

Homeopathy Use by US Adults: Results of a National Survey

Michelle L. Dossett, MD, PhD, MPH, Roger B. Davis, ScD, Ted J. Kaptchuk, and Gloria Y. Yeh, MD, MPH

We used the 2012 National Health Interview Survey to compare homeopathy users with supplement users and those using other forms of complementary and integrative medicine. Among US adults, 2.1% used homeopathy within the past 12 months. Respiratory and otorhinolaryngology complaints were most commonly treated (18.5%). Homeopathy users were more likely to use multiple complementary and integrative medicine therapies and to perceive the therapy as helpful than were supplement users. US homeopathy use remains uncommon; however, users perceive it as helpful. (*Am J Public Health*. 2016;106:743–745. doi:10.2105/AJPH.2015.303025)

Homeopathy is a system of complementary and integrative medicine (CIM) with a resurgence of public interest in recent decades.^{1,2} In the United States, many homeopathic medicines may be purchased over the counter. Although they are often sold next to dietary supplements, the Food and Drug Administration regulates them differently.³ Federal agencies are interested in understanding public use and perceptions of homeopathic products,^{4,5} but there is little published information on this topic.⁶ Recent reports suggest potential public health benefits such as reductions in unnecessary antibiotic use,⁷ reductions in costs to treat certain respiratory diseases,⁸ improvements in perimenopausal depression,⁹ improved health outcomes in chronically ill individuals,¹⁰ and control of a *Leptospirosis* epidemic in Cuba.¹¹ We analyzed data from the 2012 National Health Interview Survey (NHIS) for prevalence and patterns of homeopathy use among US adults in relation to other CIM use.

METHODS

NHIS gathers health-related data on the civilian, noninstitutionalized US population and is used to inform health policy. The most recent survey that had questions about CIM use occurred in 2012 and included 34 525 adults, with a conditional response rate of 79.7%.¹²

We included all adult respondents and divided them into 4 mutually exclusive categories: individuals who used homeopathy within the past 12 months (homeopathy use), individuals who used herbs and dietary supplements without homeopathy within the past 12 months (supplements without homeopathy), individuals who used neither homeopathy nor dietary supplements but used another form of CIM within a 12-month period (other CIM use), and individuals who did not use any form of CIM (no CIM use). For some analyses, we further subdivided the group that used homeopathy into those who did or did not see a practitioner in association with their homeopathy use.

We used survey procedures in SAS version 9.2 (SAS Institute, Cary, NC) and the sampling weights provided¹² to account for the survey's complex sampling design and to obtain statistically accurate estimates for the civilian, noninstitutionalized US population. Additional analytic details are presented as supplementary methods (available as a supplement to the online version of this article at <http://www.ajph.org>).

RESULTS

The sociodemographic characteristics and health behaviors of survey respondents are presented in Table A, available as a supplement to the online version of this article at <http://www.ajph.org>. There were significant differences among the 4 groups for all factors examined. When we excluded non-CIM users, there were no significant differences among the 3 groups of CIM users comparing percentage Hispanic ethnicity, family income, alcohol use, and physical activity. Homeopathy users were more likely than were other CIM users to be women, to be in the aged 30 to 44 years bracket, to be White, to live in the west, to be married, to be highly educated, and to have a lower body mass index. Homeopathy users were significantly more likely than were supplement and other CIM users to use nearly every category of CIM assessed on the survey except for chiropractic or osteopathic manipulation (Table 1). Homeopathy users used significantly more total CIM modalities than did supplement users or other CIM users (Figure A, available as a supplement to the online version of this article at <http://www.ajph.org>).

Of the 718 homeopathy users surveyed, only 140 (19%) saw a practitioner for homeopathic therapy (data not shown). Two thirds of homeopathy users ranked this modality within their top 3 CIM therapies (69% of those who saw a practitioner; 68% of those who did not). A third of individuals (35% vs 33%, respectively) used this modality to address a specific health-related condition. Similarly,

ABOUT THE AUTHORS

All of the authors were with the Division of General Medicine and Primary Care, Beth Israel Deaconess Medical Center, Boston, MA, when this work was performed. Roger B. Davis is also with the Harvard T. H. Chan School of Public Health, Boston, MA. Ted J. Kaptchuk is also with the Program in Placebo Studies, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston.

