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Alternative Therapy Use Among the Young-Old (Ages 65 to 74): An Evaluation of the MIDUS Database

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By the year 2020, 20% of the U.S. population will be age 65 years or older. From a health care perspective, there is growing concern about the aging population. Little is known about the elderly and their use of alternative therapies. This study included data from the National Survey of Midlife Development in the United States (MIDUS). Three-hundred and thirty-five participants between the ages of 65 and 74 completed the interview and mailback questionnaire. One-hundred and forty-five individuals (43.3%) reported using alternative medicine therapies during the past year. The most common types of alternative medicine utilized were as follows: spiritual practices, exercise/movement therapies, special diets, chiropractic, and meditation. Income, education, and sex of respondent were found to be predictors of alternative therapy use among this age group. Results from this study could provide conventional practitioners greater awareness of the health beliefs and practices of their young-old patients.

Keywords: *alternative therapy; aging; health*

According to the U.S. Census Bureau, America's population age 65 and older grew by 74% between 1970 and 1999, from 20 million to almost 35 million people (Administration on Aging, 2001a, 2001b). By the year 2020, 20% of the U.S. population will be age 65 years or older (Bland, 1998). From a health care perspective, there is growing concern about the aging population. As the population ages, more Americans will have illnesses and chronic conditions. In 1994, approximately 80% of the elderly had one or more

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chronic conditions, and nearly 40% of the noninstitutionalized elderly were limited by these conditions (Napier, 1994). According to *Chronic Care in America: A 21st Century Challenge*, a report by the Robert Wood Johnson Foundation, "there is no effective system to care for those with chronic conditions in the United States" (The Institute for Health and Aging, University of San Francisco, 1996, p. 11). If the health care demands of this group match those of their parents, it will place an extraordinary burden on funding for medical services (The Institute for Health and Aging, University of San Francisco). Understanding how the elderly seek health care in today's society is important given the disproportionate amount of expenditures that go toward treating the medical needs of this age group.

Data indicate that middle-aged and older adults are seeking ways to improve their health with the use of complementary or alternative medicine/therapies (Pelletier, Marie, Krasner, & Haskell, 1997). Alternative therapies have existed for decades and include, but are not limited to: acupuncture, biofeedback, chiropractic, herbal medicines, homeopathy, and spiritual healing. Approximately 30% to 50% of the population has used some form of unconventional medical care, and the most recent studies indicate use of alternative therapies is increasing at a rapid rate (Astin, 1998; Eisenberg et al., 1993; Millar, 1997). Recent studies provide evidence that the number of visits to providers of alternative medicine in the United States now exceeds the number of visits to all primary care physicians (Paramore, 1997). Studies indicate alternative therapies are adopted by the following: 1 in 3 people in the United States (Eisenberg et al., 1993), 1 in 4 people in England (Fisher & Ward, 1994) (3.3 million), or 1 in 10 Canadians (Wellman, Kelner, & Wigdor, 2001), 33% and 22% of Swedish women and men, respectively (Messerer, Johansson, & Wolk, 2001), and on at least one occasion used by 50% of the Australian population (Maclennan, Wilson, & Taylor, 1996) and 29.5% of the Italian population (Buono, Urciuoli, Marietta, Padoani, & De Leo, 2001). Research evidence suggests that users of alternative therapies seek this type of care as an intervention for a specific health condition rather than as a general health measure not connected to a particular disease or condition. A large number of persons seeking alternative therapies consider themselves to be in poor health and have attempted to obtain care from traditional medical providers (Bausell, Lee, & Berman, 2001). The proportion of individuals seeking alternative medical care suggests that the traditional health care system is not working for many individuals (Vincent & Furnham, 1996). However, several recent studies have begun to look at complementary and alternative medicine (CAM) use among patients with breast cancer (Richardson, Post-White, Singletary, & Justice, 1998), diabetes (Egede, Ye, Zheng, & Silverstein, 2002), fibromyalgia (Hains & Hains, 2000), HIV (Ostrow et al.,

1997), and arthritis (Rao et al., 1999). This suggests that scientists have begun to recognize the prevalence of alternative medicine usage and are attempting to determine the diseases for which these therapies are most commonly applied, in addition to their effectiveness.

