HHS Public Access

Author manuscript

Am J Geriatr Psychiatry. Author manuscript; available in PMC 2018 December 01.

Published in final edited form as:

Am J Geriatr Psychiatry. 2017 December ; 25(12): 1393–1401. doi:10.1016/j.jagp.2017.08.001.

Use of Complementary and Alternative Medicine among Older Adults: Differences Between Baby Boomers and Pre-boomers

Sheryl R. Groden, PhD,
Michigan State University

Amanda Toler Woodward, PhD,
Michigan State University

Linda M. Chatters, PhD, and
University of Michigan

Robert Joseph Taylor, PhD
University of Michigan

Abstract

Objectives—Compares use of complementary and alternative medicine (CAM) across age cohorts.

Design—Secondary analysis of data from the Collaborative Psychiatric Epidemiology Surveys.

Participants—Adults born in 1964 or earlier (n=11,371). Over half (61.3%) are baby boomers and fifty-three percent are female. Seventy-five percent of the sample is white, 10.2% African American, .6% black Caribbean, 9.35 Latino, and 4.1% Asian.

Measurements—The dependent variable is a dichotomous variable indicating use of any CAM, The main predictor of interest is age cohort categorized as pre-boomers (those born in 1945 or earlier) and baby boomers (those born between 1946 and 1964). Covariates include the use of traditional service providers in the past 12 months and 12-month mood, anxiety, and substance disorder. Disorders were assessed with the Diagnostic and Statistical manual World Mental Health Composite International Diagnostic Interview (WMH-CIDI). Logistic regression was used to test the association between use of CAM and age cohort.

Results—Baby boomers were more likely than pre-boomers to report using CAM for a mental disorder. Among identified CAM users, a higher proportion of baby boomers reported using most individual CAM modalities. Prayer and spiritual practices was the only CAM used by more pre-boomers.

Dr. Sheryl R. Groden, University of Michigan - Flint, School of Education and Human Services, Department of Social Work, 303 East Kearsley Street, 454 David M. French Hall, Flint, MI 48502-1950, grodensh@UMFlint, 510-295-5865.

Paper presented at the 65th Annual Scientific Meeting of The Gerontological Society of America in San Diego, CA (2012).

Conclusions—Age cohort plays a significant role in shaping individual health care behaviors and service use and may influence future trends in the use of CAM for behavioral health. Health care providers need to be aware of patient use of CAM and communicate with them about the pros and cons of alternative therapies.

Keywords

Complementary and Alternative Medicine; Older Adults; Mental Health; Prayer; Spirituality; Baby Boomers

Objective

Complementary and alternative medicine (CAM) is defined as a group of diverse medical and health care practices and products not presently considered part of conventional medicine (https://nccih.nih.gov/). Examples of CAM include mind-body practices such as meditation, Tai Chi, yoga, acupuncture, traditional Chinese medicine, chiropractic medicine, massage and osteopathic manipulation, and biologically-based practices such as herbs, foods and vitamins. If these practices are used together with conventional medicine, they are referred to as ‘complementary’, and if used in place of conventional medicine, they are considered ‘alternative’.

The number of CAM consumers in the United States increases each year. Americans made an estimated 425 million visits to alternative health care providers in 1990 (1) and 629 million visits in 2005 (2) This is almost double the number of annual visits to primary care physicians (2). Prevalence of CAM use among adults aged 65 and older varies widely across studies ranging from 31% to 88% in both nationally representative surveys (3–5) and smaller regional studies (6–8). A 2007 AARP telephone survey suggests variation in CAM use among older adults with the proportion of people using CAM is less common with age (9). CAM use is also higher use among women and some racial/ethnic minorities, although there is some variation depending on the type of CAM (4,8).

CAM is most frequently used for treating chronic conditions, including anxiety and depression (6,10), particularly when these conditions do not respond adequately to conventional approaches (1,11). Few studies, however, look specifically at the prevalence of CAM use among older adults for mental and substance disorders. Available studies indicate that over half of older adults with anxiety or depression reported using CAM (8,13). A higher proportion of older adults with mental disorders report using CAM compared to those without a mental disorder (13,14). However, only a small proportion of these individuals report using CAM specifically to treat mental health symptoms (13).

CAM modalities that have been most commonly used for mental health treatment include acupuncture, herbal therapy, high dose vitamins, massage therapy, relaxation techniques, guided imagery, mindfulness based stress reduction (MBSR), yoga, and prayer or other spiritual practices. A growing body of research is examining the efficacy of CAM for treating mental or substance disorders (15–17). Little of this research, however, has been done with older adults and of the studies in this group, most focus on dementia.

