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# Reasons for complementary therapy use by cancer patients, information sources and communication with health professionals

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ABSTRACT

*Background:* Cancer patients are known to commonly use complementary therapies (CT). However, it is emphasized that patients do not share sufficient information with health professionals about this subject and that the subject is ignored in oncology practice. The aim of the study is to assess cancer patients' reasons for using complementary therapy, information resources and communication with health professionals.

*Methods:* The study is a descriptive, cross-sectional study. In this study, a questionnaire was used by the researchers. A questionnaire form consisting of 3 parts was used. In the first part of this form, there were questions about the gender, age and educational status of the patients (8 questions). In the second part, there were questions about disease and treatment information (3 questions), and the third part had questions about the use of complementary therapies (9 questions). To determine the use of complementary therapy, patients were asked 'Do you currently use complementary treatment?' (Yes or No). 183 patients included in the study completed the questionnaire about complementary therapies.

*Results:* In this study, it was determined that 37.7% of the patients were using complementary therapies. The most commonly used complementary therapy was natural products (46.4%). The most common reason for using complementary therapy was to provide support for treatment. Almost half of the cancer patients (48.5%) did not talk about this issue with their physicians, and 41.1% of them did not talk about CT with their nurses. The study found that the most important reason why the patients did not talk about CT was that they were not asked about it by health professionals.

*Conclusion:* This study determined that almost half of patients could not receive information about CT from health professionals. Patients expect physicians and nurses to initiate communication on this subject. Providing healthcare professionals with evidence-based counseling about CT is essential for improving patient safety and patient outcomes.

## 1. Introduction

Cancer patients use Complementary Therapies (CT) to lessen chemotherapy side effects, as support for treatment or for disease symptom management.[1,2,3] The National Center for Complementary and Integrative Health (NCCIH) defines Complementary Medicine as non-mainstream practice used together with conventional medical treatment.[4,5] In 2017, the NCCIH reclassified complementary health practices under three titles, instead of five: natural products (such as herbs, vitamins and minerals, and probiotics), mind and body practices (such as yoga, chiropractic and osteopathic manipulation, meditation, and massage therapy), and other complementary therapies (ayurvedic medicine, Traditional Chinese medicine, homeopathy, and naturopathy).[5]

The prevalence of CT use varies from country to country. CT use has been shown to be influenced by geography and culture.[6] CT was found to be used in Germany by 40%, in Italy by 37.9%, in Australia by 48.5% and in Japan by 65.6% of cancer patients.[3,7,8] In Turkey the reported prevalence of CT use ranges between 22.1%–84.1% among cancer patients.[9] Cancer patients receiving chemotherapy know that they use at least one of the CT methods,[2] but it is emphasized that it is ignored in the practice of oncology where patients do not share enough

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information with health professionals.[10,11] Health professionals who serve cancer patients do not talk adequately about the use of CT.[12–14] This may be caused by the fear of becoming distanced from conventional medicine, and also by a lack of sufficient evidence, patients' believing that they are not listened to by the physician, and health professionals' considering themselves as having insufficient knowledge about this subject.[14–16] In our country, health professionals do not often talk about CT in oncology practice.[9,17,18] In addition to the CT methods frequently used by cancer patients, it is necessary to examine their reasons for using these methods and their communication with health professionals on this subject.

## 2. Methods

### 2.1. Study design

The study is a descriptive-cross-sectional one. This study was planned to evaluate reasons for complementary therapy use by cancer patients, and information sources and communication with health professionals on the subject.

### 2.2. Sample

This study was conducted between September-December 2017 at Akdeniz University Hospital's Medical Oncology Department and Daytime Chemotherapy Unit. Patients aged 18 years and over who were able to understand and speak Turkish, with ongoing chemotherapy or who had completed their chemotherapy treatment and were on follow-up, were included in the study. Patients who could not speak Turkish were excluded from the study. A total of 190 patients who met the inclusion criteria were reached during the study period. 183 of these patients completed the questionnaire.

### 2.3. Data collection

In this study, data were collected with a questionnaire prepared by the researchers based on previous studies.[14–16,19] The content validity of the questionnaire was evaluated by 6 nurses and 2 doctors in the field of oncology. The clarity of the questions in the questionnaire was tested with 5 patients. In this study, a questionnaire form consisting of 3 parts was used. In the first part of this form, there were questions about the gender, age and educational status of the patients (8 questions). In the second part, there were questions about disease and treatment information (3 questions), and the third part had questions about the use of complementary therapies (9 questions). To determine the use of complementary therapy, patients were asked 'Do you currently use complementary treatment?' (Yes or No). Patients using CTs indicated that they used the methods described under the NCCIH's 3 main headings: natural products such as herbs, vitamins and minerals, and probiotics; and mind and body practices such as yoga, chiropractic and osteopathic manipulation, meditation and massage therapy. Patient marked the "other method of CT use" option to indicate that if he used a CT method, he used a method not included in the choices presented to him.

