



Racial Differences in Preventive and Complementary Health Behaviors and Attitudes

## Journal of Health Disparities Research and Practice

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Volume 1 | Issue 1

Article 6

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2007

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Steven E. Shive , *Temple University*

Grace X. Ma , *Temple University*

Yin Tan , *Temple University*

*See next page for additional authors*

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#### Recommended Citation

Shive, Steven E.; Ma, Grace X.; Tan, Yin; Toubbeh, Jamil I.; Parameswaran, Lalitha; Parameswaran, Lalitha; and Halowich, Joe (2007) "Racial Differences in Preventive and Complementary Health Behaviors and Attitudes," *Journal of Health Disparities Research and Practice*: Vol. 1: Iss. 1, Article 6.

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## Racial Differences in Preventive and Complementary Health Behaviors and Attitudes

### Abstract

Screening tests have been developed for many diseases—the presence of cancer, especially—but are differentially utilized among racial/ethnic groups. In addition to standard medical screening techniques, some patients opt to use Complementary and Alternative Medicine (CAM) for prevention and treatment. The purpose of the current study is to examine racial/ethnic disparities in primary and secondary preventive health behaviors, determine differences in use of complementary and alternative health regimens, and determine which health attitudes and health self-management factors are associated with use of complementary alternative medicine. If differences among ethnic/racial groups in perceived health status, preventive health care behaviors, and use of CAM can be more fully understood, then health professionals will be able to better tailor health promotion interventions and integrate these factors.

### Keywords

Alternative medicine; Cancer – Testing; Diagnostic services; Disease screening; Health behaviors; Health disparities; Health promotion; Medicine; Preventive; Minorities; Social status – Health aspects

### Cover Page Footnote

The authors wish to thank the Commonwealth Fund, which provided the original dataset for the research and data analysis conducted in the study. This project was supported by the National Institutes of Health, National Cancer Institute's project "ATECAR – Asian Community Cancer Network" at the Center for Asian Health, College of Health Professions (Principal Investigator: Grace X. Ma, Ph.D.). The authors are solely responsible for the contents of the article.

### Authors

Steven E. Shive, Grace X. Ma, Yin Tan, Jamil I. Toubbeh, Lalitha Parameswaran, Lalitha Parameswaran, and Joe Halowich



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Steven E. Shive, Temple University

Grace X. Ma, Temple University

Yin Tan, Temple University

Jamil I. Toubbeh, Temple University

Lalitha Parameswaran, Temple University

Joe Halowich, Parkside High School, Salisbury, Maryland

### **Abstract**

Screening tests have been developed for many diseases—the presence of cancer, especially—but are differentially utilized among racial/ethnic groups. In addition to standard medical screening techniques, some patients opt to use Complementary and Alternative Medicine (CAM) for prevention and treatment. The purpose of the current study is to examine racial/ethnic disparities in primary and secondary preventive health behaviors, determine differences in use of complementary and alternative health regimens, and determine which health attitudes and health self-management factors are associated with use of complementary alternative medicine. If differences among ethnic/racial groups in perceived health status, preventive health care behaviors, and use of CAM can be more fully understood, then health professionals will be able to better tailor health promotion interventions and integrate these factors.

Key Words: health behaviors, alternative medicine, disease screening, health disparities

### **Introduction**

Differences exist among racial/ethnic groups in primary and secondary preventive health behaviors and attitudes, use of alternative medical therapies, and prevalence of health problems such as cardiovascular disease, diabetes, hypertension, smoking, and obesity. These group differences extend to mortality rates for coronary heart disease (CHD) as well. Among the major racial/ethnic groups in the United States, CHD mortality rates are highest among African Americans. Non-Hispanic whites also have relatively high CHD

mortality, whereas Native Americans, Asians, and Hispanics have lower rates.<sup>1,2</sup> Several risk factors operate in the development of CHD, including diabetes, hypertension, physical inactivity, obesity, increased serum cholesterol, and smoking.

