Demographic, Behavioral, and Health Correlates of Complementary and Alternative Medicine and Prayer Use among Midlife Women: 2002

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Abstract

Objective: This study investigated the demographic, behavioral, and health correlates of the most frequently used types of complementary and alternative medicine (CAM) therapy and the use of prayer for health among midlife women. We also examined the extent to which women used CAM for treatment of health conditions, including menopausal symptoms, and for general health and well-being.

Methods: Data from the 2002 National Health Interview Survey (NHIS), a cross-sectional, household survey representative of the U.S. civilian adult population, were used. Midlife women aged 40–59 years ($n = 5849$) were analyzed. Bivariate prevalence estimates were obtained, and binomial logistic regression models were estimated; all analyses were weighted.

Results: Overall, 46% of midlife women used any type of CAM in the past 12 months, and 54% reported using prayer for health reasons. The top five specific CAM therapies used were herbs and natural products; relaxation techniques; chiropractic care; yoga, tai chi, or qi gong; and massage. Multivariate results demonstrated different patterns of association between demographic, health, and behavioral characteristics and specific CAM therapies. A higher percentage of women used chiropractic care for an existing health condition than those using relaxation techniques, and few women used CAM specifically for menopausal symptoms.

Conclusions: CAM and prayer are frequently used by midlife women, and herbs and natural supplements are the mostly frequently used. The findings underscore the importance, particularly in the clinical setting, of asking women about their use of individual CAM therapies. Such clinical assessment is also important because of the potential for interactions of CAM therapies with prescribed therapies.

Introduction

MANY AMERICANS, PARTICULARLY WOMEN, use complementary and alternative medicine (CAM), and midlife women report the highest prevalence of CAM use.^{1,2} Recent national estimates from the 2002 National Health Interview Survey (NHIS) show that approximately 45% of women aged 45–57 reported CAM use in the past 12 months.³ Estimates obtained from other data sources are more variable, in part because of differences in the operationalization of what constitutes CAM use and in the samples of midlife women studied.^{4–7} It is clear, however,

that high percentages of midlife women are using CAM as part of their overall health management, and evidence suggests these trends will continue.^{8,9}

Nationally, herbs, relaxation, chiropractic, yoga/tai chi/qi gong, and massage are the five top specific CAM therapies used among midlife women.³ Beyond prevalence, little is known with respect to the factors associated with use of specific CAM therapies among midlife women, using nationally representative data. However, some evidence suggests racial, ethnic, socioeconomic status (SES), and other differences in use exist based on broad CAM domains, as defined by the National Center for Complementary and Alternative

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Medicine (NCCAM), for midlife women.³ The NCCAM domains are (1) whole medical systems, (2) mind-body medicine, (3) biologically based practices, (4) manipulative and body-based practices, and (5) energy medicine. Each domain comprises several specific CAM therapies (nccam.nih.gov/health/whatisacam/). Findings from the Study of Women's Health Across the Nation (SWAN), a multisite sample of midlife women, show that the effects of race, SES, and health-related variables depend on the specific CAM therapy under consideration.^{5,10} Examining these potential differences in a national sample of midlife women would allow for greater generalizability of the findings.

Women's motivations for using CAM can be regarded as one aspect of self-management of their health and health-care,^{11,12} and recent research has examined the specific health conditions for which CAM is used.¹⁻³ However, CAM is also used for general illness prevention and to promote health and well-being.^{11,12} The distinction between CAM use for treatment of an existing health condition and CAM use for illness prevention and wellness is especially relevant when examining the reasons for use of different CAM therapies. The extent to which midlife women use specific types of CAM for treatment of health conditions vs. for overall health and wellness is still an open question. Also, interest is ongoing in characterizing the ways in which midlife women are using CAM therapies for menopausal symptoms. Menopausal symptoms are positively associated with CAM use,⁵⁻⁷ but the percentages of women who report using CAM specifically for menopausal symptoms is relatively low^{3,7} and depends on the particular CAM therapy.^{5,7}