Correspondence should be sent to Michelle L. Dossett, Benson-Henry Institute for Mind Body Medicine, Massachusetts General Hospital, 151 Merrimac St., 4th floor, Boston, MA 02114 (e-mail: mdossett@mgh.harvard.edu). Reprints can be ordered at <http://www.ajph.org> by clicking the "Reprints" link.

This brief was accepted November 27, 2015.
doi: 10.2105/AJPH.2015.303025

TABLE 1—Most Frequent Complementary and Integrative Therapies Used: National Health Interview Survey, United States, 2012

	Other CIM Use (n = 5298)	Supplements Without Homeopathy (n = 5500)	Homeopathy Use (n = 718)
CIM modality			
Homeopathy	NA	NA	718 (100.0)
Herbs and supplements ^a	NA	5500 (100.0)	474 (66.6)
Chiropractic or osteopathic manipulation	1904 (36.1)	873 (16.1)	216 (30.7)
Massage	1678 (31.2)	1013 (18.4)	260 (35.0)
Mind-body exercise	1804 (34.6)	1102 (20.1)	299 (42.0)
Meditation, imagery, or progressive relaxation	717 (12.7)	654 (11.7)	244 (33.2)
Naturopathy	34 (0.4)	119 (1.8)	123 (15.9)
Acupuncture	291 (4.8)	221 (3.6)	92 (11.1)
Energy healing	75 (1.3)	112 (1.7)	85 (10.0)
Special diet	535 (9.9)	377 (6.4)	115 (16.7)
Movement therapy	356 (7.3)	244 (4.3)	78 (11.1)
Hypnosis	37 (0.7)	28 (0.5)	25 (3.1)
Craniosacral therapy	21 (0.4)	46 (0.9)	42 (4.1)
Ayurveda	18 (0.3)	36 (0.6)	42 (5.0)
Traditional healers	95 (1.4)	49 (0.8)	26 (3.9)
Biofeedback	44 (0.9)	42 (0.7)	21 (2.6)
Condition			
Respiratory or otorhinolaryngological	57 (0.7)	89 (1.5)	94 (18.5)
Musculoskeletal	1850 (26.7)	649 (13.6)	57 (12.3)
Fatigue, stress, or chronic pain	287 (3.8)	165 (2.9)	42 (7.7)
Gastrointestinal	74 (0.9)	213 (3.6)	29 (5.0)
Neurological	196 (2.8)	64 (0.9)	20 (3.4)
Mental health	188 (2.6)	59 (0.9)	17 (2.1)
Cardiac and vascular	115 (1.6)	547 (10.9)	^b
Endocrine and metabolic	115 (1.7)	70 (1.3)	^b

Note. CIM = complementary and integrative medicine; NA = not applicable. The weighted percentage estimate of the US population is presented. Prevalence was very low for gynecological, genitourinary, immune, dermatologic, and developmental conditions and cancer and benign tumors.

^aDoes not include vitamin and mineral supplements.

^bBecause relative SE > 30%, estimate is unreliable.

a third of supplement users (32%) used supplements to target health-related conditions. Table 1 summarizes the most common health conditions addressed by each group of CIM users. The single most common condition homeopathy users addressed was head and chest colds.

Homeopathy users who saw a practitioner were significantly more likely to feel that homeopathy was “very important in maintaining health and well-being” and that it helped their health condition “a great deal” than were homeopathy users who did not see a practitioner (Figure B, available as a supplement to the online version of this article

at <http://www.ajph.org>). Homeopathy users who did not see a practitioner were significantly more likely than were supplement users to find the modality they used helpful.

DISCUSSION

The 2002 and 2007 NHIS demonstrated annual prevalence rates of homeopathy use among US adults at 1.7% and 1.8%, respectively.¹³ We found that, by 2012, use had increased by approximately 15% to 2.1% of US adults, likely a reflection of the

general increase in the prevalence of CIM use around the country. Nonetheless, these numbers are lower than are prevalence rates of use from other Western countries, such as Italy (8.2%) and Germany (14.8%).¹⁴ Sociodemographic factors previously shown to be associated with CIM use such as gender, education, income, and the presence of medical comorbidities^{13,14} were significantly associated with CIM use in our analysis as well.

