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Cristiane Spadacio[I]

Nelson Filice de Barros[II]

Systematic Review

Use of complementary and alternative medicine by cancer patients: systematic review

ABSTRACT

Interest in complementary and alternative medicine has increased, especially among oncology patients. A systematic literature review of the profile of patients who choose to use this type of medicine, as well as their motivations, was carried out on the PubMed database. For this search, the key words used were ?cancer and complementary alternative medicine? and ?oncology and complementary alternative medicine?, covering the period between 1995 and 2005. The selection criteria were the following: key words were present in the article title; article was written in either English, Portuguese, or Spanish; and study was performed with an adult population. From the 43 articles analyzed, it could be concluded that the use of complementary and alternative medicine is part of these patients? social scope. Moreover, its use plays an important role in the identity construction of cancer patients, helping them to make decisions related to conventional treatment.

KEY WORDS: Neoplasms, prevention & control. Complementary therapies. Alternative therapies. Health knowledge, attitudes, practice. Review [Publication Type].

INTRODUCTION

Despite remarkable advances achieved by conventional medicine, there has been an exponential growth in interest in and use of complementary and alternative medicine (CAM), especially in developed western countries. The literature shows that non-conventional medicine is a significant element of treatment in poor and developing countries as well.[44]

The integration of CAM into the national health systems has been the subject of constant debates and relevant reference can be found in documents from the World Health Organization (WHO) as *Estrategía de la OMS sobre medicina tradicional 2002-2005*,[a] which recommends the need to investigate the following:

- national integration policies of complementary and alternative therapies in the national health systems;
- safety, efficacy, and quality of these therapies;
- access to these therapies;
- rational use by professionals and CAM users.

[I] Programa de Pós-graduação em Saúde Coletiva. Faculdade de Ciências Médicas (FCM). Universidade Estadual de Campinas (Unicamp). Campinas, SP, Brasil

[II] FCM/Unicamp. Campinas, SP, Brasil

Correspondence:
Cristiane Spadacio
Departamento de Medicina Preventiva e Social
R. Tessália Vieira de Camargo, 126
Cidade Universitária "Zeferino Vaz"
Caixa Postal 6111
13083-887 Campinas, SP, Brasil
E-mail: cris.spadacio@gmail.com

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Thus, complementary and alternative therapies represent potential options of healthcare and cannot be disregarded as therapeutic practices.

The growth in use of such therapies is evident in the specific case of patients with cancer. An increase in the number of scientific works can be observed and these seek to answer the following:

- requests about information regarding the clinical use of a number of CAM interventions by patients with cancer and family members;
- the need to provide information through the media, especially in relation to the cost of treatments for cancer patients;
- toxicological potential of interventions in two moments: when CAM is used alone or alongside conventional treatments;
- the need to assess the functionality of some interventions and the possibility to incorporate them into conventional medical practice;
- the governmental agencies' responsibility for the legal representation of these patients.[4,6]

However, specific debate over the socioeconomic, ethnic and gender-oriented profile, as well as the patients' motivations for the use of CAM in the treatment of cancer, was not identified in the literature. The objective of the present study was to analyze the profile of people who use complementary and alternative medicine and their motivations, based on biomedical literature review of this theme.

METHODS

A literature review of this theme was performed on the PubMed of the National Library of Medicine for the ten-year period between 1995 and 2005. The key words used were: "cancer and complementary alternative medicine" and "oncology and complementary alternative medicine".

The selection criteria were the following: key words were present in the article title; article was written in either English, Portuguese, or Spanish; and study was performed with an adult population (19 years of age or older).

A total of 378 articles were initially identified, out of which 115 were removed for having no relation to the review theme or for being duplicates. Next, the 263 articles selected were classified in four thematic categories, according to their analysis:

- use of CAM from the perspective of patients or groups of patients (57%; N=150);
- CAM therapeutics, studies on certain complementary and alternative therapies being clinically proved for cancer treatment (32%; N=84);
- perspective of health professionals as regards the use of CAM in cancer treatment (9%; N=24);
- doctor-patient relationship (2%; N=5).

A total of 150 works related to patients' perspective were analyzed, as information that could provide answers to this study's question might be found. Out of these, 43 articles that dealt with the characteristics and motivations of the population who uses CAM alongside conventional treatment for cancer were effectively included in this study (Table).

