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Treatment seeking and experience with complementary/alternative medicine:

A continuum of choice

Fuschia M. Sirois, M.A., B.Sc.

Carleton University, Ottawa

KEYWORDS: Treatment seeking, alternative/complementary medicine, treatment choices

Correspondence concerning this article should be addressed to Fuschia M. Sirois, PhD, Department of Psychology, University of Sheffield, 309 Western Bank, Sheffield, S10 2TP, United Kingdom. Email: f.sirois@sheffield.ac.uk

ABSTRACT

Objectives: To examine the treatment seeking patterns of conventional medicine (CM) and complementary and alternative medicine (CAM) clients across different health problems, and to investigate whether CAM clients with different levels of experience with CAM use different modes of treatment for their health issues.

Design: three-group cross-sectional, self-administered survey study

Settings and subjects: 199 self-selected participants sampled from CM and CAM clinics and offices

Outcome measures: Self-reported physical health problems, treatment seeking for health problems, and type of treatment used for each health problem (CM, CAM, or both)

Results: Treatment rates for non-life threatening health issues were significantly associated with client group membership after controlling for differences in the number of health problems (partial $r = .35$, $p < .0001$), with the more experienced CAM clients reporting the highest treatment rates and the CM clients reporting the lowest rates. The newer CAM clients also differed significantly from the more experienced CAM clients in the modes of treatment used for their health issues ($p < .0001$), with the less experienced CAM clients relying more on CM alone (42.0%) or in conjunction with CAM (38.3%), whereas the experienced CAM clients used more CAM with CM (45.0%), or CAM alone (33.5%) than just CM alone (21.5%), for treating their health issues.

Conclusions: CAM users may treat their health issues at higher rates than non-users, independent of their greater number of health problems. This treatment rate increase may be associated with greater experience with CAM. CAM clients are not homogeneous in their choices of treatment modalities. Newer CAM users still rely heavily on CM

treatments, whereas more experienced CAM users depend less on CM alone and more on CAM for treating their non-life threatening health issues.

INTRODUCTION

Increased interest and utilization of complementary and alternative medicine (CAM) over the past decade (Eisenberg et al., 1998; Eisenberg et al., 1993) has led to investigations of the characteristics of CAM users. Although this research suggests that socio-demographic and health belief variables distinguish CAM users and non-users (Astin, 1998; Balneaves et al., 1999; Furnham and Bhagrath, 1993; Kelner and Wellman, 1997b), factors related to health status and use of health services have also been implicated.

Several studies have revealed that CAM users have more medical problems (Astin, 1998), and report poorer overall health status compared to non-users (Eisenberg et al., 1998; Ramos-Remus et al., 1999; Wolsko et al., 2000). Moreover, the health problems of CAM users tend to be chronic in nature (Blais et al., 1997; Eisenberg et al., 1998; Kelner and Wellman, 1997a; Millar, 1997; Murray and Shepherd, 1993; Vincent and Furnham, 1996). Accordingly, some studies suggest that CAM users make more physician visits than non-users (Druss and Rosenheck, 1999; Murray and Shepherd, 1993; Paramore, 1997), whereas at least one investigation has found that CAM users make fewer visits to both general physicians and specialists (Blais et al., 1997). It is also widely accepted that most CAM is used in addition to rather than as a substitute for conventional medicine (CM) (Downer et al., 1994; Druss and Rosenheck, 1999; Fulder and Munro, 1985; Murray and Shepherd, 1993; Thomas et al., 1991), and that CAM users utilize various health care

modalities concurrently for their health problems (Northcott and Bachynsky, 1993).

Most of the research to date on the health characteristics of CAM users reports the existence of various health problems without addressing if and how these problems were treated. It is often assumed that the greater reports of health problems by CAM users equates to greater treatment seeking, and that the supplementation of CM with CAM accounts for this greater health care use. In contrast, Eisenberg and colleagues (1993) found that a third of CAM users did not use CAM for any principal medical condition, suggesting that CAM use was for preventive rather than therapeutic purposes. However, the issues of whether CAM users seek treatment at higher rates for their health problems than non-users, and what treatment modalities (CM or CAM) are used more often by CAM users, have not been addressed.