Current trends suggest an increase in CAM use among older adults, reflecting the aging of the baby boomers. However, little research specifically compares CAM use among baby boomers (those born between 1945 and 1964) and pre-boomers (those born before 1945). One study (18) examined generational differences in CAM use, but focused on chronic diseases that are physical (e.g., heart disease, cancer, stroke, lung disease and diabetes). Study findings indicated that even though pre-boomers report a substantially higher prevalence of chronic diseases, baby boomers report a higher use of CAM regardless of health status. In sum, current literature suggests that generational status (i.e., baby boomers vs. pre-boomers) and socio-demographic factors (e.g., gender, socioeconomic status, and race) may be important for understanding CAM use among older adults. However, questions regarding older adults' use of CAM specifically for mental health issues, as well as possible age cohort and demographic differences in CAM use, remain unanswered.

The current study uses a nationally representative sample to examine the use of CAM among baby boomers and pre-boomers for a mental or substance disorder. We expect that, controlling for other socio-demographic factors and the presence of a mental or substance disorder, baby boomers will be more likely to use CAM than pre-boomers and will use a wider variety of CAM modalities. Further, we examine whether socio-demographic factors with known associations with CAM use are moderated by age cohort.

Methods

Sample

This study used data from the Collaborative Psychiatric Epidemiology Surveys (CPES). Data were collected from 2001 to 2003 and consist of three nationally representative surveys – the National Comorbidity Survey Replication (NCS-R), the National Survey of American Life (NSAL), and the National Latino and Asian American Survey (NLAAS). The NCS-R is representative of the U.S. population and includes face-to-face interviews with 9,292 residents of English-speaking households who are 18 years or older. The NSAL was based on a national probability sample of 6,082 African Americans, blacks of Caribbean descent, and non-Hispanic whites. The NLAAS is a nationally representative sample of Latino and Asian populations in the United States, and includes 2,554 Latinos and 2,095 Asian Americans. The CPES surveys share a common set of objectives and instrumentation and are designed so that they can be combined as a single, nationally representative study (19).

The analytic sample for this study included adults born in 1964 or earlier (n=11,371). The baby boomer generation includes those born between 1946 and 1964, while the pre-boomer generation includes those born earlier than 1946. Using weighted percentages, members of the baby boomer group comprise 61.3% of the sample. Seventy-five percent of the sample is white, 10.2% African American, .6% Black Caribbean, 9.3% Latino, and 4.1% Asian. Fifty-three percent are female.

Measures

Respondents were given a list of commonly used alternative therapies and were asked, "Did you use any of these therapies in the past 12 months for problems with your emotions or

nerves or your use of alcohol or drugs?" The list of therapies included acupuncture, biofeedback, chiropractic, energy healing, exercise or movement, herbal therapy, high dose megavitamins, homeopath, hypnotism, guided imagery, massage, prayer or other spiritual practices, relaxation or meditation techniques, special diets, spiritual healing by others, and any other nontraditional remedy or therapy. Dichotomous variables were created for the use of any CAM versus no use overall and for each of the individual CAM therapies. The use of traditional service providers in the past 12 months was assessed in the same way as the use of alternative services and included a psychiatrist; general practitioner, family doctor or other medical doctor; psychologist; social worker; counselor; any other mental health professional such as a psychotherapist or mental health nurse; a nurse, occupational therapist, or other health professional; or a religious or spiritual advisor.

Past 12-month mood, anxiety, and substance use disorders for all respondents were assessed with the Diagnostic and Statistical manual (DSM-IV) World Mental Health Composite International Diagnostic Interview (WMH-CIDI) (20). Mood disorders included major depression, dysthymia, and bipolar I and II disorder; anxiety disorders included panic disorder, social phobia, agoraphobia without panic disorder, generalized anxiety disorder, and posttraumatic stress disorder; and substance use disorders included alcohol abuse and dependence and drug abuse and dependence.

The main predictor of interest was age cohort categorized as pre-boomers (those born in 1945 or earlier) and baby boomers (those born between 1946 and 1964). Other measures were race/ethnicity (Asian, Latino, Black Caribbean, African American, non-Latino White), gender, education (less than high school, high school, some college, college degree or higher), marital status (currently married, previously married, never married), employment status (employed, unemployed, not in the labor force), and household income.

Analysis

The Rao-Scott chi square for categorical variables and an F means test for continuous variables were used to examine differences in CAM use. We examined age cohort differences across specific CAM therapies, as well as differences in the use of traditional professional services among persons reporting CAM use. Finally, logistic regression models were used to test the association between use of CAM and age cohort while controlling for other sociodemographic variables. Interactions between age cohort and other predictors were examined. Sixty-four percent of respondents who used CAM indicated using prayer or other spiritual practices, and over 30% indicated that prayer or other spiritual practices was the only alternative therapy used. Consistent with previous research in this area (13,21–23) we excluded those who reported using *only* prayer or other spiritual practices (n=1,236, 30.7%) as CAM users in the multivariate analyses. Bivariate analyses are presented both with and without this category. All analyses were performed with the complex survey commands in Stata 12 which accounts for the complex multistage clustered design of the CPES sample, unequal probabilities of selection, nonresponse, and poststratification to calculate weighted, national representative populations estimates and standard errors. All percentages reported are weighted.

