

Gender Differences in Prevalence, Patterns, Purposes, and Perceived Benefits of Meditation Practices in the United States

Dawn M. Upchurch, PhD, LAc¹ and Pamela Jo Johnson, MPH, PhD²

Abstract

Introduction: Meditation is a common type of complementary and alternative medicine (CAM), and the evidence for its usefulness for health promotion is growing. Women have higher rates of overall CAM use than men do, but little is known about gender differences in meditation practices, reasons for use, or perceived benefits.

Methods: Data from the 2012 National Health Interview Survey (NHIS) were used. The NHIS design is a multistage probability sample representative of US adults aged ≥ 18 ($n = 34,342$). Design-based F-test and logistic regression were used; all analyses were weighted and were performed in 2017–2018.

Results: Overall, 10.3% of women and 5.2% of men reported using some type of meditation in the past year ($p < 0.001$). Among meditators, a higher percentage of women used meditation with yoga, tai chi, or qi gong, but men were more likely to use specific types of stand-alone practices (e.g., mindfulness) than women ($p < 0.001$ for each type). The most common reason reported for using meditation was to reduce stress (35%). Although women and men reported similar reasons for meditating, there were gender differences in the prevalence of some reasons. Both men and women perceived meditation to be helpful (90% and 94%, respectively).

Conclusions: There are gender differences in prevalence, purpose, and perceived benefits of using meditation. US adults aged ≥ 18 use meditation and find it helpful. Although currently less prevalent among men, providers can consider meditation as a tool for health promotion in both men and women.

Keywords: complementary and alternative medicine, mind–body, meditation, gender, stress

Introduction

INCREASINGLY, AMERICANS ARE including complementary and alternative medicine (CAM) such as meditation, as part of a wellness lifestyle.^{1–3} In 2012, 8.0% of adult Americans used some type of meditation, and it is the fifth most common type of CAM.⁴ There is growing evidence that meditation provides health benefits for clinical and nonclinical populations.^{5–8} Several meta-analyses, systematic reviews, and clinical trials demonstrate that meditation can help manage psychoemotional symptoms such as stress, anxiety, and depression,^{5–7,9–15} and reduce physical symptoms such as pain,^{14,15} including chronic back pain.^{16,17} Concomitantly, the prevalence of stress-related, lifestyle diseases and chronic pain is growing.^{18–20} Although recent descriptive studies provide new information on meditation use generally,^{21,22} less is known about gender differences in the characteristics of meditators, types of practices, reasons for use, or perceived benefits.

The purpose of this study is to fill this gap in the literature by examining meditation use separately for women and men. This information, in conjunction with knowledge of efficacy and effectiveness studies, can aid healthcare providers' health promotion efforts in counseling patients with health conditions for which meditation might be helpful, either alone or in combination with standard care.

Gender differences in CAM use are well established, with women reporting higher rates than men.^{4,23} In 2012, 37.4% of women reported using CAM compared with 28.8% of men.⁴ Meditation is a mind–body therapy (MBT); earlier studies on MBT more generally found that women have higher rates of use than men.^{24–27} Studies using more recent data that included details about specific meditation practices (e.g., mindfulness) also found that women engaged in these practices more so than men.^{21,22} Some have proposed that this may be because women are more health conscious or have greater health literacy than men.^{3,21} Many people are using meditation for stress

¹Department of Community Health Sciences, UCLA Fielding School of Public Health, Los Angeles, California.

²School of Public Health, University of Minnesota, Minneapolis, Minnesota.

management.^{21,22} Women consistently report higher levels of stress than men^{28,29}; yet to our knowledge, studies have not comprehensively investigated gender-specific meditation use.

This study sought to comprehensively investigate the current state of meditation use by women and men in the United States. Using a modification of the Andersen behavioral model of healthcare utilization developed for CAM use,^{3,30,31} we examined the contributions of predisposing, enabling, and need factors, and healthy behaviors on recent meditation use. We also estimated the prevalence of specific meditation practices and examined gender differences. Last, among meditators, we explored reasons for use and self-reported helpfulness separately by gender. We hypothesized that there would be gender differences in the prevalence of meditation, the types used, and in the reasons and perceived benefits of engaging in meditation based on the arguments elaborated above.