In response to federal queries regarding public use and perceptions of homeopathy, the majority of users do not see a practitioner for homeopathic therapy (81%) and presumably self-prescribe combination or individual products that are widely available over the counter for specific self-limited conditions. The most common conditions treated were respiratory and otorhinolaryngology complaints (cold symptoms were the most common; there is some evidence of efficacy^{8,15,16}) and musculoskeletal complaints such as pain. Data from a small sample of physicians who prescribe homeopathic medicines suggest that treatment of respiratory and otorhinolaryngology conditions and musculoskeletal complaints is common in clinical practice as well.⁶ In general, homeopathy users perceive these products to be more helpful for their health than supplement users perceive their use of supplements.

The dramatic difference in perceived helpfulness between those who use practitioner-prescribed homeopathy versus those who self-prescribe homeopathy is intriguing. This difference may be the result of an enhanced therapeutic effect stemming from the nature of the patient-provider relationship,^{17–19} a more individualized and effective homeopathic prescription by the provider,^{1,20} or intrinsic differences between these 2 types of homeopathy users. The last possibility we could not examine in this study because of the small sample size of homeopathy users who saw practitioners.

Limitations

The major limitations of our study are the potential for misclassification and recall bias, because NHIS data rely on self-report. Nonetheless, the NHIS is a carefully designed

face-to-face survey and the best available source for these kinds of health-related data on the US population.

In addition, because of how the survey was designed, we were unable to assess perceived helpfulness of homeopathy use from all homeopathy users. Modification of the survey to acquire data on perceived helpfulness from all CIM users would be informative. Also, the relatively small number of users who see practitioners for homeopathic treatment precluded any further analysis of this population. We did not calculate out-of-pocket expenditures for homeopathic medicines or practitioner visits because of the large amount of missing data and likely unreliability of such estimates.

Public Health Implications

Homeopathy users constitute a segment of high CIM users and report high levels of perceived helpfulness for this modality, particularly when they see a practitioner for therapy. However, most homeopathy users do not see practitioners and they self-prescribe, predominantly for self-limited conditions. Because of potential public health benefits^{7–11} associated with the use of homeopathy, further research on this modality and targeted studies of users are warranted. **AJPH**

CONTRIBUTORS

M. L. Dossett and R. B. Davis analyzed the data. M. L. Dossett, T. J. Kaptchuk, and G. Y. Yeh interpreted the data. M. L. Dossett and G. Y. Yeh conceptualized and designed the study. All authors wrote, revised, and approved the final version of the article.

ACKNOWLEDGMENTS

This work was supported by Harvard Catalyst, the Harvard Clinical and Translational Science Center, the National Institutes of Health (NIH; award 1UL1 TR001102-01), and Harvard University and its affiliated academic health care centers. M. L. Dossett was supported by an Institutional National Research Service Award (T32 AT000051) from the National Center for Complementary and Integrative Health (NCCIH) at the NIH and by the Division of General Medicine and Primary Care at Beth Israel Deaconess Medical Center. T. J. Kaptchuk was supported by the NCCIH (award K24 AT004095).

M. L. Dossett has served as a consultant for TJL Enterprises, which did not provide any support for this study.

Note. The content of this article is solely the responsibility of the authors and does not necessarily represent the official views of Harvard Catalyst, Harvard University and its affiliated academic health care centers, or the NIH.

HUMAN PARTICIPANT PROTECTION

The Beth Israel Deaconess Medical Center Committee on Clinical Investigations granted this study exempted status because all data were publicly available and de-identified.

