Complementary and Alternative Medicine: Consumers in Search of Wellness or an Expression of Need by the Sick?

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ABSTRACT

The provision of health care in Western societies is examined in relation to the arrival of complementary and alternative medicine (CAM) as a serious provider in the latter half of the 20th century. This article examines the underlying components of the increasing uptake of CAM and attempts to cluster health-care consumers according to their attitudes and motivation toward the use of health-care products and services. The analysis does not support the idea of a widespread uptake of CAM practitioner treatments on the part of the general public except for particular segments of that public, including the seriously ill. There is also little evidence of exclusive use of CAM for personal health care. On the other hand, there is significant evidence for an uptake of non-practitioner-based CAM by wider segments of the population. The findings raise issues regarding the evidence for the efficacy of CAM and the methodology for testing it. These are discussed. © 2004 Wiley Periodicals, Inc.
Health-care systems in developed countries are changing and, arguably, the increasing use of complementary and alternative medicine (CAM) is a part of this transformation (Eastwood, 2000). One estimate puts the size of the U.S. market alone at $27 billion of out-of-pocket expenditure in 1997 (Eisenberg et al., 1998), a figure projected to increase by 15% per year (Rauber, 1998). The most quoted quantitative national surveys dealing with CAM usage indicate both a significant use of these therapies and a growth in their use (Eisenberg, Kessler, Foster, Norlock, Calkins, & Delbanco, 1993; Eisenberg et al., 1998). These studies initially encouraged health organizations (state and commercial) to take notice of this consumer-driven dynamic and consider recognizing CAM therapies. Subsequently, financial pressures on health providers and associated commercial organizations led to recognition of the need for critical scrutiny of this market.

From a marketing perspective, recent work suggests that generalizations such as those from the general surveys mentioned above hide a less-than-uniform marketplace as far as both classification of products/services and segmentation of consumers are concerned (Wootton & Sparber, 2001a). Understanding this reality requires an examination of the nature of the products and services of the CAM industry and of the consumers who use them.

The objectives of this article are, therefore (a) to consider the nature of CAM and its components, (b) to identify the various groups of consumers who use CAM, whether in conjunction with conventional medical treatment (CMT) or instead of it, and (c) to explore some of the implications for researchers, practitioners, and providers.

In order to address these objectives an on-line search on Medline and ABI/Inform was undertaken, in addition to a search of other journals not accessible on-line. Qualitative and quantitative studies from both the CAM field and the retailing sector were analyzed. The surveys reviewed spanned a number of countries in the developed world as well as regions within countries. They also covered patients with a variety of ailments and of differing origins, ages, and socio-economic backgrounds. A systematic comparison between surveys could, however, not be carried out because of the diversity in methodologies used (a problem reported in other articles, e.g., Harris & Rees, 2000). Nonetheless, in line with the objectives listed earlier, an attempt was made to understand trends and identify significant sectors of the health marketplace with a view toward possible further empirical investigation.

Before embarking on this review of studies of CAM use, an overview will be provided of the historical and societal context in which the CAM phenomenon has developed. The review will consider the extent to

1Ernst et al. (1995, p. 506) define CAM as: “diagnosis, treatment and/or prevention which complements mainstream medicine by contributing to a common whole, by satisfying demand not met by orthodoxy or by diversifying the conceptual framework of medicine.”
which more general influences are involved in the way in which this market is developing, as opposed to pure health-care concerns. Finally, following the review of research into CAM use, difficulties in interpreting the literature are addressed and implications for the various stakeholders including health providers, insurers, marketers, and researchers are considered.

THE HISTORICAL AND SOCIAL CONTEXT

Historical Development of CMT and CAM

Some authors have suggested that the growth of CAM use is part of a wider societal phenomenon as well as a movement specific to health care (Dacher, 1997; Eastwood, 2000). The development of health care as we know it starts in the 17th century (the Age of Enlightenment), with a rejection of primitive efforts at cure and the arrival of a more scientific approach.

This initial revolution involved the making of a major distinction between superstition and reason. A related phenomenon to emerge was positivism, which emphasized that science based upon observation, measurement, and experimentation gives direct access to the world as it really is. This approach, focused as it was on material reality, tended to see the body as separate from the mind. Between the mid-eighteenth and mid-nineteenth centuries the focus of medicine turned to the interior of the human body. The body was perceived as a machine. If something went wrong with the machine, doctors had tools to repair it (medicines, surgery). This approach to the study of health and illness became known as biomedicine.

Friedson (1970) has described the strong political action required to organize the profession of medicine and to take legal action against other health practitioners. There was a systematic rejection of other perspectives and an insistence that biomedicine was the chief force that had led to the huge improvements in public health. Based upon a positivist epistemology, giving it a direct line to external reality, it was deemed the only valid perspective.

The last 40 years of the 20th century have seen increasing criticism of orthodox biomedicine. If the scientific approach has been effective in eradicating a wide range of diseases, a number of present-day diseases seem to involve more complex and diffuse etiologies and symptomatology, for example, cancer and AIDS as well as chronic fatigue syndrome, stress related illness, and psychological illness. Furthermore, because people live longer, there is a greater incidence of the complex, multiple conditions of old age.

The apparently slow progress of biomedicine in solving these new types of medical problems has been associated with a growing skepti-
cism and a turning to alternative health systems. In Europe, the United
States, and Australia, up to 50% of the population uses some form of
CAM, and this has been reported to be an upward trend (Eisenberg et
al., 1998; Fisher & Ward, 1994; Kessler et al., 2001; MacLennan, Wilson,
& Taylor, 1996; Zollman & Vickers, 1999c). In the United States, Eisen-
berg et al. (1998) found that more visits are made to CAM practitioners
than to primary-care physicians. It was estimated that Americans spend
as much on CAM as on physician services. Associated with this trend is
evidence of increasing reference to CAM in conventional medical jour-
nals (Barnes, Abbot, Harkness, & Ernst, 1999).
A further aspect of this change relates to the role of the medical prac-
titioner. Historically, medical doctors were among the most educated
people in society and were considered as authorities with power over
life and death. This, together with the societal dominance of biomedicine
noted by Friedson (1970) provided a virtual monopoly in health provi-
sion until the second half of the 20th century.
Increasing levels of education, however, as well as modern technology
and higher standards of living, mean that the general population is be-
coming more knowledgeable and informed about a number of issues,
including their own health. They have come to see themselves as having
the option of choosing their treatment (albeit usually by paying for it),
indeed, becoming consumers rather than patients. This perceived choice
has meant the erosion of the authority of the medical practitioners over
their patients (Calnan & Williams, 1995) and serious questioning of the
behavior of doctors and hospitals by the press and others.