Recognizing this increase on a national level and the fact that Americans spent more than $27 billion on these therapies in 1997, Congress established the National Center for Complementary and Alternative Medicine (NCCAM) in 1998. The NCCAM is an advocate for quality science, rigorous and relevant research, and open and objective inquiry into which CAM practices work, which do not, and why. Prior to the NCCAM, the Office of Alternative Medicine (OAM), established in 1992 by the National Institute's of Health (NIH), facilitated and coordinated the evaluation of alternative medical treatment modalities through research projects and other initiatives. The OAM expansion into a center gives the NCCAM greater ability to initiate and fund additional research projects and to provide more information to the public at a time when a growing number of people are interested in CAM.

Little is known about the elderly population and their use of complementary and alternative therapies (Astin, Pelletier, Marie, & Haskell, 2000). A study on Medicare supplement users conducted in California indicated that 41% of respondents reported using alternative medicine. Predictors of alternative medicine usage included the following: education, age, number of physician office visits, and health status. This particular sample, however, tended to underrepresent poorer and less educated populations and African Americans but overrepresent Asians. It is of interest to reexamine alternative medicine use in a different sample because previous research suggests that California has traditionally higher rates of alternative therapy use (Astin et al., 2000).

Most data collected thus far on predictors of use of alternative therapies have been collected using survey procedures and have focused on demographic factors such as age, education, and present health status. Little attention, however, has been given to psychological and sociocultural factors (such as degree of spirituality, perceived control over one's health, identification with one's own ethnicity, and positive psychological turning points in one's life). There is evidence that some of these factors may be important predictors of alternative therapy usage (Astin, 1998; Eisenberg et al., 1993). In a seminal study by Astin (1998), alternative health care use was predicted by psychological and sociocultural factors including the following: having a transformational experience that changed the person's worldview, identification with a cultural group identifiable by their commitment to environmentalism and feminism, and interest in spirituality and growth psychology. In addition, Astin et al. (2000) found that involvement with nontraditional spiri-

tual practices such as meditation is associated with alternative medicine use in older adults.

Middle-aged and older individuals are investing to improve their health. If not healthy, these individuals will demand more medical services. Results from this study will provide valuable information regarding the psychological, sociocultural, and demographic factors underlying a person's decision to use alternative therapy in a geographically representative sample of the U.S. population. There is no better time to address these issues given current demographic trends, health concerns, cost implications, and interest in better understanding this population.

Methods

Design

Cross-sectional data from the National Survey of Midlife Development in the United States (MIDUS) were utilized in this study. The data were collected in 1995 by the John D. and Catherine T. MacArthur Foundation Network on Successful Midlife Development to examine patterns, predictors, and consequences of midlife development in the areas of physical health, psychological well-being, and social responsibility.

Sample

This study included data from MIDUS respondents aged 65 to 74 who completed both the telephone interview and mailback questionnaires. The response rate for the telephone interview and mailback questionnaires were 70% and 86.8%, respectively. The percentage of participants who completed both the interview and the questionnaire was 60.8%. Sampling weights[1] correcting for selection probabilities and nonresponse allow this sample to match the composition of the U.S. population on age, sex, race, and education (for a detailed technical report regarding field procedures, response rates, and weighting, see http://midmac.med.harvard.edu/research.html#tchrpt). Three-hundred and thirty-five participants completed the interview and mailback questionnaire within the specified age range.

Dependent Variable

Similar to the measure used in Astin (1998) and Eisenberg et al. (1993), alternative medicine use was assessed as a dichotomous variable. Partici-

pants were classified as users of alternative medicine if they responded that they had used any of the following treatments in the past 12 months: acupuncture, biofeedback, chiropractic, energy healing, exercise or movement therapy, herbal therapy, high dose megavitamins, homeopathy, hypnosis, imagery techniques, massage therapy, prayer, relaxation or meditation techniques, special diets, spiritual practices, spiritual healing by others, or any other nontraditional remedy or therapy. Unfortunately, it was not possible to determine if any participants used these therapies in a traditional manner (e.g., exercise for high blood pressure). Yet a majority of these therapies are not typically used in traditional settings and, therefore, all reports of the latter therapies were considered indicators of alternative medicine use.