Results

Overall, 23% of the sample report using CAM in the past 12 months. A higher proportion of baby boomers (27.7%) use CAM compared to pre-boomers (16.4%) (Table 1). This pattern is evident when those who use only prayer and other spiritual practices are omitted as well as when they are included (Table 2). In contrast, when different CAM modalities are examined for the group identified as CAM users, a higher proportion of pre-boomers (69.8%) report using prayer or other spiritual practices as compared to baby boomers (61.6%). Significant age cohort differences for other CAM modalities (i.e., energy healing, exercise or movement therapy, herbal therapy, guided imagery, massage, relaxation or meditation techniques, and spiritual healing by others) indicate that a higher proportion of baby boomers report using the modality compared to pre-boomers. Further, among CAM users, a significantly higher proportion of baby boomers as compared to pre-boomers also indicate visiting a psychiatrist, a family doctor or other doctor for a mental disorder.

Bivariate analyses identify other sociodemographic characteristics that are significantly related to CAM use as well (Table 1). With respect to racial/ethnic groups, a higher proportion of Whites report using CAM (25.7%), followed by African Americans (17.0%), Latinos (15.4%), Black Caribbeans (12.7%), and Asians (11.9%). More women (29.8%) use CAM than men (16.1%). The proportion of CAM users increases with education from 14.7% of those with less than a high school education to 30.8% of those with a college degree or higher. In terms of marital status and employment status, the highest proportion of CAM users are among those who have never married (27.0%) and those who are employed (24.9%). Finally, a lower proportion of those who meet criteria for a 12-month mental disorder (48.1%) report using CAM while a higher proportion of those who visited a traditional service provider in the past 12 months (54.1%) report using CAM.

Table 3 presents results from the logistic regression model. Controlling for all other variables, pre-boomers are half as likely as baby boomers to report using CAM for a mental disorder. Black Caribbeans, African Americans and Latinos are less likely than Whites to use CAM and men are less likely to use CAM than women. Those with a high school education or higher are more likely to use CAM. In the multivariate context, CAM use was unrelated to marital and employment status. Having any 12-month mental disorder increases the odds of using CAM. CAM use is also associated with increased odds of using any traditional service provider in the last twelve months. In particular, visiting a family or other doctor, psychologist, social worker, other mental health provider, or a spiritual advisor is associated with a higher likelihood of CAM use. A significant interaction between race and age cohort indicated that the effect of age cohort is different for African Americans than for Whites. Among baby boomers, Whites have a slightly higher probability of using CAM (predicted probability=.35) compared to African Americans (predicted probability=.22); however among pre-boomers, there is no statistically significant difference.

Boomers were more likely to try Energy Healing, Herbal therapies, massage, and relaxation or meditation techniques. The implications for baby boomer use of these therapies on the future of integrative care include a need for increased patient-provider communication regarding patient use of herbal therapy, as well as a targeted communication with patients as

to whether these particular therapies will help as a non-pharmacological approach to medical care.

Conclusion

Age cohorts have a significant role in shaping individual health care behaviors and service use. Study findings verified that older adults use CAM for mental health disorders and further that cohort differences within the older population are associated with CAM use. Baby boomers came of age in the late 1960s and early 1970s, when Americans were increasingly exposed to different views about food and health, traditional health care systems, and holistic health care, as well as the development of self-care and health consumer movements (24). Rates of chronic illness and health care costs also increased dramatically at this time. Higher CAM use among this cohort is likely influenced, at least in part, by these health-relevant experiences occurring during this period. This is consistent with other studies of differences between baby boomers and pre-boomers in terms of how they access and use traditional health care. For example, baby boomers are less likely to adopt their physician's care recommendations without question, will seek out ways to manage their own health care needs (25), and are more likely to demand second opinions and be both assertive and active in personal health care decisions (26). These health self-management behaviors are consistent with those noted in patients who are most likely to seek out CAM treatment (3,13). Presumably, baby boomers are likely to continue to seek out new approaches to health care as they age, including the use of CAM for mental health care.

