

Oncology Professionals' Views of Complementary Therapies: A Survey of Physicians, Nurses, and Social Workers

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Introduction

Estimates suggest that as many as two thirds of adult cancer patients use some form of complementary and alternative medicine (CAM).¹⁻⁴ The lack of a concise definition of CAM has hindered studies from providing reliable estimates of use and has made comparisons across studies difficult.⁵⁻⁸ Despite the lack of consistent definition, studies suggest that cancer patients use a variety of CAM methods, including exercise, dietary/nutritional therapies, massage, acupuncture, herbs, and prayer/spiritual healing⁹⁻¹⁵ and that most do not abandon conventional treatments, but rather use CAM as a supplement to standard medical care.^{10,14}

Several reasons have been proposed to explain the impetus to use CAM, including changes in the healthcare delivery system, the failure of standard medical care, patients' need for autonomy, preference for "holistic" or "natural" therapy, hope for cure, and the amelioration of side effects. Other potential reasons for use include boosting immune system, improving well being, and alleviating emotional distress.^{6,11,13,16-18} As interest in CAM has grown among cancer patients, there has been a corresponding increase in interest in this topic among oncology healthcare professionals. In the few studies that address the attitudes of oncology physicians about the use of CAM, the response has ranged from mild support to serious opposition.¹⁹⁻²¹ A review of the literature regarding the knowledge and attitudes of various types of physicians indicated that although interested, physicians were cautious about CAM use due to not only the lack of scientific evidence of their benefit, but also possible harmful effects.²² With regard to oncology nurses and social workers, the literature mainly addresses the implications of patients' interest in CAM to their respective practices^{23,24} rather than the knowledge and opinions of these groups. One survey of healthcare professionals conducted in England suggested

that the respondents, most of whom were nurses working with cancer patients, acknowledged the need for professionals to receive more information and training about cancer patients' use of CAM.²⁵

A few studies have compared knowledge and/or attitudes about CAM among healthcare professionals from different disciplines. In one study, the attitudes of nurses were compared with those of physicians and allied health professionals. Findings indicated that nurses had more positive attitudes toward CAM than the other two groups, and physicians were much less positive toward these approaches.²⁶ In a survey study conducted in Norway, 16% of physicians held a positive attitude toward CAM compared with 71% of nurses.²⁷ However, these studies were conducted with general practitioners who treated a variety of medical patients including those with cancer, but they were not oncologists. This report focuses on medical professionals who specialize in oncology.

In summary, while oncology professionals continue to be interested in CAM, little is known about their views about this topic. Furthermore, there are no known reports comparing attitudes and beliefs about complementary therapies among oncology physicians, nurses, and social workers in the United States. The primary aim of this study was to determine the degree of concordance among these professionals with regard to cancer patients' use of complementary therapies.

Methods

Sample

Healthcare professionals for this study were recruited during the first quarter of 1998. To be eligible for participation, a professional had to, by self-report, be treating cancer patients at the time of study participation. Physicians were selected using systematic random sampling from the 1998 American Society of Clinical Oncology Directory. Nurses were randomly selected from the 1998 Oncology Nursing Society Directory. Social workers were randomly selected from the 1998 Association of Oncology Social Workers Directory.

Procedures

All randomly selected healthcare professionals were sent a

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Submitted November 11, 2003; accepted February 13, 2004.

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copy of the survey and a cover letter signed by a member of their organization along with a prepaid return envelope. The surveys were completed anonymously, that is, there was no tracking of respondents and no way to identify who returned the survey. Two weeks after the initial mailing, a reminder/thank you letter was sent to all individuals in the sample.

Measures

A survey was developed for this study to assess healthcare professionals' familiarity with and attitudes toward complementary therapies and to assess their beliefs regarding the role of these therapies in cancer recovery. For the purpose of this study, "familiarity" with complementary therapy was measured simply as word recognition of individual therapies presented in list form.

The items included in the survey were determined by a review of the literature regarding cancer patients' use of complementary therapies. A preliminary draft of the survey was reviewed by four psychooncology researchers, all of whom were independent of this research: one has done extensive writing about the use of complementary therapy by cancer patients, one was an expert in survey development, and two were medical oncologists. Based on their feedback, the survey was revised and prepared for distribution.

Because there is often overlap of the terms "complementary" and "alternative" medicine, a definition of complementary therapies was provided at the top of the survey for clarification purposes. We used the definition that is used by the American Cancer Society: "those that patients use *along with* conventional medicine."²⁸ In this definition, a distinction between complementary and alternative therapies is implied, ie, alternative therapies are used *instead of* conventional treatment. The National Center for Complementary and Alternative Medicine goes further to explain that complementary therapies are not presently considered an integral part of conventional medicine. For the purpose of this study, we adopted the American Cancer Society definition.