Methods and Materials

Study design and population

Data came from the 2012 National Health Interview Survey (NHIS), an ongoing, in-person household survey of the US civilian, noninstitutionalized population.³² NHIS uses a multistage probability sample design with clustering, stratification, and oversampling. The survey includes a core component and, every 5 years, an Adult Alternative Medicine supplement. A randomly selected adult aged ≥ 18 (Sample Adult Core) was identified in each household to respond to detailed health questions ($n = 34,525$). The Sample Adult Core response rate was 79.7%.³² These individuals also completed the Adult Alternative Medicine supplement. Adults were asked about their use of >20 different types of CAM, and for the specific modalities reported additional information was obtained.

The analytic sample included all adults who completed the supplement and had complete data for all variables ($n = 33,379$). Because NHIS involves publicly available, deidentified data, the study did not meet the definition of human subjects research by the university's Institutional Review Board.

Outcomes

Meditation measures. Individuals were asked if they engaged in any of three specific types of meditation practices in the past 12 months: mantra meditation (including transcendental meditation, relaxation response, and clinically standardized meditation); mindfulness meditation (including Vipassana, Zen Buddhist meditation, mindfulness-based stress reduction, and mindfulness-based cognitive therapy); or spiritual meditation (including centering prayer and contemplative meditation). Individuals were also asked if they meditated as part of other practices (yoga, tai chi, or qi gong) (YTQ). A mention of "yes" to any one of the above types of meditation was coded as engaging in any meditation in the past year. Each specific type of meditation practice ("stand-alone") was examined separately and in an aggregated "any meditation" category. A response to a global question of whether each individual had ever used meditation (defined as mantra, mindfulness of spiritual meditation) was also elicited.

Most important reason for using meditation and self-reported helpfulness. Individuals who reported using stand-alone meditation in the past 12 months were asked to give the most important reason for meditating from a list of 18 possible items (*e.g.*, to cope with health problems, reduce stress, general wellness and disease prevention). Then, they were asked how much they thought meditation helped with that issue (a great deal, some, only a little, and not at all). Those who used meditation as a part of YTQ only reported their use of YTQ as part of the top three, and individuals were not specifically asked about the benefit of meditation used with YTQ. Thus, there were no follow-up questions about reason or helpfulness for meditation used with YTQ.

Covariates

Predisposing factors reflected aspects of demographic social placement. Variables included the following: gender (male, female), age (18–29, 30–49, 50–64, 65+), race/ethnicity (White Non-Hispanic, Black Non-Hispanic, American Indian/Alaska Native Non-Hispanic, Asian/Pacific Islander Non-Hispanic, Multiple/Other Non-Hispanic, Hispanic), marital status (married, not married), and education ($<$ high school, high school diploma, some college, baccalaureate, or higher). Enabling factors reflected factors facilitating access to both conventional healthcare and formal meditation training. These variables include the following: income operationalized as federal poverty level (FPL) ($<200\%$ of federal poverty level, 200% – 399% of FPL, and 400% of FPL), health insurance (insured, not insured), and geographic region of residence (Northeast, Midwest, South, West).

Medical need factors included subjective and objective health measures (mental distress, functional limitations). Mental distress was ascertained using the K6, which is a measure of nonspecific psychological distress. The K6 was developed for use as population screening tool in the NHIS.³³ Six questions, each on a scale of 0–4, ask respondents how often they experienced symptoms of psychological distress (*i.e.*, felt sad, nervous, hopeless, restless, worthless, or that everything was an effort) in the past 30 days. Responses were summed to create an overall K6 score ranging from 0 to 24 with higher scores indicating more serious distress.³³ Levels of psychological distress were classified using cutpoints identified as optimal for predicting mood disorders (0–5 for no psychological distress, 6–12 for moderate psychological distress, and 13–24 for severe psychological distress).³⁴