The few studies that have examined the use of CM and/or CAM for various health problems have treated CAM users as a homogenous group, with similar treatment rates and preferences (Druss and Rosenheck, 1999; Eisenberg et al., 1998). However, CAM users may be distinguishable according to factors such as length of use, medical need, and type of use. Indeed, Kelner and Wellman (1997a; 1997b) found distinct differences in social and health variables between the CAM clients of different types of CAM practitioners. With more people starting to explore CAM as a treatment option, one might not expect the newer CAM clients to use CAM in the same way or at the same rates as those who have been using CAM more extensively for a longer period of time.

The current study explores these issues by examining the differences between CAM users and non-users in treatment seeking for various health problems. Furthermore, CAM clients were differentiated according to their experience with CAM to see whether

there were any differences in their treatment seeking patterns. Finally, the choice of treatment options used by CAM clients for their health problems was explored, in order to examine if the treatment modes selected were associated with experience with CAM.

MATERIALS AND METHODS

Thirteen general physicians' offices/clinics and 4 CAM practitioners' offices (massage therapy, chiropractic, naturopathy/homeopathy, chiropractic with massage and acupuncture offered) in Ottawa, Canada, participated in the survey. Each had a waiting room where a "health services study" display was set up to advertise the study and provide the questionnaires. This display included a sign giving brief information about the study and participation, questionnaires, and a drop box for the questionnaires. As participation was on a volunteer, self-selection basis at the health offices, none of the researchers or the health office staff approached the potential participants regarding taking part in the study. Clients who were interested in participating completed the questionnaire packages from the display in the waiting rooms of the offices/clinics and deposited their questionnaires in the display box. A total 396 questionnaires were distributed to the 17 health offices, and of these 204 were completed and returned in the display box. Because participation was based on self-selection it is difficult to estimate the exact refusal rates, as some clients may have read the display sign but decided not to participate. Based on the available information of the number of questionnaires displayed versus those completed and returned, the response rate was 51.5%.

Each questionnaire included questions about the frequency of use of various complementary and alternative therapies over the past 3 months and the past year. The therapies listed were chiropractic, homeopathy/naturopathy, acupuncture, massage therapy,

and “other” therapies with a blank space to be filled in. A question about whether any of these therapies had ever been tried, and how long the participant had been using CAM was also included. These questions were used to classify the participants into the three client groups, conventional medicine clients (CM), new/infrequent complementary and alternative medicine clients (NICAM), and established complementary and alternative medicine clients (ECAM).

Participants classified as CM clients had not used or tried a CAM in the past year. ECAM clients had used CAM for over five years, or had used CAM very frequently (more than 3 times per year/per CAM, with more than one CAM used) for the past 3 to 5 years. The NICAM group was comprised of new CAM clients with less than 1 year use of CAM (n = 25), recent CAM clients who had used CAM for 1 to 2 years (n = 24), and infrequent CAM clients (n = 21) who had been using CAM for 3 to 5 years infrequently (less than 5 times per year for all CAM combined). These three CAM client groups were collapsed into the one group NICAM, since it was hypothesized that clients who had been using CAM infrequently would be similar in their experience level to clients who had just started using CAM more recently. Therefore, their knowledge and confidence about using CAM for different health issues may be similar.

The participants were also asked about their physical health problems and their treatment of these problems over the previous year. Twelve health issues were listed plus one “other” item with a blank to be filled in if necessary. Participants indicated if they experienced the problem and then circled the type of treatment used from the four options listed: CM, CAM, both CM and CAM, or none. A fourteen item measure of negative affect, the negative emotionality scale (NEM) (Tellegen, 1982) was included to control for

inflation of the self-reported physical problems, since research suggests that negative affect is related to higher reports of health problems (Watson and Pennebaker, 1989). Additional questions about socio-demographic variables were also included.

Analysis

The number of health problems (both in total and non-life threatening alone) reported for each group was assessed using a SPSS one-way ANOVA. Where appropriate, subsequent analyses of the treatment use in different client groups partialled out the variance due to the differences in the number of health problems.

