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Complementary and Alternative Medicine (CAM) Use among Women of Reproductive Age in the United States

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Abstract

Background—The purpose of this study was to examine the prevalence of complementary and alternative medicine (CAM) use, types of CAM used, and reasons for CAM use among reproductive-age women in the United States (US).

Methods—Data are from the 2007 National Health Interview Survey (NHIS). We examined a nationally representative sample of US women ages 18–44 (n=5,764 respondents). Primary outcomes were past year CAM use, reasons for CAM use, and conditions treated with CAM by pregnancy status (currently pregnant, gave birth in past year, neither). Multivariate logistic regression was used to estimate the odds of CAM use by pregnancy status.

Findings—Overall, 67% of reproductive-age US women reported using any CAM in the past year. Excluding vitamins, 42% reported using CAM. Significant differences in use of biologic-based (P=0.03) and mind-body therapies (P=0.012) by pregnancy status were found. Back pain (17.1%), neck pain (7.7%), and anxiety (3.7%) were the most commonly reported conditions treated with CAM among reproductive-age women. However, 20% of pregnant and postpartum women used CAM for pregnancy-related reasons, making pregnancy the most common reason for CAM use among pregnant and postpartum women .

Conclusions—CAM use during the childbearing year is prevalent, with one-fifth of currently or recently pregnant women reporting CAM use for pregnancy-related reasons. Policymakers should consider how public resources may be used to support appropriate, effective use of alternative

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Access to Data: Dr. Johnson had full access to all of the publicly available data used in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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approaches to managing health during pregnancy and postpartum. Providers should be aware of the changing needs and personal health practices of reproductive age women.

Keywords

Complementary and alternative medicine; women of reproductive age; pregnancy; postpartum; National Health Interview Survey

Background

Use of complementary and alternative medicine (CAM) in the United States (US) is prevalent, with over one-third of adults reporting CAM use in 2012 (Clarke, Black, Stussman, Barnes, & Nahin, 2015). Women are the primary consumers of healthcare services in the US, both conventional and CAM, and women of reproductive age are the primary users of CAM (Kronenberg, Cushman, Wade, Kalmuss, & Chao, 2006; Upchurch & Chyu, 2005; Upchurch et al., 2007). While a large and growing body of international research has documented CAM use in pregnancy (Adams, Sibbritt, & Lui, 2011; Frawley et al., 2013; Munstedt, Maisch, Tinneberg, & Hubner, 2014), little is known about the extent to which CAM therapies are used by US women during pregnancy and childbirth, despite their potential to improve women's overall wellbeing, including during pregnancy.

CAM has traditionally been defined as "a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine" (NCCAM, 2011). Complementary medicine encompasses approaches used in conjunction with conventional medicine, while alternative medicine encompasses approaches used in lieu of conventional medicine. More recently, the National Center on Complementary and Integrative Health (NCCIH, formerly known as the National Center on Complementary and Alternative Medicine (NCCAM)) has moved to using the broader term complementary health approaches since most people who use CAM do so in addition to conventional treatments (NCCIH, 2015). For consistency with the majority of already published literature, we use the term CAM to refer to complementary health approaches throughout this manuscript.

Recent evidence suggests there has been growth in CAM approaches for non-medical management of various perinatal symptoms and conditions, including nonpharmacologic alternatives for nausea/vomiting, pain management, or labor induction (Close et al., 2014; Kozhimannil, Johnson, Attanasio, Gjerdingen, & McGovern, 2013; Matthews, Haas, O'Mathuna, Dowswell, & Doyle, 2014). Since many non-medical approaches to managing aspects of pregnancy and childbirth are self-prescribed, baseline information is needed to understand whether and how women are using CAM therapies in combination with or in lieu of conventional medicine for pregnancy-related conditions.