Functional limitation was classified as limited in any way versus not limited. Personal health practices were measured as a count of the number of healthy behaviors: healthy weight (body mass index 18.5–24.90), nonsmoker (current nonsmoker, vs. any current smoking), healthy alcohol use (none, light, moderate vs. heavy drinker), and sufficient leisure-time physical activity (150 minutes per week vs. fewer or no minutes of activity). To the extent possible, covariates were coded using standard categories presented in other national studies and reports.^{4,23}

Statistical analysis

First, we examined if predisposing, enabling, and need factors, and personal health practices differed by gender as well as prevalence of past-year meditation use by each category of each covariate. Next, we estimated overall prevalence

TABLE 1. DISTRIBUTIONS OF COVARIATES AND PREVALENCE OF PAST-YEAR MEDITATION USE BY GENDER, US ADULTS (N=33,379), NATIONAL HEALTH INTERVIEW SURVEY 2012

	Sample characteristics		p ^a	% Using any meditation		p ^b
	All women (column %)	All men (column %)		Women (row %)	Men (row %)	
Predisposing factors						
Age (years)			***			
18–29	20.9	22.7		11.6	6.0	***
30–49	34.5	35.1		11.4	6.1	***
50–64	25.5	26.0		11.9	4.7	***
65+	19.2	16.2		4.8	3.0	***
Race/ethnicity			***			
White, non-Hispanic	66.2	67.1		11.8	5.6	***
Black, non-Hispanic	12.1	10.5		5.1	4.8	
American Indian/Alaska Native	0.5	0.5		7.7	7.8	
Asian/Pacific Islander	5.2	4.9		11.0	7.3	*
Multiple/other, non-Hispanic	1.6	1.5		20.1	10.4	**
Hispanic	14.4	15.5		6.9	2.8	***
Marital status			***			
Others	49.1	44.4		11.0	6.1	***
Married	50.9	55.6		9.7	4.5	***
Educational attainment			***			
<High school diploma	13.7	14.5		2.6	2.2	
High school diploma	25.1	27.3		5.2	2.2	***
Some college	21.2	19.8		10.4	5.8	***
≥College degree	40.0	38.4		16.2	8.2	***
Enabling factors						
Poverty status			***			
<200% FPL	35.6	30.4		6.8	5.0	**
200%–399% FPL	29.9	30.1		8.5	4.5	***
400%+ FPL	34.5	39.5		15.5	6.0	***
Health insurance coverage			***			
Insured	85.3	81.0		10.6	5.2	***
Uninsured	14.7	19.0		8.5	5.4	**
Geographic region						
Northeast	18.4	17.9		10.7	4.4	***
Midwest	22.7	22.8		9.9	5.6	***
South	36.7	36.1		7.9	3.6	***
West	22.2	23.1		14.4	8.1	***
Need factors						
Mental distress (K6)			***			
Without mental distress	84.6	88.3		9.9	4.6	***
Moderate mental distress	11.8	9.5		13.3	10.4	*
Severe mental distress	3.7	2.3		11.5	8.9	
Functional limitations			***			
Not limited	61.1	70.2		10.7	4.8	***
Limited, any way	38.9	29.8		9.7	6.3	***
Personal health practices						
Healthy behavior index			***			
0 healthy behaviors	1.0	2.5		5.3	3.3	
1	9.0	15.4		7.5	3.8	***
2	38.5	39.9		7.2	4.2	***
3	37.1	33.3		11.7	6.6	***
4	14.4	9.0		17.3	7.9	***
Unweighted sample	18,610	14,769		1856	794	
Weighted population	117,703,378	109,246,079		12,162,621	5,718,699	

^ap Values from design-based *F*-test for gender differences in each covariate distribution.

^bp Values from postestimation *t*-test for gender differences in the prevalence of meditation use for the level of each covariate.

