Complementary and Alternative Medicine for Mental Disorders Among African Americans, Black Caribbeans, and Whites

Amanda T. Woodward, Ph.D.
Kai M. Bullard, Ph.D.
Robert J. Taylor, Ph.D.
Linda M. Chatters, Ph.D.
Raymond E. Baser, M.S.
Brian E. Perron, Ph.D.
James S. Jackson, Ph.D.

Objectives: This study examined racial and ethnic differences in the use of complementary and alternative medicine (CAM) for the treatment of mental and substance use disorders.

Methods: Data were from the National Survey of American Life (NSAL) and the National Comorbidity Survey-Replication (NCS-R). The analytic sample included 631 African Americans and 245 black Caribbeans from the NSAL and 1,393 non-Hispanic whites from the NCS-R who met criteria for a mood, anxiety, or substance use disorder in the past 12 months. Logistic regression was used to examine racial and ethnic differences in the use of any CAM and in the use of CAM only versus the use of CAM plus services in another treatment sector.

Results: Thirty-four percent of respondents used some form of CAM. Whites were more likely than blacks to use any CAM, although there was no racial or ethnic difference in CAM use only versus CAM use plus traditional services. A higher proportion of blacks than whites used prayer and other spiritual practices. Among those with a mood disorder, black Caribbeans were less likely than African Americans to use any CAM.

Conclusions: Findings of this study were similar to those of previous studies that examined physical illness in relation to CAM use in terms of its overall prevalence, the predominant use of CAM in conjunction with traditional service providers, and racial and ethnic differences in the use of CAM. The use of prayer was a major factor in differences between blacks and whites in CAM use; however, there were also differences among black Americans that warrant further research.

According to the National Center for Complementary and Alternative Medicine, complementary and alternative medicine (CAM) “is a group of diverse medical and health care systems, practices, and products that are not presently considered part of conventional medicine” (1). The mainstream health care system has become increasingly interested in understanding who uses CAM, in what circumstances CAM is used, and the relationship between alternative and conventional therapies. Previous research has found that 34% to 45% of the U.S. population uses some form of CAM (2–6), and roughly 9% has visited a CAM practitioner (7–9). These studies encompassed a range of alternative therapies and practices, such as chiropractic, massage, acupuncture, megavitamins, herbal remedies, biofeedback, and hypnosis.

Adults suffering from mental and substance use disorders are often heavy users of medical services, and yet there is substantial evidence that many of these individuals receive inadequate treatment or do not use mental health services (10,11). In addition, there is continuing evidence that members of racial or ethnic minority groups underutilize mental health services compared with non-Hispanic whites (10,12). These studies have focused largely on traditional services in the general and mental health sectors. Only a handful of the studies on CAM use have focused explicitly on those with a mental disorder (13–18), and even fewer have examined racial and ethnic differences in CAM use in this vulnerable group (15,16).

This study used a nationally repre-
sentative sample to examine the use of CAM among African Americans, black Caribbeans, and non-Hispanic whites who met diagnostic criteria for a mood, anxiety, or substance use disorder. Given the lack of existing research in this area, this study took an exploratory approach. However, it built on previous research in several ways. First, it took an in-depth look at the use of CAM specifically for the treatment of a mental disorder. Second, the presence of mental disorders was assessed by using a fully structured diagnostic interview administered to a nationally representative community-based sample. This allowed for an examination of CAM use among those who may or may not have been previously diagnosed or received traditional mental health services. Finally, this is the first study that examined differences in CAM use among American blacks by comparing African Americans and black Caribbeans.

Methods
Sample
This study used data from the National Survey of American Life: Coping With Stress in the 21st Century (NSAL) (19) and the National Comorbidity Survey Replication (NCS-R) (20). The NCS-R and NSAL are both part of the Collaborative Psychiatric Epidemiology Studies (CPES) funded by the National Institute of Mental Health and are designed to be complementary data sets. Each of the CPES studies shares a set of objectives and survey instrumentation. Both studies were conducted by the Survey Research Center at the University of Michigan and shared the multistage area probability sample designs common to the national surveys conducted by the Survey Research Center (21,22). Data were collected from 2001 to 2003 in both studies. In addition, the CPES studies were designed to allow integration of design-based analysis weights to combine data sets as though they were a single, nationally representative study (23).

