |                             | n   | %    |
|------------------------------|-----------------------------|-----|------|
| Cam Usage                    | Yes                         | 33  | 16.3 |
|                              | No                          | 170 | 83.7 |
| The source of recommendation | Health professionals        | 5   | 15.2 |
|                              | Internet and social media   | 3   | 9.1  |
|                              | Scientific books and papers | 3   | 9.1  |
|                              | Other patients              | 22  | 66.6 |
| CAM Method Used by Patients  | Phytotherapy                | 27  | 81.7 |
|                              | Music Therapy               | 2   | 6.1  |
|                              | Yoga                        | 2   | 6.1  |
|                              | Meditation                  | 2   | 6.1  |
| Used as                      | Complementary               | 23  | 69.7 |
|                              | Alternative                 | 10  | 30.3 |
| Herbs/Herbal Product         | Mint-Lemon mixture          | 16  | 59.3 |
|                              | Linden                      | 4   | 14.8 |
|                              | Roasted chickpea            | 4   | 14.8 |
|                              | Camomile                    | 3   | 11.1 |
| The part of the herbs        | Fruit                       | 11  | 40.7 |
|                              | Leaf                        | 13  | 48.2 |
|                              | Root                        | 3   | 11.1 |
| Consuming type of the herbs  | Boil and drink              | 15  | 55.6 |
|                              | Direkt drink                | 4   | 14.8 |
|                              | Eat                         | 8   | 29.6 |

**TABLE 3:** The sub-dimensions and total scores of HCAHQ according to groups

|                                   | Holistic Health  | Complementary and Alternative Medicine | Total             |
|-----------------------------------|------------------|--|-------------------|
| <b>Gender</b>                     |                  |  |                   |
| Male                              | 9.71±2.94        | 25.13±3.19                             | 34.84±3.92        |
| Female                            | 9.59±3.73        | 24.19±3.78                             | 33.77±4.88        |
|                                   | p=0.797          | p=0.068                                | p=0.103           |
| <b>Education Level</b>            |                  |  |                   |
| Primary School                    | 10.14±3.65       | 24.83±23.78                            | 34.98±4.36        |
| High School                       | 8.71±2.66        | 23.78±3.82                             | 32.49±5.07        |
| University                        | 9.42±3.44        | 24.56±3.58                             | 34.09±4.09        |
|                                   | p=0.056          | p=0.246                                | p=0.008           |
| <b>Living in</b>                  |                  |  |                   |
| Metropolitan                      | 9.23±3.28        | 24.49±3.73                             | 33.72±4.86        |
| City                              | 9.84±3.50        | 23.84±2.92                             | 33.68±3.96        |
| Town                              | 9.52±3.31        | 25.91±4.43                             | 35.44±4.12        |
| Village                           | 11.88±3.77       | 28.29±2.57                             | 37.18±3.19        |
|                                   | p=0.027          | p=0.108                                | p=0.011           |
| <b>Income Level</b>               |                  |  |                   |
| Income less than the expense      | 9.88±3.45        | 24.55±3.33                             | 34.43±4.33        |
| Income is equal to the expense    | 9.56±3.60        | 24.52±3.38                             | 34.08±4.35        |
| Income is higher than the expense | 9.52±2.98        | 24.66±4.39                             | 34.19±4.55        |
|                                   | p=0.838          | p=0.974                                | p=0.903           |
| <b>Total</b>                      | <b>9.64±3.43</b> | <b>24.56±3.58</b>                      | <b>34.19±4.55</b> |