### 2.4. Statistical analysis

In evaluating the data, SPSS (Statistical Package for Social Sciences, version 22, SPSS Inc; Chicago, IL, USA) was used for the statistical analyses. 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.

### 2.5. Ethical considerations

For the study, ethical committee approval was obtained from the "Ethics Committee for Clinical Investigations" of the Akdeniz University Medical Faculty (No:70904504/8) and permission to use data was obtained from Akdeniz University Hospital's Chief Physician's Office (No:3870/09/01/2018). After the explanation of the study, written and verbal consent to participate in the study was obtained from the patients who agreed to participate.

## 3. Results

### 3.1. Sample characteristics

In this study, the median age of the 183 patients was 55 (minimum: 22 - maximum: 83). It was determined that 104 (56.8%) of the patients were female, 151 (82.5%) were married and 66 (66.1%) were primary school graduates. In addition, the majority of the patients (93.4%) were not working and had incomes less than their expenditures (60.1%). The cancer diagnoses of the patients were as follows: 64 (35.0%) were breast cancers, 39 (21.3%) were gastrointestinal cancers, 38 (20.8%) were lung cancers, 21 (11.5%) were uro-genital cancers and 21 (11.5%) were other cancers. The majority of patients (57.9%) had stage IV cancer. The median period of diagnosis was 17 months. 156 (85.2%) of the patients were receiving chemotherapy when the data were collected (Table 1).

**Table 1**
Characteristics of patients and CT use status.

| | n | % |
|---|---|---|
| **Age** (median) 55, (mean ± SD) 55.00 ± 11.29 | | |
| **Gender** | | |
| Female | 104 | 56.8 |
| Male | 79 | 43.2 |
| **Marital status** | | |
| Married | 151 | 82.5 |
| Single | 32 | 17.5 |
| **Educational Background** | | |
| Primary school graduate | 66 | 66.1 |
| High school graduate | 20 | 14.2 |
| Over or equal to university graduate | 20 | 19.7 |
| **Employment status** | | |
| Employed | 12 | 6.6 |
| Unemployed | 171 | 93.4 |
| **Income status compared to expenditure** | | |
| Less | 110 | 60.1 |
| Balanced | 73 | 39.9 |
| **Diagnosis** | | |
| Breast | 64 | 35.0 |
| Gastrointestinal | 39 | 21.3 |
| Lung | 38 | 20.8 |
| Uro-genital | 21 | 11.5 |
| *Other Cancers | 21 | 11.5 |
| **Diagnosis period (month)** (median) 17, (mean ± SD) 30.91 ± 35.82 | | |
| **Stage** | | |
| I | 19 | 10.4 |
| II | 20 | 10.9 |
| III | 38 | 20.8 |
| IV | 106 | 57.9 |
| **Current Diseases Course** | | |
| Chemotherapy | 156 | 85.2 |
| In remission. | 27 | 14.8 |
| ***Treatment Applied*** | | |
| Chemotherapy | 36 | 19.7 |
| Chemo-radiotherapy | 11 | 6.0 |
| Surgery-chemotherapy | 69 | 37.7 |
| Surgery-chemotherapy-radiotherapy | 67 | 36.6 |
| **Complementary treatment use** | | |
| Use | 67 | 36.6 |
| No use | 116 | 63.4 |

**Table 2**
Complementary therapies used by cancer patients.

| Used complementary therapy method | n | % |
|---|---|---|
| Natural products | 32 | 46.4 |
| Mind and body practices | 23 | 35.4 |
| Natural products/ Mind and body practices | 12 | 18.2 |
| Total | 67 | 100 |

### 3.2. Complementary therapy use

In this study, 67 (37.7%) of the patients were using complementary therapies and 114 (62.3%) were not. It was determined that 46.4% of cancer patients using complementary therapies were using natural products, 35.4% were using body-mind techniques, and 18.2% were using natural products and mind and body practices together (Table 2).

### 3.3. Reasons for complementary therapy use

The reasons for using complementary therapies were mostly the need for a quick recovery (to contribute to standard treatment) (69.6%) and to reduce the side effects of chemotherapy (13.0%) (Table 3). 67.2% of the patients answered “yes”, 23.4% answered “a little helpful”, and 9.4% answered “no”, to the question "Do you believe that the complementary therapy method you use contributes to the treatment of your disease?".