At the same time, however, each survey has unique features in its national area probability samples that complement one another. The NCS-R, for example, was designed to be representative of the U.S. population in general and included face-to-face interviews with 9,282 residents of English-speaking households who were 18 years or older. The NSAL, however, was designed to be representative of blacks in the United States and was based on a national household probability sample of 6,082 African Americans, non-Hispanic whites, and blacks of Caribbean descent.

This study builds on the strengths of each survey by using a pooled sample of 631 African Americans and 245 black Caribbeans from the NSAL and 1,393 non-Hispanic whites from the NCS-R who met criteria for a mood, anxiety, or substance use disorder in the past 12 months (N = 2,269).

After complete description of the study to participants, informed consent was obtained. Both studies were approved by the University of Michigan Institutional Review Board. The NCS-R was also approved by the Human Subjects Committee of Harvard Medical School.

Measures
Respondents in both the NCS-R and the NSAL 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 therapy, herbal therapy (for example, St. John’s wort or chamomile), megavitamins, homeopathy, hypnosis, imagery techniques, massage therapy, prayer or other spiritual practices, relaxation or meditation techniques, self-help and Internet support groups, 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 and the use of CAM only versus the use of CAM plus traditional professional services. The use of traditional service providers was assessed in the same way as the use of alternative services and included professionals from the mental health sector (psychiatrists, mental health hotlines, psychologists, and other mental health professionals), the general medical care sector (family doctors, nurses, occupational therapists, and other health professionals), and the non–health care sector (religious advisors, counselors, and social workers) (11).

Sixty-four percent of respondents who used CAM indicated using prayer or other spiritual practices, and over 50% indicated that it was the only alternative therapy used. Consistent with previous research in this area (3,24,25) we excluded those who reported using only prayer or other spiritual practices as CAM users in the multivariate analyses. Bivariate analyses are presented both with and without this category.

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) (26). 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. A three-level rating of overall mental illness severity was determined for the 12 months before the interview (mild, moderate, or severe) (27) as well as a measure of disorder persistence (less than one year, one to four years, five to 14 years, or 15 years or more).

The main predictor of interest was race-ethnicity, which was categorized as African American, black Caribbean, and non-Hispanic white. Analyzes controlled for other sociodemographic variables that have consistently been found to be related to service use. These include gender, age (18–29, 30–54, or 55 years and older), and marital status (married, never married, or previously married); socioeconomic status as measured by years of education (0–11, 12, 13–15, or 16 years or more), employment status (working or not working),
and the ratio of family income to the

census poverty threshold for 2001

(less than 1.5 times the poverty

threshold, 1.5 to 2.9 times, 3.0 to 6.0

times, or greater than 6.0 times); and

a dichotomous variable indicating

whether the respondent reported

having health insurance at the time of

the interview.

Analysis

Rao-Scott chi square tests were used
to examine differences in rates of

CAM use. First, sociodemographic

and mental health characteristics of

respondents meeting criteria for a

12-month mood, anxiety, or sub-

stance use disorder were examined

by CAM use. Then racial and ethnic
differences across specific CAM

therapies as well as differences in

the use of traditional professional

services among CAM users were ex-
amined for respondents who met cri-
teria for any 12-month DSM-IV dis-
order. Finally, logistic regression

models were used to test the associ-

ation between use of CAM and race

and ethnicity among those with a

mood, anxiety, or substance disorder

while controlling for other sociode-

mographic variables. First, separate

models were examined for any CAM

use (model 1), CAM use only versus

CAM use with traditional profes-
sional services for the full sample

(model 2), and CAM use only versus

CAM use with traditional profes-
sional services for the subset of re-
spondents who were CAM users

(model 3). Then three models pre-
dicted any 12-month CAM use

among respondents with a mood dis-
order (model 4), an anxiety disorder

(model 5), or a substance use disor-
der (model 6). All analyses were con-
ducted with SAS, version 9.1.3, with
the Taylor expansion approximation
technique for calculating the com-
plex design-based estimates of vari-
ance (28). Reporting and interpreting
results focused on effect size

with an alpha level of .05 as the cut-
off for statistical significance in bi-
variate analyses and an alpha level of

.001 as the cutoff for multivariate
models. All analyses were weighted
to yield nationally representative es-

timates for the groups and sub-
groups of interest.