Certain CAM therapies have been demonstrated to be effective during pregnancy, including ginger for nausea/vomiting, omega-3 fatty acids and folate for perinatal depression, and perinatal yoga for depression or for reducing stress and increasing comfort during labor (Battle, Uebelacker, Magee, Sutton, & Miller, 2015; Curtis, Weinrib, & Katz, 2012; Dennehy, 2011; Freeman, 2009). Women are also using CAM therapies that may be

contraindicated for pregnancy, especially if used in conjunction with conventional medicines (Dante, Pedrielli, Annessi, & Facchinetti, 2013; Frawley et al., 2015; Holst, Wright, Haavik, & Nordeng, 2011). Understanding patterns of CAM use during pregnancy can also have implications for healthcare costs. Nearly half of all US births are financed by state Medicaid programs (Markus, Andres, West, Garro, & Pellegrini, 2013), a publicly-funded health insurance program that provides free or low-cost healthcare coverage to low-income Americans, including pregnant women. Thus, it is imperative to understand whether and how public resources may be used to support appropriate, effective use of non-medical approaches to managing symptoms and conditions during the perinatal period.

Several studies have reported the use of CAM among pregnant women for relief of stress and pregnancy-related complaints, preparation for labor, and for general health benefits during pregnancy (Adams et al., 2009). Two studies examined CAM use specifically for nausea and low-back pain during pregnancy (Hollyer, Boon, Georgousis, Smith, & Einarson, 2002; Wang et al., 2005). However, most existing studies on CAM use among pregnant women have either been conducted outside of the US or used small, clinic-based samples that are difficult to generalize to the overall US population. Although one recently published study has documented the US prevalence of CAM use among pregnant and postpartum women (Birdee, Kemper, Rothman, & Gardiner, 2014), no US studies to date have examined the reasons that women of reproductive age use CAM and the conditions being treated with CAM.

In this study, we used data from a nationally-representative sample of US women to examine the prevalence of overall CAM use and the specific types of CAM therapies used by women who were pregnant at the time of survey, who gave birth in the year prior to survey (recently pregnant), or who were of childbearing age (18 to 44 years) but not currently or recently pregnant. We also examined the prevalence of condition-specific CAM use among women by pregnancy status. The objective of this study was to document the prevalence of CAM use, types of CAM used, and reasons for CAM use among women of reproductive age in the US.

Methods

SAMPLE

We examined CAM use by women of reproductive age using National Health Interview Survey (NHIS) data from 2007, a nationally representative US data source that includes complementary and alternative health practices (National Center for Health Statistics, 2008). The NHIS is an annual household survey of the health and healthcare of the US non-institutionalized, civilian population (Gentleman & Pleis, 2002). The NHIS uses a multistage probability sample design with clustering and stratification (National Center for Health Statistics, 2008). The sample is drawn so that data analyzed using the sampling weights are representative of the US population. The 2007 NHIS household response rate was 87.1%. Our analytic sample included women between the ages of 18 and 44 who completed the NHIS Alternative Health Supplement and had complete data for all covariates of interest (n = 5,764 respondents).

MEASURES

The three primary outcomes of interest were global measures of past year CAM use. First, the NHIS asks about 36 specific types of CAM. Although the National Center for Complementary and Alternative Medicine (NCCAM) recently revised its taxonomy of CAM types, we organized the 36 therapies using the CAM taxonomy in use by NCCAM at the time these NHIS data were collected: Alternative medical systems, biologically-based therapies, manipulative body therapies, mind-body therapies, and energy healing therapies (Barnes, Bloom, & Nahin, 2008). Second, guided by the manner in which the NHIS CAM use question was asked, we categorized each specific CAM type as practitioner-based or self-treatment. Practitioner-based CAM indicates reported use of CAM types delivered by a CAM practitioner. Self-treatment with CAM indicates reported use of CAM types that are typically self-administered. Third, any CAM use combines the two and indicates reported use of any of the CAM types reported in the NHIS.

In the NHIS, reasons for CAM use and specific health conditions treated with CAM were elicited from respondents who reported CAM use in the past year. Reasons for CAM use were ascertained through seven specific yes/no questions. These reasons were: Improved energy, General wellness, Enhance immune function, Medical care did not help, Medical care was too costly, Provider recommended it, and Family or friends recommended it. Variables for 87 health condition categories for each of the therapies were also available. We aggregated affirmative responses for each condition to create variables representing whether or not any CAM therapy was used to treat each condition. Specifically for this study, we further examined and manually coded all responses to “Other, please specify”. These responses were verbatim text responses for each CAM type. We created an aggregate indicator variable representing any type of CAM used specifically for pregnancy or childbirth for each verbatim response that included pregnancy or childbirth related words. Words or phrases coded as pregnancy or childbirth included: pregnant, pregnancy, birth, labor, delivery, spina bifida prevention, gestational diabetes prevention, or morning sickness.

