

RESEARCH COMMUNICATION

Complementary and Alternative Medicine in Cancer Patients - Analysis of Influencing Factors in Turkey

Arzu Tuna Malak¹, Özgül Karayurt², Emel Demir¹, Aylin Sami Yümer¹

Abstract

Objective: This cross-sectional and descriptive study analysed complementary and alternative medicine (CAM) practices of patients with cancer diagnoses and influencing factors. **Methods:** The subjects consisted of 55 cancer patients hospitalized in Çanakkale State Hospital between November 2008 and March 2009 and who were willing to participate in the study. Research data were collected using a sociodemographic characteristics form regarding CAM practices of cancer patients and the Beck Hopelessness Scale (total points 20, rising with the degree of hopelessness). Written consent from the head physician of Çanakkale State Hospital and verbal consents of the patients were obtained in order for the research to be performed. The data were analysed using the SPSS 13.0 program (numbers and percentages, chi-squared and Mann Whitney U tests). **Findings:** Of the patients (49.1% female and 50.9% male) 78.2% had been living with a cancer diagnosis for more than two years. Of the 23.6% of patients with breast cancer and 21.8% with lung cancer, 87.2% uses CAM (72.7% received alternative treatment and 65.5% complementary treatment). Alternative treatments apply herbal treatments concomitantly such as honey, garlic; balsam apple, iscum album, tar oil and 29.1% of them only use stinging nettle. As a complementary treatment; 60% of patients pray for healing and 16.4% of them have massage regularly. Patients explained that they were using the alternative medicine in order to mitigate effects of the disease, to prevent its recurrence, to increase blood values, to feel psychologically relieved; and they were using complementary medicine just to feel psychologically relieved. Of 60% patients chose not to share their CAM practice with doctors and nurses. 36.4% of them use CAM on friend advice, 20% under media influence, 36.4% on their own initiative and 21.8% under family influence. The satisfaction from CAM is 61.1%. The rate of those who find alternative medicine expensive is 21.8%. There is statistically no correlation between CAM practice and age, gender, marital status, location they live for a long time, education and financial status of patients ($p>0.05$). The average of total hopelessness score of patients is 8.09 ± 2.59 , there is no statistically meaningful correlation between hopelessness score average of patients who use CAM and who do not use ($p>0.05$). **Conclusion:** The cancer patients in the study who live in Çanakkale province and in its districts use CAM. CAM practice does not vary by selected sociodemographic characteristics and the hope level. It is important that the health care professionals (nurse, doctor, etc.) should be conscious of CAM-drug interactions and notify the patients about the risk.

Key Words: Complementary and alternative treatment - cancer patients - influencing factors

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Introduction

The fear of hearing the word “cancer”, future anxiety, the stress created by being aware of inevitable pain to be suffered in the process of the disease and the treatment affect the patients and relatives of the patients in such a negative way that no other disease creates the same effect. Cancer affects the life quality of the patients in terms of both symptoms and treatment of the disease and its adverse effects (Özyılkan 2004).

Alternative medicine is described as “any healing practice that does not fall within the realm of modern medical science and modern biomedicine”. Complementary medicine is the treatment and care system

applied to medical treatment additionally. The terms of complementary and alternative medicine are usually collected under one title (Barette et al., 2003, NCCAM, 2009). The National Center for Complementary and Alternative Medicine (NCCAM) describes the CAM practices in five groups (NCCAM, 2009).

1. Whole Medical Systems (homeopathic medicine, naturopathic medicine, traditional Chinese medicine, herbs, meditation, yoga, massage, acupuncture and Ayurveda).

2. Mind-Body Medicine (patient support groups, cognitive-behavioural therapy, meditation, prayer, mental healing, and therapies that use creative outlets such as art, music, or dance).