Overall patterns of treatment seeking across the three groups were assessed by correlating group membership (CM = 1, NICAM = 2, ECAM = 3) with the number of non-life threatening health problems treated per person. Thus, each client could potentially report more than one health issue treated and therefore contribute data more than once to the total health problems. Because this violates the basic assumptions of independence of the chi-square test a correlational analysis was used.

Health problems such as cancer, heart problems, and diabetes were excluded from this analysis since most individuals would be expected to seek treatment at some time for these life-threatening conditions. The proportions of clients in each group seeking treatment were compared across individual health problems using 3 X 2 χ^2 tests where cell frequency size was greater than 5 because the chi-square test is not considered valid when over 20 percent cell frequencies are 5 or less.

Differences between the two CAM client groups in the treatment modalities chosen were assessed by generating a CAM treatment score for each client. The treatment used for each health problem was rated on a Likert-type scale with 0 indicating no

treatment, 1 reflecting CM treatment, 2 for CM plus CAM treatment, and 3 indicating only CAM used. Higher scores reflect a higher usage of CAM treatments alone for health issues, and lower scores indicate a tendency to rely more on CM for treatment. The treatment types were rated in this order since research suggests that most CAM is used in addition to CM treatments, and very few clients use exclusively CAM for their health issues (Downer et al., 1994; Druss and Rosenheck, 1999; Murray and Shepherd, 1993; Thomas et al., 1991). Therefore, it was expected that because both groups of CAM clients choose CAM as a treatment option, the scores would follow a somewhat normal distribution, with perhaps a slightly positive skew. Because ANOVA is very robust to minor violations of normality, the CAM treatment use scores for non-life threatening health problems were compared for the two CAM groups using SPSS ANOVA.

RESULTS

Of the 204 questionnaires returned, four questionnaires were not included due to excessive missing data, and one because the participant was under the legal age of consent. This left 199 participants (155 females, 43 males, 1 transgender) who were included in the study. Their mean age was 42 (SD = 13), with ages ranging from 19 to 80. The majority of the participants were married or living with a spouse equivalent (61%), employed either full or part time (72%), and Caucasian (93.4%). Fifty percent of the participants had a college education, 38 percent had some post-graduate education, and only 12 percent had high school education or less.

In addition to the 5 CAM therapies listed, 14 “other” therapies were reported. These included the more frequently listed reiki, reflexology, aromatherapy, iridology, and biofeedback.

The total number of health problems reported was significantly associated with client group membership ($F(2,196) = 5.23$, $p < .01$). Health problems were highest for the ECAM group ($M = 5.28$, $SD = 2.47$), and lowest for the CM group ($M = 4.09$, $SD = 2.21$), with the NICAM group having slightly more health issues ($M = 4.33$, $SD = 2.07$) than the CM group. The number of non-life threatening health issues also varied significantly as a function of group membership ($F(2, 196) = 4.89$, $p < .01$), and followed a similar pattern (see Table 1). The three groups, CM, NICAM, and ECAM, did not differ significantly on negative emotionality, indicating that self-reported health was not biased by negative affect.

Treatment seeking for non-life threatening health issues was associated with the type of client group, even after controlling for the differences in the number of non-life threatening health problems between the groups (partial $r = .35$, $p < .0001$). The ECAM clients sought treatment for more non-life threatening health issues ($M = 4.66$, $SD = 2.35$), than the NICAM clients ($M = 3.47$, $SD = 2.08$), or the CM clients ($M = 2.60$, $SD = 2.10$).

Analyses of treatment use by the three client groups of specific health issues was conducted for 8 of the 13 health conditions, and of these 3 tests were significant (see Table 1). Of the remaining 5 conditions, chi-square tests were not conducted due to low cell frequencies (2 conditions), or because the health condition was treated by all of the clients regardless of group (3 conditions). More ECAM clients sought treatment for back problems, headaches/migraines, and digestive problems, than did the CM clients who were less likely to treat these problems (see Table 1 for full results). Except for back problems, which were treated as often as in the ECAM clients, the NICAM clients fell somewhere in between the other two groups regarding treatment seeking. The three groups did not differ

significantly in their treatment seeking for flus and colds. Table 1 also reveals that almost all of the clients in each group sought treatment for their life threatening health issues, thus validating the decision to not include them in the analysis of the treatment seeking patterns.

