The relationship of belief in control and purpose in life to adult lung cancer patients' inclination to use unproven cancer therapies

By Barbara Skinn

Abstract

The purpose of this study was to explore the relationship of belief in control and purpose in life to the adult lung cancer patient's inclination to use unproven cancer therapies. A convenience sample of 40 lung cancer patients completed the Wallston's Multidimensional Health Locus of Control Scale, Crumbaugh's Purpose in Life Scale, an adapted Hiratzka's Alternative Therapy Scale, and a patient information sheet. The majority of participants exhibited a strong internal locus of control orientation and a strong purpose in life. Belief in control, purpose in life, and the degree of inclination to use unproven cancer therapies were not significantly associated. However, age was negatively correlated with inclination to use unproven cancer therapies. The majority of participants had heard of five or more unproven cancer remedies, and exhibited a strong inclination to use these unorthodox remedies. The most frequently used unproven therapies were anti-medicines - imagery, faith-healing, megadose vitamins and taheebo tea. The rising popularity of these anti-medicines has been reported in the literature.

Introduction

The anxiety and dread that may be experienced by cancer patients and their families create a situation in which unproven cancer therapies become difficult to ignore. A number of studies indicate that some individuals with a cancer diagnosis seek out and use unproven cancer therapies (Cassileth, Lusk & Strouse, 1984; Eidinger & Schapira, 1984; Hiratzka, 1985; Mooney, 1987; Lerner & Kennedy, 1992; Montbriand, 1993). Unproven cancer therapies are defined as "diagnostic and treatment methods which have not been assessed through the standard scientific process, and for which there is inadequate information on which to judge their safety and effectiveness" (Evers, 1987, p.2). Several terms such as unorthodox cancer treatments, unconventional cancer therapies, alternative therapies, cancer quackery, non-traditional cancer methods, and unproven cancer therapies are often used interchangeably.

Although many patients who use unproven cancer therapies continue with conventional therapies, some abandon the

traditional route for an unproven cancer therapy which purports to provide a quick, reliable and painless cure (Cassileth et al., 1984). In addition to the risk of discontinuing conventional treatments, the use of alternative cancer therapies which include medications, vitamins, diets, psychic surgery and mechanical devices may result in physical harm, emotional upheaval, false hope and substantial economic loss to patients and their families (Brown, 1977; Burkhalter, 1977; Gardner, 1980; Martin, Stolfi & Sawyer, 1983; McNaul, 1985; Brigden, 1987; Guzley, 1992). It is estimated that 25 billion dollars are spent annually in North America on a myriad of unorthodox cancer treatments (Brigden, 1993).

Several authors have speculated as to why cancer patients are attracted to unconventional therapies. These speculations include: Lack of information about current cancer treatment methods, a sense of hopelessness, impatience with and suspicion of the health care system, fear of death, and frustration with conventional treatment side effects (Brown, 1975; Brown, 1977; Burkhalter, 1978; Patrick, 1981; Noble, 1988). Moreover, some patients need to control their own destiny and are compelled to investigate and utilize unproven cancer therapies (Cassileth & Brown, 1988). Others claim that their "will to live" is the compelling force. These assertions about factors that seem to motivate their use of unproven therapies prompted this research study.

Purpose of the study

The purpose of this study was to investigate the relationship of belief in control and purpose in life to the adult lung cancer patient's inclination to use unproven cancer therapies. Although previous

RAPPORT ENTRE CE QUE LES ADULTES SOUFFRANT DU CANCER DU POUMON PENSENT DE LEUR VIE (BUTS ET DEGRÉS DE CONTRÔLE) ET LEUR PENCHANT À EMPLOYER DES THÉRAPIES ANTICANCÉREUSES NON PROUVÉES

ABRÉGÉ

Cette étude avait pour but d'explorer les rapports qui existent entre ce que les adultes souffrant du cancer du poumon pensent de leur vie (buts et degré de contrôle) et leur penchant à employer des thérapies non prouvées. Un échantillon pratique de 40 adultes souffrant du cancer du poumon a rempli l'échelle de contrôle multidimensionnelle des points de santé de Wallston, l'échelle de Crumbaugh (buts de la vie) et l'échelle adaptée d'Hiratzka sur les thérapies parallèles ainsi qu'un formulaire d'information sur le patient. La plupart des participants possédaient une forte orientation de contrôle interne et des buts de vie bien établis. Ce que les adultes pensaient de leur degré de contrôle et de leurs buts de vie n'était pas associé de façon significative à leur penchant à employer des thérapies anticancéreuses non prouvées. Toutefois, l'âge était négativement associé au penchant à employer de telles thérapies. La majorité des participants avait entendu parler d'au moins cinq remèdes anticancéreux non prouvés et avait sérieusement envie d'essayer ces remèdes peu orthodoxes. La plupart de ces derniers étaient surtout des remèdes non-médicaux - images mentales, guérison par la foi, mégadoses de vitamines et tisane de "taheebo". Les revues professionnelles signalent la popularité accrue de ces remèdes non médicaux.

