

Observational Report

The Effect of Cultural Background on the Usage of Complementary and Alternative Medicine for Chronic Pain Management

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Background: Chronic pain is a debilitating problem with significant impact on healthcare utilization in the US. Many chronic pain patients use complementary or alternative medicine (CAM) in addition to standard pharmacologic therapy.

Objective: The aim of our study was to identify differences in the characteristics of usage of CAM for chronic pain control among several ethnic groups.

Design: We recruited 92 consecutive patients seeking treatment at the pain clinic and interviewed them using a questionnaire.

Results: The most common pain complaint was back pain (55.4%) and the mean pain duration for all chronic pain problems was 9.8 years. Approximately 81% of respondents were using or have used CAM before. The commonest CAM used by patients in our study included massage therapy, spiritual healing as well as the consumption of mineral and vitamin supplements. Sixty-three percent of them were satisfied with CAM treatment compared to 56% of patients who were satisfied with prescription therapy. However, there was no difference in the use of CAM among the different ethnic groups ($P > 0.05$).

Conclusion: Our study demonstrates that CAM is used very frequently in patients with chronic pain. However, it did not show any ethnic or racial differences in CAM utilization.

Key words: Complementary and alternative medicine, ethnicity, racial differences, chronic pain

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Chronic pain is a debilitating problem with a health care cost of approximately \$100 billion annually in the United States. Pharmacologic and less commonly, complementary or alternative medicine (CAM), are used by many patients. CAM defines a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant

health system of a particular society or culture in a given historical period (1). They are treatments not considered a part of conventional medicine or methods that are not widely taught by US medical schools or used by US hospitals. In studies evaluating CAM usage in different populations, including a variety of health problems and health maintenance issues, none had described the racial background of the population that used CAM to treat chronic pain.

The aim of this study was to identify differences in the characteristics of usage of CAM for chronic pain control among several ethnic groups (Caucasian-American, African-American, Hispanic-American, Asian-American, Native American, or other). Our hypothesis was that there is a difference between Caucasian and non-Caucasian in their attitude towards the use of CAM in chronic pain management.

MATERIAL AND METHODS

Approval was obtained from our hospital Institutional Review Board prior to study commencement. After obtaining informed and written consent, patients attending the Pain and Palliative Care Clinic at the Duke University Medical Center were asked to complete a questionnaire. Inclusion criteria were age 18 years and older; diagnosed with chronic pain condition by physician; English-speaking; able to read at a 14-year-old (8th grade equivalent) level or above; and free of cognitive, visual, or motor impairment that would preclude completion of the questionnaire. Participants were asked of their race, age, income level, educational level, types of CAM used, reasons for using CAM, and the effectiveness of the intervention.

Data collected were analyzed using descriptive statistics. Frequencies, means, and standard deviations were calculated for the socio-demographic and the clinical characteristics of the respondents. ANOVA

Table 1. *Patient characteristics.*

Age (Mean ± SD)	48 ± 13 SD
Male / Female, n (%)	34 / 58 (37% / 63%)
Education Level, n (%)	
Middle School	3 (3.3%)
High School	41 (45.1%)
College	33 (36.3%)
Graduate	14 (15.4%)
Duration of pain in years(Mean ± SD)	9.8 ± 8.1
Patients who have used opioids, n (%)	71 (77.2%)
Patients who have used CAM, n (%)	75 (81.5%)
Race, n (%)	
Caucasian 67	(72.8%)
African-American 20	(21.7%)
Native American 4	(4.3%)
Hispanic 1	(1.1%)
Asian 0	(0%)

was used to compare the experience with pain management. Chi-square test was used for non-parametric data analysis. Independent variables were analyzed in a model with multiple linear regression technique. A *P* value < 0.05 was considered statistically significant.

RESULTS

We recruited 92 patients from the pain clinic. Patient characteristics are shown in Table 1. The reported sites of pain are shown in Fig. 1. The mean pain score at rest was 4.8±2.4 (on a Numeric Rating Scale of 0 to

