

Use of Complementary and Alternative Medicine for Temporomandibular Disorders

Lynn L. DeBar, PhD, MPH
Investigator

Nancy Vuckovic, PhD
Investigator

Jennifer Schneider, MPH
Research Associate

Cheryl Ritenbaugh, PhD, MPH
Senior Investigator

Center for Health Research
Kaiser Permanente
Northwest Portland, Oregon

Correspondence to:

Dr Lynn DeBar
Center for Health Research
Kaiser Permanente Northwest
3800 N. Interstate Ave
Portland, Oregon 97227
Fax: (503) 335-6311
E-mail: lynn.debar@kpchr.org

***Aims:** Despite many reports about complementary and alternative medicine (CAM) use in the general population, little information exists about specific CAM therapies used for particular health conditions. This study examines the use of CAM therapies among patients with temporomandibular disorders (TMD). **Methods:** We surveyed 192 patients with documented TMD as part of a larger project on the effectiveness of various CAM modalities for TMD patients. The survey asked about use of and attitudes toward specific CAM therapies for treating TMD and other patient-identified health conditions. The survey also measured physical health, health behavior, and psychosocial functioning. **Results:** Nearly two thirds of the respondents (62.5%; $n = 120$) reported using CAM therapies for TMD or a related condition. Of all the therapies reported, massage was rated as the most frequent and among the most satisfactory and helpful. In general, respondents who used CAM for their TMD reported being most satisfied with the "hands on" CAM therapies (massage, acupuncture, and chiropractic care). The vast majority of respondents reported using CAM approaches for TMD simultaneously with conventional care (95.6%; 66 of 69). Those using CAM for TMD tended to be older, had a history of multiple medical problems, and reported more positive psychologic functioning. Respondents who most often reported CAM treatment as "very helpful" for their TMD were likely to be healthier (ie, reporting higher levels of exercise and fewer sleep disturbances). **Conclusion:** Given the frequent use of CAM treatments by our respondents, allopathic providers should inquire about the adjunctive use of CAM among their TMD patients. J OROFAC PAIN 2003;17:224-236.*

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We know that Americans are seeking complementary and alternative medicine (CAM) in large numbers; in 1997, 42.1% of Americans spent \$12.2 billion on such care.¹ Over the past decade, many published studies surveyed the extent and demographics of CAM use.¹⁻¹⁰ Demographic studies show that CAM users (in both the United States and the United Kingdom) tend to be better educated, economically middle class or more affluent, middle-aged, and Caucasian.¹¹⁻¹⁴ Results vary slightly with respect to gender, and some studies found females were more likely to try CAM approaches,^{11,14} while others did not.¹² Other studies reported that the percentage of CAM use in the general population was similar in specific populations such as persons with AIDS, diabetes, or cardiac disease.^{13,15,16} Less is known about the specifics of which CAM treatments are successful for particular conditions.

Temporomandibular disorders (TMD) are often characterized as chronic, recurrent, non-progressive pain conditions.¹⁷⁻¹⁹ A comprehensive literature review on epidemiologic data suggests that pain in the temporomandibular region is relatively common, occurring in about 10% of the population over age 18.²⁰ In a 1989 National Health Interview Survey,²¹ an estimated 10.9 million people, or 6% of the US population, reported experiencing jaw and/or facial pain during the past 6 months. Many TMD patients also reported a variety of related musculoskeletal problems including neck and shoulder pain, upper and lower back pain, and tension headaches.^{22,23} Despite a high level of initial treatment success, TMD is an enduring, recurrent condition, and often intractable.^{17,24,25}

Published surveys on CAM use suggest that CAM is sought most frequently for musculoskeletal and pain disorders.^{1,3,26} Similarly, studies examined the use of acupuncture for TMD,^{27,28} and numerous articles reported more general psychosocial interventions (eg, stress management) with these patients.²⁹⁻³⁴ Except for 1 editorial on dentistry and alternative therapy,³⁵ we found no published accounts of TMD treatment using CAM.