Mutual Suspicion or Complementarity between Different
Health-Care Philosophies?

An aspect of the doctor's authority that has been questioned has been
the skepticism (if not downright antagonism) concerning approaches to
health that do not have the evidence base of Western medicine (Kramer,
1999; Leibovici, 1999). Chinese medicine, Ayurvedic medicine, Japanese
Kampo medicine, and herbal medicine from various parts of the world
(to name but a few) are part of the regular treatment of disease in those
societies. The travel and communications revolution of the second half
of the 20th century has made these available beyond their original fron-
tiers, which has caused some concern to the Western medical establish-
ment. When these treatment systems and other non-orthodox therapies
first arrived they were called alternative therapies. The implication
seemed to be that one could be used instead of the other, even that they
were incompatible. Increasingly the words complementary and inte-
grated appeared, and the medical scene is slowly becoming less confron-
tational. Vickers (2000) reported that a number of signs suggest that
CAM is becoming increasingly integrated. In some countries and
regions, the pressure from the marketplace has become so strong that
some therapies have now been included in the mainstream health-care system (e.g., osteopathy and chiropractic). In Canada, a hospital in Toronto has opened several CAM clinics and, because of changing demographics, traditional Chinese medicine is now being regulated in British Columbia (Elash, 1997). Yet the fact remains that the paradigms on which some CAM treatments are based are sometimes totally at variance with Western orthodoxy. Some are indeed alternatives. It is these poorly understood variations that create suspicion from orthodox practitioners. In Western Europe and North America, the gatekeeper of the national health services is usually the orthodox medical practitioner. As long as suspicion exists in the gatekeeper's mind that CAM therapists are not appropriately qualified, the route to public availability of CAM on national health systems is guarded (Kramer, 1999; Zollman & Vickers, 1999a, 1999b). This suspicion may be bred from a lack of evidence of their effectiveness, a fear of legal drawbacks, or simply old habits.

Often patients visit CAM therapists without informing their doctor. One reason for this lack of communication is the patient's sensing of a negative attitude on the part of the medical profession toward such therapies. As a consequence, doctors may prescribe drugs that, combined with, say, an herbal remedy, may be harmful (Frye, 1997). In other instances, people with serious illnesses may not go to their medical practitioner, with the result that the situation can become dangerous (Kramer, 1999; Zollman & Vickers, 1999b). Openness to complementarity has to be two-sided, especially when the driving force comes from the patients themselves.

Currently, in order to be accepted by the system, the rite de passage in most Western countries consists of providing evidence-based proof that the therapies are effective and safe. Yet new therapies and old ones with different philosophical underpinnings from orthodox medicine will take a long time to generate this evidence base. In the absence of such proof and the current lack of funds available for CAM research in Western Europe (Ernst, 1999; Frye, 1997) and to a lesser extent in the United States, is there a creative solution to the tension between the pressure from the patient/consumer for CAM and the sensible need for validation of treatments?

If, indeed, patients have become consumers, a look at health care through the lens of marketing may offer some fresh insights into the above issues.

THE CAM MARKETPLACE

Given the surge in the use of CAM, it is undeniable that value for consumers has been created. The concept of CAM, however, is wide ranging.
Before any attempt is made to identify its consumers, the difficult territory of definition and classification will be visited.

It is easy to see that problems of definition and classification can lead to difficulties for the researcher in interpreting the results of surveys of CAM use, which are based on different definitions or classifications. For example, does the use of food supplements, organic products and the taking of exercise really mean that CAM is being used, or should the definition only include actual visits to a CAM practitioner? The issue poses related problems for regulatory authorities. The unregulated proliferation of healing methods can lead to potential abuse due to uninformed use of methods or substances that prove to be either ineffective or dangerous, to unskilled practitioners, or to plain charlatanism. Some possible taxonomies of CAM will now be discussed.

Kaptchuk and Eisenberg (2001) have argued that providing a precise definition of CAM is impossible due to the heterogeneity in healing methods offered. They propose a description of various therapies historically used in the United States under two broad classifications: (a) a more prominent, “mainstream” CAM and (b) a more culture-bound, “parochial” unconventional medicine. The mainstream CAM can be divided into professional groups, layperson-initiated popular health-reform movements, New Age healing, alternative psychological therapies, and non-normative scientific enterprises. The parochial category can be divided into ethno-medicine, religious healing, and folk medicine. Similar distinctions have been made by Wootton and Sparber (2001b).

In addition to the above classification, two broad streams of CAM have been identified according to the products and services being offered: practitioner-based CAM, which includes only visits to CAM practitioners; and non-practitioner-based CAM, which includes the whole range of products and service that do not involve consultation with a practitioner. These include over-the-counter (OTC) products and self-help activities. Clearly this distinction is important, as very different usage rates apply to each of these and range between a lowest figure of some 8% of the population for practitioner-based CAM (Druss & Rosenheck, 1999) to just under 50% of the population for all types of CAM, including OTC and self-help in those countries for which English-language surveys are available (MacLennan et al., 1996). There is evidence of growth in both groups, even though CAM practitioner visits are concentrated in particular groups of individuals. With the use of the above analysis, the two streams of CAM therefore yield two separate but overlapping marketplaces: practitioner-based and non-practitioner-based CAM.