Results

Among adults with a 12-month mood,

anxiety, or substance use disorder,

34% reported using CAM in the past

12 months. A higher proportion of

non-Hispanic whites (39%) used

CAM for a mental or substance use

disorder than either African Ameri-
cans (24%) or black Caribbeans (12%)
(Table 1). This pattern oc-
curred both when those who used

only prayer and other spiritual prac-
tices were omitted and when they

were included, as well as when the

use of CAM only was examined

(Table 2). In the latter two instances,

however, the magnitude of difference

among the three groups declined. In

contrast, when different CAM modal-

ities were examined among CAM

users, a smaller proportion of whites

reported using prayer and other spir-

itual practices (47%) than African

Americans (63%) and black Carib-
beans (68%) (Table 3).

In terms of other specific CAM do-

main (Table 3), a higher proportion

of African Americans (9%) reported

using acupuncture than black Car-
ibbeans (4%) and whites (5%) report-
ed using acupuncture, although these
differences were small. The use of

herbal therapy was highest among

black Caribbeans (31%), followed by

whites (28%) and African Americans
(15%). A higher proportion of African

Americans reported using spiritual

healing by others (18%) than either

black Caribbeans (13%) or whites
(9%). There were no significant racial

or ethnic differences in the use of

other specific CAM domains or in the

use of specific traditional treatment

sectors among CAM users.

Other sociodemographic charac-
teristics were significantly related to

CAM use as well (Table 1). A higher

proportion of adults aged 30–54 years

(38%) used CAM than younger (32%)

and older (28%) adults, and females

were more likely than males to use

CAM (39% versus 28%). The propor-
tion using CAM increased with higher

levels of education, from 19% of

respondents with less than a high

school education to 52% of those with

a college degree or higher. A slightly

higher proportion of respondents

who were working at the time of the

interview used CAM (37%) than

those who were not working (30%).

CAM use also increased with income,

from 27% of those in the lowest in-
come group to 47% of those in the

highest. In addition, a somewhat

higher proportion of those with insur-
ance coverage (35%) than those with-
out insurance (28%) reported using

CAM. In terms of disorder-related

variables, a higher proportion of

those with a mood disorder (40%) than

those without a mood disorder

(30%) used CAM. The presence of an

anxiety or substance use disorder was

not significantly related to CAM use;

however, respondents with both a

mood and anxiety disorder were more

likely to use CAM (41%) compared

with those without these comorbid

disorders (33%). The proportion who

used CAM increased somewhat with

over all disorder severity, from 30%

among those with a mild disorder to

38% of those with a severe disorder,

but the use of CAM was not related to

the persistence of the disorder.

Table 4 summarizes the logistic re-
gression models. In all of the models,

an alpha of .001 was used for analyses.

In model 1, whites were almost two

taxes as likely as African Americans
to report any CAM use (odds ratio [OR]=
1.95). Model 2 examined CAM

use only versus CAM use with tradi-
tional professional services in the full

sample, and model 3 examined CAM

use only versus CAM use with tradi-
tional professional services among

CAM users. There were no racial or

ethnic differences in either of these

models at the .001 level of signifi-
cance, and no differences were ob-

served between black Caribbeans and

African Americans across any of the

first three models.

Among respondents with a 12-

month mood disorder (model 4),

whites were two times as likely as

African Americans to use CAM (OR=
2.27). Among respondents with an

anxiety disorder (model 5), there

were no significant differences across

the three groups. In model 6, race

and ethnicity were not significantly

related to CAM use among respon-
dents with substance use disorders.