Although few published studies describe CAM for particular medical conditions (including TMD), studies have examined general preferences for CAM. The most commonly used therapies are relaxation techniques, herbal medicine, massage, and chiropractic.^{1,3} Alternative treatments are often sought in conjunction with conventional medical care, not in place of it.^{12,13,36} Further, patients seem to be reluctant to discuss alternative treatments with their primary care physicians, or at least do not discuss these therapies unless specifically asked.^{12,13,37-39} In addition, studies have found satisfaction resulting from the general use of CAM in populations such as cancer patients³⁹ and the elderly.³⁷ In a study³⁶ examining satisfaction and demographics specifically for Chinese medicine, Cassidy found that mostly middle-class, educated users selectively used Chinese medicine with biomedicine. She also found significant consumer satisfaction and a preference for "holistic" delivery components of medicine. These studies, however, did not distinguish which types of therapies are being used to address what medical problems and the corresponding satisfaction with a particular method of treating the condition.

This paper reports a comparison of CAM approaches being used for TMD and other health conditions. As part of a study of CAM and craniofacial disorders, we surveyed patients with TMD

about their use of CAM for TMD and other patient-identified medical conditions, their satisfaction with these treatments, and how well they thought CAM therapies treated each health condition. We developed a survey instrument that allowed patients to report how satisfied they were using each CAM therapy, both overall and for a specific condition.

Materials and Methods

Setting and Participants

The research setting was a nonprofit, group model HMO that serves almost 450,000 members in the Pacific Northwest region of the USA. The demographic characteristics of the population are similar to those of the community it serves, with about 90% of Caucasian descent.⁴⁰ The prepaid health plan covers comprehensive medical and dental services. Services include a specialized clinic for the treatment of TMD. The study research center, the Center for Health Research (CHR), is administratively affiliated with the HMO, but the CHR conducts independent, public domain, non-proprietary research. The CHR is the lead institution in a consortium of 7 organizations that form the Oregon Center for Complementary and Alternative Medicine Research in Craniofacial Disorders (OCCAM). Currently underway are 2 OCCAM-sponsored clinical trials focused on the use of CAM to treat TMD. We surveyed participants from these TMD clinical trials who either participated in the initial pilot phase ($n = 78$) or were among those who have completed the baseline assessment ($n = 114$). All study participants had received clinical diagnoses of TMD as documented in their electronic medical chart records.

During the pilot phase, participants were recruited in 1 of 2 ways. Sixty-nine patients were approached during treatment visits in the TMD clinic and invited to participate. Forty-four of these individuals returned completed questionnaires. An additional 46 questionnaires were mailed to individuals diagnosed with TMD who had participated in earlier focus groups on TMD. Questionnaires were completed and returned by 34 of these focus group participants. In the baseline phase, the survey was distributed at study orientation to 136 participants. The survey was returned either by mail or at the next study visit by 114 of these participants. Thus, the overall response rate was 76.5%.

Survey Development

The survey instrument was designed to assess patient's use, satisfaction with, and perceived effectiveness of a variety of CAM therapies for specific health conditions. The survey instrument was constructed so it could easily be adapted for a variety of medical conditions. Survey questions were developed on the basis of published studies of CAM therapy use as well as focus groups held with TMD patients on their use of and attitudes toward CAM therapies. CAM modalities on the survey distinguished between practitioner and self-administered treatments and focused on major domains of complementary and alternative medicine as defined by the National Center for Complementary and Alternative Medicine (NCCAM).⁴¹ These domains include: alternative medical systems, the subset of mind/body interventions not yet considered "mainstream," herbal-based (biologic) therapies, and manipulative- and body-based methods. We did not include energy therapies as these therapies currently have a very low frequency of use in contrast to the other domains. In addition to asking individuals about their use of these CAM modalities for both TMD and other medical conditions, we asked about their satisfaction with and the perceived helpfulness of the CAM treatment. We also queried individuals' reasons for using CAM, barriers to using CAM, beliefs about CAM as compared to conventional medicine, and interest in trying or continuing to use various CAM treatments. The complete CAM survey is included as Appendix 1.