Barbara Skinn

Barbara Skinn, RN, MSN, OCN is staff development educator, oncology, at University of Cincinnati Hospital, Cincinnati, Ohio.

studies into unproven therapies investigated several cancer diagnoses including lung cancer, this study focused on lung cancer patients for the following reasons: First, there is a high incidence of the disease. Second, lung cancer is a malignancy that affects both males and females. Third and most important, lung cancer provides a homogeneous group in relation to a highly threatening situation. In terms of life expectancy, the majority die within three years of diagnosis (Spiro, 1988).

Significance of the study

This research study aimed to provide some insight into the factors that influence the cancer patient's propensity toward use of unorthodox treatments. With an increased understanding of the person who is inclined to use unproven cancer methods, the nurse will be in a better position to facilitate decision-making and provide appropriate patient education and emotional support.

Literature review

Three areas are pertinent to the study's purpose: Belief in control, purpose in life, and unproven cancer therapies.

Belief in control

Control can be defined as the belief that an individual has, at his/her disposal, a response that can influence the aversiveness of an event (Thompson, 1981). Rotter (1966) originally hypothesized the construct of locus of control to describe the orientation by which individuals are able to control the important events occurring in their life space. Internal locus of control individuals perceive that the event or reinforcement is contingent upon their own behaviour while individuals with an external locus of control perceive that fate, chance, surrounding forces or the control of powerful others are responsible for the event (Rotter, 1966; Phares, 1976; Wallston, Wallston, Kaplan & Maides, 1976).

Studies on control have been conducted that concentrated on individuals with cancer. The importance of the variable to cancer prevention (Hallal, 1982), the management of treatment side effects (Dodd, 1983; Brandt, 1987), and the incidence and/or recurrence of disease (Hilton, 1987; Taylor, Lichtman & Wood, 1987; Kerber, 1987) appears to be uncertain. Nonetheless, the results of the various studies suggest that cancer patients see themselves as well as others (eg, fate, God, physicians) controlling their cancer situations.

Only one study was found in the literature that addressed the relationship between locus of control and self-use of unproven cancer therapies. Hiratzka's (1985) exploratory study reported a significant positive correlation between cancer patients' inclination to use unproven cancer therapies and the degree of internality of their health locus of control. In addition, positive correlations were found between knowledge of unproven therapies and both "internal" and "powerful other" locus of control orientations.

Purpose in life

Crumbaugh (1968) defined purpose in life as the degree to which an individual experiences a sense of meaning. Lazarus and Folkman (1984) identified that clinicians dealing with people in health crises often use the expression "will to live" to describe their patients' sense of purpose in life.

Many popular books about the cancer experience focus on purpose in life. Simonton and colleagues (1974), who are renowned for their self-awareness techniques to help cancer patients cope with cancer, were fascinated by the discovery that "the cancer patients who continued to do well, for one reason or another, had a stronger 'will to live'" (p.5). Cousins (1979) and Dosdall (1986) maintained that, despite illness, having something to live for keeps a person involved with life, and gives meaning and even a certain measure of joy to life. From a physician's perspective, Siegel (1986) recorded many experiences of exceptional cancer patients who sustained a will to live and achieved their personal goals.

Although various publications describe the purpose in life of individual cancer patients, little scientific research has specifically

investigated purpose in life in people with cancer. Hilton (1987) examined how women with breast cancer (n=227) perceived their purpose in life and found that 65.2% had definite purpose and meaning in life. Owen (1989), in a qualitative study on nurses' perceptions on the meaning of hope in patients with cancer, concluded that meaning in life may be one of the precursors to feeling hopeful.