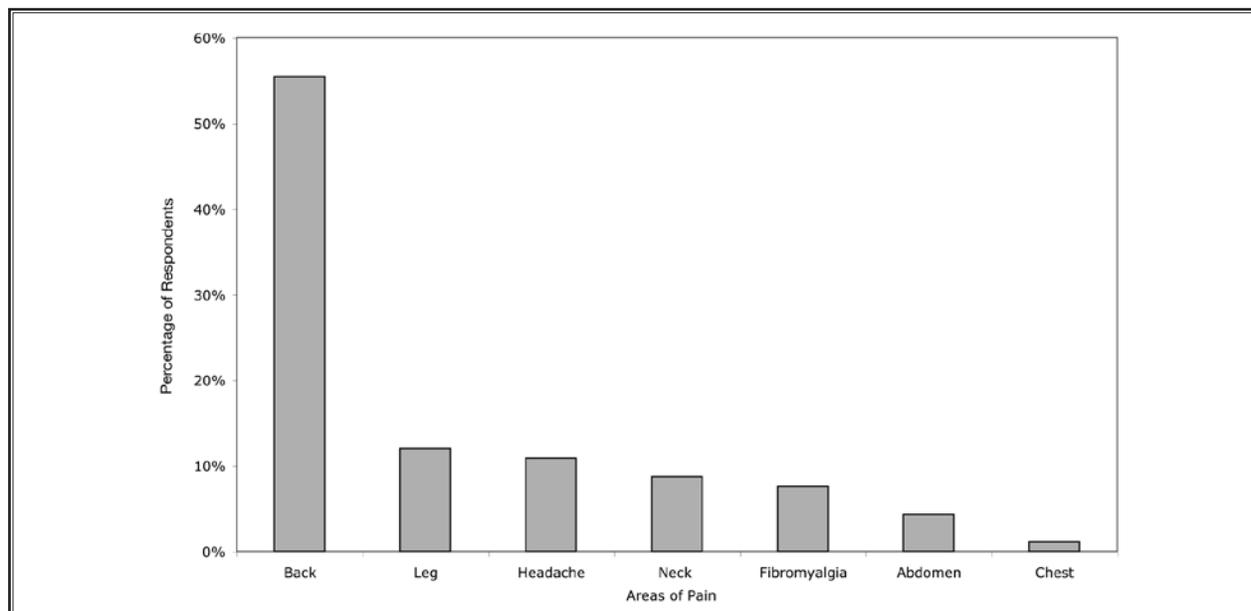


Fig. 1. *Reported sites of pain.*

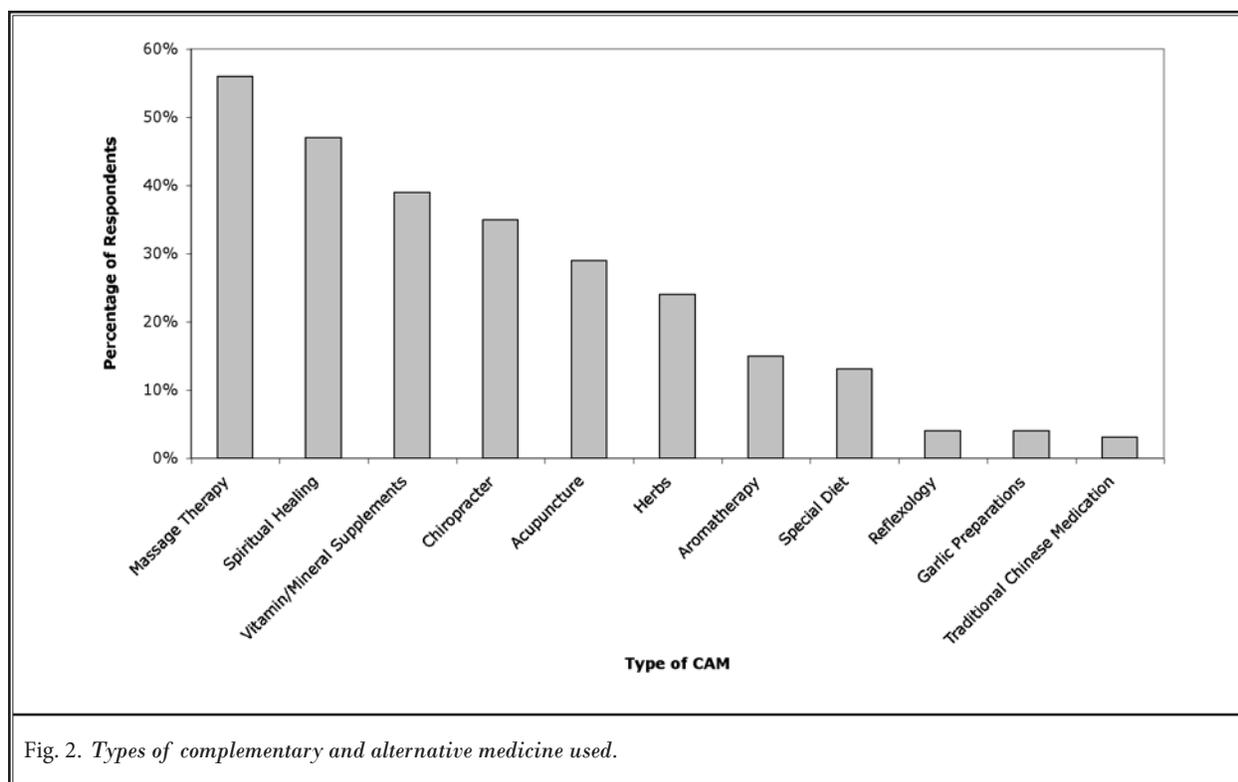


Fig. 2. Types of complementary and alternative medicine used.

