

Use of Alternative Medicine by Patients in a Rural Family Practice Clinic

Winfred F.B. del Mundo, MD; William C. Shepherd, MD; Thomas D. Marose

Background and Objectives: *There has been an increasing awareness of the use of alternative medicine and its effect on health care in the United States. However, no previous study has looked at its use among primary care patients in a rural setting. We conducted this study to determine the patterns of use of alternative medicine in this population. Methods:* A questionnaire was distributed to 750 adult patients in a family practice clinic in northern Pennsylvania. **Results:** *Our response rate was 88% (664/750). Forty-seven percent of patients reported using at least one form of alternative medicine during the past year. The most-common types used were chiropractic (used by 17.2% of respondents), relaxation techniques (16.9%), herbal medicine (16.9%), and massage (14.2%). The patients surveyed used alternative medicine more for its benefits than because of dissatisfaction with conventional medicine. Only 51% of patients told their physician about their use of alternative medicine. Conclusions:* A significant number of rural family practice patients are using alternative medicine. To better address their patients' needs, primary care physicians should routinely ask patients about their use of alternative medicine and advise them accordingly.

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Alternative medicine refers to medical interventions and techniques that have neither been traditionally taught in medical schools nor included in residency training and that are generally not used in hospitals.^{1,2} Examples of alternative therapies include acupuncture, chiropractic, massage therapy, herbal medicine, and mind-body medicine. Because of the recent mainstreaming of many of these therapies, terms like *complementary* and *integrative* medicine are supplanting *alternative* medicine.

In 1991, a national telephone survey conducted by Eisenberg showed that 3 out of 10 people had used at least one form of alternative therapy during the previous year.¹ In a follow-up survey in 1997,³ use had increased to 4 out of 10 Americans. During that year, estimated expenditures for visits to alternative therapists in the United States ranged from \$21.2 billion to \$32.7 billion, and the estimated total out-of-pocket expenditure for alternative medicine use was \$34.4 billion.³ In testament to the growing popularity of alternative therapies, more medical schools have offered

courses on the subject,^{2,4} and physicians' use of alternative medicine has increased.⁵⁻¹⁰ Insurance companies and HMOs now offer coverage for certain forms of alternative therapies.¹¹

Previous studies in various populations have examined the profiles of people who use alternative therapies, their reasons for choosing these therapies, and their perceived efficacy of the treatments compared to conventional medicine.^{1,3,12-22} Of these various studies, only a few have specifically surveyed alternative medicine use among family practice patients,^{13,20-22} and all were conducted in urban areas. Three of the studies, conducted in 1995, had small sample sizes (n=113-199) and showed that 28% to 50% of family practice patients used at least one form of alternative medicine. The studies by Drivdahl et al²⁰ and Elder et al¹³ were done in Washington State (the former in a military clinic) in areas where there are relatively large numbers of alternative practitioners and alternative medicine schools. The third study by Krastins et al,²¹ done in New York State, surveyed a low-income population and found that 29% of these patients used alternative medicine. A fourth study, by Palinkas et al,²² conducted in 1999 in San Diego, showed a 21% prevalence of use of alternative medicine.

From the Department of Family Medicine, Guthrie Clinic, Sayre, Pa, and SUNY Upstate Medical University, Syracuse, NY (Drs del Mundo and Shepherd) and Binghamton University, Binghamton, NY (Mr Marose).

The objective of the current study was to learn more about the use of alternative medicine among family practice patients in a rural setting. We surveyed a large sample of clinic patients to determine how many patients use alternative therapies, the factors associated with their use, and the reasons for choosing alternative medicine.

Methods

Subjects

The survey was conducted for 5.5 weeks from July 7 to August 15, 2000, at the Guthrie Clinic Family Practice Center in Sayre, Pa. The clinic is part of a multispecialty group located in a small rural town in Northern Pennsylvania, close to the border of upstate New York. The clinic serves a wide area in both states.

The clinic has a predominantly white adult patient population of about 7,500. It also serves as the site of a residency program, and the patients surveyed were seen by either resident or attending physicians. This research was approved by our institution's review board.

Questionnaire

We developed a questionnaire for this study, in which we defined both traditional and alternative medicine. Traditional medicine was defined as all care received from a physician (medical or osteopathic doctor) and any treatment recommended or prescribed by the physician, including physical therapy, medications, and/or counseling. Alternative medicine was defined as that provided by a nontraditional professional or the use of home remedies not commonly prescribed by a traditional physician.