For both pre-boomers and baby boomers prayer and other spiritual practices were the most utilized type of CAM. This is consistent with several studies indicating that prayer and other spiritual practices are the most prevalent form of CAM used to cope with physical health problems (23, 24) and psychiatric problems (23), although research on using CAM for mental health problems is more limited. Across virtually all forms of religious involvement (e.g., public worship, private practices, prayer) older adults are more religiously inclined that than younger age groups (28,29). Further, prayer, spirituality and religion are important aspects of life for adults as they age (30) and play a significant role in coping with the crises and the challenges of growing older, declining health and confronting one's mortality.

Despite the prevalence of prayer across both groups, a higher proportion of pre-boomers reported using prayer and spiritual practice as compared to baby-boomers. In addition to cultural changes in health attitudes and traditional care arrangements, the 1960s and 1970s were a time of significant transformations in the role of religion and religious institutions in everyday life. Pre-boomers, on the other hand, were socialized in a period when cultural attitudes and behaviors endorsed a more religious worldview. For example, nationally beliefs about the importance of religion in one's life were highest in the 1950s, followed by steady declines over subsequent decades (31). Reflecting this, older adults as a group have consistently been more likely than their younger counterparts to have higher levels of religious involvement. As the oldest of the baby boom generation moves into their seventies and beyond, it is an open question as to whether their interest and their use of prayer and spirituality as a form of CAM will increase (i.e., an aging effect) or remain the same (i.e., a cohort difference).

Study findings demonstrated other forms of sociodemographic variation in CAM use among older adults. The finding that the difference between Whites and African Americans in CAM use is only significant among baby boomers is particularly interesting. This suggests that pre-boomer Whites and African Americans are more alike in their use of CAM and that the increased use of CAM among baby boomers has been somewhat greater among Whites. Finally, findings of greater CAM use among women, employed persons, those with a high school education or more and non-Hispanic whites underscore important within group differences in CAM use for mental health issues among older adults.

Turning to issues of service use, overall our research is consistent with previous studies indicating that CAM users are also traditional service users (14,23,34). Further, recent research suggests that, although many people with a mental health problem do not receive treatment, baby boomers are more likely than pre-boomers to seek help (34). In addition, while use of services for mental health problems has remained stable among pre-boomers, the receipt of outpatient treatment or psychotropic medications has increased over time among baby boomers (35,36). Assuming this trend continues, the number of older adults in need of and seeking mental health services can be expected to increase. However, the United States health care system currently lacks sufficient numbers of geriatric mental health care professionals required to care for those older adults in need, let alone the anticipated increases in older persons requiring mental health care (34).

One way to address this challenge may be to expand both *integrative* and *integrated* care models. Integrative care includes complementary and alternative methods, alongside traditional medical approaches. The effectiveness of this approach is being studied in addressing pain management and treating PTSD among veterans (35,37), symptom management among cancer patients (38), and supporting healthy behaviors such as smoking cessation (39) and weight loss (40). Given our finding that baby boomers are more likely than pre-boomers to try CAM modalities such as energy healing, herbal therapies, massage, and relaxation or meditation techniques, a continuing focus on integrative care is important. This includes an emphasis on patient-provider communications regarding both patient use of CAM and availability of CAM within traditional settings and continued research on the efficacy of alternative approaches to care.

Integrated care, on the other hand, is the systematic integration of behavioral health within the primary care setting (41). This type of approach to care essentially targets the care needs of older adults who are reluctant to seek out separate mental health services who would then receive care within the primary care umbrella. CAM modalities can also be incorporated into integrated care approaches.

This paper has several limitations. First, the cross-sectional nature of the design limits the ability to make casual arguments. Second, given the nature of the questions regarding CAM use, we cannot tease out details such as the use of yoga and tai chi or the use of specific herbal treatments. Finally, we have no data on the context in which CAM was used. For example, meditation may be practiced at home, in the community, or within a more structured setting such as part of a Mindfulness Based Stress Reduction or Mindfulness

Based Cognitive Behavioral Therapy program. Such differences can have implications for the nature of the meditation practice and its impact on mental health.

Implications

Our findings have important implications for research, practice, and policy. First, the use of CAM modalities continues to expand and they are delivered in a variety of settings and using different methods. CAM modalities such as acupuncture and massage therapy are done under the guidance of a trained provider. A good number of CAM practices, however, are not regulated or delivered by a trained provider (e.g., over-the-counter herbs and supplements). Health care providers, including physicians, nurses, pharmacists, social workers, and other mental health care providers, need to be aware of this trend and the greater likelihood of CAM use among their older clients and baby boomers. Reflecting this, health care providers should consider including an assessment of CAM use in their interactions with patients. This is particularly crucial in the case of over the counter medicines and dietary and herbal supplements that may have adverse side effects and/or interact with prescription medications.