Ribeaux and Spence (2001) have proposed a taxonomy based on the degree of holism involved in a therapy or product. The concept of holism is complex, with almost as many versions as CAM itself. Although it is a word much used in the marketplace, as far as is known little has been written about the subject in the academic or scientific literature (an
exception being Astin & Astin, 2002). In due course, the concept needs the full attention of researchers. However, this taxonomy does address the kind of research methodology appropriate for evaluation of the efficacy of the particular kinds of CAM. Treatments or therapies are divided according to their degree of holism as, for example, in Table 1. The double-blind, randomized, placebo-controlled trial, long regarded as the gold standard for efficacy testing in medical science, is totally appropriate for the least-holistic treatments, which are similar to pharmaceutical products, but is problematic in dealing with the most holistic ones, where the issues are similar to those involved in evaluating efficacy in behavioral medicine and psychotherapy (Mair, 1992). In the case of the latter, other kinds of efficacy testing would be more appropriate.

FROM DEMOGRAPHIC CHARACTERISTICS TO VALUE CREATION: UNCOVERING THE COMPLEXITY OF CAM USERS

Although there have been attempts to identify the extent of CAM use and the profile of CAM users, these attempts have been fragmented and provide only a disjointed picture of the market as a whole. In the following section, the traditional marketing segmentation variables based on usage rate, demographic, geographic, and psychographic characteristics will be applied to CAM consumers with the aim of uncovering trends in this market.

Usage Rate

**General Trends.** The increase in CAM usage rate has been documented in a number of studies. A comparison of two national surveys conducted in the United States by Eisenberg et al. (1993, 1998) indicated that the use of at least 1 of 16 CAM therapies during the previous year increased from 34% in 1990 to 42% in 1997. Extrapolations of patterns of use to the U.S. population suggest a 47% increase in total visits to alternative medicine practitioners, from 427 million in 1990 to 629

### Table 1. Possible Classification of Therapies by Degree of Holism.

<table>
<thead>
<tr>
<th>Least Holistic</th>
<th>Moderately Holistic</th>
<th>Most Holistic</th>
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<tbody>
<tr>
<td>Herbal medicine</td>
<td>Massage</td>
<td>Alexander technique</td>
</tr>
<tr>
<td>Osteopathy</td>
<td>Acupuncture</td>
<td>Bioenergetic therapy</td>
</tr>
<tr>
<td>Chiropractic</td>
<td>Spiritual healing</td>
<td>Dance movement therapy</td>
</tr>
<tr>
<td>Reflexology</td>
<td>Aromatherapy</td>
<td>Yoga</td>
</tr>
<tr>
<td></td>
<td>Autogenic training</td>
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</tbody>
</table>

COMPLEMENTARY AND ALTERNATIVE MEDICINE 119
million in 1997, thereby exceeding total visits to all U.S. primary-care physicians. This seems a surprisingly high figure, considering most CAM is paid out-of-pocket, as few insurance companies offer these therapies in their packages.

Another interesting trend to point out is the growing segment of consumers of wellness, a $60 billion industry in the United States (Janoff, 2000a). About a third of CAM patients in 1990 did not report any specific medical condition, and this segment increased to 58% in 1997 (Eisenberg et al., 1998). CAM is used, among this segment, with the intention of maintaining a present state of wellness and prevent the possible occurrence of illness (Howell, 2001). A recent study by the Food Marketing Institute found that 37% of all shoppers use organic food to maintain their health (Vaczek, 2000).

In addition to the general upward trend in the use of CAM, therapies are gaining in popularity to differing degrees. Eisenberg et al. (1998) report that the largest increases between 1990 and 1997 occurred in the fields of homeopathy (385%), herbal medicine (380%), energy healing (192%), megavitamins (130%), self-help groups (108%), and massage (61%). The surge in the use of herbal medicine and megavitamins has not gone unnoticed by mainstream retailers, who have added shelf space for these products based on the knowledge that more than 70% of U.S. households purchase vitamins, minerals, herbs, and supplements. Natural product sales in the United States grew by 18% in 1998, accounting for $2.1 billion of mainstream supermarkets, drugstore, and mass-merchandiser sales (Janoff, 2000a). The natural-product market, which encompasses natural food and beverages, nutritional supplements, and a small segment of personal care products, is valued at $28 billion in the United States (Jarvis, 2000). This phenomenon is demand driven and, as in the case of health provision, consumers seem to be closing the gap between alternative and mainstream solutions (Janoff, 2000b) and imposing their own preferences on various suppliers. A number of major food and drug manufacturers have acquired small makers of natural products to ensure their presence in this lucrative market (Harrison, 2000; Roma Kane, 2001). This situation has raised eyebrows among supporters of a pure CAM ideology, as it is feared that large companies driven by efficiency and cost reduction may alter the traditional manufacturing process of herbal remedies together with their naturalness (Vaczek, 2000). Alongside this growth in health products and services has gone an increase in the supply of CAM therapists in a variety of disciplines. A U.K. study records an increase of some 20% in CAM therapists between 1997 and 1999 (Mills & Budd, 2000).

A further indication of the expansion of the CAM market is the growth in the number of university and medical courses partially or wholly devoted to it. In the U.K. a number of universities have developed programs both in individual CAM therapies (e.g. Herbal Medicine and Traditional Chinese Medicine at Middlesex University as well as wider
CAM courses such as that at Westminster University. Although these do not offer evidence of efficacy, they do offer the prospect of a more scientific approach to CAM by future practitioners through the teaching of research methods as well subjects equivalent to those taught in medical schools at the premedical level such as chemistry, biology, anatomy, and physiology.

In the United States, too, there are three 5-year training establishments (in Washington State, Oregon, and Arizona) that graduate doctors of naturopathy who are licensed to practice in about a dozen states with an almost equivalent scope of practice as MDs. They complete an identical premedical training to MDs as well as a range of complementary therapeutic modalities.

On the other side of the coin, medical schools are increasingly providing introductory courses in both CAM and individual CAM therapies as part of their undergraduate curriculum, albeit usually on an optional basis.