The questionnaire requested demographic information and asked participants if they had used alternative medicine within the past year. Participants were then presented with a checklist of alternative therapies adapted from the previous research conducted by Eisenberg,^{1,3} plus spaces into which other forms of therapies could be added, and asked to indicate the therapies they had used. Participants were asked to write down the medical condition(s) for which they had used alternative medicine, why they had used it, and whether they had seen an alternative medicine practitioner. Reasons for using alternative medicine were presented as a checklist derived from previous research.^{12,14-16} Participants were also asked if they had seen a traditional physician for any of the health conditions they previously listed and if they had told their physician about use of alternative medicine. If they had not told their physician about their use, they were asked to give the reason. Finally, all participants were asked what types of alternative medicine they were interested in learning more about.

Procedures

The questionnaire was distributed in the clinic 2 to 4 days per week throughout the study period. Consecutive patients were approached, but the person distributing the questionnaires was available only part of the time, so not all patients seen during clinic hours were approached. Surveys were distributed to all family practice patients who were waiting to be seen and agreed to participate during the time that study personnel were present. All patients were adults (18 years or older) and were capable of answering the questionnaire. The patients were asked to fill out an anonymous survey on health care uses and alternative medicine. Completed questionnaires were collected before the patient left the office.

Data Analysis

As in the studies done by Eisenberg,^{1,3} use of prayer and exercise for therapy or treatment is reported but not included in determining the percentage of people using alternative medicine. Megavitamin therapy, as a category, does not include use of daily vitamins.

For statistical analysis, we used SPSS[®] software, and we used *t* test to analyze differences in the mean age of users and nonusers of alternative medicine. We analyzed all other variables using the chi-square statistic.

Results

A total of 1,438 patients were seen at the clinic during the days when the surveys were collected. We approached 750 of these patients, and 664 returned the survey, for a response rate of 88%. Of those who responded, 97% were white, 74% were female, and 60% had an annual income of less than \$35,000.

A total of 314 of the 664 (47.3%) had used at least one form of alternative medicine (excluding exercise and prayer) during the past year. Significant differences were found in age, level of education, and annual income when patients who used alternative medicine were compared to those who did not (Table 1). There was no difference in the mean ages (40.3 versus 38.6) of users versus nonusers. Patients between ages 30 and 60 were 1.4 times more likely to have used alternative medicine, compared with those less than 30 or more than 60. In addition, patients who were educated beyond high school and had an annual income exceeding \$35,000 were also significantly more likely to have used alternative medicine. No significant differences were found with regard to gender.

The most common types of alternative medicine used by patients were chiropractic, relaxation techniques, herbal medicine, and massage (Table 2). Twenty-two percent of those who responded (146/664) had seen an alternative medicine practitioner. Thirty-seven percent of patients (116/314) who used alternative medicine said they had seen a chiropractor, and 11% (34/314) had

seen a massage therapist. Other practitioners visited were acupuncturists, herbalists, a homeopath, and a hypnotist. Both exercise and prayer were used fairly frequently; almost half of the patients had done some form of exercise for therapy or health maintenance (Table 2).

Patients used alternative medicine for a wide range of health conditions (Table 3). The most common condition reported was back pain (31.2%), followed closely by stress/anxiety (29.9%) and musculoskeletal pain other than back pain (27.7%). The most common conditions for which patients both used alternative medicine and saw a traditional physician were back pain and other musculoskeletal pain, high blood pressure, and health maintenance. A total of 38.2% of those who used alternative medicine stated that they did not see a traditional physician for the conditions for which they were using alternative medicine.

When asked to choose from a list of possible reasons for using alternative medicine, 82.5% (259/314) of patients chose one or more of the reasons given in Table 4. Nearly half of the alternative medicine users felt that these therapies give them control and were more effective for their problems. Four patients gave other reasons not listed, such as alternative medicine "leaves me better off than when I became ill," and traditional medicine "disrupts areas of my body not being treated, is too strong, and makes me feel worse." More people, however, chose alternative medicine because of its purported benefits (ie, effective, promotes health rather than just focusing on illness, few side effects, more affordable, more natural, etc), rather than because of their dissatisfaction with traditional medicine, doctors, or hospitals.