Health care policymakers need to examine policies related to insurance coverage of CAM modalities and be conversant with the emerging evidence base on CAM and medical marijuana laws to determine whether potentially useful and cost-effective therapies can be identified. Health care educators should include information regarding CAM in their curricula including the use of CAM modalities which fall within their professional scope of practice. In addition, CAM is potentially a rich resource for enhancing both the physical and mental health aspects of geriatric care. A few examples of the use of CAM in long-term care include chair yoga, music therapy, and the Namaste Care program which incorporates touch, massage, and aromatherapy into end-of-life care for people with dementia.

Despite strong evidence of the prevalence of CAM use within the general population, there has been less research on the efficacy of CAM use by older adults. This is important because older adults' experiences with certain CAM modalities may vary based on physical and physiological changes associated with metabolic processes, immune system changes (i.e., immune senescence), sensory functioning, interactions with medications and polypharmacy, and/or physical limitations caused by aging. As a result, additional research on CAM modalities, specifically those used for mental health treatment, is needed to identify best practices to help older adults and their health care providers make informed decisions on treatment options.

Age cohort differences are important for understanding the use of CAM modalities for mental health issues by older adults. By their sheer numbers and their history of introducing important social change, baby boomers will continue to make a mark on our health care systems and services. Baby boomers' continued use of CAM for mental health care, either alone or in conjunction with traditional care, will necessitate a shift in our current models of care to older patients. Complementary and alternative medicines are likely to be increasingly important elements of behavioral health treatment moving forward, with potential benefits for both the physical and mental health of older adults.

Acknowledgments

The data collection for this study was supported by the National Institute of Mental Health (NIMH; U01-MH57716), with supplemental support from the Office of Behavioral and Social Science Research at the National Institutes of Health (NIH) and the University of Michigan. The preparation of this article was supported by a grant from the National Institute on Aging to RJT (P30 AG015281) and from National Institute of General Medical the National Institute of General Medicine Sciences to LMC (NIGMSR25 GM058641).

References

1. Eisenberg DM, Kessler RC, Foster C, Norlock FE, Calkins DR, Delbanco TL. Unconventional Medicine in the United States – Prevalence, Costs, and Patterns of Use. N Engl J Med. 1993 Jan 28; 328(4):246–52. [PubMed: 8418405]
2. Ananth S, Martin W. Health Forum 2005 Complementary and Alternative Medicine Survey of Hospitals.
3. Astin JA. Why Patients Use Alternative Medicine: Results of a National Study. JAMA. 1998 May 20; 279(19):1548–53. [PubMed: 9605899]
4. Najm W, Reinsch S, Hoehler F, Tobis J. Use of complementary and alternative medicine among the ethnic elderly. Altern Ther Health Med. 2003 Jun; 9(3):50–7.
5. Ness J, Cirillo DJ, David R, Nisly NL, Wallace RB. Use of Complementary Medicine in Older Americans: Results From the Health and Retirement Study. The Gerontologist. 2005; 45(4):516–24. [PubMed: 16051914]
6. Astin JA, Pelletier KR, Haskell WL. Complementary and Alternative Medicine Use Among Elderly Persons: One Year Analysis of a Blue-Shield Medicare Supplement. J Gerontol Med Sci. 2000; 55A(1):4–9.
7. Cheung CK, Wyman JF, Halcon LL. Use of Complementary and Alternative Therapies in Community-Dwelling Older Adults. J Altern Complement Med. 2007 Nov 1; 13(9):997–1006. [PubMed: 18047447]
8. Cherniack EP, Ceron-Fuentes J, Florez H, Sandals L, Rodriguez O, Palacios JC. Influence of race and ethnicity on alternative medicine as a self-treatment preference for common medical conditions in a population of multi-ethnic urban elderly. Complement Ther Clin Pract. 2008 May; 14(2):116–23. [PubMed: 18396255]
9. Consumer Survey Report. AARP NCCAM; Apr 13. 2011 Complementary and Alternative Medicine: What People 50 and Older Discuss With Their Health Care Providers.
10. Tindle HA, Davis RB, Phillips RS, Eisenberg DM. Trends in Use of Complementary and Alternative Medicine by Us Adults: 1997–2002. Altern Ther Health Med. 2005 Feb; 11(1):42–9.
11. Eisenberg DM, Davis RB, Ettner SL, Appel S, Wilkey S, Rompay MV, et al. Trends in Alternative Medicine Use in the United States, 1990–1997: Results of a Follow-up National Survey. JAMA. 1998 Nov 11; 280(18):1569–75. [PubMed: 9820257]
12. Paramore LC. Use of alternative therapies: Estimates from the 1994 Robert Wood Johnson Foundation National Access to Care Survey. J Pain Symptom Manage. 1997 Feb 1; 13(2):83–9. [PubMed: 9095565]
13. Grzywacz JG, Suerken CK, Quandt SA, Bell RA, Lang W, Arcury TA. Older Adults' Use of Complementary and Alternative Medicine for Mental Health: Findings from the 2002 National Health Interview Survey. J Altern Complement Med. 2006 Jun 1; 12(5):467–73. [PubMed: 16813511]
14. Unützer J, Klap R, Sturm R, Young AS, Marmon T, Shatkin J, et al. Mental Disorders and the Use of Alternative Medicine: Results From a National Survey. Am J Psychiatry. 2000 Nov 1.157(11): 1851. [PubMed: 11058485]
15. Mehta P, Sharma M. Yoga as a Complementary Therapy for Clinical Depression. Complement Health Pract Rev. 2010 Oct 1; 15(3):156–70.
16. Richeson NE, Spross JA, Lutz K, Peng C. Effects of Reiki on Anxiety, Depression, Pain, and Physiological Factors in Community-Dwelling Older Adults. Res Gerontol Nurs. 2010 Jul 1; 3(3): 187–99. [PubMed: 20635803]