The current study extended recent research and investigated the demographic, behavioral, and health correlates of the five most frequently used types of CAM therapy among midlife women. We also investigated the correlates of use of prayer for health. Including prayer in the context of self-help and alternative medicine use is important because it is widely used by adults² and is especially frequently used among black and Hispanic women,¹ thus providing a more comprehensive understanding of racial and ethnic differences. This study also provided new information on the use of specific types of CAM for treatment of health conditions, including menopausal symptoms, and for general health and well-being. Taken together, our analysis contributes to the emerging picture of CAM use among midlife women.^{3-7,10,13}

Materials and Methods

Survey description and analytic sample

The data used for this analysis were from the 2002 NHIS, a cross-sectional, in-person household survey that is representative of the U.S. civilian noninstitutionalized population.¹⁴ A multistaged, clustered sample design was used, and self-reported information was obtained using computer-assisted personal interview (CAPI) techniques. The survey included a core set of questions, and answers were provided by a randomly selected adult from each family (Sample Adult Core). In 2002, a special supplement that focused on CAM was also administered. A total of 31,044 adults ≥ 18 years of age com-

pleted the sample questionnaire, with a response rate of 74.3%.¹⁵ Our analysis was restricted to 5927 women aged 40–59 years; after excluding those with missing information on CAM and prayer use and women who were of other race/ethnicity, the final sample was 5849 women.

Measures

Specific CAM therapies. The CAM supplement included questions about 27 specific types of CAM therapies, as well as information on the use of prayer for health reasons.² Based on the NCCAM designations, these therapies were categorized into (1) biologically based therapies (herbs, natural products, six different diet-based therapies, megavitamin therapy, folk medicine, chelation therapy), (2) mind-body therapies (deep breathing exercises, meditation, yoga, progressive relaxation, guided imagery, tai chi, hypnosis, qi gong, biofeedback), (3) manipulative and body-based therapies (chiropractic care, massage), (4) alternative medical systems (homeopathy, acupuncture, naturopathy, ayurveda), (5) energy healing/reiki, and (6) prayer for health reasons. All measures of CAM use and prayer reflected recent use (in the past 12 months). We first analyzed all these CAM types, within their respective NCCAM categories, by race and ethnicity. Because of our interest in the correlates of specific CAM therapies, however, we investigated the five most frequently used CAM therapies among midlife women and prayer for health reasons in more detail. The specific CAM therapies included in the analysis were (1) herbs and natural products (used by 25.4% of midlife women),* (2) relaxation techniques (deep breathing exercises, meditation, progressive relaxation, guided imagery) (20.8%), (3) chiropractic care (9.5%), (4) yoga/tai chi/qi gong (8.7%), and (5) massage (7.2%). Prayer for health reasons (53.7%) included prayed for own health, others prayed for your health, participated in a prayer group or prayer chain, and healing ritual or sacrament for own health. Prayer for health was analyzed separately.

Demographic variables. Race/ethnicity was coded to give priority to any mention of being Hispanic and was coded as white, black, Hispanic, and Asian. Place of birth was coded as U.S.-born or not. Age was used to distinguish women aged 40–49 from those aged 50–59 years. Completed education was coded as less than 12 years, high school graduate, some college, and college graduate or more. Multiple imputation procedures, as recommended by NCHS, were used to address nonresponse rates for annual family income¹⁶; the results were coded into five categories (<\$20,000; \$20,000–\$34,999; \$35,000–\$54,999; \$55,000–\$74,999; \$75,000+). Current employment status was coded as employed and unemployed/retired. Current union status was categorized as never married, married, cohabiting, divorced/separated, and widowed. Region was based on the four areas designated by the U.S. Census Bureau and was coded as Northeast, Midwest, South, and West.