The survey included an alphabetical listing of 46 therapies plus Other. For each therapy, respondents were asked to indicate whether they support patients' use of this therapy, do not support patients' use of this therapy, or are not familiar with this therapy. Other items assessed the beliefs of oncology professionals about the use of complementary therapies in general. These questions assessed respondents' beliefs about the reasons that patients may use complementary therapies, as well as the potential impact of these therapies on quality of life (eg, benefits and potential harm). The specific items were rated using an agreement scale in which 0 = *not at all* to 4 = *strongly agree*. Information about basic demographic characteristics (eg, age and gender) and medical practice characteristics (eg, years in practice and medical setting) was also obtained. Finally, physicians were asked if they ever refused

to continue providing conventional treatment because a patient was using complementary therapy.

Statistical Analyses

Differences among the three professional groups based on demographic and medical practice characteristics, as well as differences in their familiarity with, attitudes and beliefs regarding complementary therapies were evaluated using chi-square tests and analyses of variance. The relationships of gender, age, and number of years in practice to familiarity with and attitudes/beliefs about complementary therapies were evaluated using chi-square tests and correlational analyses.

Results

Demographic and Medical Practice Characteristics

Of the 400 surveys sent to each of the three groups, 147 (37%) were received from physicians, 183 (46%) from nurses, and 219 (55%) from social workers. The mean ages of the oncology physicians, nurses, and social workers were 48.2 (SD = 9.0), 41.9 (SD = 9.5), and 44.3 (SD = 9.8), respectively. Physicians were significantly older than the other two groups ($P < .001$). With regard to gender, there were fewer female physicians (18%) than nurses (97%) or social workers (94%; $P < .001$). The average numbers of years that physicians, nurses, and social workers had treated cancer patients were 15.4 (SD = 9.1), 10.1 (SD = 5.9), and 10.0 (SD = 6.6), respectively. Physicians had been in practice significantly longer than the other two groups ($P < .001$).

Over 70% of respondents in all three groups worked in a cancer center or hospital. Significantly more of the social workers (80%) and nurses (56%) reported that some form of complementary therapy was being offered to patients in their work setting than did the physicians (19%; $P < .001$). Only one physician reported having discontinued conventional treatment because the patient was using a complementary therapy.

Familiarity With Complementary Therapies

The percentage of professionals who were familiar with each of the therapies is presented in Table 1. On average, oncology physicians reported being familiar with 72% (range 9%-100%) of the therapies, while nurses were familiar with 76% (range 36%-98%), and social workers were familiar with 80% (range 10%-100%). The difference among the three groups in the percentage of therapies with which they were familiar was statistically significant ($P < .001$) and indicated that social workers were familiar with more therapies than nurses, who were familiar with more therapies than physicians.

With regard to sources of information on complementary therapies, more than 70% of respondents in each group

Table 1. — Familiarity With and Support for Complementary Therapies by Oncology Physicians, Oncology Nurses, and Oncology Social Workers