Table 1

Sociodemographic Characteristics of 664 Family Practice Patients Who Have (n=316) and Have Not (n=348) Used Alternative Medicine

Characteristics	Overall # (%)	Percent Users	Percent Nonusers	P Value*
Gender				
Female	489 (73.6)	44.0	56.0	NS—.310
Male	175 (26.4)	48.5	51.5	
Age				
18-29	227 (38.2)	39.2	60.8	.016
30-49	216 (36.3)	53.7	46.3	
50-69	102 (17.1)	50.0	50.0	
>69	50 (8.4)	42.0	58.0	
Mean age—40.3 users, 38.6 nonusers				NS—.254
Race				
White	643 (97.3)	47.0	53.0	NS—.963
African American	6 (.9)	50.0	50.0	
Hispanic	5 (.8)	60.0	40.0	
American Indian	4 (.6)	50.0	50.0	
Asian	3 (.5)	33.3	66.7	
Education				
Less than high school	159 (24.3)	41.5	58.5	.036
High school	203 (31.0)	43.8	56.2	
College or trade school	235 (35.9)	54.9	45.1	
Graduate school	57 (8.7)	47.4	52.6	
Annual income (\$)				
\$20,000 or less	206 (35.5)	44.7	55.3	.017
Between \$20,000-\$35,000	157 (27.1)	40.8	59.2	
Between \$35,000-\$50,000	107 (18.4)	59.8	40.2	
Between \$50,000-\$65,000	54 (9.3)	57.4	42.6	
\$65,000 or greater	56 (9.7)	48.2	51.8	
State of residence				
New York	312 (47.9)	51.6	48.4	NS—.096
Pennsylvania	337 (50.8)	43.3	56.7	
Other	3 (.5)	33.3	66.7	

* Determined by chi-square

NS—not significant.

Fifty-one percent of those patients who used alternative medicine told their traditional physicians about their use, while 34% did not. Fifteen percent of patients did not answer this question. Reasons given by those who did not tell their physician about their use of alternative medicine include: they did not need to tell or did not think of telling (12%), their physician did not ask about alternative medicine (8%), they had not seen a physician since use of alternative medicine or they do not have a personal physician (5%), and they think the physician would be hostile to alternative medicine use (1%).

Of the 664 respondents to this survey, 152 (24.8%) said they were interested in learning about one or more

Table 2

Alternative Therapies Used
by 664 Family Practice Patients

Method	#	(%)
Chiropractic	114	(17.2)
Relaxation techniques	112	(16.9)
Herbal medicine	112	(16.9)
Massage	94	(14.2)
Megavitamins	48	(7.2)
Commercial weight loss programs	38	(5.7)
Self-help groups	24	(3.6)
Lifestyle diets (ie, macrobiotics)	22	(3.3)
Folk remedies	20	(3.0)
Spiritual healing	16	(2.4)
Imagery	11	(1.7)
Homeopathy	8	(1.2)
Acupuncture	7	(1.1)
Hypnosis	7	(1.1)
Biofeedback	4	(.6)
Energy healing	2	(.3)
Exercise*	302	(45.6)
Prayer*	128	(19.3)

* As in the studies done by Eisenberg,^{1,3} use of prayer and exercise for therapy or treatment is reported but not included in determining the percentage of people using alternative medicine.

types of alternative medicine listed, and 50 (8.1%) said they were interested in all the types. The types of alternative medicine that people were most interested in learning about were herbal medicine, relaxation techniques, acupuncture, and massage therapy.

When our current study was compared to several previous surveys on alternative medicine use,^{3,13,20-22} a wide variation in alternative medicine usage was found (Table 5).

Discussion

We found that nearly half (47.3%) of family practice patients surveyed in our rural clinic have used at least one form of alternative medicine within the past year. Our results are similar to other studies^{1,3,12,20,23,24} with regard to demographics; users of alternative medicine were more likely to be middle-aged, affluent, and well educated. However, unlike other studies, we did not find a difference in use between the sexes.