### 3.4. Patient's information source about complementary therapy and communication with health professionals

Almost half of the patients reported that they never talked to physicians (48.5%) or nurses (41.1%) about the complementary therapies they were using. Among the reasons for not being able to talk comfortably with physicians and nurses, the most striking finding was that the majority of the patients reported that health professionals did not ask questions about complementary therapy use (92.5%) (Table 3).

It was determined that the data sources of the patients about the complementary therapies they used were relatives and family members (56.5%), friends (27.5%), TV, radio and newspapers (17.4%), internet sites (11.6) and physicians (5.8%), respectively (Table 3).

**Table 3**
Reasons of CT use by cancer patients, information sources and barriers to communicate with physician/nurse about CT (Multiple choices were marked).

| | Yes | | No | |
|---|---|---|---|---|
| **Your reason to use CT?** | n | % | n | % |
| Disease getting recovered more easily | 48 | 69.6 | 21 | 30.4 |
| Not satisfied with medical treatment | – | – | 69 | 100 |
| Reducing the side effects of chemotherapy drugs | 9 | 13.0 | 60 | 87.0 |
| Doctor/nurse recommendation | 1 | 1.4 | 68 | 98.6 |
| Physical-mental contribution | 9 | 13.0 | 60 | 87.0 |
| Because you were curious about its contribution to treatment | 5 | 7.2 | 64 | 92.8 |
| **Patient's information source about complementary therapy** | | | | |
| Tv/radio/newspaper | 12 | 17.4 | 57 | 82.6 |
| Relatives/family members | 39 | 56.5 | 30 | 43.5 |
| Friend/spouse/neighbor | 19 | 27.5 | 50 | 72.5 |
| Physician | 4 | 5.8 | 65 | 94.2 |
| Nurse | – | – | 69 | 100 |
| Internet | 8 | 11.6 | 61 | 88.4 |
| **Can you talk comfortably to your physician about the complementary therapy you are using?** | 35 | 51.5 | 33 | 48.5 |
| **Can you talk comfortably to your nurse about the complementary therapy you are using?** | 40 | 58.8 | 28 | 41.2 |
| **You reason for not being able to talk comfortably to complementary therapy health professionals?** | | | | |
| You think that you won't be listened to. | 1 | 1.5 | 66 | 98.5 |
| You hesitate | 4 | 6.0 | 63 | 94.0 |
| You forget to tell | – | – | 67 | 100 |
| You don't get asked about this subject | 62 | 92.5 | 5 | 7.5 |
| You worry about the interruption of your treatment | 1 | 1.5 | 66 | 98.5 |

*A patient did not answer the question.
**Two patients did not answer the question.

**Table 4**
CT Use by patient characteristics.

| | Yes | | No | | |
|---|---|---|---|---|---|
| | Mean ± SD | | Mean ± SD | | p |
| **Age (years)** | 55.01 ± 11.42 | | 54.99 ± 11.26 | | 0.989 |
| **Diagnosis period (month)** | 33.70 ± 36.80 | | 29.31 ± 35.30 | | 0.426 |
| | n | % | n | % | |
| **Gender** | | | | | |
| Female | 47 | 70.1 | 57 | 49.1 | **0.006** |
| Male | 20 | 29.9 | 59 | 50.9 | |
| **Marital status** | | | | | |
| Married | 54 | 80.6 | 97 | 83.6 | 0.604 |
| Single | 13 | 19.4 | 19 | 16.4 | |
| **Education** | | | | | |
| Primary school graduate | 47 | 70.1 | 74 | 63.8 | 0.518 |
| Secondary school | 7 | 10.4 | 19 | 16.4 | |
| University | 13 | 19.4 | 23 | 19.8 | |
| **Economic Status** | | | | | |
| Income is less than expenditure | 38 | 56.7 | 72 | 62.1 | 0.476 |
| Income is equal to expenditure | 29 | 43.3 | 44 | 37.9 | |
| **Diagnosis** | | | | | |
| Breast | 26 | 38.8 | 38 | 32.8 | 0.239 |
| Gastrointestinal | 16 | 23.9 | 23 | 19.8 | |
| Urogenital | 7 | 10.4 | 14 | 12.1 | |
| Lung | 15 | 22.4 | 23 | 19.8 | |
| Other | 3 | 4.5 | 18 | 15.5 | |
| **Stage** | | | | | |
| I | 9 | 13.4 | 10 | 8.6 | 0.055 |
| II | 4 | 6 | 16 | 13.8 | |
| III | 9 | 13.4 | 29 | 25.0 | |
| IV | 45 | 67.2 | 61 | 52.6 | |

### 3.5. Complementary therapy use and patient characteristics

In our study it was found that the use of complementary therapy did not vary by age, marital status, education level, or economic status. However, it was determined that women (70.1%) used complementary therapies more than men (29.9%) ($p = 0.006$). The disease characteristics such as the type of cancer diagnosis, the duration of diagnosis and the stage of cancer did not affect the use of complementary therapies. The patients used natural products alone or as a mixture of more than one product, and the products they used varied (Table 4).