Health and behavioral variables. Health insurance status was coded as insured or not. Self-rated health status measured at the time of interview was coded as excellent, very good,

*Among midlife women who used herbs and natural products, the top 9 items were echinacea (10%), ginkgo biloba (5%), garlic supplements (5%), ginseng (4%), glucosamine (4%), soy supplements (4%), fish oil (3%), peppermint (3%), St. John's wort (3%), and ginger supplements (3%).

good, fair, and poor. Smoking status and alcohol consumption were coded using categories already developed by NCHS.² Smoking status was coded as current, former, and never smoker. Current alcohol consumption was coded as lifetime abstainer, infrequent to light drinker, moderate to heavy drinker, and former drinker.

Health conditions. For each CAM therapy mentioned, recent CAM users were asked if they used it to treat a specific health condition (and if so, which, out of a list of 75 conditions). For each of the top five CAM methods and for prayer, we computed the top 10 health conditions mentioned, including menopause. Additionally, we computed a composite measure of "any health condition mentioned" for each type of CAM and for prayer to assess differences in use for treatment vs. for wellness across CAM types and prayer. (For women who used prayer for health, specific health condition information was obtained only for women who reported that they had a healing ritual or sacrament performed for their own health during the previous 12 months.)

The number of observations with missing data for variables other than income was small. Values were imputed using modal category or by regression imputation.

Analysis

All analyses and estimates were weighted using the NHIS sample weights to account for the complex survey design.¹⁵ Bivariate prevalence estimates for specific types of CAM use by race and ethnicity were first computed. Then, weighted binomial logistic regression was used to examine the associations of demographic, health, and behavioral factors with each of the most common CAM types and prayer for health. Because of the exploratory nature of the investigation, all the independent variables were retained in all regressions models. Adjusted odds ratios (ORs) and 95% confidence intervals (CIs) are presented. Finally, the 10 most frequently cited health conditions for use of each CAM type were estimated. Stata version 9.2 (StataCorp, College Station, TX) was used, and procedures that accounted for complex sample design were employed.

Results

The overall prevalence of any type of CAM use for women aged 40–59 was 45.5%, and race/ethnicity differences were significant (Table 1). Prayer for health reasons was also very frequently reported, and race/ethnicity differences were significant. For the remaining therapies, race/ethnicity differences were significant unless otherwise noted. Therapies that comprised the biologically based category were the most frequently used (28.4%); within that category, herbs were the most frequently used CAM type. Among the therapies comprising the mind-body category (reported use 23.9%), deep breathing exercises were most common. Meditation was the second most frequently reported, and yoga was the third most frequent, followed by progressive relaxation and guided imagery. The remaining therapies in this category were used infrequently. Recent use of two therapies that constituted the manipulative and body-based category of CAM (14.1%) also differed by race and ethnicity. Use of therapies that comprised the alternative medical systems category was generally low.

Controlling for other factors, there were no racial/ethnic differences in use of herbs or relaxation, but compared with

whites, blacks were less likely to use yoga/tai chi/qi gong, chiropractic care, and massage (Table 2). In contrast, black and Hispanic women were more likely than white women to use prayer for health. Foreign-born women were more likely to use herbs and less likely to use chiropractic care than U.S.-born women. No variation by age was observed in CAM use or prayer. Except for chiropractic care, greater educational attainment was associated with higher odds of use for all other types of CAM and prayer for health. Family income was not associated with use, except massage was more likely to be used and prayer for health less likely to be used among the most affluent women. Employment status was not associated with CAM use, but employed women were less likely to use prayer than unemployed/retired women. The relation of union status depended on the specific CAM type under consideration. Compared with married women, cohabiting women were more likely to use herbs, relaxation, and massage; divorced/separated women were more likely to use relaxation, yoga/tai chi/qi gong, and massage; never married women were less likely to use prayer for health. Compared with women living in the South, those living in the West were more likely to use each type of CAM; those living in the Midwest were more likely to use relaxation and chiropractic care, and women living in the Northeast were more likely to use chiropractic care only. In contrast, compared with women in the South, those living in other regions were less likely to use prayer for health. Women who were insured were less likely to use herbs.