### Health Problems

The prevalence of diagnosed diabetes<sup>3</sup> and hypertension is highest among non-Hispanic African Americans, followed by Hispanics and non-Hispanic whites.<sup>4,5</sup> Recent trends in obesity—another significant risk factor for CHD—show that the prevalence of obesity among U.S. adults has increased over time from 19.4% in 1997 to 25.1% in early 2004. Obesity peaks between the ages of 40–59 years, with the pattern seen in both men and women. However, the prevalence of being overweight and obese is higher in Hispanic men than in non-Hispanic white or African American men and is greater in both African American and Hispanic women than in non-Hispanic white women.<sup>1</sup>

Lack of regular physical activity contributes to obesity. Only 31.9% of U.S. adults engage in regular, leisure-time physical activity.<sup>3</sup> Activity levels are related to age, sex, and ethnic differences. Though regular physical activity has many health benefits for adults, activity declines with age, women are less active than men, and minority youths are less active than white youths.<sup>6–8</sup> Further, non-Hispanic white adults are more likely to engage in regular, leisure-time physical activity than Hispanic adults and non-Hispanic African American adults.<sup>3</sup> Various cultural and ethnic factors may be implicated in acceptance of excess weight and dietary preferences, which may influence the effectiveness of dietary modification and weight reduction programs in this population.<sup>9,10</sup>

According to a report by the Centers for Disease Control and Prevention, cholesterol levels increase with age and high levels are more common among men than women; in addition, non-Hispanic whites were most likely to have their cholesterol levels checked, while Hispanic adults were least likely.<sup>11</sup> Asians, Native Americans, and Hispanics have lower total cholesterol levels than non-Hispanic whites, but national data suffers from gaps in cholesterol screening and attitudes related to health behaviors among racial/ethnic groups.<sup>1</sup> Approximately 25% of the U.S. population, varied among racial/ethnic groups, continues to smoke on a daily basis.<sup>12,14</sup> Almost 90% of adult smokers are addicted before the age of 18.<sup>13</sup> Screening tests have been developed for many diseases—the presence of cancer, especially—but are differentially utilized among racial/ethnic groups.

## Screening

Screening rates differ among various racial/ethnic groups and age. Cervical cancer incidence rates have been steadily decreasing—especially in non-Hispanic white and African American women—but remained higher in African American (12.7/100,000) women than non-Hispanic white women (8.0/100,000) from 1996–2000. Pap smear rates within the last 3 years, among women 18 years and above, have been highest for African American women (85.5%), followed by non-Hispanic white women (83.9%), Hispanic women (77.9%), and Asian Americans (68.2%) reporting the lowest Pap smear rates of all racial/ethnic groups.<sup>15</sup> The American Cancer Society guidelines recommend that a woman have an initial Pap smear test within three years of having vaginal intercourse, but no later than 21 years of age, and then annually until the age of 30. After 30 years of age, a woman with three consecutive normal test results can opt to decrease testing to every 2–3 years. In 2001, women aged 18–24 (median 83.8%) were least likely to have ever had a Pap test compared with women aged 45–54 (median: 98.1%).<sup>11</sup> Mammogram rates among women 40 years of age and older within the last 2 years, were highest in white women (72.1%), followed by African American (68.2%), Hispanic (62.6%), American Indian and Alaskan Native (52%), and Asian (57%) women.<sup>15</sup>

Screening for colorectal cancer remains underutilized. Among adults 50 years and older, non-Hispanics whites were the most likely of all racial/ethnic groups to undergo screening using both endoscopy and Fecal Occult Blood Tests (FOBT).<sup>15</sup> Screening rates were higher with increasing age.<sup>11</sup> Hispanics had the lowest rates for FOBT (9.8%); Hispanics and Asians have the lowest rates for endoscopy.<sup>15</sup> Considering that early diagnosis and treatment of colorectal cancer results in a survival rate of over 90%, the inconsistent use of screening requires further investigation.<sup>16</sup> Despite having screening techniques for various cancers, more research is needed to learn why people from various racial/ethnic groups are less likely to be screened than others.

## Complementary and Alternative Medicine

In addition to standard medical screening techniques, some patients opt to use Complementary and Alternative Medicine (CAM) for prevention and treatment. Nationwide, adult use of CAM is about 36%.<sup>17–19</sup> Of those individuals, most used CAM in conjunction with conventional medicine.<sup>19–22</sup> Reasons cited for its use included belief that CAM combined with conventional medical treatments would help (54%); that it would be interesting to try (50%); that conventional medical