ANALYSIS

First, we examined differences in background characteristics by pregnancy status. Next, we examined the prevalence of past year use of CAM therapies among women of childbearing age by pregnancy status using cross-tabulations with design-based F-tests to test for differences. We then estimated the weighted prevalence of reported health conditions treated with CAM in the past year. Finally, using logistic regression, we estimated the odds of any past year CAM use by pregnancy status, the odds of practitioner-based CAM use, and the odds of self-treatment with CAM. All models were adjusted for race/ethnicity, age, marital status, education, employment status, nativity status, poverty status, insurance status, census region. Analyses were conducted with Stata statistical software (version 12) and accounted for the NHIS’s complex sampling design (StataCorp, 2011). This secondary analysis of publicly available, deidentified data was exempt from University of Minnesota IRB review.

Results

Table 1 presents characteristics of women of reproductive age by pregnancy status. Overall, women who are currently pregnant, recently pregnant (gave birth in the past year), and not recently pregnant differed significantly on all social and demographic characteristics examined with the exception of Census Region.

Table 2 shows the prevalence of CAM use overall and by the NCCAM types. Overall, 67% of women of reproductive age reported using some type of CAM in the past 12 months. This differed by pregnancy status with currently pregnant women having a significantly higher prevalence of use than others (78% vs. 65%; $P < 0.001$). However, excluding vitamin use, 42% of women of reproductive age reported using CAM. Significant differences in use of biologic-based ($P = 0.030$) and mind-body therapies ($P = 0.012$) by pregnancy status were found. Mind-body therapies were the most common type of CAM (69%) reported by currently or recently pregnant women who used CAM.

Table 3 presents the reasons for CAM use and reported conditions treated with CAM among women of reproductive age by pregnancy status. No differences in reasons for CAM use by pregnancy status were found. Of currently or recently pregnant women who used CAM in the past year, 61% reported using CAM for general wellness. Back pain (17.1%), neck pain (7.7%), and anxiety (3.7%) were the most commonly reported conditions treated with CAM among women of reproductive age. However, nearly 12% of currently pregnant women and 28% of recently pregnant women reported using CAM for pregnancy-related reasons ($P < 0.001$). Pregnancy-related reasons are thus the second most commonly reported condition treated with CAM among women who are currently pregnant and the first most commonly reported condition treated with CAM among recently pregnant women.

Table 4 presents the results of our logistic regression models as odds ratios of past year CAM use among women of reproductive age by pregnancy status. After controlling for potential confounders, currently pregnant women had 3.4 times higher odds (95% CI 2.2–5.1; $P < 0.001$) and recently pregnant women had 2.3 times higher odds (95% CI 1.7–3.1; $P < 0.001$) of any past year CAM use compared with other women of reproductive age. However, when vitamin use was excluded currently or recently pregnant women were no more or less likely to have used CAM in the past year than other reproductive age women.

Discussion

Among the approximately 62 million reproductive-age women in the US, CAM use is prevalent, with two-thirds of these women reporting some past year CAM use. Moreover, CAM use during the childbearing year is common, with over three-quarters of currently or recently pregnant women reporting past year CAM use. Even when vitamin use was excluded, 39% of currently pregnant and 31% of recently pregnant women reported past year CAM use. Of the currently or recently pregnant women who reported CAM use in the past year, 20% reported using CAM specifically for pregnancy-related reasons, making this the single most common reason for CAM use reported by pregnant and postpartum women.