In a review of surveys on alternative medicine use among general populations, Ernst²⁵ found that the reported prevalence of use varied from 9% to 65%. He noted that differences with regard to the populations surveyed and the study design are probably responsible for the wide variation in results. Our survey resulted in a higher rate of use than that found by Eisenberg (42%) in his 1997 national telephone survey³ and in three out of four surveys²⁰⁻²² of family practice patients (Table

Table 3

Reported Health Conditions for Which Alternative
Medicine is Used by 314 Patients

Health Condition	#	(%)
Back pain	98	(31.2)
Stress/anxiety	94	(29.9)
Musculoskeletal pain excluding back pain	87	(27.7)
Colds/flu	54	(17.2)
Health maintenance	45	(14.3)
Weight control	37	(11.8)
Headache	25	(8.0)
OB/GYN problems	17	(5.4)
Digestive problems	14	(4.5)
Depression	9	(2.7)
Hypertension	6	(1.9)
Sleep problems	5	(1.6)
Diabetes	5	(1.6)
Cardiac problems	5	(1.6)
Allergy/sinus problems	4	(1.3)
Multiple sclerosis	4	(1.3)
Cancer	3	(1.0)
Skin problems	3	(1.0)
High cholesterol	2	(.6)
Asthma	2	(.6)
Memory enhancement	2	(.6)
Sexual abuse problem	2	(.6)
Addiction problem including alcohol abuse	2	(.6)
Smoking cessation	1	(.3)
Dizziness	1	(.3)
ADHD	1	(.3)
ITP	1	(.3)
Bladder problem	1	(.3)
Macular degeneration	1	(.3)

ADHD—attention deficit hyperactivity disorder
ITP—idiopathic thrombocytopenic purpura

5). Our survey differs from these others, however, in that our survey was conducted in a rural setting, while the other four family practice studies were conducted in urban or suburban settings. Of note, although we have not found surveys focusing on a rural population in the United States, a large telephone survey in South Carolina²³ found no difference in the use of alternative medicine between urban and rural counties of the state. In that study, the prevalence of alternative medicine use among people living in the rural counties was 43.4%, similar to our findings.

Our study queried subjects about the same types of alternative medicine that were included on the Eisenberg study,¹ while the other family practice surveys^{13,20-22} included slightly different types. We found that the most common types of alternative medicine used by our patients were similar to the ones in the 1997 national survey,³ but a wide variation was seen in the use of the major types of alternative medicine among different surveys^{3,13,20-22} (Table 5). The availability of alternative medicine practitioners within a particular area may partially explain the differences. In our rural area,

Table 4

Reasons Why 314 Patients Use Alternative Medicine to Treat Their Health Problems*

Reason	Patients Who Chose Reason	
	#	%
I have more control over my problems.	153	48.7
It is effective for my problem.	134	42.7
Alternative medicine promotes health rather than just focusing on my illness.	106	33.8
I believe alternative medicine complements traditional medicine for the treatment of my problem.	104	33.1
I experience little or no side effects from alternative medicine.	97	30.9
I prefer more natural forms of therapy.	90	28.7
I can better afford my alternative medicine treatments than the treatments given to me by a traditional physician.	59	18.8
I want to try something different.	56	17.8
Alternative medicine gives me some hope to solve my problem.	53	16.9
My alternative medicine practitioner listens to me.	52	16.6
I am not satisfied with traditional or conventional treatments for my problem.	52	16.6
My alternative medicine practitioner talks to me about my personal life as well as my medical problems.	44	14.0
I don't like going to doctors and/or hospitals so I choose to see an alternative medicine practitioner.	30	9.6
I don't trust doctors and hospitals, so I use them as little as possible.	29	9.2
Gave other reasons	4	1.3

* 55 out of 314 patients did not answer this question.

Table 5

Comparison of Current Study With Selected US Surveys on the Use of Alternative Medicine

First author:	Elder ¹³	Krastins ²¹	Drivdahl ²⁰	Eisenberg ³	Palinkas ²²	Current study
Year conducted:	1995	1995	1995	1997	1999	2000
Location:	Portland, Ore	Schenectady, NY	Tacoma, Wash	US national survey	San Diego	Sayre, Pa
Subjects:	113 patients in four family practice clinics	199 mostly low-income patients in a family practice clinic	177 patients in a military family practice clinic	2,055 from general population	542 patients in 16 family practice clinics	664 patients in a rural family practice clinic
Method:	Non-random questionnaire	Non-random questionnaire	Random postal questionnaire	Random telephone survey	Non-random questionnaire	Non-random questionnaire
Response rate (%)	87	90	71	60	89	88
% total use of alternative medicine*	50	29	28	42 ⁺	21 ⁺	47 ⁺
% use of chiropractor*	21	13	18	11	7	17
% use of relaxation techniques*	11 (meditation)	6 (meditation)	NR	16	NR	17
% use of herbal medicine*	15	3	9	12	6	17
% use of massage*	16	NR	10	11	4	14
% use of acupuncture*	10	<1	5	1	1	1

* As percentage of total respondents.

