

Patients' Preference for Complementary and Alternative Medicine Presents Challenges for Research

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The article by Purohit and colleagues¹ in this edition of the *Journal* is one of a series of secondary analyses by this team of the National Health Interview Survey (NHIS) Adult Core and Alternative Medicine Supplement data conducted by Centers for Disease Control and Prevention.²⁻⁴ In their previous work,² the authors determined that respondents who endorsed at least 1 neuropsychiatric symptom (anxiety, depression, insomnia, hypersomnia, headaches, memory problems, or attentions deficits) were more likely (43.8% vs 29.7%) to seek out some type of complementary and alternative medicine (CAM) treatments in the last 12 months and that the prevalence of employing CAM therapies increased with the number of neuropsychiatric symptoms endorsed. Not surprisingly, in this article,¹ they demonstrate that out-of-pocket expenditures related to CAM therapy use is greater for subjects who endorse having 1 or more neuropsychiatric symptoms: the 36% of respondents who had 1 or more neuropsychiatric symptoms accounted for approximately \$14.8 billion of out-of-pocket CAM expenditures versus \$19.4 billion for the rest (64%) of the respondents.

The article raises many interesting issues that merit discussion. Foremost, it is important for medical and psychiatric practitioners to know that CAM therapies are sought out by patients who suffer from both psychiatric and neurologic symptoms, and so practitioners must question their patients about the use of CAM therapy. Second, patients who endorse a neuropsychiatric symptom in the NHIS tend to be more desperate: as described by Purohit and colleagues,¹ these respondents indicated that they believed conventional therapies were either too expensive or not effective. Health care practitioners need to be sensitive to these patient concerns and must encourage a dialogue with our patients.

The demographic characteristics of the 36% of respondents who endorsed 1 or more neuropsychiatric symptoms were enlightening: they were more likely to be women, have chronic medical conditions, and endorse suffering from some type of pain syndrome. Thus, individuals more likely to seek and incur costs for CAM therapies have a similar demographic profile to individuals

who are more likely to seek care and incur greater costs in the traditional health care marketplace.^{5,6}

The article also is an example of the strengths and limitations of secondary analyses of large epidemiologic data sets. Such data sets can be successfully analyzed to answer a myriad of interesting questions, but they have serious and significant limitations. Analysis of specific items is complicated because of (1) the structure of the questions asked and (2) the biases of respondents. Health survey items are difficult to write because they need to be general enough to be relevant to participants and cannot be so detailed that they cause a significant respondent time burden. And so, although these data are valuable, it is important for both investigators and readers to be aware of the inherent limitations in the design of the items. One must be careful about overinterpreting such findings. A second concern is respondent bias, which can take several forms. First, there is an intrinsic bias based on those persons motivated enough to respond to the survey; fortunately, in the case of NHIS, the response rate was quite high, 67.8%. An additional form of respondent bias that is insidious but quite real is recall bias. It is well known in the field of memory research that our memories are considerably less reliable than we would hope (or believe) them to be.⁷ This is an intrinsic limitation that is part of any self-report survey. These issues do not invalidate well-done survey work like NHIS but merely are variables that need to be considered.

Another important issue that deserves discussion is the challenge posed by the large sample size of some epidemiologic data sets: they are sometimes so large that relatively small percentage differences in response rates between 2 groups are statistically very significant. For example, a 7.1% difference in the number of respondents who paid for CAM therapies over the past year is associated with a *P* value of < .001. Thus, the significance of an important but relatively small odds ratio difference (eg, OR = 1.24 [95% CI, 1.10–1.40]) for an increased likelihood of spending funds on CAM therapy may be misconstrued by less sophisticated readers. All too often this is the case when such articles are cited in the introduction or discussion section of subsequent works.

In closing, this thoughtfully performed and written secondary analysis by Purohit and colleagues¹ is an important addition to the literature. It suggests that clinicians need to be aware of the prevalence of CAM therapy use by people who present with sleep, memory, anxiety, depression, and chronic headache concerns. The annual out-of-pocket expenditure in 2007 on CAM therapies was over \$34.2 billion, and so, as a society, we need to explore and better understand the appropriate utilization of CAM therapies.

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