Discussion

Thirty-four percent of respondents

with a mood, anxiety, or substance
### Table 1
Sociodemographic and clinical characteristics of respondents meeting criteria for a mood, anxiety, or substance use disorder in the past 12 months, by use of complementary and alternative medicine (CAM) in the past 12 months

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Used CAM (N=696) (%)</th>
<th>Did not use CAM (N=1,412) (%)</th>
<th>SE</th>
<th>χ²</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sociodemographic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race and ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>24 (76)</td>
<td>67.74 (2)</td>
<td></td>
<td></td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>12 (88)</td>
<td>2.69 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>39 (61)</td>
<td>1.51 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18–29</td>
<td>32 (68)</td>
<td>2.38 (2)</td>
<td></td>
<td>11.41</td>
<td>2</td>
<td>.003</td>
</tr>
<tr>
<td>30–54</td>
<td>38 (62)</td>
<td>1.67 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥55</td>
<td>28 (72)</td>
<td>2.57 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>28 (72)</td>
<td>2.18 (1)</td>
<td></td>
<td>16.14</td>
<td>1</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Female</td>
<td>39 (61)</td>
<td>1.53 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently married</td>
<td>37 (63)</td>
<td>2.11 (2)</td>
<td></td>
<td>3.18</td>
<td>2</td>
<td>.204</td>
</tr>
<tr>
<td>Previously married</td>
<td>33 (67)</td>
<td>2.38 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>34 (68)</td>
<td>2.36 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>19 (81)</td>
<td>2.24 (1)</td>
<td></td>
<td>92.56</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>High school</td>
<td>28 (72)</td>
<td>1.98 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some college</td>
<td>40 (60)</td>
<td>1.92 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College degree or higher</td>
<td>52 (48)</td>
<td>3.22 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working</td>
<td>37 (70)</td>
<td>2.39 (1)</td>
<td></td>
<td>4.44</td>
<td>1</td>
<td>.035</td>
</tr>
<tr>
<td>Not working</td>
<td>30 (63)</td>
<td>1.62 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty index (times poverty threshold)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1.5</td>
<td>27 (73)</td>
<td>2.02 (2)</td>
<td></td>
<td>32.78</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>1.5–2.9</td>
<td>31 (69)</td>
<td>2.61 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0–6.0</td>
<td>35 (65)</td>
<td>2.23 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;6.0</td>
<td>47 (53)</td>
<td>2.76 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance coverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>35 (65)</td>
<td>2.66 (1)</td>
<td></td>
<td>6.18</td>
<td>1</td>
<td>.013</td>
</tr>
<tr>
<td>No</td>
<td>28 (72)</td>
<td>1.34 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mood disorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>40 (60)</td>
<td>1.98 (1)</td>
<td></td>
<td>16.17</td>
<td>1</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>No</td>
<td>30 (70)</td>
<td>1.63 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>35 (65)</td>
<td>1.98 (1)</td>
<td></td>
<td>.00</td>
<td>1</td>
<td>.96</td>
</tr>
<tr>
<td>No</td>
<td>35 (65)</td>
<td>1.63 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance use disorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>32 (68)</td>
<td>3.26 (1)</td>
<td></td>
<td>.33</td>
<td>1</td>
<td>.567</td>
</tr>
<tr>
<td>No</td>
<td>34 (66)</td>
<td>1.27 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>30 (70)</td>
<td>1.80 (1)</td>
<td></td>
<td>8.16</td>
<td>3</td>
<td>.043</td>
</tr>
<tr>
<td>Moderate</td>
<td>36 (64)</td>
<td>1.99 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>38 (62)</td>
<td>3.47 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persistence (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
<td>34 (66)</td>
<td>3.18 (1)</td>
<td></td>
<td>1.09</td>
<td>3</td>
<td>.779</td>
</tr>
<tr>
<td>1–4</td>
<td>33 (67)</td>
<td>2.27 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5–14</td>
<td>34 (66)</td>
<td>2.54 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 or more</td>
<td>36 (64)</td>
<td>2.16 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comorbidity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mood and anxiety disorders only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>41 (59)</td>
<td>3.67 (1)</td>
<td></td>
<td>4.29</td>
<td>1</td>
<td>.039</td>
</tr>
<tr>
<td>No</td>
<td>33 (67)</td>
<td>1.36 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mood and substance use disorders only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>45 (55)</td>
<td>6.87 (2)</td>
<td></td>
<td>2.51</td>
<td>1</td>
<td>.113</td>
</tr>
<tr>
<td>No</td>
<td>34 (66)</td>
<td>1.25 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety and substance use disorders only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>38 (62)</td>
<td>7.32 (2)</td>
<td></td>
<td>.28</td>
<td>1</td>
<td>.594</td>
</tr>
<tr>
<td>No</td>
<td>34 (66)</td>
<td>1.19 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mood, anxiety, and substance use disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>44 (56)</td>
<td>8.84 (1)</td>
<td></td>
<td>1.45</td>
<td>1</td>
<td>.229</td>
</tr>
<tr>
<td>No</td>
<td>34 (66)</td>
<td>1.17 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a Sample sizes are unweighted, and percentages are weighted estimates.*
### Table 2