treatments would not help (28%); suggested by a conventional medical professional (26%); and that conventional medicine was too expensive (13%).<sup>19</sup> Further, one study found that participants used alternative therapies because they had greater congruence with the participants' values, beliefs, and philosophical orientations of health and life.<sup>21</sup> The two most commonly used alternative therapies (excluding prayer) are natural therapies including herbal medicine and chiropractics. The use of CAM also varies with user ethnicity and sex. Asian adults were more likely to use CAM (excluding megavitamin therapy and prayer) than non-Hispanic white or African American adults. Hispanic adults were more likely than non-Hispanic white adults to use therapies involving mind and body. In addition, women were more likely than men to use CAM. The rate of use also increased with higher education.<sup>19</sup> Further, a national study found that among CAM users, only 11.8% of adults sought care from a licensed or certified CAM practitioner, indicating that most individuals who use the therapies self-prescribe and/or self-medicate.<sup>19</sup> Potential complications can arise with the use of these therapies. A study found that 60% of CAM therapies were used, but not disclosed. Respondents did not disclose the information because they felt it was either unimportant for their doctor to know, or their doctor never asked.<sup>23</sup> These findings reveal a significant communication barrier between CAM users and their conventional health providers.<sup>24-26</sup> Even among Vietnamese and Chinese, a study found that while two-thirds used CAM therapy, only 7.6% discussed its use with clinicians.<sup>27</sup> More research needs to be conducted to examine if there is a disparity in CAM use by racial/ethnic groups and to determine if the reasons for use varies.

The purpose of the current study is to examine racial/ethnic disparities in primary and secondary preventive health behaviors, determine differences in use of complementary and alternative health regimens, and to determine which health attitudes and CAM health self-management factors are associated with CAM use.

## Methods

The Commonwealth Fund, in collaboration with the Princeton Survey Research Association, developed a 96-item interview questionnaire, which required about 25 minutes to complete. The questionnaire was administered in 2001 to adults (n=6,305) aged 18 and older living in the continental U.S. The sample consisted of a nationally representative sample of white, African American, Hispanic and Asian households.<sup>28</sup>

## Sample

A random-digit dialing method was employed, which utilized a stratified minority sample design. A disproportional selection of telephone numbers were drawn from area code exchange combinations with a greater than average density of minority households.

## Instrument

A pilot test was conducted which led to the final questionnaire. The pretest was based on a random-digit phone sample of respondents. The questionnaire was translated into Spanish, Mandarin, Cantonese, Vietnamese, and Korean. Survey items were translated and then back translated to ensure that the original meaning of the items was intact. Each selected phone number was called up to a maximum of 20 times. The calls were made at various times of the day and days of the week to enhance the probability of contacting the participants. Each household received at least one daytime call in an attempt to find someone at home. In each of the participant households, interviewees were also randomly selected.

Statistical weighting was employed to assure that the racial/ethnic distribution of the disproportionately large sample of African Americans, Latinos, and Asian Americans of the entire sample matched the distribution of the U.S. general adult population. The overall response rate, 54.3%, was based on contact, cooperation (initial consent obtained), and completion (initial cooperation and eligible participants) rates.

The questionnaire items included demographic variables, visitations to a physician or hospital, location of health care services (e.g., physician's office, community health center, hospital emergency room, some other place, or no regular place), health behaviors and attitudes (e.g., level of self-care, fatalism, health decisions, self-managed care vs. physician-managed care), health problems that prohibit daily activity, other health problems, preventive health behaviors (e.g., smoking/cessation, frequency of exercise, screening behavior), and use of alternative or complementary health therapies (types, reason for use, and whether the physician was informed about use). Demographic variables included age, sex, employment of participant and spouse (full-time, part-time, unemployed), education level (less than high school, high school, college/graduate, post-graduate), income, U.S. citizenship, and length of time in the U.S. (5 years or less, more than 5 years).

Self-reported health problems included high blood pressure, heart attack, cancer, diabetes, anxiety, obesity, and asthma. The perceived seriousness of problems with medication was based on a three-point

Likert Scale, where 1 = very serious problem, 2 = somewhat serious, and 3 = not too serious. The questionnaire included items to measure whether the participant was screened for general physical health, blood pressure, blood cholesterol, cervical cancer, breast cancer, colon cancer, and prostate cancer. Respondents also were asked how long ago they went for the screening tests (less than a year ago, 1–2 years, 3–5 years, more than 5 years ago, or never). Results for the complete physical exam were based on the entire population sample; Pap test results were based on all women; mammogram outcomes were based on women aged 40 and over; colon screening outcomes were based on persons aged 50 and above; and prostate cancer outcomes were based on men aged 40 and older.

### **Statistical Analysis**

Descriptive statistics, chi-square test of independence, and ANOVAs were conducted using SPSS Version 10.0. Descriptive statistics were reported for all variables. A chi-square analysis was conducted to examine the bivariate relationship between the dependent variable of racial/ethnic group and the independent variables. The independent variables were sex, age, participant and spouse employment, education level, income, U.S. as country of origin, length of time in the U.S., visits to the physician and/or hospital, health problems, participating in special programs, being a current smoker, types of alternative/complementary health therapies used, reason for using alternative medical therapy, and participant informing physician of use of alternative therapies.