Previous studies are consistent in finding a similarly high prevalence of CAM use among pregnant and postpartum women worldwide. A review of 24 studies from 1999–2008 on CAM use in pregnant women found CAM use prevalence across countries to fall largely between 20 and 60%, while another cross-national review of 18 articles published since 2001 found CAM use prevalence to range from 13–73% (Adams, et al., 2009; H. G. Hall, Griffiths, & McKenna, 2011). Recent studies indicate that 50% of women in Germany and 52% of women in Australia report using CAM (excluding vitamin and mineral use) during pregnancy, while 57% of women in the United Kingdom report using CAM (including vitamins) during pregnancy (Frawley, et al., 2013; H. R. Hall & Jolly, 2014; Kalder, Knoblauch, Hrgovic, & Munstedt, 2011). While our prevalence estimates (three-quarters including vitamins and one-third when excluding vitamins) fall into the range reported by previous studies, they are not directly comparable. The NHIS is a nationally representative survey of all adults. We were able to identify women that were pregnant at the time of the survey or had given birth in the past year. However, because the NHIS data indicate reports of any past year CAM use, we cannot distinguish CAM used in the past year specifically during pregnancy from use in the past year that was not during pregnancy. In the US, one recent study using the same NHIS data examined the prevalence of CAM use among pregnant and postpartum women and found CAM use among pregnant women to be similar to use among non-pregnant women but significantly lower among postpartum women when vitamins and minerals were excluded (Birdee, et al., 2014). Our results are consistent with these findings while extending this research by examining the reasons for CAM use and conditions treated with CAM among women of reproductive age.

One other finding of note is that while pregnant and postpartum women have significantly higher odds of past year CAM use compared to other reproductive age women, when vitamin use is excluded they are no more or less likely to have used CAM in the past year. Vitamin use is queried as one form of CAM in the NHIS alternative health supplement, so we included it in the overall estimates of CAM use. However, prenatal vitamin use is so prevalent among pregnant and postpartum women in the US, that this is likely driving the increased odds of CAM use in this population. As noted above, studies in other countries are inconsistent on inclusion of vitamin use in their perinatal CAM estimates. Even though there are no significant differences in overall CAM use by pregnancy status, the fact that well over one-third of pregnant and postpartum women report using CAM in the past year is critical information for maternity care providers.

The large proportion of pregnant and recently pregnant women who have used CAM in the past year underscores the need for more provider education about the types and uses of CAM in the US maternity care population, as well as further research on CAM use trends and effectiveness. Evidence for the efficacy of complementary medicine use in the perinatal period is emerging (Beddoe & Lee, 2008; Curtis, et al., 2012; Khorsan, Hawk, Lisi, & Kizhakkeveettil, 2009; Smith, Collins, Cyna, & Crowther, 2006), but few US studies have investigated the prevalence and patterns of CAM use during pregnancy. Our findings suggest, for instance, that CAM use among women of reproductive age differs significantly by socioeconomic and demographic characteristics; however, due to limitations in data availability (both sample size and perinatal CAM use), research is lacking on CAM use by detailed socio-demographic characteristics during pregnancy. Future research with larger

samples of pregnant and postpartum women should examine, in particular, differences by race/ethnicity, nativity status, education, and geographic region in the use and experience of CAM among pregnant women. More comprehensive data collection on CAM use specific to the perinatal period could also facilitate research on the types of pregnancy-related conditions being treated with CAM, along with the effectiveness of CAM for managing symptoms and conditions during pregnancy and childbirth.

The knowledge that a sizable proportion of women use CAM specifically for pregnancy-and childbirth-related conditions could also help facilitate better patient-provider communication. Maternity care providers in other developed countries consider CAM a useful supplement to conventional medical treatments though a lack of knowledge about the benefits and safety of CAM persists among providers (Adams et al., 2011; Munstedt, et al., 2014). Attitudes toward CAM use among conventional care providers in the US have become more favorable in recent years (Wahner-Roedler et al., 2014), and evidence suggests that physicians desire more education about CAM in order to better facilitate discussions about CAM use with their patients (Corbin Winslow & Shapiro, 2002). However, patients and providers may have different expectations regarding communication about CAM and the integration of CAM into primary care settings (Ben-Arye, Frenkel, Klein, & Scharf, 2008). Most people who use CAM do not disclose this use to their conventional provider with estimates of non-disclosure varying by CAM type and reason for use ranging from 40% to as high as 77% (Shim, Schneider, & Curlin, 2014); this may also be the case with women who are pregnant or who have recently given birth (Harrigan, 2011; Warriner, Bryan, & Brown, 2014). Exploration of the communication about CAM between women and providers is warranted, and improvements should be made to ensure conventional pregnancy care providers have the knowledge to advise women about CAM use.