Other Measures

In addition to the CAM questionnaire, we included a number of other questions and standardized instruments to examine the association between CAM use and these other factors. All standardized scales were chosen on the basis of their psychometric soundness and the purported relationship between the construct they measured and CAM use. Demographic questions included those assessing age, gender, education, and income. Physical and psychologic functioning was assessed by the use of the short-form-12 (SF-12).⁴² We used the Axis-II scale from the Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD)⁴³ to assess participants' chronic pain status (pain intensity and pain-related disability).⁴⁴ We also used the RDC/TMD Axis II subscales, adapted from the Symptom Checklist-90 (SCL-90),⁴⁵ for nonspecific physical symptoms and

depression.⁴⁴ Participants' histories of medical conditions were assessed by assigning them a numerical score based on the number of different body systems and diseases/syndromes for which they indicated a history of problems. The Tellegen Absorption Scale⁴⁶ assessed "mind-body awareness" and "openness to experience"—characteristics that have been posited to be important determinants of CAM use.⁴⁷ Neuroticism, the stable propensity to experience negative affect, was assessed by the distress subscale from the Weinberger Adjustment Inventory.⁴⁸ The Hope scale was used^{49,50} to assess participants' goal-directed determination and plans for meeting those goals. Studies have suggested that perseverance in the face of chronic medical conditions (ie, hope) may be strongly related to health outcomes and health behaviors such as seeking health care.^{51,52} To assess positive psychologic functioning, the Positive States of Mind Scale was used.⁵³ Finally, our assessment of current health behaviors included questions on: current smoking habits, alcohol and caffeine consumption, sleep disturbance, and aerobic and other exercise.

Statistical Analyses

This work represents an initial attempt to describe the use of and attitudes about use of CAM services by TMD patients for TMD and other medical conditions. As such, our analyses are largely descriptive in nature with the majority of reported results limited to frequency reports of use and perceived helpfulness for different types of CAM. Our final set of analyses examined potential predictors of use of and perceived helpfulness of CAM for TMD. For these analyses we report Pearson correlation coefficients, confidence intervals, the number of subjects per analysis, and identify all significant findings through the use of an alpha level of .05 and 95% confidence intervals. Because of the hypothesis-generating nature of the study, we have not adjusted for the multiple tests of association as has been recommended for such investigations.^{54,55}

Results

Table 1 shows the demographic characteristics of the survey sample. Subjects who used CAM to treat either TMD or other conditions differed little from the overall sample in these key characteristics. Nearly three quarters of the respondents (72.4%; $n = 139$) reported CAM use overall: more than one third of the sample for TMD (35.9%;

Table 1 Demographic Characteristics of Survey Sample

Variable	Total sample (N = 192) n (%)	Use of alternative medicine for TMD (N = 69) n (%)	Use of alternative medicine for other conditions (N = 111) n (%)
Age (N = 182)			
18–29	31 (17.0)	7 (10.4)	9 (8.3)
30–39	48 (26.4)	14 (20.9)	32 (29.4)
40–49	44 (24.2)	20 (29.9)	29 (26.6)
50–59	39 (21.4)	17 (25.4)	28 (25.7)
60–69	20 (11.0)	9 (13.4)	11 (10.1)
Sex (N = 187)			
Male	17 (9.1)	3 (4.3)	8 (7.2)
Female	170 (90.9)	66 (95.7)	103 (92.8)
Race (N = 183)			
White	164 (89.6)	61 (91.0)	100 (90.9)
Black	5 (2.7)	2 (3.0)	3 (2.7)
Hispanic	7 (3.8)	2 (3.0)	5 (3.6)
Asian	6 (3.3)	2 (3.0)	3 (2.7)
Education (N = 186)			
High school or less	45 (25.3)	13 (18.8)	20 (18.0)
Some college	71 (38.2)	31 (44.9)	47 (42.3)
College degree	29 (15.6)	10 (14.5)	15 (13.5)
Graduate work	39 (21.0)	15 (21.7)	29 (26.1)
Household income (N = 178)			
< 15,000	12 (6.7)	6 (9.0)	4 (3.7)
15,000–24,999	18 (10.1)	8 (11.9)	9 (8.4)
25,000–34,999	32 (18.0)	8 (11.9)	19 (17.8)
35,000–49,999	37 (20.8)	14 (20.9)	19 (17.8)
50,000–74,999	43 (24.2)	18 (26.9)	29 (27.1)
75,000–99,999	25 (14.0)	8 (11.9)	20 (18.7)
> 100,000	11 (6.2)	5 (7.5)	7 (6.5)

