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ORIGINAL ARTICLE

Knowledge and Awareness of Alternative and Complementary Medicine among Oncology Patients: An In-depth Analysis

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OBJECTIVE

This study investigates the increasing use of complementary and alternative medicine (CAM) among oncology patients, surpassing conventional medical treatments. Factors driving this trend go beyond medical intervention. The study aims to shed light on patients' awareness and knowledge of CAM practices during and after treatment.

METHODS

161 cancer patients voluntarily participated, providing demographic information, gender, age, marital status, and cancer type. Data on CAM use and knowledge were collected and analyzed using the Statistical Package for the Social Sciences 22.0 program. $P<0.05$ was considered statistically significant, with approval from the ethics committee.

RESULTS

53.4% were over 60 years old, and 57.8% were women. 86.3% were familiar with at least one CAM method, and 29.2% actively used CAM. Women used CAM significantly more than men. Usage was higher in individuals under 60 years and single patient. CAM was more popular among breast cancer patients. Black cumin and turmeric were the most frequently used herbal methods. Patients mainly acquired CAM knowledge from friends and online sources.

CONCLUSION

The study revealed a lower CAM usage rate compared to similar international studies in different settings, likely due to the focus on patients seeking treatment at the radiation oncology department. As physicians, it is crucial to expand our knowledge and educate oncology patients about CAM applications. Bridging the information gap will cater to the growing interest in CAM among patients and ensure informed decisions regarding treatment options.

Keywords: Breast cancer; complementary medicine; herbal; situational awareness.

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INTRODUCTION

Cancer remains a significant global public health concern, with far-reaching implications.[1] In addition to conventional medical treatments, oncology patients frequently turn to complementary and alternative medicine (CAM) methods for various reasons.[2] CAM approaches are sought after to enhance patients' quality of life, alleviate symptoms, and support the effects of conventional treatments.[3] This study endeavors to explore the level of knowledge among oncology patients regarding CAM methods and the extent to which they derive benefits from such practices.

During cancer treatment, patients have access to a range of CAM methods that can complement their conventional therapies. These include herbal treatments, acupuncture, massage, meditation, yoga, and hypnosis. Extensive research has been conducted to evaluate the effectiveness and safety of these approaches, yielding diverse outcomes.[4] However, it is noteworthy that the utilization rate of CAM methods and the level of patient awareness regarding these practices vary across countries and regions.[5] Factors such as cultural beliefs, accessibility to CAM services, and health-care systems influence the prevalence and knowledge of CAM among oncology patients. Therefore, understanding these regional disparities is crucial for providing comprehensive support and information to patients as they navigate their treatment journey.

Notably, in developing countries, there is a higher prevalence of CAM utilization among cancer patients, coupled with limited knowledge about these methods.[6] This knowledge gap highlights the importance of conducting investigations to assess the level of understanding among cancer patients regarding CAM approaches and the extent to which they derive benefits from such practices. By doing so, it becomes possible to design targeted education and information initiatives to address these specific needs.[7] By enhancing patient awareness and knowledge in this field, we can empower individuals to make informed decisions and maximize the potential benefits of CAM as a complementary resource in cancer care.

This study has the objective of uncovering the level of knowledge among oncology patients in Türkiye regarding alternative/complementary medicine, as well as exploring their personal experiences with these methods. By shedding light on these aspects, the study aims to contribute to the existing body of knowledge on CAM and its relevance in the context of oncology care.

MATERIALS AND METHODS

This study was conducted as a part of a student project in collaboration with Scientific and Technological Research Council of Türkiye (TÜBİTAK), with support from the medical faculty. The main objective of the study was to assess the knowledge level of oncology patients regarding CAM methods, as well as to investigate the prevalence of CAM usage among these patients. The study took place within the same center, following the necessary ethical procedures, including obtaining ethics committee approval from the City Hospital and ensuring informed consent was obtained from all participating patients.

Participants

The study enrolled a total of 161 cancer patients who willingly participated and provided responses to our questionnaire. Detailed information regarding the participants' demographic characteristics, including gender, age, and marital status, was recorded. In addition, the specific types of cancer from which the participants were diagnosed were also documented for further analysis.

Data Collecting

The study collected data on the utilization of CAM among the participants, as well as their knowledge level regarding CAM methods. The data collection process involved exploring various aspects, including the rate of CAM usage, specific CAM methods employed by the participants, the reasons behind their decision to utilize these methods, and the sources of information they received from health-care professionals.

By examining these factors, the study aimed to gain insights into the patterns of CAM usage among the participants, as well as their sources of information and motivations for seeking CAM treatments. These data points provided valuable information to assess the level of knowledge and understanding among oncology patients regarding CAM methods.

Statistical Analysis

The collected data were analyzed using the Statistical Package for the Social Sciences version 22.0 program. Descriptive statistics such as frequency, percentage, mean, and standard deviation were employed to summarize and present the data. Correlation analyses were conducted to assess relationships between variables.