17. Geiger PJ, Boggero IA, Brake CA, Caldera CA, Combs HL, Peters JR, et al. Mindfulness-Based Interventions for Older Adults: a Review of the Effects on Physical and Emotional Well-Being. Mindfulness. 2016 Apr; 7(2):296–307. [PubMed: 27200109]
18. Ho TF, Rowland-Seymour A, Frankel ES, Li SQ, Mao JJ. Generational Differences in Complementary and Alternative Medicine (CAM) Use in the Context of Chronic Diseases and Pain: Baby Boomers versus the Silent Generation. J Am Board Fam Med. 2014 Jul 1; 27(4):465–73. [PubMed: 25002001]
19. Kessler, RC., Matthias, A., Anthony, JC., De Graaf, R., Demyttenaere, K., Gasquet, I., et al. Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. 2007. [cited 2017 Jan 18]; Available from: http://bdigital.ces.edu.co:8080/repositorio/handle/10946/3883
20. Prevalence, Severity, and Unmet Need for Treatment of Mental Disorders in the World Health Organization World Mental Health Surveys. JAMA. 2004 Jun 2; 291(21):2581–90. [PubMed: 15173149]
21. Graham RE, Ahn AC, Davis RB, O'Connor BB, Eisenberg DM, Phillips RS. Use of complementary and alternative medical therapies among racial and ethnic minority adults: results from the 2002 National Health Interview Survey. J Natl Med Assoc. 2005 Apr; 97(4):535–45. [PubMed: 15868773]
22. Tippens K, Marsman K, Zwickey H. Is Prayer CAM? J Altern Complement Med. 2009 Apr 1; 15(4):435–8. [PubMed: 19388867]
23. Woodward AT, Bullard KM, Taylor RJ, Chatters LM, Baser RE, Perron BE, et al. Complementary and Alternative Medicine for Mental Disorders Among African Americans, Black Caribbeans, and Whites. Psychiatr Serv. 2009 Oct; 60(10):1342–9. [PubMed: 19797374]
24. Groft, S. White House Commission on Complementary and Alternative Medicine Policy [Internet]. 2002. Available from: http://govinfo.library.unt.edu/whccamp/pdfs/fr2002_document.pdf
25. Levinson W, Kao A, Kuby A, Thisted RA. Not All Patients Want to Participate in Decision Making. J Gen Intern Med. 2005 Jun; 20(6):531–5. [PubMed: 15987329]
26. Kahana E, Kahana B. Baby Boomers' Expectations of Health and Medicine. Virtual Mentor. 2014 May 1.16(5):380. [PubMed: 24847709]
27. Brown CM, Barner JC, Richards KM, Bohman TM. Patterns of Complementary and Alternative Medicine Use in African Americans. J Altern Complement Med. 2007 Sep 1; 13(7):751–8. [PubMed: 17931068]
28. Levin JS, Taylor RJ. Age Differences in Patterns and Correlates of the Frequency of Prayer. The Gerontologist. 1997 Feb 1; 37(1):75–88. [PubMed: 9046709]
29. Koenig, HG., editor. Handbook of religion and mental health. San Diego: Academic Press; 1998. p. 408
30. Moberg DO. Research in Spirituality, Religion, and Aging. J Gerontol Soc Work. 2005 Aug 15; 45(1–2):11–40. [PubMed: 16172060]
31. Newport, F. Religion Trends in the US [Internet]. 2013. Available from: http://www.pewforum.org/2013/08/19/event-transcript-religion-trends-in-the-u-s/
32. Druss BG, Rosenheck RA. Association Between Use of Unconventional Therapies and Conventional Medical Services. JAMA. 1999 Aug 18; 282(7):651–6. [PubMed: 10517718]
33. Kessler RC, Soukup J, Davis RB, Foster DF, et al. The use of complementary and alternative therapies to treat anxiety and depression in the United States. Am J Psychiatry. 2001 Feb; 158(2): 289–94. [PubMed: 11156813]
34. Choi NG, DiNitto DM, Marti CN. Alcohol and other substance use, mental health treatment use, and perceived unmet treatment need: Comparison between baby boomers and older adults. Am J Addict. 2015 Jun 1; 24(4):299–307. [PubMed: 25923291]
35. Rani Elwy A, Johnston JM, Bormann JE, Hull A, Taylor SL. A Systematic Scoping Review of Complementary and Alternative Medicine Mind and Body Practices to Improve the Health of Veterans and Military Personnel. Med Care. 2014 Dec.52:S70–82. [PubMed: 25397827]
36. Han B, Compton WM, Mojtabai R, Colpe L, Hughes A. Trends in Receipt of Mental Health Treatments Among Adults in the United States, 2008–2013. J Clin Psychiatry. 2016 Oct; 77(10): 1365–71. [PubMed: 27486895]