Totals for some sections are less than total N as some respondents did not complete all demographic survey questions.

n = 69) and nearly two thirds of the sample for another health concern/condition (64.1%; n = 123). Among those respondents who reported using CAM for another health concern but not directly for TMD (36.5%; n = 70), the majority reported seeking CAM treatment for musculoskeletal-related conditions (51 of 70; 72.9%), which are closely associated with TMD. Thus, nearly two thirds of the respondents (62.5%; n = 120) reported using CAM therapies for TMD or a related condition (ie, musculoskeletal conditions of the head and neck).

The frequency of respondents' use of specific CAM therapies is shown in Table 2. Of the 69 participants who reported using CAM therapies to treat TMD, massage was the most commonly reported CAM therapy (66.7%; n = 46). Chiropractic care (30.4%; n = 21), biofeedback/visual imagery (39.1%; n = 27), and over-the-counter herbal supplements (21.7%; n = 15) were also reportedly used to treat TMD by a sizeable minority of the respondents who reported CAM use for TMD. Among those using CAM therapies for a

Table 2 Frequency of Use of Specific CAM Therapies

Therapy	Used for TMD n (%)	Used for other condition n (%)
Chiropractic care	21 (30.4)	74 (66.7)
Acupuncture	11 (15.9)	25 (22.5)
Massage	46 (66.7)	59 (53.2)
Naturopathic care	7 (10.1)	15 (13.5)
Practitioner supervised use of herbal supplements	9 (13.0)	21 (18.9)
Over-the-counter use of herbal supplements	15 (21.7)	56 (50.4)
Homeopathic remedies	6 (8.7)	14 (12.6)
Biofeedback/visual imagery	27 (39.1)	19 (17.1)
Overall	69 (100.0)	111 (100.0)

health condition other than TMD (n = 111), more than half (52.3%; n = 58) reported using CAM for another musculoskeletal condition (ie, back, neck, or shoulder problems) while approximately one quarter (27.9%; n = 31) used CAM for general

Table 3 Overall Satisfaction with and Perceived Effectiveness of CAM Therapies Among Patients Using These Therapies for TMD

Therapy	Rated “very” or “extremely” satisfied n (%)	Rated “very helpful” n (%)
Chiropractic care	8 of 21 (38.1)	10 of 21 (47.6)
Acupuncture	5 of 11 (45.5)	3 of 11 (27.3)
Massage	28 of 46 (60.9)	25 of 46 (54.3)
Naturopathic care	< 3 of 7 (-)	5 of 7 (71.4)
Practitioner supervised use of herbal supplements	< 3 of 9 (-)	< 3 of 9 (-)
Over-the-counter use of herbal supplements	< 3 of 15 (-)	< 3 of 15 (-)
Homeopathic remedies	< 3 of 6 (-)	< 3 of 6 (-)
Biofeedback/visual imagery	8 of 27 (29.6)	8 of 27 (29.6)

To preserve anonymity, the authors elected to aggregate cells with fewer than 3 subjects.

health maintenance and health enhancement. Other reported conditions for which participants used CAM included cancer, reproductive problems, immunologic/rheumatologic conditions, and mental health problems. Chiropractic care, massage, and over-the-counter herbal supplements were the most common CAM treatments used for these other health conditions.