Unproven cancer therapies

Many articles have been written that discuss unproven cancer therapies, however very little research has been conducted that investigated the actual use of these unorthodox therapies. Faw and colleagues (1977) surveyed patients and/or parents of paediatric cancer patients (n=69) to determine the percentage of patients who were knowledgeable about unproven cancer therapies. The survey revealed that 27 patients (39.1%) had tried, considered or received recommendations to try unproven cancer therapies. In another study, Cassileth and colleagues (1984) reported that 40% of patients who used both conventional and unconventional therapies discontinued conventional care entirely in favour of alternative regimes after an average of eight months on standard therapy. The remaining 60% of patients pursued both kinds of treatment simultaneously. Most patients who had used unorthodox therapies, with or without conventional care, believed that their type of cancer could be prevented, primarily through diet, stress reduction and environmental changes. In addition, they believed that unorthodox cancer treatments were beneficial while chemotherapy and radiotherapy were useless or more harmful than helpful.

Eidinger and Schapira (1984) surveyed 315 cancer patients regarding their views of unconventional therapies. They found that 25% believed that these treatments were effective in curing cancer. Seventy per cent stated that they would use one of the forms of

BERLEX CANADA INC.

**Research is
our tradition
and our future**

Major product categories:
Antiandrogen for prostate
cancer, antineoplastic
for chronic lymphocytic
leukaemia, oral contraceptive,
intrauterine device, contrast
enhancement agent
for MRI.

Bringing Research to Life
PMAC PAAB

Berlex Canada Inc.
2260 32nd Avenue
Lachine, Quebec
H8T 3H4

unconventional therapy if it was available locally. However, only seven per cent of the patients were currently taking or had taken medications to treat their cancer other than those prescribed by their physician. Two explanations regarding unconventional use of cancer therapies were proposed by Eiding and Schapira. First, patients become desperate when conventional treatments fail or are too unpleasant, and are willing to try any treatment that may offer some hope, especially if it is more palatable. Second, unconventional therapies usually require active participation by the patient, and this participation has a beneficial effect.

Mooney (1987) studied unconventional cancer therapy usage in 71 patients with metastatic disease. She reported that 18% had used some form of unconventional therapy, and that users were more action-oriented and more knowledgeable about treatment options. Lerner & Kennedy (1992) reported that 452 (9%) of the 5,047 patients interviewed in a nationwide (USA) telephone survey had used unproven cancer therapies. Commonly-used therapies were "mind" therapies (eg, imagery, hypnosis and psychic surgery), diets and drugs. The use of questionable cancer therapies varied by disease site and geographic region. According to participants in a two-phase study conducted by Montbriand (1993), alternative therapies were beneficial panaceas and could be organized into three distinct categories: Physical (eg, herbs, vitamins, massage), psychological (eg, visualization) and spiritual. The study found that 81% of the 48 participants in the first phase and 81% of the 252 participants in the second phase chose to use some type of unorthodox therapy.

Methods

A descriptive correlational design was used for this study. The study's convenience sample consisted of adults attending a lung chemotherapy and follow-up clinic at the ambulatory care department at a cancer control agency in western Canada.

Subjects selected for inclusion in the study were 20 years of age or older, had a confirmed diagnosis of lung cancer and were outpatients for more than one (1) month. All subjects were mentally competent with no evidence of cerebral metastases, and were physically and emotionally able to complete the questionnaire in English.

Sixty-five patients who met the study criteria were approached by the researcher and asked to participate in the study. Fifty-two patients agreed to participate and were given a questionnaire by the researcher. Forty patients (77%) completed and returned the questionnaire.

Data collection instruments

The self-administered questionnaire used in this study incorporated three instruments and a patient information sheet which elicited data on the socio-demographic characteristics of the study participants.

The Multidimensional Health Locus of Control (MHLC) was utilized to measure the three dimensions of health locus of control: Internality (ILOC) and externality, the latter which incorporates chance (CLOC) and powerful other (PLOC) (Wallston et al, 1976; Wallston & Wallston, 1981). The self-administered instrument consists of 18 items, six for each dimension. The items are measured on a six-point Likert scale ranging from 1 (strongly agree) to 6 (strongly disagree). According to Wallston and Wallston (1981), scores greater than 18 on one subscale and lower than 18 on the other two subscales indicate a "pure" or strong locus of control orientation. The internal consistency was originally tested with 115 predominantly middle-class people and ranged from an alpha of 0.83 to 0.86. The three MHLC subscales are empirically independent. The "internal" and "chance" scores are negatively correlated and the "chance" and "powerful other" scales have a low correlation of 0.2 (Wallston & Wallston, 1981).

Crumbaugh's Purpose in Life Test (PIL), developed by Crumbaugh (1968), is a 20-item scale that measures the degree to which an individual experiences meaning and purpose in life (Crumbaugh, 1968). Responses are registered on a seven-point scale rated from 1 (low purpose) to 7 (high purpose or

meaningfulness). The PIL's reported internal consistency reliability (split-half correlation) was 0.85 for a sample of 120 church parishioners (Crumbaugh, 1968).