Use of complementary and alternative medicine (CAM) among respondents meeting criteria for any DSM-IV disorder in the past 12 months, by race and ethnicity

<table>
<thead>
<tr>
<th>CAM use</th>
<th>Total (N=2,269)</th>
<th>African American (N=631)</th>
<th>Black Caribbean (N=245)</th>
<th>Non-Hispanic white (N=1,393)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>SE</td>
<td>%</td>
<td>SE</td>
</tr>
<tr>
<td>CAM therapy use (use of prayer and other spiritual practices only omitted)</td>
<td>34</td>
<td>1.2</td>
<td>23</td>
<td>1.9</td>
</tr>
<tr>
<td>CAM therapy use (use of prayer and other spiritual practices only included)</td>
<td>45</td>
<td>1.3</td>
<td>36</td>
<td>2.3</td>
</tr>
<tr>
<td>CAM use only (other treatment sector use omitted)</td>
<td>15</td>
<td>.9</td>
<td>11</td>
<td>1.3</td>
</tr>
</tbody>
</table>

a Sample sizes are unweighted, and percentages are weighted estimates.
b df=2

### Table 3

Treatment used in the past 12 months among respondents meeting criteria for any DSM-IV disorder in the past 12 months and who used complementary and alternative medicine (CAM), by race and ethnicity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total (N=696)</th>
<th>African American (N=124)</th>
<th>Black Caribbean (N=47)</th>
<th>Non-Hispanic white (N=525)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>SE</td>
<td>%</td>
<td>SE</td>
</tr>
<tr>
<td>Type of CAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acupuncture</td>
<td>6</td>
<td>.9</td>
<td>9</td>
<td>2.4</td>
</tr>
<tr>
<td>Biofeedback</td>
<td>3</td>
<td>.7</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Chiropractic</td>
<td>12</td>
<td>1.4</td>
<td>10</td>
<td>3.7</td>
</tr>
<tr>
<td>Energy healing</td>
<td>5</td>
<td>1.1</td>
<td>4</td>
<td>1.6</td>
</tr>
<tr>
<td>Exercise or movement therapy</td>
<td>43</td>
<td>2.6</td>
<td>46</td>
<td>5.5</td>
</tr>
<tr>
<td>Herbal therapy</td>
<td>26</td>
<td>1.9</td>
<td>15</td>
<td>2.9</td>
</tr>
<tr>
<td>Megavitamins</td>
<td>13</td>
<td>1.5</td>
<td>13</td>
<td>2.7</td>
</tr>
<tr>
<td>Homeopathy</td>
<td>4</td>
<td>.8</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>Hypnosis</td>
<td>2</td>
<td>.6</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>Imagery techniques</td>
<td>5</td>
<td>.8</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Massage therapy</td>
<td>17</td>
<td>1.5</td>
<td>18</td>
<td>4.1</td>
</tr>
<tr>
<td>Prayer or other spiritual practices</td>
<td>50</td>
<td>2.5</td>
<td>63</td>
<td>6.3</td>
</tr>
<tr>
<td>Relaxation or meditation techniques</td>
<td>39</td>
<td>2.5</td>
<td>38</td>
<td>5.7</td>
</tr>
<tr>
<td>Self-help and Internet support groups</td>
<td>17</td>
<td>1.6</td>
<td>16</td>
<td>3.9</td>
</tr>
<tr>
<td>Special diets</td>
<td>10</td>
<td>1.2</td>
<td>10</td>
<td>3.1</td>
</tr>
<tr>
<td>Spiritual healing by others</td>
<td>11</td>
<td>1.1</td>
<td>18</td>
<td>3.0</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>.7</td>
<td>3</td>
<td>1.2</td>
</tr>
<tr>
<td>Other treatment sector use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health service provider</td>
<td>49</td>
<td>2.0</td>
<td>49</td>
<td>4.9</td>
</tr>
<tr>
<td>General medical</td>
<td>32</td>
<td>1.8</td>
<td>30</td>
<td>4.0</td>
</tr>
<tr>
<td>Mental health specialty</td>
<td>36</td>
<td>1.9</td>
<td>42</td>
<td>5.4</td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>21</td>
<td>1.5</td>
<td>27</td>
<td>4.0</td>
</tr>
<tr>
<td>Nonpsychiatrist</td>
<td>28</td>
<td>1.9</td>
<td>36</td>
<td>5.7</td>
</tr>
<tr>
<td>Human service provider</td>
<td>17</td>
<td>1.6</td>
<td>21</td>
<td>4.5</td>
</tr>
</tbody>
</table>