Limitations

Findings should be considered in light of potential limitations. First, CAM use in the NHIS data is based on self-report, which relies upon willingness and accuracy of recall. Second, identification of pregnancy-specific CAM use was documented only in the “other” text responses. No questions systematically inquired about CAM use during the perinatal period making it difficult to identify CAM use for conditions related specifically to pregnancy. Women who used CAM for pregnancy-specific reasons may have chosen not to disclose or may have reported the specific health condition (e.g., back pain) but not identified it as pregnancy-related. This may be even more common among regular CAM users who do not distinguish pregnancy-specific instances outside of their regular use, thus leading to underestimates of pregnancy-specific CAM use. Third, the sample size for currently and recently pregnant women was small. Thus, we were unable to conduct a comprehensive analysis of the use of specific CAM therapies during the perinatal period. Finally, the NHIS alternative health supplement is a periodic survey that is only fielded every 5 years. Although 2012 data are now available, this analysis was based on the 2007 data because of changes in the data collection and public use data files. Specifically, conditions for CAM use are now limited to the top 3 therapies used. Given that pregnancy is an isolated event during the previous year, it is quite likely that pregnancy-related use would be

underreported. Moreover, the “other” text responses are no longer included in the public use files, so potential reports of pregnancy-specific use are not readily accessible.

Implications for Practice and/or Policy

Nearly four million women give birth in the US every year; pregnancy and childbirth are the most common reasons women access health services (Podulka, Stranges, & Steiner, 2011). As many as three million of these women may use CAM, and demand for non-pharmacologic and non-medical alternatives during the perinatal period is growing. Policymakers need to consider how public resources may be used to support appropriate, effective use of alternative approaches to managing pregnancy and childbirth. Support for research on the effectiveness of CAM therapies during pregnancy and labor can improve the safety of pregnant women who use CAM, while covering effective evidence-based CAM under insurance programs such as Medicaid can help reduce socio-demographic disparities in access to effective CAM therapies that occur due to the costs of CAM.

Given the prevalence of CAM use by pregnant women, greater integration of CAM into education and services provided as part of traditional maternity care may also be warranted, in order to ensure access to a full range of supportive medical and CAM care during the perinatal period. Many women who use CAM for pregnancy-related conditions may not disclose their CAM use to their conventional care providers. Providers need to be aware of the changing needs and personal health practices of pregnant women and take an active role in asking patients about CAM use, as well as providing referrals to CAM practitioners where appropriate. Integrating CAM and conventional care may not only improve communication between providers and patients, but also reduce the risk of using CAM therapies that are contraindicated for pregnancy or adverse interactions between conventional medicine and CAM therapies being used simultaneously. Changes to standard clinical procedures and the restructuring of organizational and payment systems may be needed to create stronger working partnerships between CAM and conventional providers and better care coordination for pregnancy women (Knutson, Johnson, Sidebottom, & Fyfe-Johnson, 2013).

Conclusion

Over three-fourths of currently or recently pregnant women in the US have used CAM during the past year; of these women, one-fifth reported CAM use for pregnancy- or childbirth-related reasons. Policymakers and health care providers should consider improving data collection and better understanding access to and appropriate use of CAM for symptoms and conditions related to pregnancy, childbirth, and the postpartum period.

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Biographies

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Katy B. Kozhimannil, PhD, MPA is Associate Professor of Health Policy and Management, University of Minnesota. She is a health policy analyst who studies institutional and government policies affecting healthcare delivery, quality, and outcomes for women and families.

Judy Jou, MA is a doctoral candidate in Health Services Research, Policy, and Administration, Division of Health Policy and Management at the University of Minnesota. Her work examines the effects of health policies on patient experience and outcomes.

Neha Ghildayal, PhD is a Health Decision Scientist who just received her doctoral degree in the Division of Health Policy and Management, University of Minnesota. Her doctoral work was focused on CAM use for low back pain in the U.S.

Todd H. Rockwood, PhD is Associate Professor of Health Policy and Management at the University of Minnesota. He is a sociologist and survey methodologist with expertise in survey research methods, measurement/scale construction, and outcomes research.

Table 1

Characteristics of women of childbearing age (18 to 44), NHIS 2007.