REFERENCES

- Fisher P. What is homeopathy? An introduction. *Front Biosci (Elite Ed)*. 2012;4(1):1669–1682.
- Jonas WB, Kaptchuk TJ, Linde K. A critical overview of homeopathy. *Ann Intern Med*. 2003;138(5):393–399.
- Borneman JP, Field RI. Regulation of homeopathic drug products. *Am J Health Syst Pharm*. 2006;63(1):86–91.
- US Food and Drug Administration. Homeopathic product regulation: evaluating FDA's regulatory framework after a quarter century. Available at: <http://www.fda.gov/Drugs/NewsEvents/ucm430539.htm>. Accessed May 19, 2015.
- Federal Trade Commission. Homeopathic medicine & advertising: an FTC workshop. Available at: <https://www.ftc.gov/news-events/events-calendar/2015/09/homeopathic-medicine-advertising>. Accessed June 17, 2015.
- Jacobs J, Chapman EH, Crothers D. Patient characteristics and practice patterns of physicians using homeopathy. *Arch Fam Med*. 1998;7(6):537–540.
- Grimaldi-Bensouda L, Bégaud B, Rossignol M, et al. Management of upper respiratory tract infections by different medical practices, including homeopathy, and consumption of antibiotics in primary care: the EPI3 cohort study in France 2007–2008. *PLoS One*. 2014;9(3):e89990.
- Rossi E, Crudeli L, Endrizzi C, Garibaldi D. Cost-benefit evaluation of homeopathic versus conventional therapy in respiratory diseases. *Homeopathy*. 2009;98(1):2–10.
- Macías-Cortés EDC, Llanes-González L, Aguilar-Faisal L, Asbun-Bojalil J. Individualized homeopathic treatment and fluoxetine for moderate to severe depression in peri- and postmenopausal women (HOMDEP-MENOP study): a randomized, double-dummy, double-blind, placebo-controlled trial. *PLoS One*. 2015;10(3):e0118440. [Correction at *PLoS One*. 2015;10(5):e0127719]
- Witt CM, Lüdtke R, Mengler N, Willich SN. How healthy are chronically ill patients after eight years of homeopathic treatment?—Results from a long term observational study. *BMC Public Health*. 2008;8:413.
- Golden I, Bracho G. A reevaluation of the effectiveness of homoeoprophylaxis against leptospirosis in Cuba in 2007 and 2008. *J Evid Based Complementary Altern Med*. 2014;19(3):155–160.
- Division of Health Interview Statistics, National Center for Health Statistics. 2012 National Health Interview Survey (NHIS) public use data release: NHIS survey description. 2013. Available at: http://ftp.cdc.gov/pub/health_statistics/nchs/Dataset_Documentation/NHIS/2012/srvydesc.pdf. Accessed September 18, 2013.
- Barnes PM, Bloom B, Nahin RL. Complementary and alternative medicine use among adults and children: United States, 2007. *Natl Health Stat Rep*. 2008;(12):1–23.
- Frass M, Strassl RP, Friehs H, Müllner M, Kundi M, Kaye AD. Use and acceptance of complementary and alternative medicine among the general population and medical personnel: a systematic review. *Ochsner J*. 2012;12(1):45–56.
- Bornhöft G, Matthiessen PF, eds. *Homeopathy in Healthcare—Effectiveness, Appropriateness, Safety, Costs*. 2011. Available at: <http://link.springer.com/10.1007/978-3-642-20638-2>. Accessed April 28, 2015.
- Zanasi A, Mazzolini M, Tursi F, Morselli-Labate AM, Paccapelo A, Lecchi M. Homeopathic medicine for acute cough in upper respiratory tract infections and acute bronchitis: a randomized, double-blind, placebo-controlled trial. *Pulm Pharmacol Ther*. 2014;27(1):102–108.
- Kaptchuk TJ. The placebo effect in alternative medicine: can the performance of a healing ritual have clinical significance? *Ann Intern Med*. 2002;136(11):817–825.
- Koithan M, Embrey M, Bell IR. Qualitative evaluation of successful homeopathic treatment of individuals with chronic diseases: descriptive phenomenology of patients' experiences. *J Med Person*. 2014;13(1):23–35.
- Dossett ML, Mu L, Davis RB, et al. Patient-provider interactions affect symptoms in gastroesophageal reflux disease: a pilot randomized, double-blind, placebo-controlled trial. *PLoS One*. 2015;10(9):e0136855.
- Mathie RT, Lloyd SM, Legg LA, et al. Randomised placebo-controlled trials of individualised homeopathic treatment: systematic review and meta-analysis. *Syst Rev*. 2014;3:142.