37. Wynn GH. Complementary and Alternative Medicine Approaches in the Treatment of PTSD. Curr Psychiatry Rep. 2015 Aug 1.17(8):62.

38. van Die MD, Bone KM, Emery J, Williams SG, Pirotta MV, Paller CJ. Phytotherapeutic interventions in the management of biochemically recurrent prostate cancer: a systematic review of randomised trials. BJU Int. 2016 Apr 1.117:17–34. [PubMed: 26898239]

39. Carim-Todd L, Mitchell SH, Oken BS. Mind–body practices: An alternative, drug-free treatment for smoking cessation? A systematic review of the literature. Drug Alcohol Depend. 2013 Oct 1; 132(3):399–410. [PubMed: 23664122]

40. Katterman SN, Kleinman BM, Hood MM, Nackers LM, Corsica JA. Mindfulness meditation as an intervention for binge eating, emotional eating, and weight loss: A systematic review. Eat Behav. 2014 Apr; 15(2):197–204. [PubMed: 24854804]

41. Butler, M., editor. Minnesota Evidence-based Practice Center, United States. Integration of mental health/substance abuse and primary care. Rockville, MD: Agency for Healthcare Research and Quality; 2008. p. 190(Evidence report/technology assessment)

Highlights

- 23% of older adults in the study used CAM, consistent with results from previous nationally representative samples.
- Baby boomers were more likely than pre-boomers to report using CAM and among CAM users reported using more CAM modalities.
- Prayer and spiritual practices was the only type of CAM modality used more by pre-boomers. This is consistent with research to date regarding prayer and aging.
- Baby boomers' continued use of CAM for mental health care will necessitate a shift in our current models of care to older patients.

Am J Geriatr Psychiatry. Author manuscript; available in PMC 2018 December 01.

Table 1

CAM use by study variables[1]

	Total[2]		Used CAM[3]		Did not use CAM				
	N/M	%/SD	N/M	%/SD	N/M	%/SD	Test statistic	df	p
Age									
Baby boomers	7344	61.3	1681	27.7	5663	72.3	X^2=110.80	1	<.001
Pre-boomers	4027	38.7	582	16.4	3445	83.6			
Race/ethnicity									
Asian	1298	4.1	154	11.9	1144	88.1	X^2=49.29	4	<.001
Latino	1836	9.3	279	15.4	1557	84.6			
Black Caribbean	810	0.6	104	12.7	706	87.3			
African American	2778	10.2	498	17.0	2208	83.0			
White	4471	75.7	1187	25.7	3284	74.3			
Gender									
Male	4826	47.0	689	16.1	4137	84.0	X^2=224.31	1	<.001
Female	6545	53.1	1574	29.8	4971	70.2			
Education									
Less than high school	2558	18.7	299	14.7	2259	85.3	X^2=26.83	3	<.001
High school	3300	31.6	571	20.2	2729	79.8			
Some college	2752	24.7	678	26.3	2074	73.7			
College degree or higher	2761	25.0	715	30.8	2046	69.2			
Marital status									
Married	6695	66.0	1261	22.3	5434	77.7	X^2=4.17	2	0.019
Divorced/separated/widowed	3584	26.9	758	24.9	2826	75.1			
Never married	1092	7.1	244	27.0	848	73.0			
Employment status									
Employed	6929	60.8	1458	24.9	5471	75.1	X^2=6.16	2	0.002
Unemployed	859	8.3	147	19.0	712	81			
Not in labor force	3549	30.9	647	21.3	2902	78.7			
Household income	59252.8	47257.7	61621.9	48973.8	59882.1	47920.3	F=.54	1,165	0.463
Any 12 month disorder	1704	15.5	725	48.1	979	51.9	X^2=439.76	1	<.001

	Total[2]		Used CAM[3]		Did not use CAM				
	N/M	%/SD	N/M	%/SD	N/M	%/SD	Test statistic	df	p
12-month non-CAM service use	1354	31.2	697	54.1	657	48.9	X^2=277.28	1	<.001

[1] Sample sizes are unweighted and percentages are weighted estimates.