¹School of Health Sciences, Canakkale Onsekiz Mart University, Canakkale, ²School of Nursing, Dokuz Eylül University, Izmir, Turkey *For Correspondence: arzutunamalak@gmail.com

3. Biologically Based Practices (herbs, foods, vitamins, dietary supplements).

4. Manipulative and Body-Based Practices (osteopathic manipulation, chiropractic medicine, massage and naturopathy)

5. Energy Medicine (a- biofield therapies; qi gong, reiki, therapeutic touch, b-bioelectromagnetic-based therapies; electromagnetic fields, pulsed fields, magnetic fields, alternating-current or direct-current fields) (NCCAM, 2009)

Patients also may practise the complementary and alternative treatments (CAM) together with medical treatments in order to increase their life quality, to cope with symptoms of the disease and to prolong the lifetime. (Lee et al., 2000; Chang et al., 2006). Although very few of alternative treatments have been seriously tested (Angell, 1998), most of them have not been tested in spite of being popular (Brigden, 1998). However, patient's quest for learning about CAM practise continues depending on the increase of cancer incidence and the increase of survival rates of the patients (Burkhardt and Nagai-Jacobson, 2001).

CAM meets the demands that conventional medicine cannot principally satisfy, and provides a complementary solution to conventional medicine (Ernst, 2000). CAM practices aim to reduce symptoms of the disease and side effects of conventional treatment rather than being curative (Kuzeyli et al., 2006). Cancer patients use CAM practices widely in the world (Hyodo et al., 2003). In the studies performed in cancer patients it has been found out that the rate of CAM practice varies somewhere between 7% and 91% (Ernst and Cassileth, 1999; Lee et al., 2000; Molassiotis et al., 2005; Yates et al., 2005). When cancer patients from four different ethnic groups practicing CAM (n: 397) in United States had been analysed, it was found out that black people tend to perform religious practices by 36%, Chinese people practice herbalism by 22%, Latin people apply diet-based therapies by 30% and perform religious practices by 26%, white people practice diet-based therapies and massage, acupuncture etc. by 21% (Lee et al, 2000).

The cancer patients regard CAM as a strong motivation and practice it not to leave any options or methods unattempted (Ernst 2000). Alternative herbs are used in treatments of diseases in Turkish and Asian alternative medicine. Some people find herbal treatments "natural" and "safe". Accordingly, patients use herbal medicines additionally as supporter of the drugs received by physician's prescription or use them with their own demands alternatively (WHO Geneva, 2002; Gözüml et al., 2003).

What makes people tend to practice CAM is not known exactly (Hyodo et al, 2003). Although the orientation to CAM increases steadily, the causes of this orientation vary on a great scale. This variety is closely related to socio-cultural characteristic of people (Gözüml et al 2003, Tan et al, 2004). In addition, the severity of the disease is an important factor leading patients to practice CAM. In cancer patients with bad prognoses or progressive disease, the rate of CAM practice is higher. Many patients use CAM in order to strengthen their immune system, to

prevent the tumour's growth or spread (White 2001).

In studies where the factors affecting CAM practice of patients are analysed, it is demonstrated that the rate of CAM practice concurrently increases as income (Burstein et al 1999, Gotay et al 1999, Warrick et al, 1999) and education level (Burstein et al 1999, Warrick et al 1999) rise, while age range declines CAM practice frequency tend to increase (Warrick et al. 1999).

It has been detected that most of the patients in Turkey use CAM because they believe it to be useful in treatment of cancer (Akyürek et al 2005; Gözüml et al., 2003; _nañç et al., 2006; Mazicio_lu, 2006). It has also been indicated that great majority of the patients in Turkey practice these methods upon suggestion of their family, friend or other patients in the ward and most of them use these methods during their medical treatments after cancer diagnosis. In addition, it has been detected in the studies that most patients using CAM and / or patients relatives do not inform doctors / nurses regarding their CAM practice.

A research analysing CAM practice in cancer patients, performed in the east of Turkey (n: 107), has demonstrated that 41% of the patients use alternative herbal treatments. In the same study, it has been specified that CAM practice is higher in women, in married people, in primary school graduates, in people living in city center and receiving chemotherapy and radiotherapy (Gözüml et al, 2003). In the west of Turkey (n: 220), it has been determined that 42% of cancer patients practise at least one of CAM methods, and the rate of those using herbal alternative treatments is 36.8% and those receiving nutritional support therapy is 20.3%. It has been indicated that the most used herbs (32.3%) in alternative treatment are stinging nettle and its seeds and the most used method in complementary treatment is praying. It has been determined that the factors affecting CAM, similarly with the study performed in the east, are high in women, in married people, in people having high-level income, living in city center and receiving chemotherapy and radiotherapy after diagnosis and in case of recurrence, and differently from those it is high in university graduates. No meaningful difference between hopelessness level and CAM practice of the patients has been determined (Tarhan, 2004). In the west of Turkey, in another study (n: 100) performed in patients with breast cancer, it has been demonstrated that the rate of CAM practice is 87%; of 62% use herbal alternative therapies (mostly stinging nettle). The 80% of patients continued to practice CAM while receiving chemotherapy, radiotherapy and hormone-therapy. It has been stated that patients receiving information through the media regarding CAM methods do not share the treatment methods they are using with their physicians (Yavuz et al., 2007).