Little difference was observed in CAM use by self-rated health status, except for relaxation techniques. Women with poorer health were more likely to use relaxation; only women reporting the poorest health were more likely to use massage. In contrast, poorer health status was associated with significant increases in use of prayer for health. Compared with never smokers, former smokers were more likely to use herbs, relaxation, and yoga/tai chi/qi gong; current smokers were less likely to use yoga/tai chi/qi gong or massage and were less likely to pray for health. Compared with current infrequent or light drinkers, abstainers were less likely to use all types of CAM; former drinkers were less likely to use massage. Women who were moderate or heavy drinkers were less likely to use prayer for health, whereas former drinkers were more likely to do so.

The total percentage of women who mentioned any specific health condition for each type of CAM is provided in the first row of Table 3. Women who used chiropractic care had the highest percentage reporting a specific health condition, and women who used yoga/tai chi/qi gong had the lowest. Midlife women used CAM for a variety of health conditions, with clear differences in the health conditions mentioned according to specific CAM used. For example, among midlife women who used herbs, 14.2% reported they did so for treatment of menopausal symptoms. No other CAM type had menopausal symptoms mentioned in the top 10 conditions.

Discussion

Our findings demonstrate that CAM use is frequently reported by midlife women. Overall, 46% of American women aged 40–59 years used any type of CAM in the past 12 months. Our findings are consistent with a recent national study of women aged 45–57 years using the same NHIS dataset,³ but we found lower prevalence than several other studies of

TABLE 1. PREVALENCE OF RECENT CAM USE BY NCCAM CATEGORY AND SPECIFIC TYPES OF CAM AMONG WOMEN AGED 40–59 YEARS, BY RACE AND ETHNICITY, NHIS, 2002^a

n	Total 5849	White 3933	Black 879	Hispanic 896	Asian 141
Any CAM use***	45.5	48.6	34.7	32.6	50.0
Prayer for health reasons***	53.7	49.8	77.4	59.7	38.1
Biologically based therapies***	28.4	29.6	21.6	25.1	36.2
Herbs***	25.4	26.2	19.5	23.3	33.8
Diet-based therapies	5.3	5.6	3.4	5.4	3.6
Megavitamin therapy*	3.4	3.8	2.8	1.4	1.6
Folk medicine	0.1	0.1	0.0	0.3	0.0
Chelation therapy	0.0	0.0	0.0	0.0	0.0
Mind-body therapies***	23.9	25.8	19.4	13.6	24.6
Deep breathing exercises***	16.7	18.1	14.2	9.9	11.9
Meditation**	10.8	11.5	9.2	6.2	13.9
Yoga***	8.0	8.9	4.0	4.7	12.7
Progressive relaxation**	5.5	6.1	4.6	2.9	1.9
Guided imagery**	3.6	4.1	1.7	2.0	0.7
Tai chi	1.4	1.3	1.0	2.0	2.9
Hypnosis	0.5	0.5	0.3	0.0	0.0
Qi gong	0.4	0.4	0.2	0.8	1.2
Biofeedback	0.2	0.2	0.4	0.3	0.0
Manipulative and body-based therapies***	14.1	16.4	5.5	7.5	7.2
Chiropractic care***	9.5	11.2	3.1	5.3	3.7
Massage***	7.2	8.5	3.1	3.7	3.5
Alternative medical systems	4.1	4.4	2.5	4.3	2.7
Homeopathy	2.7	2.9	1.8	2.7	1.7
Acupuncture*	1.6	1.7	0.4	2.3	1.1
Naturopathy	0.5	0.5	0.7	0.2	0.0
Ayurveda	0.2	0.2	0.1	0.1	0.0
Energy healing/Reiki	1.0	1.1	0.5	0.9	0.7

^aPercentages are weighted using individual-level sampling weight. Any CAM use includes all types listed except for prayer for health reasons, which is listed separately.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$. Results based on design-based F-test.