10 where 0 is “no pain” and 10 is the “worst possible pain”). The mean pain score on movement was 7.7 ± 2.2 . Approximately 81% of respondents use or have used CAM before. The types of CAM used by subjects are shown in Fig. 2. About 63% of these respondents told their doctors that they used or had used CAM for treating their pain. There was no difference in the use of CAM among the different ethnic groups ($P > 0.05$). Approximately 80% of Caucasians, 80% of African-Americans, and all Hispanic and Native Americans have used or are currently using CAM.

One-quarter of respondents chose to use CAM because they felt the need to have more control over their pain treatment. Twenty-three percent of patients used CAM because conventional medications did not help. Another 12.3% of respondents chose CAM because they believed that CAM was safer than conventional medication and 12.3% of respondents chose CAM because CAM helped relieve their pain better.

Respondents might have received prescription therapy, CAM therapy, or both, and they were asked how satisfied they were with treatment. Fifty-six percent of respondents were satisfied with prescription therapy, compared with 63% who were satisfied with

CAM treatment. Among those patients who were prescribed opioids for pain control, 52.9% of them were satisfied with their pain treatment. In comparison, among patients who were not prescribed opioids for pain, 56.2% of them were satisfied with their treatment ($P < 0.05$). The amount of money spent on prescription medication was $\$114 \pm 222$ while the amount spent on CAM was $\$62 \pm 96$.

DISCUSSION

This study demonstrates that patients with chronic pain, regardless of ethnicity, commonly use CAM. As many as 81% of patients surveyed have used or are using CAM therapy. Out-of-pocket expenses appears to be less with CAM therapy compared with prescription medication. Data from a large survey involving over 30,000 patients from the 2002 National Health Interview Survey (NHIS), conducted by the Centers for Disease Control (CDC) National Center for Health Statistics showed that 36% of adults used at least one method of CAM to treat a variety of medical problems (2). When the definition of CAM included prayers or spiritual healing, the prevalence of CAM usage increased to 62%. A separate survey involving 399 Asians in Singapore

found that 76% of respondents had used CAM over 12 months. Traditional Chinese medicine (88%) was the most widely used form of CAM, followed by traditional Malay (Jamu) medicine (8%) and traditional Indian (Ayurvedic) medicine (3%) (3). In this study, CAM utilization differed significantly among the various ethnic groups. Chinese (84%) were the most frequent users, followed by Malays (69%) and Indians (69%), with adjusted odds ratios of 0.4 (95% C.I. 0.2 – 0.7) for Malays and 0.4 (95% C.I. 0.2 – 0.8) for Indians (3).

A survey by Astin (4) showed that alternative medicine was used to treat chronic pain in 37% of respondents. However, this study did not find any racial or ethnic differences that predicted use of alternative medicine. The authors noted that the sample sizes of certain ethnic groups were too small to be significant.

The most common pain condition seen in our study was back pain. Our survey also showed that 81.5% of our respondents used CAM for treating chronic pain. This was higher than that seen in the CDC NHIS (62%). As CAM was commonly used to treat neck, back, and joint pains, it was reasonable to expect that the incidence of CAM usage to be higher in our study involving patients with chronic pain. This was fairly consistent with a primary care survey conducted in United Kingdom where 84% of patients used CAM for chronic musculoskeletal pain (5).

Our survey did not show any difference among the various ethnic groups in the use of CAM for chronic pain management. However, no Asian American subject was recruited in our study. It is probable that Asian patients, especially Chinese, tend to use

CAM more frequently than patients of the other ethnic communities. In addition, there was limited representation of minority races such as Hispanics and Native Americans. Our survey may not have the adequate sample size needed to demonstrate differences among the different ethnic groups in the use of CAM for chronic pain. Nevertheless, given that the majority of patients surveyed in our study use CAM, it is relevant and important for pain physicians to ask about CAM when taking a history regarding medication use. Knowledge of the different types of CAM available and their purported benefits in treating chronic pain will also have an impact on how pain physicians prescribe a treatment plan for a patient as there is a potential for drug interactions.

The use of opioids did not seem to improve patient satisfaction as only 52.9% of them were satisfied with their pain treatment, as compared with 56.2% of patients not prescribed with opioids. However, it may also imply that patients with more severe refractory pain continue to have poor pain control despite opioid therapy.

CONCLUSION

This study demonstrates that CAM is used very frequently in patients with chronic pain. It did not show any ethnic or racial differences in CAM utilization among patients with chronic pain seeking treatment at our pain clinic. Approximately 80% of Caucasians, 80% of African-Americans, and all Hispanic and Native Americans have used or are currently using CAM. Limited representation of minority races may be a possible reason for the lack of difference.

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