A one-way ANOVA was used to determine differences among groups in health behaviors and attitudes, frequency of exercise, screening for general physical health, blood pressure, blood cholesterol, cervical cancer, breast cancer, colon cancer, dental exams, and prostate cancer. A Tukey HSD test was used to determine subgroup differences.

Logistic regression analysis was used to identify potential predictor variables of CAM use. The independent variables were health and attitudes, reasons for using alternative therapies. The dependent variable was whether or not the person received CAM therapy. A forward stepwise selection of variables was used to select variables for inclusion in the final model. The likelihood-ratio (LR) test was used to determine the removal of variables from the model at each step. The criterion for entry of variables was .10 for each step and the significance criterion for selection of whether the variable remained was .05. Nagelkerke's Max-rescaled  $R^2$ , an estimate of the variation in the dependent variable explained by the logistic regression model, was estimated.



## Results

There was a significant difference ( $p<.001$ ) between racial/ethnic groups in age, sex, employment, spouse employment, education, income, U.S. as country of origin, and length of time in the U.S. (Table 1). Asians were most likely to be employed full-time, to have spouses who were employed full-time, to have a college education, and a higher income, and compared to whites, African Americans, and Hispanics, were least likely to have been in the U.S. more than 5 years.

**Table 1. Sample Characteristics by Race/Ethnicity**

	White N=3488,%	African American N=1037,%	Hispanic N=1153,%	Asian N=627,%	$\chi^2$
<b>Age</b>					
18–29	16.4	23.7	32.9	29.4	
30–39	20.1	23.3	27.9	29.3	
40–49	21.1	20.2	19.9	21.1	
50–64	23.1	19.5	13.2	14.3	
65+	19.3	13.4	6.1	5.9	360.2**
<b>Female</b>	61.5	68.9	61.6	52.0	47.2**
<b>Employment</b>					
Full-Time	51.0	28.6	47.9	58.3	
Part-Time	3.3	3.3	6.1	1.8	
Unemployed	45.6	68.1	46.0	40.0	224.1**
<b>Spouse Employment</b>					
Full-Time	64.7	70.5	70.3	73.3	
Part-Time	8.5	5.2	8.7	4.9	
Unemployed	26.8	24.3	21.0	21.8	22.1**
<b>Education</b>					
< H.S.	8.1	15.0	29.6	4.5	
High School	25.7	33.6	30.4	10.9	
College/college graduate	51.0	44.4	35.2	60.9	
Post grad/professional ed.	15.2	7.0	4.8	23.7	661.5**
<b>Income</b>					
< \$20,000	16.8	32.8	30.3	15.7	
\$20,000–\$34,999	20.1	29.3	29.2	14.1	
\$35,000–\$49,999	17.8	18.1	18.6	19.2	
\$50,000–\$74,999	18.8	10.3	11.8	18.4	
\$75,000+	26.4	9.6	10.0	32.5	400.3**
<b>U.S. country of origin</b>	93.1	90.5	19.6	19.6	2308.0**
<b>Length of time in U.S.</b>					
<5 years	13.6	13.3	13.5	20.0	
>5 years	86.4	86.7	86.5	80.0	9.9*

\* $p<.05$ , \*\* $p<.001$

## Preventive Health Behaviors and Attitudes

As shown in Table 2, significant differences were found among racial/ethnic groups in visits to a physician within the last year ( $\chi^2(9) = 138.7, p < .001$ ). Whites (79.5%) were most likely to visit a physician and Asians (64.3%) were least likely among all four groups. Significant differences in location of health care also were found ( $\chi^2(15) = 391.6, p < .001$ ). Though all groups were more likely to visit a physician's office than any other location, Hispanics (19.8%) visited community health centers most, followed by African Americans (10.4%), Asians (7.3%), and Whites (5.7%).

A one-way ANOVA comparing health behaviors and attitudes of the racial/ethnic groups was conducted. Significant differences ( $p < .05$ ) were found among the groups for health depending on self-care, fatalistic view of health, health decisions left to a physician, and self-management of health. A Tukey HSD test was used to determine the nature of the differences among the groups. This analysis found that African Americans ( $M=1.18, SD=0.51$ ) agree more than Asians ( $M=1.24, SD=0.54$ ) that health was dependent on care of self. Hispanics ( $M=2.76, SD=1.36$ ) were more fatalistic about their health than whites ( $M=3.18, SD=1.03$ ), African Americans ( $M=2.92, SD=1.27$ ), or Asians ( $M=2.86, SD=1.13$ ); and Asians were more fatalistic than African Americans or whites. More African Americans ( $M=2.93, SD=1.11$ ) than whites ( $M=2.65, SD=1.08$ ), Hispanics ( $M=2.51, SD=1.21$ ), or Asians ( $M=2.14, SD=1.05$ ) thought it was better to care for one's own health than to go to a physician, and whites more so than Hispanics or Asians.