To determine statistical significance, the threshold for accepting significance was set at $p<0.05$. This level of significance was used to evaluate the strength and

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significance of associations observed in the data, allowing for meaningful conclusions to be drawn from the statistical analysis.

RESULTS

The study included a diverse group of participants, with 53.4% of them being over the age of 60 year, highlighting the representation of older individuals. Furthermore, women constituted 57.8% of the participant pool, underscoring their significant presence in the study. Regarding the distribution of cancer types among the participants, breast cancer accounted for 30.4%, whereas lung cancer and gastrointestinal cancer each represented 17.4%. These findings provide insights into the specific cancer diagnoses prevalent among the study population.

A substantial majority of the patients, approximately 94.4%, resided in metropolitan cities, reflecting an urban-centric sample. In addition, a considerable proportion, 83.2%, were married, indicating the potential influence of marital status on their health-seeking behaviors and decision-making processes. When examining the family structure of the participants, it was found that 72% had a nuclear family arrangement, potentially impacting their support systems and dynamics within the context of their cancer journey. Moreover, a significant portion, 63.5%, had completed primary or secondary school education, representing the educational attainment level within the study population.

Among the comorbidities reported, hypertension and diabetes were the most common, affecting 15% of the participants. This highlights the significance of managing and considering these concurrent health conditions in the overall care of oncology patients. Summarized overview of the sociodemographic information of the patients is presented in Table 1.

The study findings indicate that a majority of the participants, specifically 86.3% (139 patients), reported being aware of at least one CAM method. Out of these individuals, 29.2% (47 patients) confirmed using CAM methods. Regarding gender differences, the study did not observe any statistically significant variance in terms of awareness rates between men and women. However, the rate of CAM usage was found to be significantly higher among women. Among the female participants, 39.8% (37 out of 93 women) reported using CAM, whereas only 14.7% (10 out of 68 men) of male participants were utilizing these methods (p=0.001).

Table 1 Overview of sociodemographic information of patients

Variable	Category	n	%
Sex	Man	68	42.2
	Woman	93	57.8
Age group	≥60	86	53.4
	<60	75	46.6
Lives in	Village	4	2.5
	District	5	3.1
	City	152	94.4
Marital status	Single	27	16.8
	Married	134	83.2
Family type	Large	39	24.2
	Core	116	72.0
	Alone	6	3.7
Children	None	10	6.2
	Yes	151	93.8
Education status	Read/write only	8	5.0
	Primary/secondary school graduate	101	62.7
	High school graduate	21	13.0
	University graduate	16	9.9
	Illiterate	13	8.1
Cigarette	None	98	60.9
	Yes	62	38.5
Alcohol	None	142	88.2
	Yes	18	11.2
Additional disease	Blood pressure	25	15.5
	Sugar	11	6.8
	Heart	11	6.8
	Other	12	7.5

CAM usage was further analyzed in relation to different factors. Among the age groups, it was found that 37.3% of individuals under the age of 60 years and 22.1% of those aged 60 years and over used CAM methods, with a statistically significant difference (p=0.038). Similarly, 48.1% of single participants reported CAM usage compared to 25.4% of married participants (p=0.022). Regarding cancer types, breast cancer patients had a significantly higher CAM usage rate compared to other cancer types, with 40.8% of breast cancer patients utilizing CAM, whereas the rates for other cancer types were 24.1% and 25% (p=0.039).

Furthermore, a significant association was found between the number of known CAM methods and CAM usage (p=0.000024), indicating that participants who were aware of at least three CAM methods were more likely to use them. The most commonly used herbal methods by the patients were black cumin (89%) and turmeric (45%). Traditional methods such as spa, leech therapy, and cupping were also observed to be

Table 2 Awareness and practice of CAM methods among patients

CAM	Heard of (%)	Heard of and practiced (%)
Meditation	16.1	1.9
Hypnosis	18.6	0.6
Yoga	23.6	2.5
Tai Chi/music	7.5	0.6
Massage	50.9	2.5
Hot springs/thermal	42.2	11.2
Exercise	54.0	8.1
Ozone therapy	24.8	3.1
Leech therapy	37.3	6.2
Acupuncture	31.7	3.7
Herbal therapy	13.0	1.2
Apitherapy	10.6	1.2
Bioenergy	5.6	0.6
Cupping therapy	52.1	9.2

CAM: Complementary and alternative medicine

frequently applied by the patients (Table 2). Regarding the sources of learning about CAM methods, 55% of the participants acquired knowledge from their spouses and friends, whereas 26% obtained information from the Internet or television. Interestingly, 10% of participants using CAM methods stated that they started these methods based on the advice of a physician.

In addition, the frequency of CAM usage increased as the time since the cancer diagnosis progressed, indicating a potential correlation between the duration of diagnosis and the inclination to use CAM methods.