****p* < .001; ***p* < .01; **p* < .05.

of meditation in addition to type-specific meditation practices by gender. Cross-tabulations and design-based F-tests were used for bivariate analyses. Multivariate logistic regression was used to examine the associations among predisposing, enabling, and need factors, personal health practices and recent meditation use. Adjusted odds ratios and 95% confidence intervals are presented. Last, among meditators, we reported the “most important” reasons for using meditation and self-reported helpfulness for the mentioned condition. All analyses were conducted with Stata statistical software (SE version 13.1) and used techniques to account for the complex sample design of the NHIS.^{33–35} Analysis was conducted in 2017–2018.

Results

Table 1 shows the distribution of predisposing, enabling, and need factors and personal health practices and prevalence of use of any type of meditation in the past year by gender for each of these covariates. There were significant gender differences in meditation, with women reporting higher levels of meditation for almost all covariates. A few notable exceptions are provided: there were no gender differences among non-Hispanic Blacks and American Indian/Alaska Native, for the lowest level of education, for those with severe mental distress, or those engaging in no healthy behaviors.

Table 2 shows multivariate results, by gender, for use of any type of meditation in the past year. The odds of use for each covariate were similar, although not identical, for women and men. Compared with the 18–29 year olds, the women and men ≥65 had significantly lower odds of use. The effects of race and ethnicity differed by gender. Compared with White women, Black, Asian, and Hispanic women had lower odds and Other/multirace women had higher odds of meditating. For men, only Hispanic men had lower odds than Whites. Married women and men had lower odds of use, while those with high school, some college, or college degree had higher odds than those with less than high school. Relative to women <200% FPL, those who were ≥400% FPL had higher odds; there were no significant differences for men. Regional variation in use was similar but not identical for women and men.

Compared with those with no mental distress, women and men with moderate or severe mental distress had higher odds of meditating, as did women and men with any type of functional limitation. Last, compared with women who reported no healthy behaviors, those with three or more had higher odds of meditating; there was no significant variation in odds of meditating based on health behaviors among men.

Overall, 4.1% of adults in the general population engaged in stand-alone meditation practices, and 7.9% used meditation either as stand-alone practice or in combination with YTQ (top panel, Table 3). There were significant gender differences in prevalence of each type of meditation practice, with women uniformly reporting higher use than men ($p < 0.001$ for each). For example, 2.1% of women reported engaging in mindfulness meditation (vs. 1.7% of men) and 4.9% of women used some type of stand-alone meditation compared with 3.2% of men. Overall, 10.3% of women reported use of any type of meditation (including in combination with YTQ) compared with 5.2% of men.

The lower panel shows the distributions of the individual types of meditation practices used by gender, among medi-

TABLE 2. ADJUSTED ODDS RATIOS OF ANY PAST-YEAR MEDITATION USE STRATIFIED BY GENDER AMONG US ADULTS AGED ≥18, NATIONAL HEALTH INTERVIEW SURVEY 2012

	Women		Men	
	OR	p	OR	p
Predisposing factors				
Age (years)				
18–29	1.00		1.00	
30–49	0.99		1.10	
50–64	1.00		0.76	
65+	0.42	***	0.50	**
Race/ethnicity				
White, non-Hispanic	1.00		1.00	
Black, non-Hispanic	0.48	***	0.98	
American Indian/Alaska Native	0.72		1.08	
Asian	0.65	**	0.92	
Other, non-Hispanic	1.59	*	1.25	
Hispanic	0.72	**	0.54	**
Marital status				
Others	1.00		1.00	
Married	0.65	***	0.72	**
Educational attainment				
<High school diploma	1.00		1.00	
High school diploma	1.96	**	1.03	
Some college	3.40	***	2.49	***
≥College degree	5.31	***	4.45	***
Enabling factors				
Poverty status				
<200% FPL	1.00		1.00	
200%–399% FPL	1.07		0.82	
400%+ FPL	1.69	***	0.88	
Health insurance coverage				
Insured	1.00		1.00	
Uninsured	1.11		1.26	
Geographic region				
Northeast	1.00		1.00	
Midwest	0.89		1.21	
South	0.79	*	0.84	
West	1.39	**	1.79	***
Need factors				
Mental distress (K6)				
Without mental distress	1.00		1.00	
Moderate mental distress	1.72	***	2.23	***
Severe mental distress	1.70	**	2.04	**
Functional limitations				
Not limited	1.00		1.00	
Limited, any way	1.24	**	1.62	***
Personal health practices				
Healthy behavior index				
0 healthy behaviors	1.00		1.00	
1	1.53		1.10	
2	1.66		1.19	
3	2.49	*	1.81	
4	3.39	**	2.07	