Table 2 indicates the treatment modalities used for different health problems in each CAM client group. Examination of Table 2 reveals that the NICAM clients still rely mostly on CM for treatment across different health problems, whereas the ECAM clients use CM the least to treat their health issues. The NICAM clients also used less CAM alone to treat health issues, and the ECAM clients were more apt to use CAM alone than CM alone. After controlling for differences in the number of health problems with ANCOVA, CAM treatment use scores were significantly higher in the ECAM group ($F(1, 138) = 24.19$, $p < .0001$) (adjusted $M = .92$) than in the NICAM client group (adjusted $M = .69$).

DISCUSSION

The present study replicates and extends previous findings regarding the health care service use and health status of CM users. Although the results reflect a preliminary view of these issues, the findings suggest that not only do CAM users have more health problems than non-users, but they may also seek treatment for their health issues more often than non-users. Furthermore, the current study presents two major findings not previously shown by other research. The distinction of CAM clients into two groups based on experience with CAM in the current study revealed differential patterns of both treatment rates and choice of treatment modalities. Overall, CAM clients sought treatment more often than the CM clients, with treatment rates increasing from the less experienced CAM clients (NICAM group) to the more experienced CAM clients (ECAM group). Although the number of health problems also followed a similar increasing pattern from

CM clients to the ECAM clients, the increased treatment rates remained significant after controlling for the number of health problems. In accordance with previous findings (Druss and Rosenheck, 1999; Murray and Shepherd, 1993; Paramore, 1997), this suggests that CAM clients may seek treatment for their health problems at higher rates than non-CAM users. Furthermore, the current study suggests that greater experience with CAM may be associated with higher treatment rates of non-life threatening health issues irrespective of the number of health problems experienced.

The results of the current study also suggest that differences in treatment seeking may be dependent upon the type of health problem, as treatment rates varied across the three client groups for non-life threatening health problems but not for serious health problems. Digestive problems and headaches were treated at significantly different rates across the three client groups, with the more experienced CAM clients seeking treatment for these problems the most often. Back problems, which have been reported in other studies to be one of the main health complaints associated with CAM use (Astin, 1998; Eisenberg et al., 1998), were treated more often by both CAM groups relative to the CM clients. However, the two CAM client groups did not differ in their treatment rate of this health issue. This finding may be related to the high use of chiropractic for treating back problems. Research suggests that that 40% of all episodes of back pain care are primarily treated by a chiropractor, and that subsequent episodes of back pain continued to be treated by chiropractors rather than medical doctors (Shekelle et al., 1995).

The newer CAM clients and the established CAM clients also differed significantly in how they chose to treat their health problems. The pattern of treatment choice for the NICAM clients relative to the ECAM clients suggests that they are in transition from

relying on CM alone for treating their health issues to supplementing CM with CAM. Fewer non-life threatening health problems were treated with CAM alone (19.7 %) by the newer CAM clients, suggesting that lack of experience and perhaps knowledge about CAM makes them more cautious in their use of CAM. The only exceptions to this were back problems and digestive issues, which were treated by the NICAM clients equally often using CAM alone or CAM supplementing CM.

In contrast, the more experienced CAM clients relied much less on CM as a treatment mode than the newer CAM clients, instead choosing to treat the majority of their non-life threatening health problems with a combination of CAM and CM. However, their second choice of treatment options was CAM alone, and this was used for a third of their health issues. CM was only chosen to for roughly 20 percent of the non-life threatening health issues of this group.