There seems, therefore, to be little doubt that CAM has become part of many consumers' (including students') regular purchasing habits, be it with a preventive, curative, or educational objective. However, the exact extent of this growth cannot be determined in the absence of accurate estimates of CAM use over the last decade. Unfortunately, these are not available in any general sense. Each study uses either a different definition of CAM, a different sample of CAM therapies, or a different time period of investigation. This is a situation noted by a number of authors in the field (for the most recent systematic review, see Harris & Rees, 2000). Some of this complexity is illustrated in Table 2. The table features four studies using two representative definitions of CAM. It contains two recent studies published since the Harris and Rees review, and two high-quality studies referred to by them. Druss and Ro-

<table>
<thead>
<tr>
<th>Use of Health Provider Over the Year</th>
<th>Druss &amp; Rosenheck, 1999 (USA)</th>
<th>MacLennan et al., 1996 (Australia)</th>
<th>Eisenberg et al., 1998 (USA)</th>
<th>Thomas et al., 2001 (UK)</th>
</tr>
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<tbody>
<tr>
<td>CAM only</td>
<td>1.8%</td>
<td></td>
<td></td>
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<tr>
<td>CAM and CMT</td>
<td>6.5% (48.5%)^</td>
<td>20.3% (42%)</td>
<td>13.6% (28.3%)</td>
<td></td>
</tr>
<tr>
<td>CMT only</td>
<td>59.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neither</td>
<td>32.2%</td>
<td></td>
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Note: Figures without parentheses refer only to visits to at least one practitioner. Parentheses denote both practitioner visits and use of food supplements, etc. Brackets denote lifetime use.

^Use of at least one nonmedically prescribed alternative medicine excluding iron, calcium, and prescribed vitamins (excludes practitioner visits).
senbeck (1999) use only practitioner visits as their measure of CAM use. Eisenberg et al. (1998) include both practitioner visits and less expensive products and services such as self-help groups, meditation, vitamins, and food supplements. To complicate matters, MacLennan et al. (1996) have separate figures for practitioner visits and other kinds of products and services. In addition, all studies have different ways of measuring practitioner visits with, for example, Eisenberg et al. (1998) including a much larger sample of CAM therapies than Thomas, Nicholl, and Coleman (2001). In Table 2, figures for practitioner visits only are indicated without brackets, and figures combining practitioner visits and other products/services are indicated in brackets.

A very small proportion of people use only CAM for their health care. In the case of these individuals, it seems likely that such use is based on ideology or perhaps the good fortune not to be suffering from any particular serious symptoms, or both.

On the other hand, up to perhaps 50% of people use at least one form of CAM (loosely defined) over the course of their lifetime (Thomas et al., 2001). However, the Druss and Rosenheck (1999) survey, using a narrower definition of CAM use (practitioner visits only) puts the figure at much less than 10%. With such disparate figures, confusion about the actual use of CAM is not surprising. However, during the late 1990s it does seem to be somewhere between 8% (Druss & Rosenheck, 1999) and 20% for CAM practitioner visits over 1 year (MacLennan et al., 1996), and up to 50% if the figure is to include self-care in the form of over-the-counter (OTC) remedies, self-help groups, etc. (Eisenberg et al., 1998; MacLennan et al., 1996). The idea of widespread use of CAM must therefore be considered in the context of a relatively small use of practitioner visits. This is in line with the conclusions of Harris and Rees (2000) and is supported by the study of Wolsko et al. (2002). They suggest that much of CAM use is concentrated in a small minority of persons (8.9% of the population, 17.5 million adults in the United States). These users accounted for more than 75% of the 629 million visits made to CAM providers in 1997.

**CAM versus CMT.** Is CAM alternative or complementary to CMT? There are many strands to this issue. However, it clearly appears that only a very small minority of CAM users has CAM as their only source of health care. In Astin's (1998) survey, only 4.4% of respondents reported relying primarily on CAM. The Druss and Rosenheck (1999) survey reported that the figure was even smaller (1.8%) versus the 59.5% who used only conventional care and the 32.2% who used neither, leaving 6.5% who used both. In this study, use of unconventional therapies was substantially lower than reported in previous national surveys (because practitioner-based CAM only was measured), but was associated with increased use of physician services. These results are in keeping with those of Eisenberg et al. (1998), who reported that 96% of respon-
dents who saw an alternative therapist during the prior 12 months also
saw a medical doctor. The results nevertheless show that CAM appears
to serve more as a complement rather than an alternative to conven-
tional medicine. This, to some extent, reduces the fear that it may be
used instead of CMT in critical conditions, with the possibility of fatality
or an increase in the seriousness of the condition.

Furthermore, national survey data seem not to support the view that
use of CAM in the United States primarily reflects dissatisfaction with
conventional care (Astin, 1998). Of 831 respondents who saw a medical
doctor and used CAM therapies in the previous 12 months, 79% per-
ceived the combination to be superior to either one alone (Eisenberg
et al., 2001). More targeted surveys, however, reported that patients
used CAM because their particular condition could not be treated effec-
tively with CMT (Vincent & Furnham, 1996).

Specific Medical Conditions. If a 42% CAM (broadly defined) usage
rate is considered the average for the U.S. population (Eisenberg et al.,
1998), it appears that the incidence of CAM use is greater among pa-
tients with specific illnesses. Reported usage rates can be as high as
88% for lung transplant patients (Matthees et al., 2001), 66% among
patients attending a rheumatology clinic (Boisset & Fitzcharles, 1994),
and 67% among Canadian breast cancer survivors (Boon et al., 2000).
These latter patients reported using CAM in an attempt to boost the
immune system. A very high incidence of CAM use was found among
fibromyalgia syndrome patients (91%), possibly indicating that conven-
tional medical therapies are inadequate in providing symptomatic relief
to these patients (Pioro-Boisset, Esdaile, & Fitzcharles, 1996). Among
patients with chronic disease, a wide variety of therapies are generally
used (Winterholler, Erbguth, & Neundorfer, 1997).

In a number of surveys, poorer health in general (a higher level of
morbidity), not necessarily the presence of specific conditions, was as-
associated with an increased usage of CAM (Astin, 1998; Bausell, Lee, &
Berman, 2001b; Krastins, Ristinen, Cimino, & Mamta, 1998; Welsko
et al., 2000).