*** $p < .001$; ** $p < .01$; * $p < .05$.

tators. Meditation with YTQ was the most often reported, with 68.4% of meditators reporting use. There were significant gender differences in the use of each type of meditation practices ($p < 0.002$ or $p < 0.001$). Male meditators reported higher use of mantra, mindfulness, and spiritual meditation, whereas female meditators reported higher use of meditation

TABLE 3. PREVALENCE OF PAST-YEAR MEDITATION USE BY GENDER AMONG US ADULTS AGED ≥18 YEARS, NATIONAL HEALTH INTERVIEW SURVEY 2012

	<i>Gender</i>			<i>p</i> ^a
	<i>Women (%)</i>	<i>Men (%)</i>	<i>Total (%)</i>	
Among all adults (<i>n</i> = 33,379 unweighted)				
Meditation practices ^b				
Mantra meditation	1.8	1.3	1.6	<0.001
Mindfulness meditation	2.1	1.7	1.9	<0.001
Spiritual meditation	3.7	2.3	3.0	<0.001
Yoga, tai chi, qi gong w/meditation	7.6	3.0	5.4	<0.001
Overall meditation use				
Past-year (stand-alone) meditation practice	4.9	3.2	4.1	<0.001
Any past-year meditation, including w/yoga, tai chi, qi gong	10.3	5.2	7.9	<0.001
Among meditators (<i>n</i> = 2560 unweighted)				
Meditation practices ^b				
Mantra meditation	17.8	25.3	20.2	0.001
Mindfulness meditation	20.6	31.5	24.1	<0.001
Spiritual meditation	35.8	44.1	38.5	0.002
Yoga, tai chi, qi gong w/meditation	73.9	56.6	68.4	<0.001
No. of meditation types				
One	70.4	64.7	68.6	0.102
Two	15.9	18.1	16.6	
Three	9.0	12.1	10.0	
Four	4.8	5.1	4.9	

^a*p* Values from design-based F-test for gender differences in each covariate distribution.

^bNot mutually exclusive.

TABLE 4. MOST IMPORTANT REASON FOR USING ANY STAND-ALONE MEDITATION PRACTICE IN THE PAST YEAR BY GENDER, US ADULTS, NATIONAL HEALTH INTERVIEW SURVEY 2012 (*N* = 1328)

	<i>% Reporting</i>	<i>How much did meditation help for this?</i>			<i>p</i> ^a
		<i>A great deal (%)</i>	<i>Some (%)</i>	<i>A little or not at all (%)</i>	
To help reduce your stress level	35	50	40	10	0.554
Women	36	51	38	11	
Men	33	48	44	8	
General wellness or general disease prevention	24	60	33	7	0.001
Women	24	66	31	3	
Men	22	49	37	15	
To make you feel better emotionally	11	67	30	3	0.126
Women	11	75	24	1	
Men	12	56	38	6	
To improve your overall health and make you feel better	9	69	24	7	0.679
Women	10	71	24	5	
Men	6	64	25	11	
To improve energy or performance	7	43	44	13	0.032
Women	5	47	52	1	
Men	11	40	39	21	
Make it easier to cope with health problems	5	59	35	6	0.531
Women	5	63	30	7	
Men	5	52	45	3	
To improve your relationships with others	5	70	29	1	0.127
Women	4	83	17	0	
Men	7	58	39	2	
To improve specific lifestyle behaviors	4	47	44	9	0.994
Women	5	47	44	9	
Men	3	46	45	10	
Total		57	35	8	0.009
Women		61	33	6	
Men		50	40	10	

Values in bold indicate statistical significance.