Therapy	% Familiar With This Therapy			% Who Would Recommend/Support This Therapy*		
	Physicians n = 147	Nurses n = 183	Social Workers n = 219	Physicians	Nurses	Social Workers
Acupressure	68%	81%	87%	50%	90%	96%
Acupuncture	94%	92%	95%	69%	81%	93%
Aromatherapy	55%	77%	84%	27%	93%	89%
Art therapy	74%	91%	98%	78%	98%	100%
Ayurvedic medicine	21%	13%	22%	20%	74%	87%
Biofeedback	95%	93%	96%	83%	96%	99%
Chiropractic	93%	97%	96%	40%	61%	77%
Crystal healing	59%	46%	65%	5%	31%	44%
Dance therapy	74%	89%	94%	69%	94%	96%
Dietary supplements	95%	98%	96%	77%	94%	99%
Exercise	99%	98%	99%	97%	99%	99%
Faith healing	88%	92%	94%	33%	70%	71%
Fasting and juice therapies	88%	86%	84%	6%	13%	24%
Flower remedies	57%	48%	41%	11%	46%	53%
Folk medicine	74%	70%	68%	23%	61%	77%
Healing touch therapy	74%	93%	92%	32%	94%	94%
Herbal therapy	84%	92%	90%	30%	86%	92%
Homeopathy	83%	75%	83%	27%	85%	90%
Humor therapy	79%	97%	97%	74%	99%	99%
Hypnosis	93%	93%	98%	69%	83%	93%
Imagery	85%	98%	99%	73%	98%	99%
Laetrile	90%	68%	70%	2%	6%	13%
Light therapy	56%	49%	66%	26%	82%	85%
Macrobiotic diet	83%	69%	81%	16%	47%	57%
Marijuana	94%	95%	94%	43%	74%	72%
Massage	95%	98%	99%	84%	98%	99%
Meditation	95%	99%	99%	93%	100%	100%
Music	92%	98%	99%	90%	99%	100%
Native American healing	54%	55%	74%	40%	87%	98%
Naturopathy/natural medicine	67%	64%	80%	28%	88%	96%
Prayer/spiritual practice	96%	99%	98%	86%	99%	100%
Reflexology	53%	67%	72%	18%	92%	96%
Reiki	23%	28%	58%	30%	90%	92%
Relaxation	95%	99%	99%	92%	99%	100%
Self-help books	95%	99%	99%	85%	98%	99%
Sound therapy	46%	63%	52%	43%	96%	94%
Special diet	70%	57%	66%	36%	69%	75%
Spiritual healing	82%	96%	94%	53%	92%	94%
Support group	99%	99%	99%	98%	100%	100%
Tai chi	67%	67%	91%	69%	95%	99%
Therapeutic touch	60%	98%	95%	39%	97%	97%
Traditional/Chinese medicine	59%	57%	76%	38%	84%	97%
Visualization	74%	98%	98%	70%	97%	99%
Vitamins	92%	99%	98%	69%	94%	96%
Water therapy	44%	50%	46%	24%	92%	94%
Yoga	89%	94%	98%	74%	98%	99%
Other	64%	29%	50%	19%	20%	79%

* Percentage of those familiar with the therapy who would recommend or support its use in conjunction with conventional therapy.

received information from a combination of the media, lay literature, medical journals/books, and patients. More of the social workers (90%) obtained information about complementary therapy from the lay literature than did physicians (81%) or nurses (80%; $P<.05$). More ($P<.05$) of the oncology nurses (57%) reported that they had received information about complementary therapy as part of training than did the physicians (47%) or social workers (44%). Forty-one percent (41%) of oncology social workers obtained information from the Internet, while fewer ($P<.01$) nurses (28%) and physicians (24%) used this source of information.

Attitudes and Beliefs About Complementary Therapies

The percentage of professionals who would support the use of each of the therapies is also reported in Table 1. The attitudes of the healthcare professionals toward complementary therapies, that is, how supportive they were, were defined as a ratio of the number of therapies supported to the number of therapies with which they were familiar. Average support ratios were calculated for each of the three groups. Oncology social workers had the most supportive attitude, indicating that they would support the use of 89% (range 55%-100%) of the therapies with which they were familiar, and nurses reported that they would support 85% (range 35%-100%). Physicians reported that they would support significantly fewer therapies (58%, range 0%-100%; $P<.01$). With regard to specific therapies, more than 75% of all professionals supported the use of exercise, support groups, biofeedback, massage, meditation, music, prayer/spiritual practice, relaxation, self-help books, art, and dietary supplements.

Belief about the reasons that cancer patients use complementary therapies was defined as whether the professional agreed or strongly agreed with each reason listed (Table 2). More than 75% of the professionals agreed with many of the reasons that were presented. However, dif-

ferences between the groups emerged with regard to several beliefs. Physicians were significantly more likely than the other two groups to agree that patients use complementary therapies because they feel pressured by family and friends ($P<.001$). In addition, physicians were least likely to agree that patients were using these therapies because the patients wanted to play a more active role in their treatment ($P<.001$), to control side effects ($P<.001$), or to feel more control over their illness ($P<.05$). Nurses were less likely to agree that patients were using these methods because they were not satisfied with conventional treatment ($P<.01$). A greater proportion of the social workers believed that patients use complementary therapies because they desire a more holistic approach to treatment ($P<.001$) and want a more involved relationship with their practitioner ($P<.01$).

The survey also included items that assessed professionals' beliefs about the potential impact of complementary therapies on patients' quality of life (Table 3). With regard to these beliefs, physicians differed from the other two groups. Physicians were least likely to agree that complementary therapies could help reduce side effects ($P<.001$), reduce stress ($P<.001$), or provide hope to patients ($P<.001$). A significantly higher percentage of physicians believed that complementary therapies may harm patients ($P<.001$), provide false hope ($P<.001$), or provide no help to patients ($P<.001$). Finally, social workers were significantly more likely than physicians or nurses to agree that complementary therapies may provide a cure ($P<.05$).