The Hiratzka Alternative Therapy Scale (ATS) measures awareness of and inclination to use unproven cancer therapies (Hiratzka, 1985). The ATS was modified for this study. With permission from the author, 11 unproven cancer treatments were added to the original list of 16 unproven therapies in order to include the most current and popular therapies. These additional therapies were chosen from the literature and in consultation with several cancer control agency staff members who confirmed that these unproven methods were readily available in western Canada. This established face validity.

The adapted ATS is comprised of 27 types of unproven cancer therapies, and study participants were asked to answer two questions regarding each method. The first question assesses awareness and asks whether the participants have or have not heard of each of the therapies. The participants' awareness scores are derived by adding the number of unproven cancer treatment methods about which they have heard.

The second question asks the subjects to indicate where they would rank themselves on a six-point inclination scale for each of the listed methods as well as any additional methods they might add to the list. Each level is assigned a numerical score ranging from one

Table One:
Most frequently heard-of therapies

Unproven cancer therapy	Number of participants who had heard of (N=40)
faith healing	37
laetrile	28
megadose vitamin therapy	26
psychic surgery	23
carrot juice diet	20
imagery	18
macrobiotic diets	11
comfrey	10
taheebo tea	7

Table Two:
Inclination to use unproven cancer therapies

Unproven cancer therapy	Would consider trying in the future	Have considered trying	Have tried
imagery	2	2	8
megadose vitamin therapy	9	1	4
faith healing	1	0	3
taheebo tea	3	0	3
macrobiotic diet	1	0	1
psychic surgery	0	0	1
laetrile	1	0	1
dimethyl sulfoxide	0	0	1
naturopathic medicine*	0	0	1
garlic*	0	0	1
live cell therapy*	0	0	1
self hypnosis	0	0	1
carrot juice diet	5	1	0
chapparral tea	2	0	0
grape cure diet	1	0	0
essiac	1	0	0
comfrey	1	0	0

*added to the list of unproven cancer therapies by study participants

(would never consider trying) to six (have tried). The higher the score, the greater the level of inclination to use unproven cancer treatment methods.

The individuals' overall inclination to use score is derived by assigning the number of their highest level of response to any of the therapies on the list. This score is not contingent upon how many times they mark a particular level. That is, if participants indicate they have tried laetrile, they receive an overall inclination to use score of six, even though they may mark that they "would never consider trying" any of the remaining therapies.

Results

The age of the participants ranged from 34 to 79 ($M=60$) years. Of the 40 subjects, 14 were female (35.0%) and 26 (65.0%) were male. Thirty of the participants were married (75.0%). The number of months since diagnosis ranged from 1.5 to 50.0 months with the majority of subjects being six months or less from initial diagnosis. The largest percentage of subjects (55.0%) had clinical evidence of metastatic disease at the time of diagnosis.

Awareness of and inclination to use unproven cancer therapies

The participants' awareness of unproven cancer therapies scores ranged from one to 13 ($M=5.925$, $mode=5$). All 40 subjects had heard of at least one of the therapies on the list. From the list of 27 therapies, 22 subjects (55.0%) had heard of six or more unproven therapies while 18 subjects (45.0%) had heard of five unproven therapies or less. The participants were most familiar with faith healing (92.5%), laetrile (70.0%), and megadose vitamin therapy (65.0%). Table One lists the most frequently heard-of therapies.

In this study, 28 patients (70.0%) had a strong inclination toward the use of unproven cancer therapies. There were 17 unproven cancer therapies which scored a four or higher on the degree of inclination to use scale (Table Two). The four most popular therapies were imagery, megadose vitamin therapy, faith healing and taheebo tea.

Eighteen subjects (45.0%) had actually tried an unproven therapy. Only two subjects (5.0%) indicated that they would never consider trying any of the unproven cancer therapies on the list.

Belief in control

The Spearman rank correlation coefficient was utilized to analyze the correlation between inclination to use and internal locus of control. No significant correlation was found ($\rho=0.03$, $p=0.42$). In addition, no significant relationship was found between inclination to use and either Chance (CLOC) ($\rho=-0.09$, $p=0.28$) or Powerful Other (PLOC) ($\rho=-0.11$, $p=0.23$) orientations. The degree of inclination to use unproven cancer therapies was therefore not positively associated with an internal locus of control orientation.