A one-way ANOVA comparing health problems impairing daily activity of the racial/ethnic groups was conducted. A significant difference was found among the groups ( $F(3,6222) = 4.04, p < .01$ ). A Tukey HSD test was used to determine the nature of the differences among the groups. Whites ( $M=3.36, SD=0.98$ ) felt they were more inhibited by health problems than did African Americans ( $M=3.25, SD=1.09$ ), and African Americans felt less inhibited by health problems than Hispanics ( $M=3.39, SD=0.99$ ) and Asians ( $M=3.38, SD=0.93$ ). A chi-square test of independence was calculated comparing the reported health problems of the racial/ethnic groups. A significant difference ( $p < .001$ ) was found among the groups for high blood pressure, heart attacks, cancer, diabetes, anxiety, and asthma. More African Americans reported having high blood pressure, diabetes, and asthma as health problems than the other groups. Whites reported having more heart attacks, cancer, anxiety, and obesity than the other groups.

A significant difference among the groups was found for smoking ( $\chi^2(3)=26.1, p<.001$ ). Whites (22.2%) and African Americans (22.2%) smoked the most, followed by Asians (16.5%) and Hispanics (16.3%). A one-way ANOVA comparing exercise by the racial/ethnic groups found that Hispanics ( $M=3.84, SD=1.33$ ) exercised more frequently than whites ( $M=3.76, SD=1.3$ ), African Americans ( $M=3.59, SD=1.4$ ) and Asians ( $M=3.6, SD=1.32$ ).

**Table 2. Characteristics of Preventive Health Attitudes and Behaviors by Race/Ethnicity**

	White n=3488,%	African American n=1037,%	Hispanic n=1153,%	Asian n=621,%	
<b>Health care access</b>					
In the last 12 months, have you?					$\chi^2$
Visited a Physician	79.5	76.1	65.4	64.3	138.70***
Been admitted to a hospital	13.4	13.1	12.8	8.7	16.00
<b>Location for health care</b>					
Physician's office	81.8	67.5	61.9	73.9	
Community health center/public	5.7	10.4	19.8	7.3	
<b>Clinic</b>					
Hospital outpatient department	4.1	9.5	4.6	9.3	
Hospital emergency room	3.2	8.7	6.0	2.6	
Some other place	2.8	2.4	3.0	3.7	
No regular place of care	2.3	1.5	4.7	3.1	391.60***
<b>Health behavior attitudes<sup>a</sup> (M,SD)</b>					
My health depends on care of self	1.23(0.52)	1.18(0.51)	1.20(0.54)	1.24(0.54)	2.94*
Staying healthy is a matter of luck	3.18(1.03)	2.92(1.27)	2.76(1.26)	2.86(1.13)	49.00***
Leave to Dr to make decisions for my health	2.10(0.93)	2.02(0.97)	2.04(1.03)	2.14(0.94)	2.98*
Better to take care of own health than go to Physician	2.65(1.08)	2.93(1.11)	2.51(1.21)	2.14(1.05)	70.80***
<b>Preventive health behaviors</b>					
Currently smoke cigarettes	22.2	22.2	16.3	16.5	26.07***
Frequency of exercise <sup>b</sup> (M, SD)	3.77(1.3)	3.49(1.6)	3.82(1.39)	3.46(1.4)	8.25***
<b>Health problems</b>					
High Blood Pressure	22.5	30.9	16.7	11.7	106.10***
Heart Attack	7.5	6.0	3.3	3.1	37.02***
Cancer	5.2	3.1	3.0	1.1	31.03***
Diabetes or sugar diabetes	6.8	11.0	9.0	5.5	26.80***
Anxiety or depresión	17.2	11.5	14.7	6.5	58.90***
Obesity	10.3	9.8	7.4	3.6	33.40***
Asthma	8.1	10.1	7.2	5.0	14.98**
<b>Health problem inhibits activities<sup>c</sup> (M, SD)</b>					
3.36(0.98)	3.25(1.09)	3.39(0.99)	3.38(0.93)	4.04**	
<b>Screening<sup>d</sup></b>					
Complete physical exam	1.96(1.13)	1.59(0.87)	1.99(1.18)	2.19(1.25)	44.01***
Blood pressure checked	1.25(0.63)	1.19(0.52)	1.55(1.04)	1.52(0.95)	52.60***
Blood cholesterol checked	1.95(1.34)	1.79(1.30)	2.20(1.50)	2.24(1.46)	23.40***
Pap test	1.78(1.09)	1.53(0.85)	1.70(1.08)	2.01(1.29)	16.85***
Mammogram	1.96(1.30)	1.80(1.18)	2.07(1.34)	2.24(1.40)	4.93*
Screening for colon cancer	2.95(1.60)	2.80(1.70)	3.30(1.70)	3.4(1.60)	6.50***
Dental exam	1.68(1.03)	1.90(1.11)	2.02(1.28)	1.69(1.10)	32.80***
Blood test/rectal exam for Prostate	2.18(1.50)	2.13(1.4)	2.60(1.70)	2.6(1.70)	5.67***