^a*p* Value from design-based F-test for gender differences in how much meditation helped.

with YTQ. The majority of meditators (68.6%), regardless of gender, engaged in a single type of meditation practice.

Table 4 shows the reasons for meditating and for each reason, the perceived benefit of meditation, overall, and separately by gender among those who used a stand-alone practice. The top reason mentioned was stress reduction (35% of meditators), followed by general wellness/disease prevention (24%), to feel better emotionally (11%), and to improve overall health (9%). Other reasons were less common. In general, the rank order for the reasons specified was the same for women and men. Overall, both women and men believed that meditation was helpful. For example, among those who mentioned they used meditation for stress reduction, 50% believed it helped “a great deal” and another 40% said it helped at least “some.” For each reason given, there were no significant gender differences in perceived benefits, except for two.

Among those who mentioned use for general wellness, a higher percentage of men reported meditation helped “a little or not at all” than women (15% vs. 3%). Although a higher percentage of men mentioned use for improved energy or performance (11% vs. 5%), a higher percentage of men said it helped “a little or not at all” compared with women (21% vs. 1%). When all reasons mentioned are combined to obtain an overall level of perceived benefit, there were significant gender differences, with men reporting higher percentage that meditation helped “a little or not at all” relative to women.

Discussion

Our study shows that there are gender differences in prevalence, purpose, and perceived benefits of using meditation for specific reasons. Women and men use a variety of meditation techniques as stand-alone practices and in combination with other CAM modalities. In 2012, 10.3% or 12.2 million women and 5.2% or 5.7 million men used some form of meditation in the past year and for every type of specific meditation practice, women had higher rates of use than do men. While both women and men report using meditation primarily for stress reduction and general wellness and disease prevention, overall, men believe that it was less helpful. Taken together, these findings suggest that millions of women and men in the United States view meditation playing a role in helping them develop skills to better care for their own well-being and overall health, although somewhat less so for men.

In this research, we examined the contributions of predisposing, enabling, and need factors, and lifestyle behaviors on meditation use by women and men in the United States. Our findings support the utility of framing meditation with a modification of the Andersen behavioral model that was developed specifically for CAM use.³ Also, we find that individuals engaging in meditation are similar to CAM users more generally, again supporting the use of the modified model.^{1,4} Although there are substantial gender differences in prevalence of use, the factors associated with meditating are largely similar for women and men. That is, meditators are more likely to be younger, unmarried, have higher levels of education, mental distress, and functional limitations.²⁵⁻²⁷

However, there are three important gender differences in factors associated with meditation. There is more racial and ethnic variability in who meditates for women than for men, such that Black, Asian, and Hispanic women are less likely

and women of other races more likely than Whites. Only Hispanic men are less likely to meditate than White men. Also, women at the highest income level or who engaged in two or more healthy behaviors are more likely to meditate; this is not true for men. Other research shows that individuals who engage in healthy behaviors are more likely to use CAM for health and well-being than for treating health conditions.³ It may be that women are more inclined than men to incorporate meditation as part of a “wellness lifestyle,” and may have greater health literacy relative to men.^{1-3,21} However, health promotion efforts incorporating meditation could be targeted toward men as well as women to increase the use of this potentially beneficial practice by both.

Women and men with moderate or severe mental distress in the past 30 days are more likely to report that they meditated in the past year than those without distress, which may be one of the motivations for meditating. This is further supported by the finding that 60% of women and 55% of men who meditate mention stress reduction or to feel better emotionally as their reasons for using meditation, underscoring the importance of a mental health component associated with meditation. Clinical studies on meditation, but in particular, mindfulness meditation, show that it can be effective in reducing anxiety, depressive symptoms, and stress compared with treatment as usual, including cognitive behavioral therapy.^{6-9,11-13}

While our findings are suggestive, it must be noted that the NHIS uses the K6 scale that has good psychometric properties for screening nonspecific psychological distress,³³ but it is not a clinical diagnostic assessment. Additional research is needed in nonclinical populations to more comprehensively investigate how individuals with mental distress use meditation; for instance, if it is used in conjunction with conventional mental healthcare, or whether it was recommended by a mental health professional or other healthcare provider.