+ Use of alternative medicine within the past year only

NR—not reported.

chiropractors and massage therapists are relatively more available, compared with acupuncturists, herbalists, homeopaths, and other types of practitioners.

In our study, alternative medicine was used for a wide range of health conditions encompassing all organ systems. Of note, a number of these conditions were chronic problems such as pain, depression, stress, etc, for which conventional medicine is less effective. We found greater use of alternative medicine for stress, anxiety, and depression.

Fewer than half of alternative medicine users have actually consulted an alternative medicine practitioner, most have presumably obtained information about alternative medicine from some other source. Previous studies^{20,23} have found that only about one in five users received information from a physician or other traditional health care professional, while others received information from a family member, friend, the media, or books. Because physicians should be able to understand their patients' needs and because alternative medicine may interact with conventional treatments, communication between physicians and patients about the latter's use of alternative therapies should be encouraged.

Physicians can foster discussion of alternative medicine with their patients if they have a better understanding of why patients use alternative medicine. Some previous studies suggest that users of alternative medicine do so mainly because they are dissatisfied with the care they received from a traditional physician,^{15,22,24} while other studies suggest that users are no more dissatisfied with or distrustful of conventional care than non-users are.¹²⁻¹⁴ Our study seems to support the latter in that most patients surveyed used alternative medicine for its benefits rather than because of dissatisfaction with their traditional physician or hospitals. Four of 10 of our respondents believed that alternative medicine is effective for their problem, and almost half felt they had more control over their problems. Many users also believe that alternative medicine provides more holistic care.

Limitations

Our study did not use a random sample of our patients, so although we had a relatively large sample, there is a possibility of selection bias. In addition, the proportion of female patients surveyed was higher (74%) than the proportion of females in the clinic population (66%), again raising the possibility of a selection bias. Although our study found no significant difference in use of alternative medicine between males and females, previous studies^{3,22-24} have indicated that females tend to use more alternative medicine than males. This may explain why we found a greater percentage of use of alternative medicine among our patients. Studying an office sample compared to a sample

drawn from the general population may also have introduced bias, since our participants may be more likely to use conventional rather than alternative medicine. Future studies should involve random samples representative of the population.

Comparing our study with other surveys is difficult since there have been different interpretations of what qualifies as alternative medicine. This may have posed a problem with the participants in the survey who may have had different interpretations of what qualifies as alternative medicine even though we provided subjects with a definition. Since it is difficult to come up with a consistent definition of alternative medicine, research should focus on studying particular types of alternative medicine rather than the whole. Finally, different timelines have been studied (ie, 1-year use versus lifetime use) in different studies.

Conclusions

Our survey found that a significant number of patients in our rural family practice clinic use one or more forms of alternative medicine. Chiropractic, relaxation techniques, herbal medicine, and massage were the most commonly used types. People used alternative medicine for a wide variety of problems, but the predominant conditions were pain (back or musculoskeletal pain) and stress and anxiety. Since a substantial number of their patients may be using alternative medicine, primary care physicians in rural areas should routinely ask patients about alternative medicine use and be able to advise patients about it.

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Corresponding Author: Address correspondence to Dr del Mundo, Hull Medical Center, 180 George Washington Boulevard, Hull, MA 02045. 617-298-5851. wdeldmundo@yahoo.com.

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The clinic has a predominantly white adult patient population of about 7,500. It also serves as the site of a residency program, and the patients surveyed were seen by either resident or attending physicians. This research was approved by our institution's review board.

Questionnaire

We developed a questionnaire for this study, in which we defined both traditional and alternative medicine. Traditional medicine was defined as all care received from a physician (medical or osteopathic doctor) and any treatment recommended or prescribed by the physician, including physical therapy, medications, and/or counseling. Alternative medicine was defined as that provided by a nontraditional professional or the use of home remedies not commonly prescribed by a traditional physician.