a Sample sizes are unweighted, and percentages are weighted estimates.
b df=2
c Not computed because of insufficient data
use disorder used CAM in response to their mental health problems. This is consistent with previous estimates of CAM use in the general population (2–6). Similarly, a study of psychiatric outpatients found that 44% used CAM to treat psychiatric symptoms (18), and a study by Unützer and colleagues (14) found that 16% to 32% of respondents with a mental disorder used CAM. These results suggest that although CAM use is a substantial source of care for adults with a mental disorder, they are not relying on CAM any more or any less than those seeking treatment for physical ailments.

More than half of those who used CAM for a mental disorder also received treatment from a traditional service provider, while 15% of the sample used CAM only. This also seems to be consistent with previous literature. Druss and Rosenheck (8) examined a sample of the adult non-institutionalized civilian U.S. population to determine how often they visited practitioners for conventional and alternative treatment. The study found that a higher proportion used both CAM and conventional therapies (7%) than CAM alone (2%). Other studies have found that the majority of CAM users relied on both CAM and conventional mental health services (14,16). A previous study of psychiatric patients, however, found that only half of those using CAM therapies for psychiatric symptoms informed their doctors that they were doing so (18). Given the potential for interactions between CAM and conventional treatments, understanding how much patients reveal about CAM use to traditional service providers is an important area for further study.

Non-Hispanic whites were more likely than both African Americans and black Caribbeans to use CAM. This is consistent with previous research comparing whites and African Americans (3,5,9,15,25,29) and was true for overall CAM use and use of CAM only in the whole sample. The greater reliance of whites on CAM use without traditional service use raises some concern about the overall adequacy of treatment received by whites who appear to be more likely to miss the opportunity for traditional treatment. Additional analyses (not shown), however, also found that a higher proportion of CAM users (55%) than non-CAM users (30%) used traditional services. This was true for African Americans and non-Hispanic whites but not for Caribbean blacks. African Americans and non-Hispanic whites who use CAM, therefore, appear to be more likely to receive traditional treatment than those who do not use CAM. In addition, there were no racial or ethnic differences in the use of CAM only compared with use of CAM along with other treatments. Taken together, these findings suggest that CAM users tend to be service users in general and that there is no racial or ethnic difference in the tendency to substitute CAM for more conventional services.

There was no racial or ethnic difference in CAM use among those with a substance use disorder. This may be due to different overall help-seeking patterns among individuals with substance use disorders or perceptions that CAM therapies are less effective for treating substance use disorders. In addition, although overall there were few differences between African Americans and black Caribbeans, a higher proportion of black Caribbeans than African Americans reported using herbal therapies. The higher rate of herbal therapy among black Caribbeans is consistent with research indicating the long history of traditional use of medicinal herbs among Caribbeans (30–33).