Usage Rate and Expenditure. The extent of CAM use can also be
evaluated by the extent of disposable income spent on various therapies,
treatments, and products. Estimated expenditure for the 16 CAM ther-
apies studied increased 45% (in real terms) between 1990 and 1997 and
was conservatively estimated at $21 billion in 1997, with at least $12
billion paid out-of-pocket (Eisenberg et al., 1998). This exceeded the
out-of-pocket expenditure relating to CAM (including professional vis-
ts, herbal therapies, megavitamins, diet products, CAM books, and
equipment) was conservatively estimated at $27 billion, which is com-
parable with the projected 1997 out-of-pocket expenditure for all U.S.
CMT services. Insurance coverage for CAM provision was a strong correlate of frequent use of CAM providers (Wolsko et al., 2002). A study of breast cancer survivors identified cost as a barrier to using CAM (Boon, Brown, Gavin, Kennard, Stewart, 1999).

Other studies, however, have demonstrated that CAM use is not necessarily linked to high expenditure. The annual CAM expenditure for a group of rheumatology patients was $100. These patients used mostly inexpensive products and no-cost spiritual aids (Boisset & Fitzcharles, 1994). Home remedies were used by 31% of the respondents followed by special diets (24%), relaxation techniques (20%), and herbal medicines (18%). More expensive therapies such as acupuncture, biofeedback, energy healing, and hypnosis were used by less than 5% of a sample of Florida residents questioned about their lifetime use of CAM (Burg, Hatch, & Neims, 1998). Self-treatment is also common among Chinese immigrants (Ma, 1999), and the use of folk healing is widespread among Mexican-Americans (Keegan, 1996), Hawaiians, and Filipinos (Maskarinec, Shumay, Kakai, & Gotay, 2000). These low-cost CAM alternatives may be more congruent with the patients' culture and beliefs as well as purchasing power, and may explain the statistical prevalence of CAM use in patients from all socio-economic backgrounds. Different kinds of people use different kinds of CAM.

At the other end of the spectrum, the wellness marketplace offers spa vacations, including stone massage, champagne wrap, whipped chocolate bath, underwater shiatsu massage, and so forth, starting at about $US85 per treatment (Robin, 2002). The spa business has revived some dying hotels and has increased capacity in others. The income generated by this sector reached $1 billion in 2000 in the United States and Canada (including accommodations, meals, and treatments) with a 20% annual increase between 1998 and 2000 (“Spa Industry Exploding,” 2000). “Spa clients try to find an oasis of serenity, a refuge from the rigors of life and stress, a place to detoxify and de-stress” (Elliott, 2002). These are only some examples of the use of CAM aimed at the wellness market and serving more hedonist purposes.

Demographic Variables

Demographic variables have been analyzed in many surveys for their relationship with CAM use. The results are not conclusive, sometimes contradictory, and seem to depend on the samples used, the methodology, and the situation faced by patients when interviewed regarding their use of CAM. Some patterns, however, stand out.

Several surveys show the incidence of CAM use to be significantly higher among women than men (see, e.g., Astin, 1998; Burg, Hatch, & Neims, 1998; Leung, Dzankic, Manku, & Yuan, 2001; MacLennan et al., 1996; Vincent & Furnham, 1996; Wolsko et al., 2000, 2002). These women are more likely to be middle-aged and with higher education.
Beal (1998), however, argued that the higher incidence of CAM users among females may simply be linked to their tendency to be more concerned about their health and to make more visits to health practitioners in general.

A survey carried out in Quebec showed that CAM attracts a particular clientele and that users and non-users of CAM differed in age, activity, education, and income (Blais, Maiga, & Aboubacar, 1997). Astin (1998) found higher education to be a predictor of CAM use. On the other hand, Wolsko et al. (2000) demonstrated that income, age, race, and education were not significantly associated with CAM use, but being female was. This was supported by the results of Matthees et al. (2001) with lung transplant patients. Furthermore, Breuner, Barry, and Kemper (1998) found that CAM is frequently used by homeless youth. Seventy per cent of such subjects used CAM. Although the usage rate was lower than the average, another survey found that 29% of low-income patients used CAM (Krastins et al., 1998). A high interest in organic products was reported by consumers earning less than $30,000 per year (Howell, 2001). It may be concluded that CAM use in its broad sense is not necessarily confined to privileged socio-economic groups but instead is spread across a variety of individuals and social groups.

A study by Kelner and Wellman (1997) compares the social and health characteristics of patients of five kinds of practitioners: family physicians (used as a baseline group), chiropractors, acupuncturists/traditional Chinese medicine doctors, naturopaths, and Reiki practitioners. Although the most striking social and health differences occur between patients of family physicians and the patients of alternative practitioners, significant differences are also evident between the different groups of alternative patients. Reiki patients, for example, have a higher level of education and are more likely to be in managerial or professional positions than other alternative patients. In the study of Boutin, Buchwald, Robinson, and Collier (2000), frequency of use of CAM was high (85%), and overall use did not differ by gender and race, except when diet/nutrition was excluded. When this variable was excluded, women were more likely to use alternative therapies, and use of manual healing and herbal medicine differed by race. These two studies seem to indicate that all encompassing surveys may hide important details and possibly lead to over sweeping generalization.

Most general studies report that the tendency to use CAM is mainly the province of middle-aged patients, but it seems that children as well as the elderly also use these therapies, especially when faced with specific health problems. Friedman et al. (1997) found that 65% of children with cancer and 51% of children visiting their pediatrician for regular care used CAM. The findings of Astin, Pelletier, Marie, and Haskell (2000) suggest that there is significant interest in and use of complementary/alternative medicine among elderly Californians. Forty-one per cent of their respondents used CAM. Given the contradictions
encountered in the above surveys, demographic variables may not be the best predictor of CAM use and may mislead practitioners as well as commercial organizations.