<sup>a</sup> Where 1=strongly agree, 2= somewhat agree, 3=somewhat disagree, 4=strongly disagree

<sup>b</sup> Where 1=never, 2=once a week, 3=1-2 times a week, 4=3 times a week, 5=>3 times a week

<sup>c</sup> Where 1=a great deal, 2=a fair amount, 3=not too much, 4= none at all

<sup>d</sup> Where 1=< 1 year ago, 2=1-2 years ago, 3=3-5 years ago, 4= >5 years ago, 5=never

\*p<.05, \*\*p<.01, \*\*\*p<.001

## Screening Behavior

Significant differences were found in screening behavior among the racial/ethnic groups (Table 2). African Americans, on the whole, had the most recent general physical exams and screenings for blood pressure, blood cholesterol, cervical cancer, breast cancer, colon cancer, and prostate cancer. Whites reported the most recent dental exams. Asians reported the least recent screenings for general physical exams, and blood cholesterol, cervical cancer, breast cancer, colon cancer, and prostate cancer. A Tukey HSD test was used to determine the nature of the differences among the groups. In general, whites were significantly more likely to report having been recently screened for all conditions than Asians; African Americans reported more recent screenings than Hispanics or Asians.

## Complementary and Alternative Medicine

Overall, 31.6% of participants reported using CAM therapies (e.g., herbal medicines, acupuncture, chiropractor, and traditional healer or herbalist). A chi-square test of independence was calculated among those reporting the use of CAM therapies to compare the type of alternative therapies used among the racial/ethnic groups (Table 3). A significant difference was found in the use of herbal medicines, acupuncture, chiropractics, and traditional healers. Whites were more likely to report the use of herbal medicines and chiropractics than Asians, African Americans, and Hispanics. Asians were more likely to use acupuncture and traditional healers than the other groups. Significant differences among the groups were found in reasons cited for alternative therapy use, including being a cheaper way of receiving care, preferring other approaches before consulting the physician, and cultural or religious beliefs. Among those who chose alternative therapies, Hispanics did so primarily because they were less expensive; whites did so mostly preferring them over going to the physician; and Asians did so because of cultural or religious beliefs. Whites informed their physicians of alternative use more than the other groups ( $\chi^2(6)=49.7, p<.001$ ).

The final logistic regression results are presented in Table 4. The independent variables were health attitudes and reasons for using alternative therapies. The dependent variable was whether the person received CAM therapy. The only variable which was not removed from the model and which was positively correlated with using CAM was not being fatalistic. Participants who believed that their health was not a matter of luck, were more likely to use CAM. Thinking that staying healthy was a matter of luck served as a protective factor (OR=.75) for

**Table 3. Use of Alternative Health Therapies by Race/Ethnicity**

	White N=3488	African American N=1037	Hispanic N=1153	Asian N=621	χ <sup>2</sup>
<b>Type of CAM Used in Last 2 Years</b>					
Herbal medicines	26.0	17.2	19.0	21.5	47.6**
Acupuncture	4.0	2.0	3.0	6.6	25.8**
Chiropractor	15.8	8.6	12.7	10.9	40.9**
Traditional healer or an herbalist	2.7	2.1	2.8	8.2	57.2**
<b>Reason for using CAM<sup>a</sup></b>					
Avoid prescription medicines	48.9	44.1	46.0	39.0	7.4
Cheaper way of getting care	15.7	14.0	25.1	18.5	17.7**
Prefer other approaches before going to Dr.	52.3	43.2	48.5	44.4	9.6*
Work well, feel good, keep you healthy	85.4	80.8	82.3	80.9	5.7
Work with prescriptions and doctor's care	39.8	33.5	35.7	35.2	4.9
Other medications did not work	35.3	28.5	36.4	35.7	4.7
Cultural or religious beliefs	4.5	12.6	17.3	28.3	134.2**
<b>Participant informed Dr. of alternative therapies use<sup>a</sup></b>	71.7	57.8	55.4	57.0	49.7**