[2] Column percentages.

[3] Row percentages.

N=frequency, M=mean, SD=standard deviation

Table 2

Unweighted n's and weighted %s for CAM use by age cohort

	Total sample		Baby boomers		Pre-boomers			
	N	%	N	%	N	%	χ^2	p
Used CAM								
CAM use - use of prayer and other spiritual practices only omitted	1519	15.8	1171	20.1	348	9.0	93.53	<.001
CAM use - use of prayer and other spiritual practices only included	2263	23.3	1681	27.7	582	16.4	110.80	<.001
Type of CAM								
Acupuncture	87	3.4	63	3.5	24	3.3	0.04	0.849
Biofeedback	31	1.3	26	1.5	5	0.8	0.95	0.332
Chiropractic	218	10.8	163	10.9	55	10.5	0.040	0.833
Energy healing	49	2.1	42	2.6	7	0.8	5.41	0.021
Exercise or movement therapy	614	27.7	467	29.9	147	22.1	6.89	0.010
Herbal therapy	290	14.3	247	16.9	43	7.3	33.83	<.001
High dose megavitamins	160	7.1	126	7.2	34	6.9	0.03	0.865
Homeopathic	34	1.9	29	2.1	5	1.4	0.70	0.403
Hypnotism	25	1.2	19	1.4	6	1.0	0.57	0.453
Guided imagery	66	3.1	58	3.7	8	1.5	5.79	0.017
Massage	292	12.6	239	14.6	53	7.0	30.45	<.001
Prayer or other spiritual practices	1490	63.8	1	61.6	389	69.8	7.10	0.009
Relaxation or meditation techniques	569	24.7	458	27.5	111	17.2	17.19	<.001
Special diets	174	6.7	45	5.9	129	6.9	0.702	0.403
Spiritual healing by others	162	6.0	136	7.0	26	3.5	6.41	0.012
Other 12-month service use (among CAM users)								
Any professional	697	43.0	552	44.6	145	37.7	3.87	0.051
Psychiatrist	218	32.2	174	35.5	44	22.3	8.18	0.005
Family or other doctor	365	45.0	274	48.4	91	36.9	4.56	0.035
Psychologist	141	25.0	115	26.6	26	18.1	1.71	0.194
Social worker	77	35.1	69	37.0	8	20.4	2.49	0.118
Counselor	109	22.2	98	23.4	11	15.0	1.2	0.276
Other mental health	56	35.4	50	36.8	6	26.2	0.69	0.41

	Total sample		Baby boomers		Pre-boomers			
	N	%	N	%	N	%	χ^2	p
Nurse, etc.	35	33.3	31	31.4	4	46.1	0.64	0.427
Spiritual advisor	192	38.7	161	40.0	31	35.0	0.3	0.584

N=frequency

Degrees of freedom for χ^2 tests is 1.

Table 3

Logistic regression predicting CAM use.

	Used CAM[1]	
	OR	p
Age cohort		
Pre-boomer	0.53	<.001
Baby boomer	1.00	
Race/ethnicity		
Asian	0.8	0.277
Latino	0.75	0.037
Black Caribbean	0.34	<.001
African American	0.56	<.001
White	1.00	
Gender		
Male	0.52	<.001
Female	1.00	
Marital status		
Married	1.00	
Divorced/separated/widowed	0.88	0.325
Never married	1.11	0.656
Education		
Less than high school	1.00	
High school	1.30	0.046
Some college	1.92	<.001
College degree or higher	2.91	<.001
Employment status		
Employed	1.00	
Unemployed	1.49	0.036
Not in labor force	1.01	0.958
Household income	1.00	0.951
Any 12 month disorder	1.76	<.001
Any 12 month non-CAM service use	2.00	<.001
Medical doctor	1.66	0.004
Psychologist	1.98	0.002
Social Worker	2.95	0.004
Other mental health	2.47	0.015
Spiritual advisor	2.95	<.001
Pre-boomer x African American	1.97	0.033

[1] Those who reported using only prayer or other spiritual practices not included as CAM users.

OR=Odds ratio

Test of model significance is an adjusted Wald test, F=13.02 (20, 143), p<.001. Tests of individual variable significance are Wald tests using the t-statistic.