The vast majority of respondents reporting CAM use for TMD ($n = 69$) tended to use CAM approaches for TMD simultaneously with conventional care (95.6%; $n = 66$). The type of CAM treatment affected the satisfaction of a patient with their treatment and whether or not a patient perceived CAM therapies as helpful for treating TMD. Table 3 shows satisfaction with and the perceived helpfulness of the various CAM therapies among respondents using these therapies to treat their TMD. Massage was reported as the most satisfactory CAM therapy for TMD, with 60.9% ($n = 28$) of respondents “very” or “extremely satisfied” with it as a treatment for TMD. Most of the other practitioner-delivered CAM treatments (acupuncture, chiropractic care, biofeedback/visual imagery, and naturopathic care) received these satisfaction ratings from approximately one third or more of respondents who reported using those modalities. Those CAM treatments most frequently rated as “very helpful” for TMD were naturopathic care (71.4%; $n = 5$), and the manipulative therapies: massage (54.3%; $n = 25$) and chiropractic care (47.6%; $n = 10$). Approximately one third of the respondents found other practitioner-delivered CAM treatments (acupuncture, biofeedback/visual imagery) as “very helpful” for TMD. Finally,

herbal supplements and homeopathic remedies were rated among the least satisfactory and least helpful CAM modalities used to treat TMD.

Patients who reported using CAM therapies for TMD had various rationales for their use. Among the most frequently cited reasons for using CAM therapies were: “a failure of conventional treatments to relieve symptoms” (44.9%; $n = 31$), “having read positive accounts of CAM therapies” (40.6%; $n = 28$), and “a belief that CAM practitioners provide more personal attention to their patients than conventional practitioners” (40.6%; $n = 28$).

Finally, we used bivariate analyses to determine factors predicting the use and perceived helpfulness of CAM therapies for TMD. Table 4 reports bivariate correlations between the hypothesized predictors and the dependent variables. Those using CAM for TMD tended to be older, more likely to have a history of multiple medical problems, and report more positive psychologic functioning, although even these significant associations were quite modest. Use of CAM for TMD was not associated with education, income, gender, nor other measures of physical health, health behavior, or psychosocial functioning. Those most likely to report CAM treatment as “very helpful” for their TMD were respondents reporting higher levels of exercise and fewer sleep disturbances. No other demographic variables nor measures of physical health, health behavior, or psychosocial functioning were associated with the perceived helpfulness of the CAM treatment for TMD. Because there were few strong associations in the bivariate analyses between participant characteristics and either the use or perceived helpfulness of CAM therapies, further multivariate analyses were not conducted.

Discussion

This study examined patients’ use of CAM therapies for TMD, as well as their satisfaction with and the perceived helpfulness of the CAM treatment. The majority of the TMD patients responding to our survey (72.4%; $n = 139$) reported using CAM therapies for TMD or another health concern. Interestingly, the majority of those reporting the use of CAM for a health focus other than their TMD reported seeking CAM for the treatment of musculoskeletal problems (52.3%; 51 of 70), which are closely associated with TMD.^{22,23} Overall, nearly two thirds of the respondents (62.5%; $n = 120$) reported using CAM therapies