	Pregnancy Status				
	Currently pregnant	Birth in past year	All others	TOTAL	p-value
Race/ethnicity					
White	56.8%	50.0%	64.6%	63.3%	<0.001
Black	11.1%	15.2%	14.0%	13.9%	
AIAN	2.6%	1.8%	1.4%	1.5%	
Asian/NHOPI	4.9%	4.3%	5.6%	5.5%	
Hispanic	24.6%	28.7%	14.5%	15.9%	
Nativity status					
US-born	75.9%	72.8%	83.0%	82.0%	<0.001
Foreign born	24.1%	27.2%	17.1%	18.0%	
Age Group					
18–24 years	28.0%	34.6%	24.8%	25.6%	<0.001
25–34 years	54.5%	48.3%	34.2%	36.1%	
35–44 years	17.5%	17.1%	41.0%	38.4%	
Marital Status					
Married	68.1%	72.2%	47.5%	50.0%	<0.001
Unmarried	32.0%	27.8%	52.6%	50.0%	
Education					
< H.S. Diploma	20.2%	22.1%	12.3%	13.3%	<0.001
High School	20.1%	25.3%	25.3%	25.1%	
Some College	15.0%	18.9%	24.1%	23.3%	
College Degree	44.8%	33.7%	38.3%	38.3%	
Employment					
Unemployed	39.9%	53.5%	29.5%	31.6%	<0.001
Employed	60.1%	46.5%	70.5%	68.4%	
Poverty Status					
< 200% FPL	33.4%	53.1%	36.4%	37.4%	<0.001
200–399% FPL	30.3%	26.1%	31.5%	31.1%	

	Pregnancy Status				
	Currently pregnant	**Birth in past year**	**All others**	**TOTAL**	**p-value**
400%+ of FPL	36.3%	20.8%	32.0%	31.5%	
Insurance					
Uninsured	13.1%	22.9%	21.6%	21.3%	0.007
Insured	86.9%	77.1%	78.4%	78.7%	
Census Region					
1 Northeast	14.4%	13.7%	16.5%	16.2%	0.686
2 Midwest	23.0%	23.3%	24.9%	24.7%	
3 South	38.2%	41.4%	37.3%	37.6%	
4 West	24.4%	21.6%	21.3%	21.5%	
SAMPLE SIZE					
Unweighted	273	392	5,099	5,764	
Weighted	2,552,894	3,366,825	47,078,407	52,998,126	

Table 2

Prevalence of past year CAM use by pregnancy status, adult women 18 to 44, NHIS 2007.

	Pregnancy Status				
	Currently pregnant	**Birth in past year**	**All others**	**TOTAL**	**p-value**
All women of childbearing age (n = 5,764 unweighted)					
NCCAM Types					
Alternative medical systems	4.2%	2.4%	4.2%	4.1%	0.476
Biologically-based therapies	82.2%	70.7%	58.1%	60.1%	<0.001
Biologically-based therapies excl. vitamins	20.7%	9.9%	19.8%	19.2%	<0.001
Manipulative body therapies	20.4%	13.7%	19.5%	19.2%	0.093
Mind-body therapies	24.7%	23.1%	24.8%	24.7%	0.835
Energy Therapies	0.8%	0.0%	0.5%	0.5%	0.453
Overall CAM use					
Any CAM therapy	83.3%	74.3%	65.8%	67.2%	<0.001
excl. vitamins	39.4%	31.1%	42.9%	42.0%	<0.001
Practitioner-based	21.1%	14.2%	20.8%	20.4%	0.052
Self-treatment (excl. vitamins)	33.1%	26.8%	35.0%	34.4%	0.026
Those with past year CAM use (n = 2,295 unweighted)					
Alternative medical systems	0.5%	0.4%	8.8%	9.6%	0.840
Biologically-based therapies excl. vitamins	52.5%	31.8%	46.1%	45.7%	0.030
Manipulative body therapies	51.7%	44.0%	45.5%	45.7%	0.587
Mind-body therapies	62.8%	74.3%	57.8%	58.8%	0.012
Energy Therapies	2.1%	0.0%	1.2%	1.2%	0.498

Note: Data from NHIS Sample Adult, Alternative Health Supplement file 2007

Table 3

Reasons for CAM use and prevalence of conditions treated with CAM in the past year by pregnancy status, adult women 18–44 years who used CAM (n = 2,295 unweighted), NHIS 2007