Both women and men reporting functional limitations are more likely than those with no limitations to meditate. The results are in line with meta-analyses of clinical studies demonstrating benefits of meditation for physical functioning, including pain management,^{6,7,14,15} and recent randomized-controlled trials (RCTs) on lower back pain and meditation.^{16,17} However, only 5% of women and men meditators report that the main reason for using it was to cope with health problems. This disconnect suggests that healthcare providers have an opportunity to educate about meditation as one method that may help patients cope with physical ailments, including functional limitations.

We also examined gender differences in the use of specific meditation practices, and found that while higher percentages of women use each type more so than men, both genders engage in a variety of different types. For both women and men, the most common is meditation done in conjunction with YTQ. However, among meditators, women are more likely than men to engage in meditation with YTQ, while men are more likely to use each type of stand-alone practice. Women report significantly greater mental distress and more functional limitations than men, which may account for some of the differences. Other research shows that women report higher levels of stress than men, and that men and women have very different ways of managing that stress.^{28,29}

Better understanding of the factors driving these gender differences in meditation is needed, and it underscores the

importance of providers to work with their patients to develop stress management strategies that consider gender. For example, our findings suggest that female patients may prefer a meditation practice with YTQ.

Finally, among meditators, we explored reasons for use and level of self-reported helpfulness by gender. Although women and men report similar reasons for meditating, there are gender differences in the prevalence of some reasons. The most common reason was to reduce stress. Recent studies have also reported stress management.^{21,22} Yet to our knowledge, this is the first study to document gender-specific reasons for using meditation. Both men and women perceived meditation to be helpful overall, but women are more likely than men to report meditation helped a great deal for every reason mentioned. No previous studies have investigated this. Perceptions of helpfulness may be related to gender differences in expectations for results of using meditation, or there may be gender differences in the frequency of practice.

Additional research is needed to better understand how Americans access and use these meditation training programs, especially with respect to the associated social and demographic differentials. As American consumers increasingly request CAM and integrative healthcare (coordinated access and use of conventional medicine and CAM) to manage their health needs, more research that explicitly characterizes meditation training programs, classes, and methods for payment through health insurance benefits is warranted.³⁶ In addition, while there is growing literature on the cost effectiveness of specific CAM modalities,³⁷ new studies emphasizing meditation are needed.

Although this study used the most recent national data on CAM and meditation, making the findings generalizable to US adults, there are limitations. The cross-sectional observational design limits causal inference, especially with respect to timing of mental and health conditions and use of meditation. Because this is an observational study, meditators were self-selected and undoubtedly differ on other characteristics not included in our analysis. In addition, there is no information on the frequency or duration of meditation practice. Last, while suggestive, the meditation reasons and outcomes assessed were subjective. These issues are important considerations when outcomes and benefits are being evaluated.

Conclusions

Meditation is practiced by ~18 million women and men in the United States, and the majority report health and wellness benefits. Given the healthcare burden of stress-related disease, healthcare providers may want to consider incorporating this low-cost, low-tech option as another tool for promoting health and preventing disease with their patients.³⁸ Furthermore, this study documents the acceptability for a large number of women and men who practice meditation to reduce stress, and for general wellness and disease prevention. Finally, physicians and other healthcare providers need to be trained about meditation and the strategies to effectively prescribe and monitor its practice, especially among patients with mental health or physical challenges.

Author Contributions

Dr. Johnson had full access to all of the data in this study, and takes responsibility for the integrity of the data and the

accuracy of the data analysis. All authors contributed to the study concept and design, acquisition, analysis, and interpretation of data, drafting and critical revision of the article for important intellectual content, statistical analysis, and study supervision. None of them obtained funding.

Author Disclosure Statement

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Address correspondence to:
 Dawn M. Upchurch, PhD, LAC
 Department of Community Health Sciences
 UCLA Fielding School of Public Health
 650 Charles Young Drive South
 Los Angeles, CA 90095-1772

E-mail: upchurch@ucla.edu