The quest for solution by cancer patients, which has become a public matter recently, indicates the transition from modern medicine into 'public medicine' by CAM practice. The objective of this study is to analyse CAM practices of patients living in one region in western Turkey, which enjoys a great biodiversity and has been a home to various cultures since antiquity and to assess the relative importance of different the factors triggering CAM practice.

Materials and Methods

The research has been conducted at the state hospital in Çanakkale located in the northern Turkey. The study involves 55 cancer patients hospitalized in Çanakkale State Hospital between November 2008 and March 2009, who approved to participate in the research. A written consent from head physician of Çanakkale State Hospital and verbal consent of patients were obtained in order for the research to be performed. The research data have been collected using sociodemographic characteristics form, data form consisting of 20 questions regarding CAM practices of cancer patients and Beck Hopelessness Scale. Beck Hopelessness Scale:

It is a scale aiming to determine the level of hopelessness of individuals for future developed by Beck et al. in 1974. Beck Hopelessness Scale consists of the expressions specifying the feelings and thoughts for the future that is composed of 20 articles. The scale is scored between 0 and 1. In the scale, "yes" option in 11 articles and "no" option in 9 articles are scored as 1 point. "No" option in questions 1, 3, 5, 6, 8, 10, 13, 15, and 19; and "yes" option in questions 2, 4, 7, 9, 11, 12, 14, 16, 17, 18, and 20 are scored as 1 point. The expressions generating the scale are analysed in three sub-dimensions. In the scale, the feelings about the future consist of the articles numbered 1, 6, 13, 15, 19, the subjects related loss of motivation consist of the articles numbered 2, 3, 9, 11, 12, 16, 17, 20, and the expectations about the future consist of the articles numbered 4, 7, 8, 14 and 18. The obtained total score consists of "hopelessness" score. The lowest score could be taken from the scale is 0 and the highest score is 20. High score shows high hopelessness level of the individual (Beck et al., 1974).

The reliability and validity of the scale for Turkey have been tested in two studies (Seber et al., 1993; Durak and Palabayıko_lu, 1994). In the validity and reliability study, Seber and his colleagues performed (1993), the consistency validity was analysed based on the scales of Beck Depression and Rosenberg Self-Respect and the correlation coefficients were determined as 0.65 and 0.55 respectively. It was reported that Cronbach's Alpha Coefficient detected for the reliability of the scale in the study was 0.86 and Pearson's Product Moment Correlation was 0.73. Durak and Palabayıko_lu (1994), in validity study of the scale analysed simultaneous, distinctive and structure validity of the scale (factor structure). In consequence of the factor analysis, they reported that the scale, similar to original factor structure of the scale, consists of three factors including "feelings about the future", "loss of motivation" and "hope" and it is a valid tool.

The data were analysed in SPSS 16.0 program also using number, percentage, chi-square test and Mann Whitney U test.

Results

When socio-demographic characteristics of cancer patients are analysed, the average age is 56.47 ± 13.23 (min: 30, max: 68), of 49.1% are women and 50.9% are

Table 1. The Practice of CAM, Alternative and Complementary Medicine by Cancer Type

Cancer site	CAM		AT	CM
	User	Non-user	User	User
Breast cancer	13 (100)	-	11 (84.6)	13 (100)
Lung cancer	10 (83.3)	2 (16.7)	9 (75.0)	6 (50.0)
Brain cancer	6 (85.8)	1 (14.2)	5 (71.4)	4 (57.1)
Prostate cancer	3 (60.0)	2 (40.0)	3 (60.0)	3 (60.0)
Colon cancer	4 (100)	-	3 (75.0)	4 (100)
Pancreatic cancer	3 (100)	-	3 (100)	2 (66.6)
Other	9 (81.9)	2 (18.1)	6 (54.5)	6 (54.5)
Total	48 (87.2)	7 (12.8)	40 (72.7)	36 (65.5)