<sup>a</sup>Based on those who use alternative therapies

\*p < .05, \*\*p < .001

**Table 4. Final Logistic Regression: Predictor Variables of Health Attitudes and CAM Associated with Race/Ethnicity**

(N = 3852)	Coefficient(Se)	Odds Ratio	95% Confidence Interval
Staying healthy is a matter of luck (fatalism)	-.29(1.30)*	.75	(.58, .96)
Constant	-172.32		
*p < .05			

using CAM. The Max-rescaled  $R^2$  was 0.93 which indicates that 93% of the variance in CAM use is explained by the logistical regression model.

## Discussion

### Preventive Health Care Behaviors and Attitudes

Racial/ethnic groups go to physicians and hospitals at differential rates. All groups were more likely to visit a physician's office than any other location. Whites were most likely to go to a physician and Asians were least likely among the groups. Hispanics visited community health centers more than other groups, followed by African Americans, Asians, and whites. These findings may indicate that certain groups, for example Asians, have more difficulty in communicating with physicians in particular and accessing health care services in general. This may also influence Asian satisfaction with health care, since Asian Americans have lower satisfaction with health care services than do African Americans and whites.<sup>29</sup> These findings support a recent report by the Institute of Medicine which asserted that access-related factors are likely to be the most significant barriers to equitable health care for all populations and needs to be addressed as an important first step toward eliminating health care disparities.<sup>30</sup> Further, to adequately reduce the disparity in health care services among the various groups, it may be necessary to target the locations where the populations are currently receiving the services.

While supporting previous studies which indicated that certain ethnic/racial groups have fatalistic notions about health,<sup>31, 32</sup> the current study was able to determine degrees of difference in fatalism between the groups. Hispanics were more fatalistic about their health than the other groups, and Asians were less fatalistic than African Americans or whites. Hispanics were more fatalistic about their health than Asian Americans. African Americans agreed, more than Asians, that health was dependent on care of self. African Americans believed, more than whites, Hispanics and Asians, that it is better to care for one's own health than go to a physician; and whites felt this way more than Hispanics and Asians. This finding is important because health interventions which target personal health promotion may be less effective among Hispanics and Asians because they are less likely to perceive that their behaviors have an impact on their own health. Interventions that promote awareness and convey self-efficacy may need to be conducted among these groups to demonstrate that lifestyle does influence health. Other messages, like the family benefits of screening, may be relevant for health promotion, too.

## Health Problems

Whites thought they were more inhibited by health problems than did African Americans, and African Americans thought they were less inhibited by health problems than did Hispanics and Asians. This could imply that Hispanics and Asians have fewer health problems, or that they do not perceive that their problems inhibit their daily activity. This finding implies that if individuals perceive that their health problems inhibit activity, they will be less likely to do the activity, which in turn, will influence their self-perceptions of health status. One study found that self-efficacy, risk taking, and life events were predictive of perceptions about health status in minority adolescents.<sup>33</sup>

Differences were found among the groups for health problems such as high blood pressure, heart attacks, cancer, diabetes, anxiety, and asthma which support previous findings.<sup>34</sup> African Americans reported having more high blood pressure, diabetes, and asthma as health problems than the other groups. The current study also found that there were differences in preventive health behaviors, which may in part explain the disparity in health problems. In addition, there were differences in smoking rates and exercise among the groups. An interesting finding was that, even though Hispanics were fatalistic about their health, they engaged in relatively higher levels of exercise than other groups, contrary to previous literature.<sup>3</sup> While populations may be vulnerable to factors which lead to health problems, they may also respond to culturally appropriate interventions within their communities which address the health problems.