The questionnaire requested demographic information and asked participants if they had used alternative medicine within the past year. Participants were then presented with a checklist of alternative therapies adapted from the previous research conducted by Eisenberg,^{1,3} plus spaces into which other forms of therapies could be added, and asked to indicate the therapies they had used. Participants were asked to write down the medical condition(s) for which they had used alternative medicine, why they had used it, and whether they had seen an alternative medicine practitioner. Reasons for using alternative medicine were presented as a checklist derived from previous research.^{12,14-16} Participants were also asked if they had seen a traditional physician for any of the health conditions they previously listed and if they had told their physician about use of alternative medicine. If they had not told their physician about their use, they were asked to give the reason. Finally, all participants were asked what types of alternative medicine they were interested in learning more about.

Procedures

The questionnaire was distributed in the clinic 2 to 4 days per week throughout the study period. Consecutive patients were approached, but the person distributing the questionnaires was available only part of the time, so not all patients seen during clinic hours were approached. Surveys were distributed to all family practice patients who were waiting to be seen and agreed to participate during the time that study personnel were present. All patients were adults (18 years or older) and were capable of answering the questionnaire. The patients were asked to fill out an anonymous survey on health care uses and alternative medicine. Completed questionnaires were collected before the patient left the office.

Data Analysis

As in the studies done by Eisenberg,^{1,3} use of prayer and exercise for therapy or treatment is reported but not included in determining the percentage of people using alternative medicine. Megavitamin therapy, as a category, does not include use of daily vitamins.

For statistical analysis, we used SPSS[®] software, and we used *t* test to analyze differences in the mean age of users and nonusers of alternative medicine. We analyzed all other variables using the chi-square statistic.

Results

A total of 1,438 patients were seen at the clinic during the days when the surveys were collected. We approached 750 of these patients, and 664 returned the survey, for a response rate of 88%. Of those who responded, 97% were white, 74% were female, and 60% had an annual income of less than \$35,000.

A total of 314 of the 664 (47.3%) had used at least one form of alternative medicine (excluding exercise and prayer) during the past year. Significant differences were found in age, level of education, and annual income when patients who used alternative medicine were compared to those who did not (Table 1). There was no difference in the mean ages (40.3 versus 38.6) of users versus nonusers. Patients between ages 30 and 60 were 1.4 times more likely to have used alternative medicine, compared with those less than 30 or more than 60. In addition, patients who were educated beyond high school and had an annual income exceeding \$35,000 were also significantly more likely to have used alternative medicine. No significant differences were found with regard to gender.

The most common types of alternative medicine used by patients were chiropractic, relaxation techniques, herbal medicine, and massage (Table 2). Twenty-two percent of those who responded (146/664) had seen an alternative medicine practitioner. Thirty-seven percent of patients (116/314) who used alternative medicine said they had seen a chiropractor, and 11% (34/314) had

seen a massage therapist. Other practitioners visited were acupuncturists, herbalists, a homeopath, and a hypnotist. Both exercise and prayer were used fairly frequently; almost half of the patients had done some form of exercise for therapy or health maintenance (Table 2).

Patients used alternative medicine for a wide range of health conditions (Table 3). The most common condition reported was back pain (31.2%), followed closely by stress/anxiety (29.9%) and musculoskeletal pain other than back pain (27.7%). The most common conditions for which patients both used alternative medicine and saw a traditional physician were back pain and other musculoskeletal pain, high blood pressure, and health maintenance. A total of 38.2% of those who used alternative medicine stated that they did not see a traditional physician for the conditions for which they were using alternative medicine.

When asked to choose from a list of possible reasons for using alternative medicine, 82.5% (259/314) of patients chose one or more of the reasons given in Table 4. Nearly half of the alternative medicine users felt that these therapies give them control and were more effective for their problems. Four patients gave other reasons not listed, such as alternative medicine "leaves me better off than when I became ill," and traditional medicine "disrupts areas of my body not being treated, is too strong, and makes me feel worse." More people, however, chose alternative medicine because of its purported benefits (ie, effective, promotes health rather than just focusing on illness, few side effects, more affordable, more natural, etc), rather than because of their dissatisfaction with traditional medicine, doctors, or hospitals.