DISCUSSION

This study revealed that 86.3% of the participants were acquainted with at least one CAM method. This figure closely aligns with similar studies carried out in Türkiye, thereby underscoring a notable degree of familiarity among Turkish oncology patients.[8,9] Nevertheless, when juxtaposed with global studies,[7,10] this rate appears relatively lower. These findings point to an intriguing observation: Turkish patients exhibit a lowered level of interest and knowledge in CAM methods in comparison to patients in other countries.

We also observed a significant difference in CAM usage between men and women, with women using CAM methods more frequently. This finding is consistent with studies conducted in Türkiye and globally,[7–10] highlighting that women are generally more receptive and inclined to adopt CAM practices.

When evaluating CAM usage by age groups, we found that individuals under the age of 60 years were more likely to use CAM compared to those aged 60 years and over. This finding aligns with the previous research conducted in Türkiye and internationally,[5,7] indicating a higher interest and adoption of CAM methods among younger patients. Moreover, we observed that patients diagnosed with breast cancer used CAM significantly more than other types of cancer. This finding is consistent with studies conducted in Türkiye and worldwide,[5,8] suggesting that breast cancer patients show a particular interest in CAM methods.

In terms of the specific CAM methods used, our study identified exercise, cupping, and massage as the most common practices among participants. These findings are similar to other studies conducted in Türkiye,[8,10] indicating the prevalence of local CAM methods influenced by the cultural factors.

Furthermore, we found that hot springs/thermal treatments, cupping, and exercise were the most frequently applied CAM methods. These findings align with the previous studies conducted in Türkiye and globally,[5,8,9,11] suggesting that cultural, geographical, and medical background differences contribute to the selection of CAM methods. The popularity of hot springs/thermal treatments and cupping in Türkiye suggests the acceptance of traditional and alternative medicine practices within the population. Interestingly, our study revealed a lower awareness and utilization rate of spiritually and mentally focused CAM methods such as meditation and yoga among Turkish oncology patients. This indicates a preference for local and traditional methods over these practices in Türkiye.

Regarding the influence of factors such as smoking, alcohol use, educational status, the presence of additional diseases, children, and family type on CAM usage and knowledge, our study did not find statistically significant associations between these factors. These findings align with existing research conducted in Türkiye, suggesting that these factors may not have a significant impact on CAM usage or knowledge among oncology patients.[12,13]

The findings from studies conducted worldwide align with our study in Türkiye, demonstrating almost similar patterns and trends. For instance, a study conducted in the United States found no statistically significant association between CAM usage or awareness and factors such as smoking, alcohol use, educational status, comorbidities, and the presence of children.[14] Similarly, another study concluded that family type did not have a significant impact on CAM utilization or knowledge.[15]

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When considering the influence of time elapsed after cancer diagnosis on CAM usage rates, variations can be observed depending on the geographical and cultural factors.[16] In certain regions, the rate of patients resorting to CAM methods during the later stages of cancer treatment may be higher, whereas in other regions, these rates might be comparatively lower.[5] These disparities could be attributed to factors such as patients' level of confidence in conventional medical treatments, socioeconomic status, cultural beliefs, and the popularity of CAM methods within different populations.[17]

In light of these considerations, our study in Türkiye supports the findings from global studies, revealing both similarities and differences in the utilization and knowledge of CAM. This underscores the complexity of CAM usage as a multifaceted issue, where regional, cultural, and personal factors play significant roles. Understanding these factors is essential in comprehending the nuances of CAM practices and tailoring interventions and health-care approaches to meet the diverse needs of patients worldwide.

CONCLUSION

The results of the study show that the level of interest and knowledge in CAM methods in Türkiye is lower than the use worldwide. Therefore, our duty as physicians to expand our knowledge base and actively inform oncology patients about the evolving field of CAM practice.

Considering the lack of data on the efficacy and safety of CAM methods, it is important for health-care professionals to inform and guide patients on this issue. Especially in Türkiye, it is of great importance for health-care professionals to be informed about CAM methods and to provide their patients with accurate information about the potential benefits and risks of these methods.

In addition, when the sources from which patients learned CAM methods were examined, it was determined that most of them learned these methods from their spouses and friends, the Internet, or television. This poses the risk that patients may be exposed to insecure and misleading information about CAM methods. Providing health-care professionals with accurate and reliable information about CAM methods will contribute to a better understanding of the effects of these methods on patients.

Future research may contribute to the treatment processes of oncology patients by providing more information on the use and effectiveness of CAM methods. In addition, further studies on the relationship between CAM use in Türkiye and regional and sociodemographic factors may help to better understand the effects of these methods on patients. In addition, considering that cultural and geographical differences have a significant impact on the use of CAM methods, it is important to integrate and support these methods in accordance with local and traditional practices. In line with these recommendations, it can be aimed to use CAM methods more effectively and widely to increase the quality of life of oncology patients in Türkiye.

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