C, complementary; A, alternative; M, medicine

men, of 94.5% live in Aegean Zone from past to the present, of 76.8% are married, of 44.6% are primary school graduates, of 50% have low-income, and of 78.2% had cancer diagnoses about two years ago. 23.2% of them are cancer patients at the second and fourth stage, and 39.3% are at third stage. 23.6% of the patients have breast cancer (n: 13) and 21.8% (n: 12) of them have lung cancer. Of 87.2% (n: 48) patients practice CAM. 72.7% of the patients practicing CAM apply alternative therapy and 65.5% complementary therapy. CAM practice has been determined in all patients with breast cancer (n: 13) and in 83.3% of the patients with lung cancer (n: 10) (Table 1).

Of 58.2% (n = 32) patients practised alternative treatments while having chemotherapy and 47.3% (n = 26) radiotherapy. While no patient using alternative treatments before the disease exists, the "praying" practiced as a complementary treatment is used before the disease. 32,7% of patients using alternative treatment practice herbal treatments concomitantly such as honey, garlic, balsam apple, iscum album, tar oil and 29,1% of them only use stinging nettle. As a complementary treatment; 60% of patients pray and 16.4% of them have massage therapy. CAM is used in order to mitigate effects of the disease, to prevent its recurrence, to increase blood values, to relax psychologically; and complementary medicine to relax psychologically (Table 2).

Of 60% the patients do not share their CAM practice with doctors and nurses. 36.4% of patients administrate CAM on a friend advice, 20% under media influence,

Table 2. Practice Reasons for Alternative and Complementary Medicine

CAM Practice Reasons*	n	(%)
Alternative Medicine (n = 40)		
Increasing blood values	11	27.5
Reducing the pain	7	17.5
Reducing nausea and vomiting	8	20.0
Strengthening the immune system	20	50.0
Trying all methods	8	20.0
Preventing tumor growth	15	37.5
Preventing its recurrence	16	40.0
Feeling psychologically relieved	11	27.5
Complementary Medicine (n = 36)		
Feeling psychologically relieved	30	83.3
Trying all methods	6	16.7

* More than one response possible

Table 3. Factors that May Influence CAM Practice

Factor	Users	Non users	Total	U	p
Age	56.5±13.1	56.4±15.4	56.5 ±13.2	152	0.69 p>0.05
Gender*					
Female	25 (92.6)	2 (7.4)	27 (49.1)	1.35	0.24
Male	23 (82.1)	5 (17.9)	28 (50.9)		p> 0.05
Marital Status*					
Married	38 (88.4)	5 (11.6)	43 (78.2)	0.21	0.64
Single	10 (83.3)	2 (16.7)	12 (21.8)		p>0.05
Education Status - School*					
Primary	30 (85.2)	5 (14.3)	35 (63.6)	0.21	0.64
≥High	18 (90.0)	2 (10.0)	20 (36.4)		p>0.05
Financial Status - Income*					
<Expend	33 (86.8)	5 (13.2)	38 (69.1)	0.21	0.88
≥Expend	15 (88.2)	2 (11.8)	17 (30.9)		p>0.05
Living Place*					
City	42 (89.4)	5 (10.6)	47 (85.5)	1.26	0.26
Village	6 (75.0)	2 (25.0)	8 (14.5)		p>0,05
Point of Hopelessness Level (X ± SS)	8.12±2.71	7.85±1.86	8.09± 2.59	152	0.68 p> 0.05

*, number and % data

36.4% on their own initiative and 21.8% under family influence (There is more than one response). The satisfaction rate from CAM is 61.1%. The rate of those finding alternative medicine expensive is 21.8%.

There is no statistically meaningful difference between CAM practice and age, gender, marital status, the city, where they live for a long time, education and financial status of the patients ($p > 0.05$). The total hopelessness point average of patients is 8.09 ± 2.59 . There is no statistically meaningful difference between point averages of hopelessness level of the patients who use CAM and do not use ($p > 0.05$).