Independent Variables

Variables that comprised three areas of focus believed to be important in this context (demographic variables, health factors, and psychological and sociocultural factors) were assessed. The item descriptions for variables within each of these categories are listed in Table 1.

Results

Alternative medicine use percentages across pertinent demographic factors are listed in Table 2. Most individuals were White (n = 306, 91.3%), although only 22 reported other ethnicities (6.6%), and 7 participants did not report race (2.1%). Reported combined income for participants and their spouses varied greatly. Over the past 12 months, participants reported average earnings of $9,000 to $9,999 annually, although incomes ranged from $0 to more than $100,000. This was based on a response rate of 87% (n = 291).

More than one half of the individuals (n = 179, 53.4%) ranked their health as excellent or very good, 43.3% (n = 145) ranked their health as average, and 1.8% (n = 6) ranked it as below average and poor. Five individuals (1.5%) did not respond to this question. An average of 3 chronic conditions such as asthma, lung disorders, migraines, sleep disturbances, backaches, depression, and arthritis were reported by respondents, with a range between 0 and 17. Most individuals reported visiting their physician an average of two times in the past 12 months, with a range between 0 and 32 times. One-hundred and forty-five individuals (43.3%) reported using alternative medicine therapies in the past year. The most common types of alternative medicine utilized were as follows: spiritual practices, exercise/movement therapies, special

Table 1. Independent Variables

Psychological and sociocultural factors
How closely do you identify with other people who are of the same ethnic descent as yourself?
1 = *not at all closely*, 2 = *not very closely*, 3 = *somewhat closely*, and 4 = *very closely*
How important is spirituality in your life?
1 = *not at all*, 2 = *not very*, 3 = *somewhat*, 4 = *very*
Discovering important good things about yourself that changed your view of who you are, what you stand for, or how you should lead your life can constitute a turning point for many. Did you have a major psychological turning point like this in the past 12 months?
0 = *no* and 1 = *yes*
Health factors
How would you rate your health these days?
0 = *worst* and 10 = *best*
How would you rate the amount of control you have over your health these days?
0 = *none* and 10 = *very much*
Number of chronic conditions out of 29 possible conditions.
(Possible conditions: asthma, bronchitis, or emphysema; tuberculosis; other lung problems; arthritis, rheumatism, or other bone or joint diseases; sciatica, lumbago, or recurring backache; persistent skin trouble; thyroid disease; hay fever; recurring stomach trouble, indigestion or diarrhea; urinary or bladder problems; being constipated all or most of the time; gall bladder trouble; persistent foot trouble; trouble with varicose veins requiring medical treatment; AIDS or HIV infection; lupus or autoimmune disorders; persistent trouble with your gums or mouth; persistent trouble with your teeth; high blood pressure or hypertension; anxiety, depression, or some other emotional disorder; alcohol or drug problems; migraine headaches; chronic sleeping problems; diabetes or high blood pressure; multiple sclerosis, epilepsy or other neurological disorder; stroke; ulcer; hernia or rupture; piles or hemorrhoids)
Number of times respondent went to see a doctor in the past 12 months about their own physical health.
Demographic factors
Education, age, income, and sex

diets, chiropractic, and meditation. The utilization rates of these and other therapies appear in Table 3.