midlife women.^{5,7,17} Recent findings for midlife women from SWAN indicated an overall prevalence of CAM use of 52.7%,⁵ which was a similar prevalence to that found in a Canadian study of women 45–65 years.¹⁸ In contrast, an Australian study of women aged 48–67 years reported a prevalence of recent CAM use of 82%.¹⁷ A study of women 45–65 years who were members of a Washington HMO also found a relatively high prevalence of CAM use (76%).⁷ These differences are due, in part, to the differences in the definitions of “any CAM use,” as well as sample variability. We found that >53% of midlife women said they used prayer for health reasons; this percentage is similar to that found in SWAN.⁵ We found that black and Hispanic women are more likely to use prayer for health, independent of other factors; this is also true for women of all ages and other samples of midlife women.^{1,5} Including prayer for health in studies of CAM use is clearly relevant and demonstrates important racial and ethnic differences that require additional investigation.¹⁹ Taken together, our findings suggest that for a substantial number of midlife women, CAM use and prayer appear to be important components of their overall health management.

Moreover, we found that women use a diversity of CAM therapies, and, importantly, the relations of many demographic, health, and behavioral factors to CAM use depended on the specific CAM type under consideration. For example, in the multivariate analyses, no racial or ethnic differences

were observed in use of herbs or relaxation, but blacks were less likely than whites to use yoga/tai chi/qi gong, chiropractic care, and massage; blacks and Hispanics were more likely to use prayer for health. These racial and ethnic differences in specific types of CAM use are likely due to unmeasured group differences in knowledge, attitudes, and preferences about CAM use and health and health behaviors more generally. Being foreign born was positively associated with use of herbs, which may be because of continued adherence to traditional medicines of countries of origin.²⁰ Except for chiropractic care, increases in education were associated with increases in use for each type of CAM and prayer. Increases in income had little independent effect on CAM use, except for massage. It may be that differences in knowledge and attitudes about CAM and health and wellness that arise from increased education are important.²¹ Although the effects of union status also depended on the specific type of CAM considered, explanations are somewhat more speculative but are consistent with other research.¹ It may be, for example, that divorced women have fewer social supports than married women and, thus, are more likely to seek CAM therapies as coping strategies (e.g., relaxation techniques, yoga/tai chi/qi gong, massage).²² As expected, we found regional variability in CAM use, with women residing in the West more likely to use every type of CAM and less likely to use prayer than women residing in the South. These regional differences reflect the combined effects

TABLE 2. WEIGHTED LOGISTIC REGRESSION (ADJUSTED ODDS RATIOS)^a OF SELECTED CHARACTERISTICS ON USE OF SPECIFIC TYPES OF CAM: WOMEN AGED 40–59 YEARS, NHIS, 2002