Table 4 Correlations of Hypothesized Predictors With Use and Helpfulness of CAM

Variable	Instrument	Use of CAM for TMD			Helpfulness of CAM for TMD		
		<i>r</i>	95% CI	N	<i>r</i>	95% CI	N
Demographic variables							
Age	Current survey*	0.17 [†]	.03 to .31	182	0.07	-.18 to .31	67
Education	Current survey	0.06	-.09 to .20	186	-0.12	-.35 to .12	69
Income	Current survey	-0.01	-.16 to .14	178	-0.20	-.42 to .05	67
Gender	Current survey	0.12	-.02 to .27	187	0.09	-.15 to .32	69
Physical functioning							
Overall physical health	SF-12 ⁴²	-0.10	-.25 to .06	163	-0.09	-.34 to .17	60
Pain intensity and disability	RDC/TMD Axis II ⁴³	0.01	-.14 to .15	189	0.07	-.18 to .31	67
Nonspecific physical symptoms	RDC/TMD Axis II ⁴³	-0.01	-.17 to .16	145	-0.06	-.33 to .21	55
History of multiple medical problems	Adapted from WHI ⁵⁸	0.15 [†]	.01 to .29	192	-0.19	-.33 to .15	69
Psychologic functioning							
Overall psychologic functioning	SF-12 ⁴²	0.07	-.08 to .23	163	0.01	-.25 to .27	60
Depression	RDC/TMD Axis II ⁴³	-0.02	-.16 to .12	186	-0.09	-.33 to .15	66
Positive well-being	PSOM ^{54,60}	0.16 [†]	.01 to .31	170	-0.03	-.29 to .22	63
Absorption	MPQ absorption subscale ⁴⁶	0.01	-.14 to .17	170	0.003	-.25 to .26	63
Neuroticism	WAI	-0.10	-.24 to .04	187	-0.13	-.36 to .11	69
Hope	HOPE ⁵⁰	0.10	-.03 to .26	187	-0.09	-.33 to .15	69
Health Behaviors							
Smoking	Current survey	0.01	-.14 to .15	192	-0.02	-.26 to .23	69
Alcohol consumption	Current survey	-0.18	-.41 to .05	69	-0.19	-.58 to .27	21
Caffeine consumption	Current survey	-0.10	-.28 to .08	121	-0.22	-.50 to .09	42
Aerobic exercise	Current survey	0.14	-.06 to .32	103	-0.07	-.38 to .24	41
Other exercise	Current survey	0.15	-.13 to .42	50	0.46 [†]	.05 to .75	22
Sleep disturbance	Adapted from WHI ⁵⁸	0.07	-.09 to .24	146	-0.39 [†]	-.60 to -.14	55

*Questions developed specifically for the current survey, [†] $P < .05$, [‡] $P < .01$.

WHI = Women's Health Initiative study; PSOM = Positive States of Mind Scale; MPQ = multidimensional personality questionnaire; WAI = Weinburger Adjustment Inventory.

for TMD or a related condition. These results suggest that CAM therapies may be frequently sought to deal with TMD and related problems.

The proportion of individuals reporting the use of CAM therapies in this study was considerably higher than what has been previously reported in the literature. While this may in part reflect those who fully met study criteria (eg, TMD-related impairment) and chose to respond to our survey or participate in CAM-related clinical trials, these high rates of CAM use are particularly noteworthy given that we were fairly restrictive in our definition of CAM treatment in the study. As suggested by NCCAM, we restricted the CAM therapies that we considered to: alternative medical systems, the subset of mind/body interventions not yet considered “mainstream,” herbal-based (biologic) therapies, and manipulative- and body-based methods. In contrast, many previous reports that have noted considerably lower rates of CAM use have included among CAM treatments common lifestyle behaviors (eg, aerobic exercise, spiritual activities) and psychosocial interventions (eg, relaxation, support groups) that are considered “mainstream” in many regions of the country.

Distinguishing between the types of CAM therapies provided additional details about participant response to CAM. Of all the CAM therapies reportedly used for TMD, massage was the most frequent and was rated as the most satisfactory and among the most helpful CAM treatments received. In general, respondents reported being most satisfied with the “hands on” CAM therapies (massage, acupuncture, and chiropractic care). Yet, somewhat surprisingly, those reporting use of CAM therapies for TMD in this study felt that these therapies only modestly helped their condition. Respondents appeared to use CAM therapies simultaneously with conventional care, although we did not ascertain whether patients were informing their conventional care practitioners of their use of CAM therapies.