RESULTS

In the analysis of all the 263 articles, a growing number of publications about the CAM-cancer treatment relation were noted, as it is shown on Figure 1.

By observing all the 43 articles on patients' profiles and their motivations to use CAM, as well as the publication date (Figure 2), it was verified that the first works focusing on this began to appear in 1997.

As regards the methodology used, it was observed that 40 articles were of a quantitative nature, while three of them were of a qualitative nature. The United States performed more studies (30%; N=12), followed by Canada (11.6%; N=5) Austria and Hawaii (9.3%; N=4). No works with this focus were registered in Latin-American countries.

All the 43 articles were classified according to the main theme developed: socioeconomic, clinical, ethnic-racial and gender-oriented profile of patients who use CAM; patients' perceptions of the disease and experiences; and motivations to use CAM.

DISCUSSION

In the analysis of profile of patients who used CAM, studies showed that they are adults aged between 30 and 59 years of age,[5,7,12,14,19,26,28,29,30,38,43] female,[11,20,26,27,30,41,43] with a high level of education[3,6,9,14,17,19,20,28,29] and high family income,[7,14,19,26,28,29,41] with advanced-staged cancer,[6,7,23,26,30,37,39,42] belonging to some religious group[20] and ethnically influenced[1,17,19,37] in relation to the alternative therapy adopted.

Some studies related the influence from the patients' social network – constituted by friends, neighbors, family members and professionals – on the access to and support to use CAM during conventional cancer treatment.[8,9,24,26,35]

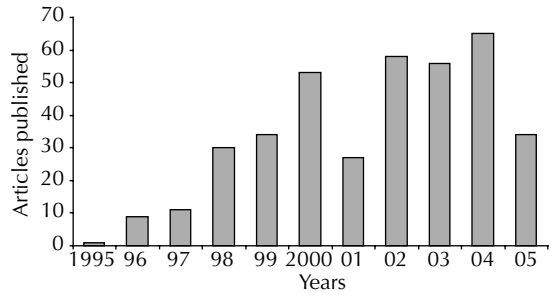

Figure 1. Annual distribution of publications on the theme of complementary and alternative medicine and cancer. N=263

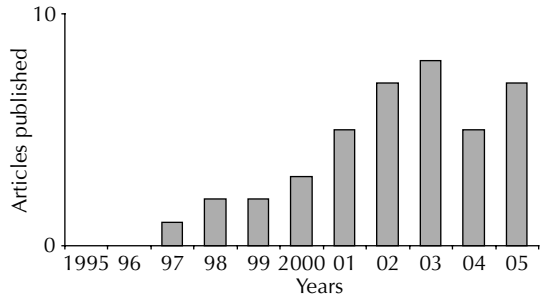

Figure 2. Annual distribution of publications on cancer patients' characteristics and their motivations to use complementary and alternative medicine. N=43

The main complementary and alternative therapies used are: homeopathy,[9,24] Ayurvedic medicine,[8] traditional Chinese medicine,[6,20,41] herbal therapies[1,5,6,14,18,24] (including teas), psychological therapies,[25,45] spiritual therapies,[1,3,14,24,43] support groups,[6,25,26] relaxation and meditation,[3,14,18,24,35,43] diets (vitamins and minerals, mushrooms, shark cartilage, mistletoe),[3,5,6,18,23,27,35,42] and reflexology.[41] These complementary and alternative therapies need to be separated into therapeutic techniques and rationality, as this means the incorporation of elements from some other medical rationality. Homeopathy and Ayurvedic medicine, for instance, have a distinct explanatory medical doctrine about what a disease and the process of getting sick mean, origin or cause, evolution or cure.[24,a] The other therapies are only techniques, which can, as a result, be more easily incorporated to complement conventional treatments.

In relation to the patients' perception of the disease and their experiences, studies show that those who use CAM perceive a higher risk of death or recurrence of the disease. In this sense, there are studies that relate the use of CAM to the level of anxiety and depression, showing that the higher the mental stress, the more frequent the use of CAM. Moreover, patients who use CAM are more likely to become depressed.[26,29,39] However, the relation between self-knowledge promoted by CAM and the development of depressive symptoms has not been sufficiently looked into, and, consequently, this is a theme open to investigation.