<i>Characteristic (reference group)</i>	<i>Herbs 5813</i>	<i>Relaxation techniques 5808</i>	<i>Yoga/tai chi/qi gong 5813</i>	<i>Chiropractic care 5830</i>	<i>Massage 5830</i>	<i>Prayer 5768</i>
Race/ethnicity (white)						
Black	0.80	0.85	0.60*	0.34***	0.51**	2.87***
Hispanic	0.85	0.77	0.77	0.72	0.71	1.56***
Asian	1.25	1.22	1.64	0.66	0.41	0.66
Nativity status (U.S.-born)						
Foreign born	1.40*	0.81	1.27	0.43***	0.88	0.89
Age (40–49 years)						
50–59	1.12	1.08	1.00	0.90	0.80	0.99
Education (<12 years)						
High school graduate	1.44**	1.30	2.29*	1.20	3.19***	1.18
Some college	2.26***	2.30***	4.25***	1.43	5.42***	1.44**
College graduate or more	2.70***	3.30***	7.17***	1.22	8.81***	1.54***
Family income (< \$20,000)						
\$20,000–\$34,999	1.05	1.04	1.12	1.31	1.42	0.90
\$35,000–\$54,999	0.96	1.11	1.12	1.16	1.74*	0.77*
\$55,000–\$74,999	1.01	1.10	1.27	1.24	1.57	0.81
\$75,000 or more	1.05	1.07	1.24	0.98	2.16**	0.65***
Employment status (unemployed)						
Employed	0.96	0.84	0.89	1.01	1.06	0.83*
Marital status (married)						
Never married	0.95	1.20	1.18	0.74	1.24	0.77*
Cohabiting	1.90***	1.92***	1.58	1.09	1.75*	0.87
Divorced/separated	1.16	1.67***	1.86***	1.13	1.98***	0.95
Widowed	0.94	1.38	1.20	0.95	1.60	1.08
Region (South)						
Northeast	1.13	1.05	1.35	1.54**	1.06	0.64***
Midwest	0.95	1.35**	1.25	1.59**	1.33	0.80**
West	1.64***	1.58***	1.64***	2.10***	2.40***	0.62***
Health insurance status (no insurance)						
Insured	0.80*	1.19	1.02	1.16	1.09	1.24
Self-rated health status (excellent)						
Very good	1.16	1.14	0.90	1.05	0.84	1.23*
Good	1.27*	1.31*	0.84	1.11	1.13	1.46***
Fair	1.22	1.59**	0.77	0.96	0.99	3.15***
Poor	1.45	2.14***	0.78	1.69	2.19*	5.85***
Cigarette smoking status (never smoker)						
Current smoker	0.87	1.14	0.67*	0.76	0.65*	0.68***
Former smoker	1.39***	1.42***	1.32*	1.18	1.18	0.93
Alcohol consumption (current, infrequent/light)						
Lifetime abstainer	0.54***	0.53***	0.40***	0.51***	0.33***	1.02
Current drinker moderate/heavy	1.12	0.90	1.18	1.07	1.20	0.71***
Former drinker	0.82	0.81	0.74	0.86	0.63*	1.34**

^aOdds ratios are weighted using individual-level sampling weights. Numbers are unweighted.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

of availability of CAM therapies and services as well as regional normative differences in acceptability and utility of CAM.

Compared with studies that included women of all ages,¹ the effect of self-reported health status on CAM use was less pronounced among midlife women. Only relaxation techniques and prayer showed increasing use with poorer health; it may be that these women are using these practices as part of their overall management of their poorer health. Self-reported health status, although a useful measure, captures only one aspect of women's overall health. Other studies of midlife women found that those with a greater number of chronic health conditions (e.g., heart disease, high blood pressure,

arthritis, among others) were more likely to use flaxseed, glucosamine, and soy supplements,⁵ CAM types that were not explicitly considered here. The effects of smoking and alcohol use on CAM use have also been found by others,^{1,2} but testable explanations are still needed. For example, it may be that women who are former smokers have become more health conscious and, thus, more likely to use herbs, relaxation, and yoga/tai chi/qi gong as part of their health maintenance. Former drinkers may be using prayer as part of a sobriety program, which is commonly done in 12-step-type programs. In sum, our findings underscore the importance of analyzing individual CAM therapies separately because of

TABLE 3. TOP 10 HEALTH CONDITIONS TREATED (%) FOR EACH TYPE OF CAM
AMONG WOMEN 40–59 YEARS, NHIS, 2002^a

Health condition	Herbs 976	Relaxation techniques 457	Chiropractic 457	Yoga/qi gong/tai chi 107	Massage 211	Prayer 121
Any health condition	65.15	36.37	85.81	20.43	46.56	62.15
Head or chest cold	30.50					
Menopause	14.23					
Stomach or intestinal illness	11.08					
Arthritis/gout/lupus/fibromyalgia	9.44	13.41	8.03	26.42	10.11	11.03
Anxiety/depression	7.02	28.66		11.38	4.98	6.77
Joint pain or stiffness	6.58	5.14	10.35	8.07	10.04	11.70
Insomnia or trouble sleeping	6.52	6.76				
Sinusitis	5.22					
Menstrual problems	4.26					
Severe headache or migraine	3.74	6.31	6.82		2.67	8.24
Stress		15.18		5.32	6.58	
Back pain or problem		12.39	63.63	31.94	43.93	11.36
Asthma		7.08		5.51		
Recurring pain		6.86	5.71	9.48	5.07	4.18
Neck pain or problem		6.04	29.84	10.82	25.99	9.45
Fracture, bone/joint injury			2.09			4.79
Sprain or strain			1.64			
Jaw pain			1.23			
Other nerve damage			1.13			
Hypertension				4.26		
Muscular problems					2.19	
Poor circulation in the legs					1.67	
Cancer						12.63
Gynecological problems						5.77
Other				7.40		