Logistic regression was utilized to understand the best predictors of alternative therapy use among the young-old. Demographic variables (income, education, age, and gender)[2] were entered in a first block, with remaining variables (identification with other people of same descent or ethnic status, importance of spirituality in respondent's life, perceived present health, sum of chronic conditions, physician visits, control over health, and positive psychological turning points) entered in a second block. This order of entry was

Table 2. Demographic Characteristics

Variable	n	*% Users of Alternative Medicine*
Age		
65 to 69	153	46.4
70 to 74	182	40.7
Sex		
Male	162	38.2
Female	173	48.0
Race		
White	306	42.2
Other	22	54.5
DNR	7	57.1
Educational level		
Graduate school	30	60.0
Undergraduate degree	46	56.5
Some college/2-year degree	97	46.4
Completed high school/GED	95	35.8
Less than high school	67	32.8
Health (1-to-10-point scale; 1-3, *poor*; 4-7, *average*; 8-10, *excellent*)		
Excellent or very good	179	39.1
Average	145	46.2
Poor	6	83.3
DNR	5	60.0

NOTE: *N* = 335. DNR = did not respond to the question.

Table 3. Type of Alternative Therapy Utilized

Type of Alternative Therapy	*Utilization*	*Percentages*
Acupuncture	4	1.2
Biofeedback	0	0.0
Chiropractic	28	8.5
Energy healing	4	1.2
Exercise/movement therapy	64	19.5
Herbal therapy	9	2.8
High-dose megavitamins	11	3.4
Homeopathy	5	1.5
Hypnosis	4	1.2
Imagery techniques	7	2.1
Massage therapy	13	4.0
Spiritual practices	72	21.9
Meditation techniques	25	7.6
Special diets	32	9.7
Spiritual healing by others	3	0.9
Other therapy	10	3.1

Table 4. Intercorrelations Among Predictor Variables and Alternative Medicine Use (weighted)

Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1. Alternative medicine use	1.00								
2. Education	.20***	1.00							
3. Age	–.01	–.03	1.00						
4. Income	.13**	.12**	–.03	1.00					
5. Identify with ethnic group	.03	–.04	–.06	–.03	1.00				
6. Spirituality importance	.15*	–.03	–.03	.02	.24***	1.00			
7. Present health status	–.20***	.07	–.08	.11	.05	.06	1.00		
8. Control over health	–.07	.05	–.05	.03	.07	.05	.60***	1.00	
9. Number of chronic conditions	.18*	–.11**	–.12**	–.05	–.02	.11**	–.42***	–.36***	1.00

*$p < .01$. **$p < .05$. ***$p < .001$.

deemed appropriate because of the exploratory nature of the present investigation (i.e., there was no theoretical rationale for any ordering of the latter variables).

Variables included in the final model predictive of alternative medicine use were as follows: greater income levels, higher levels of education, female sex, greater importance of spirituality, greater control over health, and perceived present poor health. Intercorrelations between all predictors and the criterion variable are presented in Table 4. Adjusted odds ratios and confidence intervals for all significant predictors are listed in Table 5.

Discussion

The present study was designed to provide an overview of the psychological, sociocultural, and demographic factors associated with the use of alternative therapies in the young-old. Income, education, and sex of respondent were found to be predictors of alternative therapy use among the young-old in the present study. Findings from previous studies corroborate some but not all of the demographic findings in the present study. Eisenberg et al.'s (1993) study of unconventional medicine use in the U.S. suggested that the frequency of alternative therapy use varied by sociodemographic groups, with

Table 5. Significant Predictors for Logistic Regression Analysis on Alternative Medicine Use (weighted)

Variable	*Adjusted Odds Ratio*	*95% Confidence Interval*	p
Education	1.23	1.228 to 1.239	< .01
Male sex	0.46	0.449 to 0.469	< .05
Income	1.04	1.035 to 1.037	< .05
Spirituality importance	1.69	1.667 to 1.710	< .05
Present health rating	0.73	0.725 to 0.738	< .05
Control over health rating	1.28	1.266 to 1.285	< .05

the highest use reported by non-Black persons from 25 years to 49 years of age who had more education and higher income, but that sex was not a significant predictor of use. Millar's (1997) study on alternative therapy use in Canadians yielded similar results. Income and education were significant predictors of alternative therapy use, but these findings were particular to women. Those between the ages of 25 and 64 were more likely to use alternative medicine than those under 25 and over 65. Astin (1998; Astin et al., 2000) found that education, but not income or sex, was a predictor of alternative therapy use. In his most recent study, alternative therapy use was significantly higher in young seniors, reflecting a cohort effect rather than age effect, according to the authors. Their rationale for this finding is that recent generations have been more exposed to alternative therapy use and are more likely to be familiar and open with experimenting with these therapies.