Purpose in life

Purpose in life scores ranged from 73 to 140 with a median of 116 and a mean of 112.65 ($SD=15.99$) (Table Three). Using the Spearman

rank correlation coefficient, no significant correlation was found between inclination to use and purpose in life ($\rho=-0.10$, $p=0.27$). The degree of inclination to use unproven cancer therapies was not positively associated with purpose in life.

Discussion

Awareness of unproven cancer therapies scores were found to range from 1 to 13 ($mode=5$). These findings were not surprising. Hiratzka (1985) reported similar results: Her study found that awareness scores ranged from none to 14 therapies. This study found that the participants were most familiar with faith healing, laetrile and megadose vitamin therapy. Likewise, Faw and colleagues (1977) discovered that laetrile and faith healing were named more often than any other individual therapy. Hiratzka (1985) reported that 69% of her sample had heard about laetrile and three subjects added vitamin therapy to the list of unproven therapies.

The therapies which were commonly used in this study were also reported by other researchers (Faw et al, 1977; Cassileth et al, 1984; Eidinger & Schapira, 1984; Hiratzka, 1985; Lerner & Kennedy, 1992; Montbriand, 1993; Brigden, 1993). These results indicate that today's alternative treatments are anti-medicines (Cassileth, 1982) which emphasize a common sense approach to non-scientific cancer therapy (Brigden, 1993). Dietary regimens, vitamins, enemas, exercise and/or mind control are appealing because they are natural, non-toxic, personalized, home-based alternatives that require active participation by the patient.

Cassileth (1982), Hopkins & Brigden (1991) and Brigden (1993) propose that something can be learned by examining the frequent use of these non-toxic, natural therapies. They conclude that health care professionals should involve patients in their own care, objectively discuss alternative cancer treatments, pay attention to the patient as opposed to the disease, and provide accurate information on diet, vitamins and relaxation techniques. While many authors (Ingelfinger, 1977; Burkhalter, 1977; Brown, 1978; Lehrer, 1979; Patrick, 1981; Holland, 1982; Glymour & Stalker, 1983; Brigden, 1993) support the need for more active participation by the patient in health care, they argue that there is no such thing as a safe "non-toxic therapy". They present case studies in which patients suffered physical, irreparable harm from vitamin overdose, internal detoxification and from following gruelling dietary regimens.

Many people and authors (Pelletier, 1977; Fiore, 1981; West & Inglis, 1983; Benson, 1984; Achterberg, 1985; Wurtman, 1986; Dossdall, 1986; Siegel, 1986; Rossman, 1987) suggest that the public is beginning to drift away from the medical establishment, with increasing belief in alternative medicine, because physicians employ a purely scientific approach to health/illness. Cassileth (1982) maintains that interest in alternative treatments "arises in the context of increasing mistrust and dissatisfaction with the standard health-care system and with researchers' failure to cure malignant disease" (p.1483). Glymour and Stalker (1983) argue that the increasing public support of alternative medicine "...is no reason to take its claims seriously; superstition, self-deception, stupidity and fraud are ubiquitous and always have been" (p.962). This negative view of unproven therapies is supported by many health care professionals.

On numerous occasions during this study, many subjects shared with the researcher their frustration in dealing with doctors and nurses who refuse to acknowledge the existence of users or potential users of unproven cancer therapies. Ten subjects believed that their doctors vehemently opposed their use of these therapies. In addition, 16 subjects expressed concern that the current issues surrounding the use of unproven therapies were often completely ignored by the health care professionals.

It is obvious from the results of this study and previously conducted studies that the use of alternative cancer therapies is indeed an issue for cancer patients. Many patients are users or potential users of unproven cancer therapies even though the verdict concerning the efficacy of unproven treatments has not been reached.

Table Three:
Purpose in life scores

Purpose in life	Score	Frequency	Per cent
Low	<72	0	0.0
	73-91	6	15.0
Uncertain	92-112	8	20.0
High	113-140	26	65.0
Total		40	100.0

Belief in control

In this study, no significant correlation was found between the degree of inclination to use and internal locus of control (ILOC) orientation ($\rho=0.03$, $p=0.42$). This finding was unexpected because the literature reports that cancer patients' need for personal control - to be masters of their own destiny - is often an important factor in their decision to try an unproven therapy (Brown, 1975; Brown, 1977; Cousins, 1979; Hiratzka, 1985). Only one study was found in the literature that challenged this study's findings. Hiratzka (1985) found a significant relationship between internal locus of control and inclination to use unproven therapies. Her study concluded that the higher the ILOC score the more likely a positive attitude existed toward using unproven therapies.