Both African Americans and black Caribbeans were more likely than non-Hispanic whites to utilize prayer and other spiritual practices, as well as spiritual healing by others. Previous research on CAM has also found that African Americans were more likely than whites to use prayer (3,24,25). This finding is also consistent with recent research using the

### Table 4

Use of complementary and alternative medicine (CAM) among respondents meeting criteria for a mood, anxiety, or substance use disorder in the past 12 months, by race and ethnicitya

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total N</th>
<th>Black Caribbean</th>
<th>Non-Hispanic white</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>95% CI</td>
<td>p</td>
</tr>
<tr>
<td>Model 1: Any CAM useb</td>
<td>2,024</td>
<td>.58</td>
<td>.31–1.09</td>
</tr>
<tr>
<td>Model 2: CAM use onlyb</td>
<td>2,024</td>
<td>.78</td>
<td>.40–1.52</td>
</tr>
<tr>
<td>Model 3: CAM use only among those who used CAMb</td>
<td>681</td>
<td>1.33</td>
<td>.39–4.55</td>
</tr>
<tr>
<td>Model 4: CAM use among those with a mood disorderc</td>
<td>969</td>
<td>.21</td>
<td>.07–.62</td>
</tr>
<tr>
<td>Model 5: Any CAM use among those with an anxiety disorderc</td>
<td>1,201</td>
<td>.39</td>
<td>.14–1.09</td>
</tr>
<tr>
<td>Model 6: Any CAM use among those with a substance disorderc</td>
<td>319</td>
<td>.58</td>
<td>.04–8.11</td>
</tr>
</tbody>
</table>

a Reference: African American. Cutoff for statistical significance is p<.001.
b Models control for sex, age cohort, marital status, education, employment status, poverty index, and insurance coverage, as well as severity, persistence, and type of disorder.
c Models control for sex, age cohort, marital status, education, employment status, poverty index, and insurance coverage, as well as severity and persistence of disorder.
NSAL that found that compared with non-Hispanic whites, African Americans and black Caribbeans are more religious (34) and more likely to utilize religious coping in general (35).

Overall these findings suggest that although there are differences between blacks and whites in CAM use, there are also differences among black Americans that should be considered and may be rooted in ethnic cultural differences. Because CAM therapies emerge from a variety of different cultures, it is particularly important to understand the ways in which various cultural groups incorporate CAM into more traditional treatment systems. Although this study focused specifically on black Americans, further examination of the use of CAM across Hispanic, Asian, and American Indian or Alaska Native groups is important for future studies.

There are several limitations to this study that should be noted. First, the WMH-CIDI questions used to assess alcohol and drug dependence were modified such that respondents who did not report lifetime abuse symptoms were not administered questions assessing dependence. Thus individuals who have a history of dependence without abuse were excluded, resulting in underestimation of the overall rates of substance dependence (36). As suggested by Cottler (37), persons from racial or ethnic minority groups are most likely to be excluded from the data. Therefore, much like other studies involving the WMH-CIDI with this skip pattern, the results of this study should be interpreted in the context of this diagnostic issue.

Second, the number of cases was too small for multivariate analyses related to the use of specific CAM domains. This limited our ability to tease out racial and ethnic differences in this area. In addition, given the variety of CAM modalities, it may be more advantageous for future research to examine individual or smaller homogeneous groups of treatments rather than grouping all types of alternative treatments under one construct. Finally, although this study characterized results in terms of effect size, it is important to note that some of the statistically significant findings may be a result of multiple comparisons.

Conclusions
This initial study of CAM use for mental and substance use disorders among African Americans, black Caribbeans, and non-Hispanic whites identified the prevalence and types of CAM use and found both commonalities and differences across race and ethnicity in the use and types of CAM. These findings point to the need for continued study of the use of CAM for mental and substance use disorders in these groups. Given the paucity of information on African Americans and black Caribbeans on these topics, the findings further indicate the importance of investigating ethnic differences in CAM use overall and in conjunction with physical and mental health service utilization patterns within the black population.

Acknowledgments and disclosures
This study was funded by grant U01-MH57716 from the National Institute of Mental Health, with supplemental support from the Office of Behavioral and Social Science Research, National Institutes of Health; from the University of Michigan; by grants R01-AG18752 and F30-AG15281 from the National Institute on Aging; and from the Robert Wood Johnson Foundation.

The authors report no competing interests.

References