The limitations of the current study include a rather small sample of predominantly highly educated, Caucasian females who may make treatment choices in different ways from a sample where these socio-demographic factors are distributed more evenly. The number of different health problems reported may not be representative of the full range of health issues that CAM users treat, especially since the participants were self-selected. Additionally, the small numbers of some of the health problems reported in the current study did not allow for individual analyses, although for some issues like chronic pain and insomnia it is likely that group differences in treatment rates exist. The current study also relied upon retrospective self-reports for assessing the treatment of health issues, which may not be wholly accurate. Although some "other" CAM therapies were reported that might be self-care CAM (e.g., aromatherapy), for the most part the findings of the present

study refer to the use of provider-based CAM.

Finally, the cross-sectional design of this study does not allow for a determination of causation regarding experience with CAM and the rate and types of treatment used. Ideally, following a group of newer CAM clients over time and monitoring their treatment choices would allow for a more definitive assessment of some of the conclusions suggested by the present investigation.

When the results of the present study are compared with previous findings of increased physician visits by CAM clients (Druss and Rosenheck, 1999; Murray and Shepherd, 1993; Paramore, 1997), they suggest that experience with CAM may need to be considered when assessing use of health services. CAM clients who have been using CAM extensively over time may be less likely to rely on CM treatments alone, perhaps because their experience with CAM has made them aware of the variety of treatment options available through CAM therapies, some of which they may have found to be effective alternatives to CM. Accordingly, reliance on CM may decrease. In contrast, less experienced CAM clients may still tend to rely on CM services without CAM.

The results of the current investigation suggests that both CAM client groups may use more health services of any type overall, although the rates may be highest for the experienced CAM clients. This suggests that the choice of treatment options associated with CAM use can be conceptualized as a continuum, with CM treatments lying at one end and CAM treatments alone at the other. As the individual begins to explore the use of CAM, there is still a reliance on CM alone for dealing with health issues. With greater experience with (and perhaps knowledge and trust of) CAM, CAM users choose to supplement CM with CAM, and for some health issues CAM may even replace CM as the

treatment choice. It is possible then that the apparent decrease in reliance in CM treatments as CAM use increases may reflect that the CAM treatments for certain health issues are providing effective alternatives for managing these health issues. Although the full transition to treating most health issues with CAM alone is not likely, this may occur for some health issues such as back problems.

Overall, the findings of the current study add to a growing understanding of the treatment choices of CAM users. The results of this preliminary investigation into the treatment choices of CAM clients suggest that this group may not be as homogenous in how they use CAM and other health services as previous research has suggested. Future research on the treatment seeking of CAM users should consider the continuum of treatment choices available to this group of health care consumers as well as how experience with CAM influences their choices.

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Table 1. Proportions of clients seeking treatment for health problems

		Client group						
		OM n = 58		NICAM n = 70		ECAM n = 71		
Non-life threatening health problems	Total n treated	% (freq.)		% (freq.)		% (freq.)		χ^2
Back problems/muscle strains	154	52.8	(19)	94.6	(53)	98.4	(61)	45.40[c]
Flu or cold	134	69.0	(29)	71.1	(32)	87.2	(41)	4.97
Headaches/migraines	126	48.3	(14)	73.3	(33)	86.5	(45)	13.80[b]
Allergies/skin problems	99	84.4	(27)	96.7	(29)	91.9	(34)	---
Digestive problems	87	60.9	(14)	75.0	(21)	91.7	(33)	8.04[a]
Insomnia	63	58.3	(7)	78.3	(18)	92.9	(26)	---
Chronic pain	56	50.0	(3)	83.3	(15)	100.0	(32)	---
Respiratory problems	52	100.0	(17)	93.3	(14)	95.0	(19)	---
Arthritis	49	66.7	(10)	82.4	(14)	94.1	(16)	---
Other health problems	49	100.0	(11)	100.0	(14)	100.0	(24)	---
Life threatening health problems								
Heart problems/ high blood pressure	27	77.8	(7)	80.0	(4)	92.3	(12)	---
Cancer	12	100.0	(3)	100.0	(4)	100.0	(5)	---
Diabetes	7	100.0	(2)	100.0	(3)	100.0	(2)	---

OM = orthodox medicine group
NICAM = new/infrequent complementary and alternative medicine clients
ECAM = established complementary and alternative medicine clients

[a] $p < .05$
[b] $p < .001$
[c] $p < .0001$