For all three professional groups, we examined how age and number of years in practice correlated with opinions about and familiarity with complementary therapies. There were no significant correlations between familiarity with complementary therapies and age or number of years in practice. In contrast, attitude toward complementary therapy was significantly correlated with both

Table 2. — Oncology Health Professionals' Beliefs Regarding Reasons for Use of Complementary Therapies by Cancer Patients

Reason	Physicians (% Agree)	Nurses (% Agree)	Social Workers (% Agree)	P Value
Feel pressured by family and friends	66	51	39	<.001
Want to play a more active role in their treatment	88	93	99	<.001
Are not satisfied with conventional treatment	74	57	71	.002
Want to control side effects such as pain and nausea	70	87	89	<.001
Want psychological support	88	82	91	.049
Desire a more holistic approach to treatment	77	79	92	<.001
Want a more involved relationship with their practitioner	43	50	62	.001
Have had a negative experience with conventional treatment	49	51	43	.231
Want to feel more control over their illness	90	93	97	.023
Are not happy with the relationship with their oncologist	12	17	10	.117
Were informed that their cancer is incurable or that they would not benefit from conventional treatment	63	60	62	.850
Gives them hope	94	96	97	.402
Heard comments from other patients	85	79	83	.309

Table 3. — Oncology Health Professionals' Beliefs Regarding the Potential Benefits and Harmful Effects of Complementary Therapies

Impact	Physicians (% Agree)	Nurses (% Agree)	Social Workers (% Agree)	P Value
Provide a cure	4	8	12	.015
Help reduce side effects such as pain and nausea	56	87	94	<.001
Harm patients physically	54	29	28	<.001
Reduce stress or help people cope	77	93	99	<.001
Provide hope to people with cancer	79	90	97	<.001
Provide false hope to people with cancer	85	46	44	<.001
Provide no help to people with cancer	32	12	8	<.001

age and number of years in practice, that is, younger professionals were more likely to be supportive of complementary therapies ($r = -.21$; $P < .01$) as were professionals who had been practicing for fewer years ($r = -.24$; $P < .01$). Age and number of years in practice were correlated ($r = .62$; $P < .01$). Due to homogeneity within the group of nurses and social workers, differences based on gender were not analyzed. However, in the group of physicians, with 18% women and 82% men, it was possible to compare the subgroups with regard to familiarity with and opinions about complementary therapy. There was no difference between female and male physicians with regard to familiarity with complementary therapies (72% in both groups), but female physicians were supportive of more therapies (71%) than male physicians were (54%; $P < .01$).

Discussion

As the popularity of complementary therapies continues to grow among cancer patients, interest in this topic rises within the professional community. The purpose of this study was to explore familiarity and attitudes toward complementary therapies and beliefs about patients' use of these therapies in a national sample of oncology physicians, nurses, and social workers.

The three groups differed in demographic and medical practice characteristics. Physicians were older than the other two groups on average by 7 years and had been in practice on average 5 years longer. Since age and number of years in practice were negatively correlated with attitudes toward complementary therapy, these differences may account for some of the discrepancies between physicians and the other two groups in their attitudes and beliefs about complementary therapy.

With regard to familiarity with complementary therapies, social workers were familiar on average with the most methods, followed by nurses then physicians. It should be noted that while the differences between the groups were statistically significant, the groups were similar in that all three were familiar with approximately three fourths of the therapies listed in the survey. Several years ago, physicians considered themselves relatively unfamiliar with up to 50% of complementary therapies,²⁹ but in

this study, physicians were familiar with 72% on average. This suggests increasing understanding of this topic among this professional group. It is possible that attitudinal differences among these groups were due in part to disparities in the level of familiarity with complementary therapy or in the way that the professionals define CAM. Further research could examine the impact of medical and graduate school training and continuing education about this topic on professionals' knowledge, attitudes, and beliefs. In addition, the role that each of these groups plays in the care of the cancer patient may have had an impact on their views about complementary therapy. Social workers play a more supportive role than do the other two groups, and they would be more likely to discuss psychosocial issues such as complementary therapy as opposed to focusing on medical issues. Further, some healthcare professionals may actually provide some form of complementary therapy with patients (eg, relaxation, imagery), affecting their opinions about complementary therapy use in general. Differences in opinions about complementary therapies based on the role taken in the care of the cancer patient would be an interesting factor to include in future research.