Predictors of use did not include many of the variables found in other studies. Particularly striking was the lack of association with education, income, and gender in light of the numerous previous studies that have found these associations. The lack of association with gender may be an artifact of our skewed population (91% female). More generally, however, as familiarity with and use of

CAM therapies becomes more widespread, the population using such services might be becoming less distinct. This generalization may be particularly true in the Pacific Northwest, where providers of CAM and types of CAM therapies are readily available. Those who reported finding CAM treatments most helpful for their TMD reported other healthy behavioral characteristics such as more exercise and less sleep disturbance. Similar results were found by Astin and colleagues in their study of CAM use among the elderly,³⁷ suggesting that a subset of CAM users may be healthier or more health conscious than those who do not use these therapies. Finally, although other authors have claimed that CAM use is a “marker for distress,”^{56,57} our results suggest a modest but significant association between positive psychologic functioning (positive states of mind) and CAM use. As mentioned previously, many studies of CAM use have included increasingly commonplace psychosocial interventions used to treat distress (eg, support groups, relaxation), which may confound CAM treatments with more psychologically oriented therapies widely available. This distinction underscores the importance of carefully defining the CAM treatments under examination.

Several things should be kept in mind when interpreting the information in this report. The sample used in the present study was not a representative sample of TMD patients as it was limited both to the Pacific Northwest region of the USA and to those who were eligible for and self-selected to participate in a study focused on the use of CAM for TMD. This may have resulted in a sample bias in favor of CAM, thus inflating estimates of CAM use and interest in such therapies. In addition, the analyses limited to those reporting CAM use for their TMD were based on a subgroup of the study sample ($n = 69$) and, thus, may be somewhat less stable estimates than findings pertaining to the entire study population ($n = 192$). Nonetheless, analyses reported with similarly sized samples are regularly reported in the psychosocial and biomedical literatures. Finally, although we asked respondents both about their satisfaction with and the perceived helpfulness of specific CAM therapies, these answers do not directly address the efficacy of the various CAM treatments for TMD. The only systematic way to determine clinical efficacy of particular CAM therapies for specific medical conditions is to conduct a controlled trial. We are currently conducting 2 randomized clinical trials to address the efficacy for TMD of CAM therapies delivered in a controlled fashion.

Despite these limitations, we believe the present study provides important information about the use of CAM therapies among TMD patients. Given the frequent use of these treatments by our respondents, allopathic providers may want to systematically inquire about the adjunctive use of CAM among their patients. This report also underscores the importance of asking about specific CAM therapies used for particular conditions. Given the heterogeneity of available CAM therapies, we suggest future research should use surveys that delineate specific types of CAM therapies and the reasons for their use; the survey published here provides this capacity. Determinants of CAM use may vary with the specific types of CAM therapies and health problems for which care is sought.

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Appendix 1 – Survey Instrument to Assess CAM Use and Attitudes

This section contains questions about your experience with and your attitude toward complementary and alternative medicine (CAM). CAM therapies are generally thought of as those treatments not usually used in standard medical care or reimbursed by medical insurance companies. Please respond to each question by checking all responses that describe your experience or beliefs.

1. Have you ever used any of the following alternative or complementary therapies? (Respond to all categories that are relevant for you. That is, you may have used a particular form of treatment for TMD or for another medical condition, or both.)

	No	Yes, for TMD	Yes, for another medical condition (please specify the condition/reason below)
a. Chiropractic care	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	_____
b. Acupuncture	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	_____
c. Massage therapy	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	_____
d. Herbal medicine provided by a practitioner	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	_____
e. Herbal medicine purchased at a grocery, drug, or health food store <i>without</i> practitioner recommendation	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	_____
f. Naturopathic care	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	_____
g. Homeopathic remedies	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	_____
h. Biofeedback or visual imagery	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	_____
i. Other (please specify: _____)	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	_____

(IF NO to a–i above, skip to question #5.)

2. IF YES to any of a–i in question #1 for TMD, when did you try this alternative or complementary therapy?

Complete this question only if you used any of the alternative or complementary therapies listed in question #1 for TMD.

	As the first and only treatment approach I tried	In addition to receiving more conventional treatment for TMD	After using conventional treatment that didn't take care of my TMD (or was only partially effective)
a. Chiropractic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
b. Acupuncture	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
c. Massage therapy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
d. Herbal medicine provided by a practitioner	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
e. Herbal medicine purchased at a grocery, drug, or health food store <i>without</i> practitioner recommendation	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
f. Naturopathic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
g. Homeopathic remedies	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
h. Biofeedback or visual imagery	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
i. Other (please specify: _____)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

Complete question 3 below only if you used any of the alternative or complementary therapies listed in question 1 for a health condition other than TMD.