^aPercentages are weighted using individual-level sampling weights and numbers are unweighted. Column numbers are the total number of women who used specific type of CAM for a health condition.

the differences in the effects of demographic, health, and behavioral factors. Although “any use of CAM” is an important summary measure to assess overall prevalence, the exclusive use of this general measure masks important differences in the correlates of use of specific CAM types.

Our findings show substantial variability in the percentages of women who use a specific CAM type to treat a specific health condition vs. for general health and wellness. The highest percentage reported for treatment of specific health conditions was among women using chiropractic care, and the lowest was among women who used yoga/qi gong/tai chi and relaxation techniques. Herbs, massage, and prayer were used both for health conditions and for wellness. These findings also underscore the importance, particularly in the clinical setting, of asking women about their use of individual CAM therapies because reasons for use (curative vs. preventive) vary substantially by type of CAM. Moreover, for women who reported a health condition, substantial variability was observed in the particular health conditions mentioned across specific CAM types. For example, high percentages of women reported using relaxation techniques for stress-related conditions, whereas those using chiropractic care reported pain-related conditions. Importantly, only 14% of women who reported using herbs said they used herbs for menopausal symptoms; menopause was not a frequently mentioned condition for any other CAM therapy. This is significant because although the research is not very promising regarding the efficacy of various herbs and natural

products for the treatment of one of the more bothersome menopausal symptoms, hot flashes,²³ evidence is increasing that other CAM strategies, including relaxation techniques and deep breathing exercises, may ameliorate vasomotor symptoms.²⁴ Thus, opportunities exist for education among menopausal women who might be interested in behavioral alternatives to hormone therapy for vasomotor symptoms.

Although the current study provides new information on the differences in specific types of CAM use among a nationally representative sample of midlife women, limitations must be acknowledged. The NHIS data used in the analysis are cross-sectional; therefore, the findings are limited to describing patterns of association between demographic, health, and behavioral characteristics and CAM. Few longitudinal datasets include the variables necessary to characterize women's patterns of use over time. A recent report using SWAN data is an exception¹³ and points to the need for additional longitudinal studies of CAM. Also, the NHIS data were collected in 2002, and although a recent trend analysis suggests some leveling off of annual prevalence rates of CAM use.⁸ The 2007 NHIS shows an increase of one to two percentage points in the CAM therapies we investigated.⁹ It is not clear what impact the Women's Health Initiative findings may have on midlife women's use of CAM, especially for management of menopausal symptoms. Additionally, although our findings suggest that some types of CAM tend to be used for treatment of health conditions and other types tend to be used for prevention and well-being, data limitations precluded any fur-

ther analysis, such as evaluating reported effectiveness. Better understanding the ways in which midlife women make decisions about using CAM for treatment vs. prevention would provide a more comprehensive picture of their health management.

Conclusions

Both CAM and prayer for health are used frequently by midlife women, and our research shows differences in the correlates of CAM use according to which specific type is under consideration. Thus, whereas “any CAM use” is a useful global measure to assess overall prevalence of use, it confounds underlying differences across CAM types. Herbs and natural supplements were the most frequently used type among midlife women. Most of these products are available over the counter, and as a group, their efficacy and potential for interactions with prescribed drugs are still of concern. Furthermore, more recent developments, such as the risks identified with the use of hormone therapy for menopausal symptoms,²⁵ may have led to an increase in CAM use for menopausal symptoms, increasing the need for clinicians to assess women’s CAM use in the context of their menopausal status and symptoms. Such clinical assessment is also important because of the potential for interactions of CAM therapies with prescribed therapies.

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