The unexpected results of this study suggest that other factors may influence the patients' use or inclination to use unproven cancer therapies. Perhaps past experience, education and socialization, their present health status, and/or support systems were catalysts. Consequently, regardless of their belief in personal control, these catalysts may have justified the use or the inclination to use these therapies. In addition, the use of these therapies may have been viewed as a viable coping strategy since it might alter the disease outcome.

Purpose in life

In this study, 26 subjects (65.0%) scored greater than 113 on the PIL scale which indicates a definite purpose and meaning to life. Only six subjects (15.0%) scored less than 91 which indicates a lack of clear meaning and purpose in life. Three reasons for this lack of clear meaning in life are plausible. First, some of the participants may be unable to cope with the side effects of treatment or with the many disturbing emotions such as depression, fear, despair and self-pity that they have experienced since being diagnosed with lung cancer. As a result of this inability to cope, hopelessness and helplessness ensue, and life becomes meaningless. Second, 11 subjects stated that they were told by their cancer doctor that their disease was not curable and consequently, believing that death from their neoplasm was inevitable, some may have lost their "will to live". Third, 13 participants (32.5%) were uncertain about the prognosis of their disease. Thus, the lack of communication with their physician about their prognosis may have caused some subjects to appraise their future as uncertain, lacking clear direction and purpose.

A significant correlation was not found between purpose in life and the degree of inclination to use unproven cancer therapies. This finding was unexpected because the researcher's past experience in caring for cancer patients revealed that patients who set future goals and had "something to live for" were more apt to investigate various types of unorthodox cancer methods. Since this relationship has not previously been systematically explored, there is no way of comparing the results of the correlational analysis obtained in this study. However, it is again possible that, regardless of the person's purpose in life, the use of unproven therapies was viewed as beneficial and realistic because it might change the disease outcome.

Ancillary analyses

The variables of age, gender, marital status and participants' perception of intent of treatment(s) were correlated with the degree of inclination to use unproven cancer therapies. Only one significant correlation was found. A significant negative correlation was found between age and the degree of inclination to use unproven therapies ($r=-0.28$, $p=0.04$). The younger participants were more inclined to use unproven cancer therapies.

Limitations

Due to the small sample size, the researcher's inability to access lung cancer patients who were receiving radiotherapy or radiotherapy follow-up, and the non-random nature of the sampling procedure, the results of this study cannot be generalized. The scope of this study was limited to adult lung cancer patients receiving chemotherapy or chemotherapy follow-up.

Implications for nursing practice

The findings of this study suggest four major implications for nursing practice. First, nurses are often involved in the implementation of educational, supportive and rehabilitative programs to cancer patients and to the community. Traditionally, the approach to these programs has not incorporated discussions about the use of unproven cancer remedies despite the fact that many cancer patients, especially the younger patients, view the use of these therapies as acceptable. Thus, educational programs should provide factual information and clarify misconceptions about the various treatments that have not been approved through scientific means. The *Ca - A Cancer Journal for Clinicians*, a journal of the American Cancer Society, is an excellent resource about unproven cancer therapies.

Second, the nursing process must focus on assisting the individual to cope with the chronicity of the disease. Nursing assessments must determine the patient's understanding of cancer and its treatments, both conventional and alternative. Care planning and interventions must concentrate on the whole person to ensure personalized care and promote active participation of the patient. As a result, the appeal of the unorthodox practitioner may be reduced and/or the person's quality of life may improve regardless of the treatment method(s) chosen.

Third, nurses need to communicate to other nurses, cancer patients, and the general public the details surrounding the use of popular alternative methods and the promoters of unorthodox treatments. Receipt of information reduces ambiguity, mystery and secrecy (Patrick, 1981). Likewise, nurses need to be able to communicate to physicians the patients' questions and concerns about both orthodox and unorthodox cancer treatment methods. As patient advocates, nurses may be helpful in eliminating or diminishing the patients' feelings of guilt, uncertainty, self-blame and confusion that often surround the use of unproven therapies. Consequently, trust and support in making informed choices may increase, and the need to seek unproven alternatives may decrease (Patrick, 1981). Moreover, nurses who are knowledgeable about the popular therapies will be in a better position to educate the public on the dangers inherent in using certain therapies and to lobby the government to legislate against legalizing potentially harmful unproven therapies.

Finally, many patients in this study shared with the researcher their frustration in dealing with health care professionals who refuse to acknowledge the existence of users or potential users of unproven cancer therapies. Thus, nurses who provide care to cancer patients must examine their own beliefs and values about the use of unproven cancer therapies. Value clarification is crucial to oncology nurses' ability to provide holistic care to those patients who may be considering or using unproven therapies.