3. IF YES to any of a-i in question #1 for another health condition, when did you try this alternative or complementary therapy?

	As the first and only treatment approach I tried	In addition to receiving more conventional treatment for my condition	After using conventional treatment that didn't take care of my condition (or was only partially effective)
a. Chiropractic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
b. Acupuncture	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
c. Massage therapy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
d. Herbal medicine provided by a practitioner	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
e. Herbal medicine purchased at a grocery, drug, or health food store <i>without</i> practitioner recommendation	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
f. Naturopathic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
g. Homeopathic remedies	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
h. Biofeedback or visual imagery	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
i. Other (please specify: _____)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

4. How satisfied have you been with the *overall* care you received using the following alternative or complementary therapies?

	Never received	Extremely satisfied	Very satisfied	Satisfied	Not very satisfied	Not at all satisfied
a. Chiropractic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆
b. Acupuncture	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆
c. Massage therapy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆
d. Herbal medicine provided by a practitioner	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆
e. Herbal medicine purchased at a grocery, drug, or health food store <i>without</i> practitioner recommendation	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆
f. Naturopathic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆
g. Homeopathic remedies	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆
h. Biofeedback or visual imagery	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆
i. Other (please specify: _____)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆

5. How **helpful** do you think each of the following has been or would be for your TMD?

	Very unhelpful	Somewhat unhelpful	Somewhat helpful	Very helpful	Not sure
a. Chiropractic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
b. Acupuncture	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
c. Massage therapy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
d. Herbal medicine provided by a practitioner	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
e. Herbal medicine purchased at a grocery, drug, or health food store <i>without</i> practitioner recommendation	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
f. Naturopathic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
g. Homeopathic remedies	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
h. Biofeedback or visual imagery	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
i. Other (please specify: _____)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

6. If you have ever used or would consider using any of the alternative or complementary therapies listed above, what was or would be the reasons for seeking this care? (*check top three reasons only*)

- | | |
|---|--------------------------|
| a. I think alternative therapies work | <input type="checkbox"/> |
| b. Because alternative therapies are less harsh than conventional therapies | <input type="checkbox"/> |
| c. Other conventional methods didn't work | <input type="checkbox"/> |
| d. Alternative/complementary therapy(s) match my world view or personal beliefs | <input type="checkbox"/> |
| e. Friend or family member had a positive experience | <input type="checkbox"/> |
| f. Because I'd read positive things about alternative/complementary therapy(s) | <input type="checkbox"/> |
| g. Someone I trusted suggested I do it | <input type="checkbox"/> |
| h. Alternative/complementary providers generally offer more personal attention to their patients than do conventional providers | <input type="checkbox"/> |
| i. Other (Please specify: _____) | <input type="checkbox"/> |

7. How interested are you in trying or continuing to use the following alternative or complementary therapies?

	Not interested	Somewhat interested	Very interested
a. Chiropractic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
b. Acupuncture	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
c. Massage therapy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
d. Herbal medicine provided by a practitioner	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
e. Herbal medicine purchased at a grocery, drug, or health food store <i>without</i> practitioner recommendation	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
f. Naturopathic care	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
g. Homeopathic remedies	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
h. Biofeedback or visual imagery	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
i. Other (please specify: _____)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

8. Compared to conventional medicine, alternative or complementary therapies are:

- | | No | Yes |
|---|----------------------------|----------------------------|
| a. More natural | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 |
| b. Have providers who are more personally attentive | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 |
| c. More expensive | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 |
| d. More holistic (treat the whole person, not just the disease) | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 |
| e. Riskier | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 |
| f. Free of side effects | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 |
| g. Focused on health instead of illness | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 |
| h. Less legitimate | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 |
| i. Other (please specify: _____) | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 |

9. What would be the primary barrier(s) that would keep or have kept you from using alternative or complementary therapies?