In general, patients view the use of CAM in a positive manner, as useful and non-toxic, and believe they provide a change in life style and quality, thus influencing the course of the disease positively.[2,32] Another significant perception is related to the sensation of better control over the body and the treatment itself after using some form of alternative therapy.[10,16,21,29,36,41,46] Studies show that the number of patients who use some form of alternative therapy after the diagnosis of cancer is high.[9,15,16,24,26,47]

Regarding the motivations to use CAM, technical, psychological, and biological reasons were identified. Biological reasons are related to the increase in the body's ability to fight against the disease, [13,24,45,46] promote the strengthening of the immunological system,[9,24,34,35] relieve side effects caused by chemotherapy, thus enabling people to hope for a "cure" [5,8,9,35,41,46] and the prevention of recurrence.[1,9,24,40,45] In relation to the psychological motivation, the promotion of well-being, control of stress and improvement of life quality were described.[2,5,6,9,14,23,27,46] The technical reasons for the use of CAM in the treatment of cancer are intimately connected to the dissatisfaction with conventional treatment,[1,8,12,36,37] especially concerning side effects and the interaction that is formed with health professionals,[33] besides the autonomous, humanizing process promoted by non-conventional practices.

The literature analyzed in this study acknowledges the substantial increase in the use of CAM by cancer patients, even though it accepts them merely as complementary practice to a treatment that has already been established or as an alternative to treat side effects caused by surgery, radiotherapy or chemotherapy. In this sense, the authors of these works point out that patients must be investigated as regards the use of CAM, always arguing that there is little scientific evidence. This theme is disregarded by the majority of studies and ends up becoming a highly recurrent reason to ignore the use of CAM in cancer treatment, despite high levels of satisfaction with alternative therapies.[2,6,9,11,22,31,36]

Apart from the connection between motivations to use CAM and the "dissatisfaction" with conventional techniques, it can be observed that patients seek a different type of logic to relate to their body, their disease and even the health service they go to. If, on the one hand, biomedicine has its paradigm regulated by the biomechanical, positivist and representationalist model,

[a] Luz MT. Racionalidades médicas e terapêuticas alternativas. Rio de Janeiro: Instituto de Medicina Social, Universidade Estadual do Rio de Janeiro; 1996. (Série Estudos em Saúde Coletiva, 62)

Table. Studies on the profile of cancer patients and their motivations to use complementary and alternative medicine, obtained in review carried out in PubMed, 1995-2005.