Implications for nursing research

This study raises many questions for further research concerning unproven cancer therapies. Studies need to be conducted to identify variables of importance that influence people to think about and/or use alternative therapies. This study needs replication with a larger sample in order to identify the influence of control and purpose in life not only for those with cancers which have a poor prognosis but also for those with cancers which have a better prognosis.

Further research is needed to explore the relationships of other variables such as culture, religious beliefs, socio-economic status, gender and education in the decision to use unproven cancer therapies.

Finally, studies should be conducted to measure the health care professional's knowledge and attitudes toward unorthodox cancer remedies. Perhaps these studies would identify personal limitations and knowledge deficits, and consequently, the cancer community would be better able to meet the educational and support needs of both patients and caregivers.

References

1. Achterberg, J. (1985). *Imagery in healing: Shamanism and modern medicine*. Boston: New Science Library.
2. Benson, H. (1984). *Beyond the relaxation response*. New York: Times Books.
3. Brandt, B.T. (1987). The relationship between hopelessness and selected variables in women receiving chemotherapy for breast cancer. *ONF*, 14(2), 35-39.
4. Brigden, M. (1987, Jan.) Unorthodox therapy and your cancer patient. *Postgraduate Medicine*, 81(1), 271-280.
5. Brigden, M. (1993, Mar.) Alternative cancer therapy - a never ending problem. *Contemporary Oncology*, 9-16.
6. Brown, H. (1974, May). Cancer quackery -- what can you do about it? *Nursing* 75, 24-26.
7. Brown, H. (1977). Quackery -- the dreadful delusion. *Proceedings of the 2nd National Conference on Cancer Nursing of the American Cancer Society* (pp. 104-106). New York: American Cancer Society, Inc.
8. Burkhalter, P. (1977, March). Cancer quackery. *AJN*, 451-453.
9. Burkhalter, P. (1978). Cancer quackery: What you need to know. In P. Burkhalter & D. Donley (Eds.), *Dynamics of oncology nursing* (pp. 428-441). New York: McGraw-Hill Book Co.
10. Cassileth, B. (1982). After laetrile, what? *N Engl J Med.*, 306, 1482-4.
11. Cassileth, B.R. & Brown, H. (1988). Unorthodox cancer medicine. *Ca*, 38(3), 176-187.
12. Cassileth, B.R., Lusk, E.J. & Strouse, T.B. (1984). Contemporary unorthodox treatments in cancer medicine: A study of patients, treatments and practitioners. *Ann Intern Med*, 101(1), 105-12.
13. Cousins, N. (1979). *Anatomy of an illness as perceived by the patient*. New York: Bantam Books.
14. Crumbaugh, J.C. (1968). Cross-validation of purpose in life test based on Frankl's concepts. *Journal of Individual Psychology*, 24, 74-81.
15. Dodd, M.J. (1983, May). Patterns of self-care in patients with breast cancer receiving chemotherapy. Paper presented at the Eighth Annual Congress of the Oncology Nursing Society, San Diego, CA.
16. Dosdall, C. (1986) *My God, I thought you'd died*. Toronto: McClelland & Stewart-Bantam Ltd.
17. Eidinger, R. & Schapira, D. (1984, June). Cancer patients' insight into their treatment, prognosis and unconventional therapies. *Cancer*, 53(12), 2736-2740.
18. Evers, M. (1987). OTA agrees to assess nontraditional cancer treatments for congress. *Cancer Victims Journal*, 21(3&4), 2-3.
19. Faw, C., Ballentine, R., Ballentine, L., vanEys, J. (1977). Unproved cancer remedies - a survey of use in paediatric outpatients. *JAMA*, 238(14), 1536-1538.
20. Fiore, N.A. (1981). *The road back to health: Coping with the emotional side of cancer*. New York: Bantam Books, Inc.
21. Gardner, K. (1980, September). Hope, quackery and orthodox health research. *Annals of Internal Medicine*, 93(3), 503-504.
22. Glymour, C. & Stalker, D. (1983). Engineers, cranks, physicians, magicians. *N Eng J Med.*, 308, 960-963.
23. Guzley, G. (1992). Alternative cancer treatments: Impact of unorthodox therapy on the patient with cancer. *Southern Med J*, 83(5), 519-523.