In general, research suggests that individuals who are better educated and more affluent tend to use alternative medicine more. One possibility for this finding is that patients with more disposable income are able to pay for the out-of-pocket expenses of alternative therapies, particularly in countries in which socialized medicine exists (Wellman et al., 2001). However, not all studies indicate that income is a significant predictor of usage. It is unclear if affluence is a valid predictor of CAM use because some individuals report using CAM because of their low-cost (Ai & Bolling, 2002). In addition, certain ethnic populations have used CAM for centuries, and ethnicity may be confounding the relation between income and CAM use (Astin, 1998; Astin et al., 2000). Future studies need to carefully control for ethnicity, income, and type of health care when examining CAM utilization. Wellman et al. (2001) pointed out that "social capital" may be a better predictor of alternative medicine usage because those with higher education and larger and

broader social networks are provided with diverse kinds of health care information.

In the present study, age was the only demographic variable not found to be a significant predictor of alternative therapy use. This could be because of the age range limitations (65 to 74) utilized in the present study, although Astin (1998) also failed to show that age, 18 to 64-plus, was a significant predictor of alternative medicine use.

The present study found that 43% of the respondents utilized alternative medicine. This is only slightly higher than data reported in the study on older adults in California (41%) (Astin et al., 2000). The data from the California study and the present MIDUS study differ in types of alternative medicines utilized. The present study indicated that participants were more likely to list spiritual practices and exercise/movement therapy as their primary alternative therapy modalities, whereas participants in the California study were more inclined to use herbal therapies, chiropractic treatment, massage therapy, and acupuncture.

Psychological factors, such as importance of spirituality, demonstrated significance in the present study. This factor was also found to be predictive in the study reported by Astin (1998). People who hold this philosophical orientation may be attracted to alternative health care because they see in these therapeutic systems a greater acknowledgement of the role of mind/body/spirit in creating health and illness. The Astin study also demonstrated that individuals who have had a transformational experience that changed their worldview are more likely to use alternative medicine. This study, using a similar variable to assess positive psychological turning points in one's life, did not find this factor significant. It is unclear why similar findings were not realized for the Astin investigation and the present study. Certainly, this variable deserves further exploration as it may relate to health care choices and alternative medicine use.

A large number of persons seeking alternative therapies consider themselves to be in poor health and have attempted to obtain care from traditional medical care providers. More research is needed to identify whether alternative therapies are used in conjunction with medical care or as a substitute for medical care. This study found that only 17 individuals reported using an alternative care provider without going to a physician. It would be interesting to note what factors predict sole use of alternative medicine. Analysis to investigate this phenomenon was not conducted because of the small number of participants in this category, and it is left for larger scale studies to explore this relationship.

Although this study is somewhat limited in terms of the explored reasons for the use of alternative care, there are benefits that may still be realized.

Results from this study could provide conventional practitioners greater awareness of the health beliefs and practices of their young-old patients and may suggest areas where practitioners and the present health care system are failing to meet health care needs adequately (i.e., in the case of the importance of spirituality, herbal remedies, massage, etc.). In particular, it would behoove the health/medical community to explore the particular conditions for which these therapies are being used. This may lead to greater awareness of the specific areas in which the present system is failing. If health care professionals are to effectively support individuals in making informed, safe, and appropriate choices, it is critical that they develop greater awareness of the nature of, potential efficacy of, and reasons for patients' use of unconventional therapies.

In addition, information derived from this study and similar studies can serve as an adjunct to data derived from controlled studies of the efficacy of alternative therapies and can serve to stimulate future dialogue among the government, managed care organizations, the biomedical community, insurance companies, and other community/professional organizations.

Notes

1. Weighting was only applied to the logistic regression and correlation analyses.

2. Race was excluded from the logistic regression because of the homogeneous nature of the variable.

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