There was agreement among the groups about the reasons why patients use complementary therapies. The reason most agreed upon was that "it gives them hope"; over 90% of professionals in all three groups agreed with this statement. A majority of professionals also reported believing that patients use complementary therapies because they want to play a more active role in their treatment and feel they have more control of their illness. These findings are consistent with other reports of patients' reasons for using complementary therapies.³⁰

There were also some discrepancies between the groups in their beliefs about complementary therapies. For example, oncology physicians were significantly less likely than nurses or social workers to acknowledge that complementary therapies can help patients manage side effects, reduce stress, and cope. They were also more likely to acknowledge that complementary therapies may be harmful to patients. The more cautious view of complementary therapies held by physicians in this study is consistent with past studies of physicians' attitudes toward this topic.¹⁹ Perhaps physicians are more cautious

because many CAM methods have not been proven using scientific methods such as clinical trials.³¹ However, as research in this area moves forward, cancer patients' use of some of the therapies, eg, relaxation training, imagery, and massage, have received empirical support.³²⁻³⁴ In this study, we assessed attitudes toward the use of complementary therapies in general; in the future, it would be useful to distinguish attitudes toward individual therapies. As more research examines the usefulness of individual complementary therapies on the well-being of cancer patients, there will be more opportunity to inform patients and providers about their use.

In addition, professionals may be concerned that encouragement of the use of complementary methods may result in a patient's abandoning conventional treatment. However, some research suggests that patients with breast cancer who use complementary therapies do not discontinue conventional treatment but rather use them as supplements to standard care.^{10,14} The impact of the adoption of complementary therapies on cancer patients' decision to continue conventional treatment would be a useful area for future research. It should be noted that evaluation of gender differences within this group revealed that female physicians were supportive of the use of more therapies than were male physicians; this result should be replicated with a larger sample. Finally, including the list of specific therapies in this survey may have influenced the responses to the general questions about CAM use. If the survey were replicated in another country, or in a setting where the respondents' experience with CAM was different, the same list could elicit a different reaction. This highlights the importance of carefully choosing the therapies to be included in studies of CAM.

Overall, there was a lack of concordance with regard to some opinions regarding the general use of complementary therapies among the professionals included in this study. This situation presents the risk that cancer patients who discuss this topic with their healthcare team may receive mixed messages from their doctors, nurses, social workers, and other healthcare professionals that could potentially result in real confusion for the patient. This confusion could inhibit patient-professional communication and interfere with recovery. The importance of communication between oncology professionals and patients about CAM is receiving more attention.³⁵⁻³⁷ Past research on other populations shows that poor communication between physicians and patients is significantly associated with high levels of anxiety, distrust of healthcare providers, suspicion of therapy recommendations, and dissatisfaction with medical services.³⁸⁻⁴² In contrast, positive interactions between physicians and patients have been associated with improved patient satisfaction with medical care and adherence to treatment, as well as improved well-being and more favorable attitudes toward professionals and better overall health status.⁴³⁻⁴⁷

A few limitations to this study should be noted. The response rates from the oncology professionals in this study were low, and the response rate of physicians (37%) was lower than that of social workers (55%). It may be that the individuals who responded were biased, either positively or negatively, about the use of complementary therapies. In addition, the survey was developed and administered in 1998; in the past few years, oncology professionals may have developed new attitudes and beliefs about complementary therapies. However, these findings provide a valuable context for evaluating changes in attitudes among oncology professionals about this topic. Further, the list of therapies included in this survey may not represent all available complementary therapies, and this survey was not formally validated. Finally, future studies might examine the influence of other factors such as professionals' personal experience with complementary therapies and the availability of complementary therapies within their facility and nearby.

It is vital that oncologists be informed regarding what patients are using beyond standard medical treatment, but they are not always made aware of the use of complementary therapies.^{48,49} Efforts need to be made to increase the likelihood of communication between oncology professionals and their patients about complementary therapies.^{50,51} Perhaps research to demonstrate the efficacy of complementary therapies would increase support among oncology professionals and encourage communication about this issue. Education of healthcare professionals about complementary therapies may encourage them to adopt a more holistic medical philosophy, that is, one that involves the combination of conventional/standard medical treatment with unconventional/complementary methods.⁵² As professionals become more open to discussing this topic with their patients, a mutual education can occur that will benefit both patients and providers, resulting in better quality of life for cancer patients.

Appreciation is expressed to Corinne Cramer, MM, for her editorial assistance in manuscript preparation.

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