Discussion

CAM practice among cancer patients has increased in the last 15 years (Ernst and Cassileth 1998). In this study, 87.2% of patients practice CAM. It is reported that the rate of CAM practice in the studies performed abroad in cancer patients is between 7% and 91% (Ernst and Cassileth, 1999; Lee et al., 2000; Molassiotis et al., 2005; Yates et al., 2005); and this rate in our country is ranging between 41% and 87% (Gözüm et al 2003; Tarhan, 2004; Yavuz et al., 2007). The rate of CAM practice that we derived in our study shows similarity with the results of study performed in the world and in Turkey. The used alternative treatment, since it is considered that it strengthens immune system and prevents progression and recurrence of cancer (Tarhan, 2004), might have affected the results to be the similar.

It has been discovered in the study that 29.1% of cancer patients use stinging nettle for an alternative treatment and 32.7% use the treatments composed by various herbs. In the western Turkey, because stinging nettle plant is an alternative plant used very frequently, where biological variety is rather rich, demonstrates similarity with the other studies performed in our country (Tarhan, 2004; Algier et al., 2005; Ceylan et al., 2005; Yavuz et al., 2007).

That the patients participated in our sampling are from lower income group may be related to the fact that most of herbal treatments are cheap and easy to reach— in most cases stinging nettle is collected from gardens at no cost. As a complementary treatment; 60% of patients pray for healing and 16.4% of them practice massage therapy. Praying is the method used as a spiritual approach in Turkey, where most of the population is Muslim (Tahran, 2004; Montazeri et al., 2007). This result also has been reflected to the study and it is determined that cancer patients pray in order to feel psychologically relieved. While cancer patients in Turkey, like in our study, mainly use herbal methods (Gözüm et al., 2003; Algier et al., 2005). It has been reported that cancer patients in the eastern countries use other complementary medicine practices such as yoga, meditation. (Upchurch and Chyu, 2005; TMS. 2005). This situation can be explained with that complementary medicine methods such as yoga and meditation are not preferred frequently in Turkey because of cultural difference.

Although 58.2% of patients use alternative treatment while receiving chemotherapy and 47.3% radiotherapy, more than half of the patients do not share these experiences with doctors and nurses. Cancer patients practice CAM as a method that is influenced by beliefs and abstain from the health care personnel (Yavuz et al., 2007). The reason why patients do not inform and do not consult the health personnel in this regard may be the fear of getting negative reactions.

The satisfaction rate from herbal treatments, one of alternative medicine methods, is 40% and complementary medicine is 36.4%. The low satisfaction can be seen because of not taking positive effects expected from CAM. In Turkey, different results have been found in the studies analysing the triggering factors of CAM practice. It is reported that CAM practice is more common in people with low education levels and in women in the eastern Turkey (Gözüm et al., 2003); in the midst of Turkey, in people with low education levels and live in rural areas is high (Ceylan et al); in the western Turkey is equal between women and men, in people with high-education levels, married and live in a city is high. (Tarhan 2004). In the study performed in the western region of our country (in Çanakkale) there is no difference between CAM practice and age, gender, marital status, location, education and financial status of cancer patients ($p > 0.05$). These different results in the east, mid and west of Turkey have come out in our study. Cultural differences between the regions, spiritual living and belief systems might have influenced this situation (Tatsumura et al., 2003; Snyder and Lindquist, 2006; Montazeri et al., 2007).

No meaningful difference between hopelessness level and CAM practice of the patients has been determined. In a study performed in Turkey, similarly to our study, also no difference between hopelessness levels and CAM users has been determined (Tarhan, 2004). In the literature, it is specified that since hopelessness level increases CAM practice reduces, people who have hopelessness with high levels cannot derive benefits from CAM practice, and those with low hopelessness levels do not seek any other treatment except medical treatment (Tarhan, 2004).

In addition, health care professionals (nurses and doctors) should inform their patients for their ignoring modern medicine and practicing CAM. The patients need to be elucidated about possible benefits and efficacy of the treatment in the light of limited appropriate evidences using appropriate communication techniques and an intelligible language. It is suggested to perform studies with more samplings in different centres covering the western Turkey.

Acknowledgements

The study has been performed in a limited scope including only the patients in Çanakkale State Hospital. The findings and interpretations do not pose any generalisation for all cancer patients living in Turkey.

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