	Pregnancy Status				
	Currently pregnant	Birth in past year	All others	TOTAL	p-value
Reasons for CAM use					
Improve energy	49.8%	42.2%	38.5%	39.2%	0.1397
General wellness	62.0%	60.6%	56.5%	56.9%	0.4900
Enhance immune function	20.0%	23.3%	19.8%	20.0%	0.7619
Medical care did not help	18.3%	10.2%	11.4%	11.7%	0.2241
Medical care too costly	4.0%	2.6%	5.4%	5.2%	0.5160
Provider recommended	17.5%	27.5%	16.4%	17.0%	0.0536
Family recommended	41.9%	42.0%	39.8%	40.0%	0.8801
Conditions reported					
Back pain or problem	22.1%	16.7%	16.9%	17.1%	0.529
Pregnancy, childbirth	11.9%	28.0%	0.3%	2.1%	<0.001
Neck pain or problem	11.7%	1.6%	7.8%	7.7%	0.046
Anxiety	4.6%	0.0%	3.9%	3.7%	0.209
Acid reflux or heartburn	2.9%	0.0%	0.2%	0.3%	<0.001
Other joint pain or stiffness	2.0%	1.3%	1.8%	1.8%	0.939
Severe headache or migraine	1.1%	2.6%	2.4%	2.3%	0.753

Note: Data from NHIS Sample Adult, Alternative Health Supplement 2007

Table 4

Odds of any past year CAM use among women of childbearing age (ages 18–44)

	Any CAM use				Any CAM, excluding vitamins			
	OR	**LCI**	**UCI**	**P-value**	**OR**	**LCI**	**UCI**	**P-value**
Pregnancy Status								
Currently pregnant	3.4	2.20	5.12	< **0.001**	1.0	0.74	1.38	0.965
Gave birth in past year	2.3	1.71	3.10	< **0.001**	0.9	0.64	1.16	0.327
All other women 18–44	1.0				1.0			
Race/ethnicity group								
White	1.0				1.0			
Black	0.6	0.51	0.76	< **0.001**	0.5	0.41	0.62	< **0.001**
AIAN	0.9	0.53	1.51	0.669	1.2	0.70	2.12	0.476
Asian/NHOPI	1.0	0.70	1.31	0.793	0.8	0.57	1.04	0.091
Hispanic	0.6	0.50	0.80	< **0.001**	0.5	0.39	0.60	< **0.001**
Nativity status								
Foreign born	1.0				1.0			
US-born	1.1	0.90	1.43	0.292	1.3	1.02	1.61	**0.031**
Age Group								
18–24 years	1.0				1.0			
25–34 years	1.1	0.85	1.32	0.579	1.2	0.95	1.51	0.120
35–44 years	1.3	1.01	1.57	**0.043**	1.3	1.06	1.68	**0.014**
Marital Status								
Married	1.0				1.0			
Not married	1.1	0.95	1.32	0.180	1.4	1.22	1.71	< **0.001**
Educational Attainment								
Less than a H.S. Diploma	1.0				1.0			
High School Diploma	1.6	1.27	1.94	< **0.001**	1.9	1.45	2.42	< **0.001**
Some College	2.8	2.23	3.61	< **0.001**	3.5	2.67	4.47	< **0.001**
College Degree	4.1	3.23	5.15	< **0.001**	4.3	3.27	5.52	< **0.001**
Employment Status								
Unemployed	1.0				1.0			

	Any CAM use				Any CAM, excluding vitamins			
	OR	**LCI**	**UCI**	**P-value**	**OR**	**LCI**	**UCI**	**P-value**
Employed	1.0	0.84	1.16	0.855	1.0	0.82	1.14	0.665
Poverty Status								
Below 200% FPL	1.0				1.0			
200 – 399% of FPL	1.2	0.97	1.45	0.101	1.1	0.89	1.34	0.379
400%+ of FPL	1.6	1.22	2.03	**0.001**	1.5	1.23	1.94	< **0.001**
Insurance coverage								
Uninsured	1.0				1.0			
Insured	1.1	0.94	1.35	0.211	1.0	0.83	1.21	0.985
Census Region								
1 Northeast	1.0	0.80	1.26	0.968	1.1	0.92	1.44	0.217
2 Midwest	1.2	1.00	1.55	**0.050**	1.3	1.05	1.55	**0.014**
3 South	1.0				1.0			
4 West	1.4	1.13	1.75	**0.003**	1.7	1.38	2.07	< **0.001**