**Geographic Variables**

The increase in the use of CAM has been studied principally in the developed world (the U.S., Europe, and Australia). Some studies have suggested that this increase was to some extent induced by demographic changes (Montoya, 1998). As an example, high demand from people with higher education from non-Western cultures encouraged a hospital in Toronto to open a full wing dedicated to CAM (Elash, 1997). In more traditional societies, CAM is the standard way of treating illnesses, and immigrants to Western countries seem to have kept their ways of approaching health. Studies specifically comparing usage rates of CAM between ethnic groups and Western groups have generally found that CAM is still the favored route toward wellness for certain ethnic groups. The findings include high rates of self-treatment and home remedies (balanced diets and other alternative medicines) for Chinese immigrants to the United States; medium rates of utilization of integrated Western and traditional health services, including travel to country of origin for care; and low rates of exclusive utilization of Western or traditional Chinese treatments (Ma, 1999). Similar practices were also found among Mexican Americans and Dominicans (Allen et al., 2000). Keegan (2000) reported that Mexican Americans used CAM twice as often as Anglo-Americans, including visits to the traditional curanderos (Mexican folk healers) (Keegan, 1996). Maskarinec et al. (2000) detected ethnic differences in CAM use among cancer patients. CAM use was highest among Filipino and Caucasian patients, intermediate for native Hawaiians and Chinese, and significantly lower among Japanese. Some ethnic preferences for CAM followed ethnic folk medicine traditions, for example, herbal medicines by Chinese, Hawaiian healing by native Hawaiians, and religious healing or prayer by Filipinos. This study supports the importance of cultural factors in determining the frequency and type of CAM therapies chosen.

In a study using a broader sampling frame, the results are somehow different. Wolsko et al. (2000) investigated clinics in the United States with patients of different socio-economic backgrounds and found no significant differences in race between users and non-users of CAM. On the other hand, Bausell, Lee, and Berman (2001a) suggested that Hispanics and African Americans were less likely to visit CAM providers than whites, supporting the findings of Leung et al. (2001) of higher use of CAM among Caucasians. These results illustrate how sensitive to survey design these conclusions may be.
Psychographic Variables

It can be concluded from the above that tangible descriptive variables only partially explain why patients choose CAM. Another dimension of CAM use seems to be the health-related values and beliefs of patients, for instance, a perceived ineffectiveness of orthodox medicine, congruence between CAM and personal lifestyle, the patient's desire to take an active role in maintaining his/her health, a perceived emphasis on treating the whole person.

Although the national surveys point to the fact that CAM is being used as a complement to CMT and, consequently, no dissatisfaction seemed to be obvious with CMT, studies focusing on the motivation for CAM use did show dissatisfaction. Siahpush (1999) indicated that dissatisfaction with CMT has two distinct dimensions. One relates to the medical outcome, that is, a belief in the effectiveness of CAM for a particular condition compared to CMT, or a concern regarding the side effects of conventional therapies (Furnham & Bhagrath, 1993; Vincent & Furnham, 1996). The other relates to the medical encounter, such as a difficult or unsatisfactory relationship with CMT practitioners (Sollner, Zingg-Schir, Rumpold, & Fritsch, 1997).

Neither of these dimensions, however, fully explains people's attitudes toward alternative medicine as described in preceding sections. If dissatisfaction with CMT is seen as being a predictor of the use of CAM, the high percentage of patients consulting a medical practitioner indicates that some ideological values should also be present. The pattern revealed is one of multiple uses: Patients choose the combination of practitioners they believe can best help their particular problem. These patients portray a proactive attitude toward their health that is similar to one of consumerism. Furthermore, given the relatively small number of patients actually using CAM practitioners, one conceptualization could be that these patients are among the innovators and early adopters of new trends in the marketplace and portray an attitude of self-discovery (Janoff, 2000a). This argument is supported by studies showing that users of CAM were found to have a holistic orientation to health, that is, believing that "numerous healthy lifestyle methods are available and efficient in preventing illness" (Furnham & Bhagrath, 1993). Others have had a transformational experience that has changed their worldview (Astin, 1998). They also showed a commitment to or an interest in environmentalism, feminism, spirituality, and personal growth psychology. This trend has been noted as well by marketing researchers studying the growth of the organic product market. They have found more caring behaviors and higher-level concerns aimed at the environment and the community among the purchasers of such products (e.g. Hartman Group, 1997).

Proactive behavior was found among patients with specific conditions. Having some control over their health motivated these patients to
embrace CAM. Because these patients generally feature a higher rate of morbidity than the average population, the use of CAM may have helped to improve their quality of life through more effective coping with stress, decreasing the discomforts of treatment and illness, and giving them a sense of control (Burstein, Gelber, Guadagnoli, & Weeks, 1999; Sollner et al., 2000; Sparber et al., 2000a). Instances of enhancement of quality of life and provision of additional coping mechanisms abound in the literature. As an example, the vast majority of HIV/AIDS patients agreed that the benefits of CAM use were: feeling better, coping better, feeling in control, and experiencing an enhanced treatment outcome, with 61% stating CAM was as effective, or more effective than conventional treatment (Sparber et al., 2000b).

Some cancer patients also perceived additional values in CAM, such as being more effective and less harmful than CMT, which somehow contributed to their decision to decline part or all of their conventional treatment (surgery, chemotherapy, or radiation) (Shumay, Maskarinec, Kakai, & Gotay, 2001). In addition, patients with specific conditions found in CAM the emotional support not found in CMT, especially when their relationship with CMT providers had been unsatisfactory or alienating (Sollner et al., 1997).

DISCUSSION

It seems that the search for a profile of the CAM patient defies simple description. Some of the interacting variables include medical condition, age, education, ethnicity, culture, gender, motivation, ideology (holism), and type of CAM used. These interact in a mosaic about which, due to the non-standardized nature of the surveys so far, it is impossible to be precise. However, from the evidence reviewed, it seems possible to identify, albeit speculatively, clusters of usage that may help to clarify the phenomenon and to make use of psychological theory to suggest some ideas about the motivations within these clusters. In this section, an analysis of the CAM market to identify meaningful consumer segments is attempted, based on evidence presented earlier. This is followed by suggestions as to the value drivers that have triggered the health market growth as seen from a consumer perspective. The role of attitudinal and emotional factors in the CAM sector, given the unproven scientific status of many of its products and services, is then discussed, together with the necessity for efficacy testing if there is to be rapprochement of this sector with CMT.