## Screening

There were significant differences in screening behavior among the racial/ethnic groups. African Americans reported the most recent screenings for general physical exams, blood pressure, blood cholesterol, cervical cancer, breast cancer, colon cancer, and prostate cancer. Whites reported having the most recent dental exams. Asians reported the least recent screenings for general physicals, blood cholesterol, cervical cancer, breast cancer, colon cancer, and prostate cancer. For diseases overall, whites were significantly more likely than Asians to report recent screening, and African Americans were more likely to than Hispanics and Asians. These findings are consistent with previous findings<sup>15</sup> indicating non-uniform screening rates among ethnic/racial groups. The current study further showed that colon cancer screening was the least recent screening done by all the ethnic/racial groups. This may indicate that colon cancer is of less concern to the participants than other diseases,

or they are less knowledgeable about it. Cost may also be a factor in decreased likelihood to seek colorectal screening than other types of cancer screening. While colorectal cancer is one of the most preventable types of cancer, only 18 states have any legislation which mandates that insurance companies cover the cost of screening.<sup>35</sup>

### **Complementary and Alternative Medicine**

Complementary and alternative medicine is becoming more acceptable in the U.S. and is being integrated into personal health care. Herbal medicines and chiropractics were the most widely used form by all the groups, supporting previous literature.<sup>19</sup> The current study found differences among the groups in their uses of herbal medicines, acupuncture, chiropractics, and traditional healers. Whites were more likely than Asians, African Americans, and Hispanics to report the use of herbal medicines and chiropractics. Asians were most likely to use acupuncture and traditional healers. Groups' reasons for using CAM varied. Among those who chose CAM, Hispanics chose it because it was less expensive; whites preferred it to going to the physician; and Asians used it because of cultural or religious beliefs. Respondents from all groups most often reported that CAM was used because it worked well, felt good, and kept them healthy, but there were no significant differences among the groups in this response. Whites informed their physicians about their use of CAM more than the other groups. Given the prevalence of CAM use, especially among certain ethnic/racial groups, openness to potentially beneficial treatment should be an important goal in the physician-patient relationship. Inquiries about the use of CAM should be part of a routine medical history.<sup>24</sup> The idea that CAM may synergistically collaborate with conventional therapy is gaining favor, to the extent that there are some recommendations to replace the term 'alternative medicine' with the term 'integrative medicine.'<sup>25,26</sup> Medical practitioners should consider documenting CAM use in patients' medical histories, regardless of its perceived benefit, because it may influence patients' medical outcomes. In addition, the current study found among the variables of health attitudes, reasons for using CAM, and race, that only fatalism was significantly inversely associated with using CAM. This finding indicates that those who use CAM believe that their behavior does influence their health, which is an opportunity for health promotion education for primary and secondary preventive health behaviors.

This study had two limitations. The measures for health problems, screenings, and alternative medical use was based on self report. The issue of veracity may be of special concern for some racial/ethnic groups



where there is reluctance to share personal information due to distrust. The sample also included a low rate of recent immigrants and, therefore, cannot be used to generalize to the entire immigrant population—for example, for those groups that may be less acculturated.

If differences among ethnic/racial groups in perceived health status, preventive health care behaviors, and use of CAM can be more fully understood, then health professionals will be able to better tailor health promotion interventions and integrate these factors. Future studies should examine how interventions can be specifically tailored to address health-seeking behavior disparities.

## Acknowledgment

The authors wish to thank the Commonwealth Fund, which provided the original dataset for the research and data analysis conducted in the study. This project was supported by the National Institutes of Health, National Cancer Institute's project "ATECAR – Asian Community Cancer Network" at the Center for Asian Health, College of Health Professions (Principal Investigator: Grace X. Ma, Ph.D.). The authors are solely responsible for the contents of the article.

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**Steven E. Shive**, PhD, MPH, Center for Asian Health, Temple University;  
Assistant Professor, Department of Health, East Stroudsburg University, East  
Stroudsburg, Pennsylvania

**Grace X. Ma**, PhD, CHES, Professor of Public Health, Department of Public  
Health; Director of Center for Asian Health, College of Health Professions,  
Temple University, Philadelphia, Pennsylvania

**Yin Tan**, MD, MPH, Project Manager and Research Associate, Center for Asian  
Health, Department of Public Health, College of Health Professions, Temple  
University, Philadelphia, Pennsylvania

**Jamil I. Toubbeh**, PhD, Senior Researcher, Center for Asian Health, Adjunct  
Professor, Department of Public Health, College of Health Professions,  
Temple University, Philadelphia, Pennsylvania

**Lalitha Parameswaran**, MD, Research Assistant, Center for Asian Health,  
Department of Public Health, College of Health Professions, Temple  
University, Philadelphia, Pennsylvania

**Joe Halowich**, MS, CHES, Health Faculty, Parkside High School, Salisbury,  
Maryland