24. Hallal, J. (1982). The relationship of health beliefs, health locus of control and self concept to the practice of breast self-examination in adult women. *Nursing Research*, 31(3), 137-142.
25. Hopkins, C. & Brigden, M. (1991). Alternative cancer treatments - a professional perspective. *CONJ*, 1(4), 119-123.
26. Hilton, A. (1987). *Coping with the uncertainties of breast cancer: Appraisal and coping strategies*. Unpublished doctoral dissertation, University of Texas at Austin.
27. Hiratzka, S. (1985). Knowledge and attitudes of persons with cancer toward use of unproven treatment methods. *ONS*, 12(1), 36-41.
28. Holland, J. (1982). Why patients seek unproven cancer remedies: A psychological perspective. *CA*, 32(1), 10-15.
29. Inglefinger, F.J. (1977). Laetrilomania. *N Eng J Med*, 296, 1167-8.
30. Kerber, A. (1987). Locus of control, hope and disease-free interval. (From *ONS Abstracts*, 1987, 14, Abstract No. 137).
31. Lazarus, R.S. & Folkman, S. (1984). Coping and adaptation. In W.D. Gentry (Ed.) *Handbook of Behavioural Medicine*. New York: Guilford Press.
32. Lazarus, R.S. & Folkman, S. (1984b). *Stress, appraisal and coping*. New York: Springer Publishing Co.
33. Lerner, I. & Kennedy, B.J. (1992). The prevalence of questionable methods of cancer treatment in the United States. *Ca*, 42(3), 181-191.
34. Martin, D.S., Stolfi, R.L. & Sawyer, R.C. (1983, Feb.). Ineffective cancer therapy: A guide for the layperson. *Journal of Clinical Oncology*, 1(2), 154-163.
35. McNaull, F.W. (1985). The social and economic costs of cancer. In S.C. Gross & S. Garb (Eds.) *Cancer Treatment and Research in Humanistic Perspective* (pp. 94-103). New York: Springer Publishing Co.
36. Montbriand, M. (1993). Freedom of Choice: An issue concerning alternative therapies chosen by patients with cancer. *ONS*, 20(8), 1195-1201.
37. Mooney, K. (1987). Unproven cancer treatment usage in cancer patients who have received conventional therapies. (From *ONS Abstracts*, 1987, 14, Abstract No. 124A)
38. Noble, M.C. (1988). Unprincipled treatments for cancer. *BC Medical Journal*, 30(1) 28-30.
39. Owen, D. (1989). Nurses' perspectives on the meaning of hope in patients with cancer - a qualitative study. *ONF*, 16(1), 75-79.
40. Patrick, P. (1981). Cancer quackery: Information, issues, responsibility, action. In L.B. Marino (Ed.), *Cancer Nursing* (pp. 357-370). St. Louis: C.V. Mosby Co.
41. Pelletier, K. (1977). *Mind as healer, mind as slayer*. New York: Dell Publishing Co.
42. Phares, E.J. (1976). *Locus of Control in Personality*. New Jersey: General Learning Press.
43. Rossman, M.L. (1987). *Healing yourself: A step-by-step program for better health through imagery*. New York: Walter Publishing Co., Inc.
44. Rotter, J.B. (1966). Generalized expectancies for internal versus external control for reinforcement. *Psychological Monographs*, 80(1), 1-27.
45. Siegel, B. (1986). *Love, medicine and miracles*. New York: Harper & Row, Publishers.
46. Simonton, O.C., Matthews-Simonton, S. & Creighton, J.L. (1978). *Getting well again*. New York: Bantam Books.
47. Spiro, S.G. (1988). Prognosis and end results. In Hoogstraten, B., Addis, B.J., Hansen, H., Martin, N. & Spiro, S.G. (Eds.) *Lung tumours - Lung, mediastinum, pleur, & chest wall* (pp. 163-66). New York: Springer-Verlag.
48. Taylor, S., Lichtman, R. & Wood, J. (1984). Attributions, beliefs about control and adjustments to breast cancer. *Journal of Personality and Social Psychology*, 46(3), 489-502.
49. Thompson, S. (1981). Will it hurt less if I can control it? A complex answer to a simple question. *Psychological Bulletin*, 90(1), 89-101.
50. Wallston, B.S., Wallston, K.A., Kaplan, G.D., Maides, S.A. (1976). Development and validation of the health locus of control scale. *Journal of Consulting and Clinical Psychology*, 44(6), 580-585.
51. Wallston, K.A. & Wallston, B. (1981). *Research with the locus of control construct* (Volume 1). New York: Academic Press.
52. West, R. & Inglis, B. (Aug. 8/1983). Spectrum. *The Times*, p.10.
53. Wurtman, J. (1986). *Managing your mind and mood through food*. New York: Rawson Associates.