A Range of Consumers

The review of the literature on health-care consumption, attitudes, and behavior presented previously aided in identifying ongoing trends in
this market. From the evidence studied, three possible categories of health-care consumer can be profiled, together with a number of subcategories: (a) CAM believers who are ideologically wedded to the exclusive use of CAM in their health care; (b) seekers, who make some use of CAM, both practitioner-based and non-practitioner-based, alongside CMT; and (c) CMT trusters, who make exclusive use of CMT. The theory of planned behavior (e.g., Ajzen, 1991; Ajzen & Madden, 1986) and its later extensions among other approaches will be used illustratively to provide insights into the motivations for each cluster's use of specific health-care solutions.

(a) CAM Believers. Very few people (less than 5%) (Astin, 1998; Druss & Rosenheck, 1999) use CAM as their only form of treatment. This small group does so possibly because of its congruence with their ideology and beliefs. Although in the present investigation no details were identified regarding these consumers' lifestyle, one might imagine that the CAM believer seeks to follow a path to prevent illness and, if ill, seeks to use natural remedies and methods. A subcategory may consist, as with the seekers, of ethnic groups, some of whose members rely chiefly on traditional healing methods (Ma, 1999). This may be due to old habit patterns, a fear of the unknown when dealing with CMT or a conscious effort to maintain ethnic identity in the adopted country (Laroche, Kim, & Tomiuk, 1999). In the case of this category, attitude is the major factor determining choice, perhaps supported by a subjective norm deriving from an ethnic, peer, or reference group. The Fishbein and Ajzen (1975) theory of reasoned action accommodates this type of behavior, as does the later extension, the theory of planned behavior (Ajzen, 1991; Ajzen & Madden, 1986).

(b) Seekers. These consumers use both CAM and CMT in varying proportions, depending either on their particular medical condition, to prevent illness, or achieve a greater state of wellness. Using a broad definition of CAM (including practitioner visits as well as use of food supplements, OTC remedies, self-help groups, etc.), usage rate in this category ranges from 42% (Eisenberg et al., 1998) to 48% (MacLennan et al., 1996). However it rises to as high as 91% for patients suffering from fibromyalgia syndrome (Pioro-Boisset et al., 1996). Seekers are likely to be proactive individuals who educate themselves about their specific conditions or about alternative lifestyles through which they may achieve their goals of treatment, prevention, or wellness. They do not immediately accept conventional medical practitioners' authority and seek a balance between conventional and CAM paths that is right for them. The different subcategories of seekers, namely, those with a specific medical condition, those dissatisfied with CMT, and those specifically influenced by their ethnic group, can also probably be accommodated by the theory of planned behavior. In these cases, the use of
CMT as well as CAM is explained by the recognition of a lack of behavioral control. The existence of a medical condition may indicate a situation outside the perceived behavioral control of the individual. This will reduce the likelihood that the person will seek to rely exclusively on either CAM or CMT. The literature on hope may also help explain the behavior of seekers. Out of despair, frustration or simple enthusiasm, these individuals may turn to CAM to fulfill their unmet needs in the hope that some day, their goal of wellness will be realized (for a review see McInnes & de Mello, 2001).

Although positive evidence for some forms of CAM is accumulating from well-conducted trials, it is also the case that much of the evidence is negative (Ernst, Pittler, Stevinson, & White, 2001, p. xii). The literature on self-deception (Mele, 1987, 1993, 1997) is therefore relevant here. Negative information about the effectiveness of CAM may be systematically misinterpreted. Alternatively, the individual may avoid sources of negative information (Frey, 1986).

For those seekers for whom CAM is part of a lifestyle, the concept of hedonic consumption may provide additional explanatory power. “Hedonic consumption designates those facets of consumer behavior that relate to the multisensory, fantasy and emotive aspects of one’s experience with products” (Hirschman & Holbrook, 1982, p. 92). Hedonic consumption allows for the full range of emotions to be studied (Holbrook & Hirschman, 1982). In this context, products and services are not considered for their utilitarian function, but for the emotive response they trigger for the consumer, their symbolic value. Hence, using CAM as part of a lifestyle may strengthen the belief that eternal youth is possible. Seekers comprise a spread of consumers ranging from a majority of those who visit practitioners to those who, for a variety of reasons, have helped fuel the growth of the non-practitioner-based market. The jury is still out on the extent to which they are purchasing effective products and services or snake oil. See below for a discussion of the efficacy testing necessary to render this marketplace a more rational one.

(c) CMT Trusters. CMT trusters seem to be individuals who respect CMT practitioners’ authority and are reluctant to venture into the CAM arena. These patients appear to represent in the region of 60% of the population (e.g., Druss & Rosenheck, 1999). Again, in keeping with planned-behavior theory, one could hypothesize that their lack of perceived behavioral control in the event of illness would cause them to engage in the behavior endorsed by both their own attitude and their subjective social norms.

Changing Marketplace, Changing Values

The present review seems to show that there is indeed a trend toward consumerism in health-care provision. Consumers are choosing, and us-
ing, a number of treatments in order to achieve wellness, whether they are ill or not. The growth in the number of CAM practitioner visits and in the use of lifestyle and self-help methods suggests that patients/consumers may be taking responsibility for their health to a greater extent than before. Increasing numbers appear to be involved in illness prevention and in achieving and maintaining a certain level of wellness. CAM is considered helpful by patients in spite of the lack of scientific data about its effect and very little insurance reimbursement (Von Gruenigen et al., 2001). Although consumers are increasingly making use of nonpractitioner items like vitamins, food supplements, and other items at the cheaper end of the market in terms of cash and time, others are increasingly ready to make a financial sacrifice. This suggests that, within the CAM marketplace, consumers are engaging in exchanges that bring them value. These value drivers are both utilitarian and symbolic and, in keeping with the philosophy of holism, might be characterized in the following manner: (a) at the body level, the aim is to decrease the symptoms or physical pain directly experienced, as well to offer an alternative or complement when CMT has proven ineffective, for example, in the case of musculo-skeletal conditions; (b) at the mind level, what is sought is a decrease in helplessness with or without ill health, as well as a sense of increased well-being, a search for prevention, and a hope for long-term wellness; and (c) at the spirit level, there is a search for higher values in order to reduce discomfort and increase coping, or to find greater meaning in life, even in the case of already achieved wellness, for example, a sense of greater wholeness.