Author / year of publication	Country of study	Population studied
Sollner et al[38] 1997	Austria	215 patients under treatment in a university hospital.
Liu et al[20] 1997	China	100 patients at an advanced stage of cancer.
Miller et al[23] 1998	Austria	56 patients under treatment in a university hospital.
Risberg et al[32] 1998	Norway	252 cancer patients under treatment and 305 without cancer in a university hospital in Tromso.
Balneaves et al[3] 1999	Canada	52 female patients under treatment in a university hospital in Vancouver.
Rasky et al[30] 1999	Germany	154 patients under treatment in the oncology outpatient ward of a health institute.
Lee et al[19] 2000	USA	379 patients from four ethnic groups (Latin-American, white, black and Chinese), diagnosed between 1990 and 1992 in a university hospital in San Francisco.
Malik et al[21] 2000	Pakistan	191 patients under treatment in the oncology unit of a public hospital.
Sollner et al[39] 2000	Austria	172 patients under radiotherapy treatment in a university hospital.
Alferi et al[1] 2001	USA	231 black and white women under breast cancer treatment.
Jordan & Delunas[16] 2001	USA	89 patients under treatment in a private service in Indianapolis.
Maskarinec et al[22] 2001	Hawaii	143 patients under treatment and follow-up, who use CAM, identified by the Hawaiian Tumor Registry.
Paltiel et al[26] 2001	Israel	1,027 patients under treatment in the outpatient ward of three hospitals in Jerusalem.
Salmenpera et al[33] 2001	Finland	216 women with breast cancer and 190 men with prostrate cancer under treatment.
Gupta et al[8] 2002	India	553 patients under leukemia treatment in a public tertiary care hospital in northern India.
Patterson et al[27] 2002	USA	356 patients with colon, breast or prostate cancer, identified in health service in Washington (Cancer Surveillance System)
Shen et al[35] 2002	USA	115 patients in an advanced stage of breast cancer in an oncology center.
Shumay et al[37] 2002	Hawaii	143 patients under follow-up, three years after diagnosis, identified by the Hawaiian Tumor Registry.
Swisher et al[41] 2002	USA	113 patients under gynecological cancer treatment in the University of Washington's Oncology Division.
Tough et al[43] 2002	Canada	817 patients under colon-rectal cancer treatment, selected in the years of 1993 or 1995, in Alberta.
Wilkinson et al[46] 2002	USA	1,099 patients attended to in six prostate cancer treatment institutions in Illinois.
Chrystal et al[5] 2003	New Zealand	200 patients under treatment in a regional center for cancer treatment.
Gray et al[7] 2003	Canada	731 women under advanced cancer treatment, selected by the Cancer Registry of Ontario.
Harris et al[11] 2003	USA	1,693 patients under treatment, selected in a treatment center in Wale.
Henderson & Donatelle[13] 2003	USA	551 women with breast cancer in Oregon.
Kakai et al[17] 2003	Hawaii	140 patients from three different groups: Caucasians, Japanese and non-Japanese under treatment in a cancer research center at a university in Hawaii.
Schonekaes et al[34] 2003	Germany	203 patients under follow-up in an oncology center.
Spiegel et al[40] 2003	Austria	231 patients under treatment in an oncology center in Viena.
Van der Weg & Streuli[45] 2003	Switzerland	108 women under treatment in an oncology clinic at a general hospital in the district of Langenthal.
Cui et al[6] 2004	China	1,065 women with cancer in an urban area of Shanghai.
Hedderson et al[12] 2004	USA	178 men and 178 women selected by a cancer control system in Wale.
Henderson & Donatelle[14] 2004	USA	551 women who were undergoing post-treatment in Portland.
Kim et al[18] 2004	South Korea	187 hospitalized patients in a cancer hospital in Korea.
Nagel et al[25] 2004	Germany	263 women with cancer who reported using CAM.
Yap et al[47] 2004	Canada	300 patients under treatment, aged between 52 and 90 years, after undergoing radiotherapy.
Algier et al[2] 2005	Turkey	100 patients under treatment, monitored in two hospitals.
Hann et al[10] 2005	USA	608 women over 50 years of age, whose treatment ended at least five years before, selected by means of the American Cancer Society.
Hana et al[9] 2005	Israel	2,176 cancer patients under follow-up, selected by the National Cancer Registry System.
Hyodo et al[15] 2005	Japan	3,461 patients under treatment in 16 treatment centers and 40 palliative care units.
Molassiotis et al[24] 2005	Several countries	68 patients under treatment or follow-up in 12 European countries.
Pud et al[28] 2005	Israel	111 patients who participated in a major European study.
Rakovitch et al[29] 2005	Canada	251 patients under treatment in an outpatient ward of a cancer center.
Singh et al[36] 2005	Hawaii	18 CAM users and 9 non-CAM users under prostate cancer treatment.

CAM goes against this model, bringing a new perspective to the disease and the individual. Thus, complementary and alternative therapies have contributed to: bring the sick person back to the center of care; reset the doctor-patient relationship as fundamental for the therapy; seek simple therapeutic means; and build up the patient's autonomy.[5,42,47]

CONCLUSIONS

The theme of CAM use by cancer patients has attracted investigators and surpassed exclusive interests of specific disciplines. However, the majority of studies identified in the literature result from quantitative studies, performed in the northern hemisphere, with the perspective of discussing how this use takes place. Few studies qualify why CAM is used, enabling the preparation of complementary and alternative strategies in cancer treatment.

The use of CAM is part of the social scope of oncology patients. This use has an important socio-cultural meaning in the construction of the cancer patient's identity. Moreover, it also helps them to make decisions in relation to conventional treatment itself. Such evidence cannot be disregarded by health services so that strategies which promote dialogue about CAM between professionals and patients are developed, thus improving service quality.

The urgency to make more investigations is emphasized when taking into consideration the complexity of factors that lead cancer patients to use CAM. Such investigations would have the objective of analyzing health professionals' perspective on the use of CAM, the possibility to introduce these practices into conventional health services, and the position of public health policy makers and managers as regards its incorporation into the Brazilian Health System.

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C Spadacio and NF Barros are members from the *Grupo de Estudo de Metodologia Qualitativa e Sociologia das Medicinas Alternativas, Complementares e Integrativas* (Study Group on Alternative, Complementary and Integrative Medicine Sociology and Qualitative Methodology) at the Department of Preventive, Social Medicine, Faculdade de Ciências Médicas da Unicamp.