## 4. Discussion

CT is reported to be widely used among cancer patients. CT use varies according to regional and cultural differences. In this study, it was determined that approximately one in three patients (37.7%) used complementary therapy, and the most commonly used CT method was found to be natural (herbal) products (46.4%) for Turkish cancer patients using CT. The CT method used most frequently in Turkey and worldwide is known to be natural products.[17,20–23] The vast majority of cancer patients use complementary therapy with natural products (herbs, vitamins and minerals) during the treatment period, and easiness of non-prescription use is indicated to be effective in this situation.[24] However, it has been reported that especially the herbal products used during the period of active chemotherapy have a risk of

interacting with drugs due to the fact that their mechanism of action cannot be fully explained and that this situation may cause damage to the patient.[25,26] In a study with 711 cancer patients using complementary therapies, it was evaluated that a 54.9% risk of interaction is present between natural products (herbal products or vitamins) and chemotherapy drugs.[4]

Most of the patients answered positively to the question "Do you believe that the CT method you are using contributes to the treatment of your disease?". Cancer patients use complementary therapy because of fear that the disease will not be brought under control, faster recovery, strengthening of the immune system, need to control the disease and body, presence of comorbidity, unwanted side effects caused by treatments, and dissatisfaction with treatment.[2,4] It has been reported that 50.7% of patients use CT to deal with the disease, 40.6% for physical support and 35.2% for emotional strengthening.[19] In this study, it was determined that the most important reason for using CT was to support faster recovery from the disease. It was also observed that CT was used to reduce the side effects of chemotherapy and to benefit from its physical and mental contribution. This result of the study is consistent with the literature.

The most important information and support resources for the use of CT by cancer patients are family/friends.[27,28] In a study conducted on melanoma cancer patients, it was reported that 41.0% used family/friends' recommendations and that 41.7% used visual media as a source of information.[22] In our study, it was determined that 56.5% of the patients were using complementary therapies with the recommendation of relatives/family members.

Moreover, 92.5% of the patients indicated that the reason they did not talk about CT with health professionals was that they were not asked about it. Patients expect healthcare professionals to start talking about CT. Effective communication by health professionals with patients has positive effects on treatment outcomes.[11,29] 60.6% of nurses in Turkey are considered to have a lack of knowledge regarding guidance about the use of CT.[18] Similarly, in a study conducted in Australia, it was reported that 60.3% of nurses had very little or no knowledge of CT.[30] Physicians' and nurses' knowledge about CT should be supported by undergraduate and postgraduate training. Being informed about the possible benefits and damages of these applications for the cancer patient is very important for the patient.[4,31] Informing the patient adequately about CT and adequate sharing of evidence-based information about this subject with the patient will prevent dangerous results (such as drug-plant interaction), especially in cancer patients.

In our study, the vast majority of patients using CT reported that they thought CT use contributed to their treatment. Similarly to our study, it was reported in different studies that patients who used complementary therapies found these applications useful.[15,16,28] There is no complete consensus on the use of complementary therapies among cancer patients and physicians.[34] Patients using CT expect these applications to contribute to making the disease process more comfortable; however, clinical oncology expects that there should be evidence-based results for most of the CTs.[16,28,32]

In this study, regarding the use of complementary therapy according to gender difference, CT use was significantly higher in females. Similarly to our study, it is stated in other studies that female patients use CT methods more often [2,21,28,33]

### 4.1. Study limitations

This study has some limitations. The most important limitation is that the data were obtained only with a questionnaire. Qualitative data are needed for in-depth information about the reasons why patients use CT, information sources and communication with health professionals. Moreover, in this study, patients' communication with health professionals regarding CT was evaluated from the patients' perspective. In future studies, there is a need to examine the knowledge of health professionals regarding CT evidence and the obstacles that hinder their communication with patients on this subject. Furthermore, the study is limited to only one geographical region, not to Turkey as a whole. In our study, it was found that Turkish oncology patients mostly used herbal methods. Regarding another limitation of our study, repeated measurement and follow-up in future studies will be particularly useful in determining drug-plant interactions and side effects.

## 5. Conclusion

Cancer patients mostly use natural products to support their treatment. The situation that almost half of them could not receive information from health professionals was determined. Patients expect physicians and nurses to talk about this subject. Providing healthcare professionals with evidence-based counseling about CT is essential for improving patient safety and patient outcomes.

## Conflict of interest

The authors declare that they have no conflict of interest.

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