Health care has been transformed in many respects, and the CAM revolution is not to be denied. Yet it is a more complex phenomenon than the simple descriptions of either a pragmatic search for a remedy or a part of a wide-ranging social change in the direction of post modernism and consumerism. On the one hand, the exclusive position of positivist biomedicine has radically changed. For many, the unquestioned authority of the doctor as the expert in fixing the human machine has been rejected. The fallibility of the medical practitioner, so evident in the media, and the arrival of a more medically educated patient have combined to alter the medical practitioner/patient relationship in a significant proportion of cases. On the other hand, there remain a large number, at least 50%, of patients for whom the doctor retains his or her traditional authority, albeit perhaps for lack of perception of any alternative. This picture has implications for research, for providers of health care, and for insurance companies.

CAM Efficacy Testing

Underpinning the CAM phenomenon lies the quicksand of “efficacy.” Although evidence is accumulating from well-conducted studies for the efficacy of some forms of CAM, it remains the case that others have little
evidence to back them up (Ernst et al., 2001, p. xii). In view of this situation, efficacy testing is a matter of urgency. It has, however, been argued that the gold standard of efficacy testing in CMT, the randomized controlled trial (RCT), is inappropriate for testing holistic therapies such as those in CAM. This view is probably oversimplified.

It makes little sense to ask whether a CAM therapy works. Just as conventional medicine contains a large number of specialties and treatments, so do many CAM therapies. Osteopathy, for example, makes use of many different techniques and manipulations. Herbal medicine makes use of many different herbs. Osteopathy and herbal medicine are too wide in their scope to ask whether they work.

In order to go deeper into the matter, a distinction is necessary between a therapy and a treatment. For present purposes, therapy is defined as the portfolio of treatments available to members of a profession. Osteopathy is therefore a therapy consisting of a number of treatments, for example, massage and manipulation. Instead of asking whether osteopathy works, one should ask which osteopathic treatments are effective for which conditions (under what circumstances, by whom, for whom). The task of evaluation is to identify which treatments from within a therapy's armory are effective for which conditions. A therapy is shown to be effective when an appropriate proportion of its treatments are demonstrated to be effective in the hands of most of its trained therapists (practitioners). However, there is a complication here, deriving from two sources: the holistic basis of many CAM therapies and the fact that many CAM therapists are multiskilled. Both of these enable tailoring the treatment to the patient and make it difficult to standardize treatments for efficacy testing purposes. The logic of this argument points to finer and finer units of analysis: from therapy to specific treatment to particular therapist. Whereas much of CMT and the less holistic therapies may focus chiefly on the evaluation of outcomes, the RCT being appropriate for this, research into holistic therapies also has to take into account further subtleties involved in the delivery process of the treatment and is likely to require analysis of inter therapist differences (see Ribeaux & Spence, 2001, for a fuller review of these issues).

That the issue of efficacy is likely to be treated with increasing seriousness is perhaps indicated by the introduction of complementary medicine courses in universities and medical schools as mentioned earlier in this article. Improved communication between practitioners of CAM and CMT in the future with benefits in the form of collaboration in an integrated approach and a joint approach to efficacy testing is to be hoped for.

Research and Marketing Implications

A number of points may be made in connection with the research and marketing implications of the present study. First, clearer and more
consistent methodologies for surveys of usage rates are required to remedy the present lack of clarity surrounding CAM use. More specifically, there is a strong need to differentiate in the surveys between the definitions of CAM that include only practitioner visits and those which include OTC, self-help products and non-practitioner-based activities. This distinction is likely to be related to variables such as income, education, and ethnicity.

Second, the variety of CAM products and therapies makes it impossible to make meaningful overall generalizations about the sector. Future surveys should therefore present their results in a manner that facilitates direct comparison of usage rates (a) for a fixed period of time, (b) for particular therapies and products and for groups of these, and (c) for particular sectors of the population and medical diagnosis.

Third, research in marketing might further investigate the distribution of values sought by health-care consumers, especially among seekers. This would enable targeting of relevant groups with health-care packages appropriate to their value drivers, for example, CAM alongside cancer therapy, or exclusively CAM treatment for chronic back pain in those for whom that choice adds most value. In addition, more research is required to identify the manner in which specific illnesses, belief systems, gender, education, and other variables interact with CAM use.

Finally, CAM research into process and efficacy needs to be pursued because the efficacy status of its products and services underpins the whole dynamic of the marketplace and the extent to which it is driven by rational or emotional considerations.

**CONCLUSION**

This article has made an initial attempt at segmenting consumers in the context of complementary and alternative medicine. In view of the lack of evidence for the efficacy of many of its products and services, the need for methods of efficacy testing appropriate to CAM is discussed in order to develop a more rational map of this market in contrast to one based predominantly on attitude and emotion, the purpose being to enable a greater rapprochement with conventional medicine. Although conventional medicine has long preached the value of prevention, it has regularly found itself in the role of fire fighter to the extent that the time, expense, and energy required for preventive medicine have not been available. This situation is changing with the arrival of patients increasingly prepared to take their health care into their own hands. The philosophical underpinning of CAM, inasmuch as it exists, points specifically in this direction. The time has come for a concerted collaborative venture between health-care providers and patients via the use of CAM ideas about healthy lifestyle and the use of appropriate CAM
therapies for prevention. To this end, mistrust between CAM and CMT practitioners will have to be reduced through increased communication and education. The development of CAM courses in universities and medical schools where it should come under critical scrutiny and move toward increased efficacy testing gives rise to optimism in this respect. The insurance sector is implicated in this process, because extent of insurance coverage is a strong correlate of frequent use of CAM providers (Wolsko et al., 2002). Market demand, though, should not take precedence over a system that offers plurality based on efficacy, safety, and cost effectiveness. This tension is healthy, but just as in other sectors, the public has to be protected from products and services that do not live up to their claims.

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