Table 1

Sociodemographic Characteristics of 664 Family Practice Patients Who Have (n=316) and Have Not (n=348) Used Alternative Medicine

Characteristics	Overall # (%)	Percent Users	Percent Nonusers	P Value*
Gender				
Female	489 (73.6)	44.0	56.0	NS—.310
Male	175 (26.4)	48.5	51.5	
Age				
18-29	227 (38.2)	39.2	60.8	.016
30-49	216 (36.3)	53.7	46.3	
50-69	102 (17.1)	50.0	50.0	
>69	50 (8.4)	42.0	58.0	
Mean age—40.3 users, 38.6 nonusers				NS—.254
Race				
White	643 (97.3)	47.0	53.0	NS—.963
African American	6 (.9)	50.0	50.0	
Hispanic	5 (.8)	60.0	40.0	
American Indian	4 (.6)	50.0	50.0	
Asian	3 (.5)	33.3	66.7	
Education				
Less than high school	159 (24.3)	41.5	58.5	.036
High school	203 (31.0)	43.8	56.2	
College or trade school	235 (35.9)	54.9	45.1	
Graduate school	57 (8.7)	47.4	52.6	
Annual income (\$)				
\$20,000 or less	206 (35.5)	44.7	55.3	.017
Between \$20,000-\$35,000	157 (27.1)	40.8	59.2	
Between \$35,000-\$50,000	107 (18.4)	59.8	40.2	
Between \$50,000-\$65,000	54 (9.3)	57.4	42.6	
\$65,000 or greater	56 (9.7)	48.2	51.8	
State of residence				
New York	312 (47.9)	51.6	48.4	NS—.096
Pennsylvania	337 (50.8)	43.3	56.7	
Other	3 (.5)	33.3	66.7	

* Determined by chi-square

NS—not significant.

Fifty-one percent of those patients who used alternative medicine told their traditional physicians about their use, while 34% did not. Fifteen percent of patients did not answer this question. Reasons given by those who did not tell their physician about their use of alternative medicine include: they did not need to tell or did not think of telling (12%), their physician did not ask about alternative medicine (8%), they had not seen a physician since use of alternative medicine or they do not have a personal physician (5%), and they think the physician would be hostile to alternative medicine use (1%).

Of the 664 respondents to this survey, 152 (24.8%) said they were interested in learning about one or more

Table 2

Alternative Therapies Used by 664 Family Practice Patients

Method	#	(%)
Chiropractic	114	(17.2)
Relaxation techniques	112	(16.9)
Herbal medicine	112	(16.9)
Massage	94	(14.2)
Megavitamins	48	(7.2)
Commercial weight loss programs	38	(5.7)
Self-help groups	24	(3.6)
Lifestyle diets (ie, macrobiotics)	22	(3.3)
Folk remedies	20	(3.0)
Spiritual healing	16	(2.4)
Imagery	11	(1.7)
Homeopathy	8	(1.2)
Acupuncture	7	(1.1)
Hypnosis	7	(1.1)
Biofeedback	4	(.6)
Energy healing	2	(.3)
Exercise*	302	(45.6)
Prayer*	128	(19.3)

* As in the studies done by Eisenberg,^{1,3} use of prayer and exercise for therapy or treatment is reported but not included in determining the percentage of people using alternative medicine.

types of alternative medicine listed, and 50 (8.1%) said they were interested in all the types. The types of alternative medicine that people were most interested in learning about were herbal medicine, relaxation techniques, acupuncture, and massage therapy.

When our current study was compared to several previous surveys on alternative medicine use,^{3,13,20-22} a wide variation in alternative medicine usage was found (Table 5).

Discussion

We found that nearly half (47.3%) of family practice patients surveyed in our rural clinic have used at least one form of alternative medicine within the past year. Our results are similar to other studies^{1,3,12,20,23,24} with regard to demographics; users of alternative medicine were more likely to be middle-aged, affluent, and well educated. However, unlike other studies, we did not find a difference in use between the sexes.

In a review of surveys on alternative medicine use among general populations, Ernst²⁵ found that the reported prevalence of use varied from 9% to 65%. He noted that differences with regard to the populations surveyed and the study design are probably responsible for the wide variation in results. Our survey resulted in a higher rate of use than that found by Eisenberg (42%) in his 1997 national telephone survey³ and in three out of four surveys²⁰⁻²² of family practice patients (Table

Table 3

Reported Health Conditions for Which Alternative Medicine is Used by 314 Patients

Health Condition	#	(%)
Back pain	98	(31.2)
Stress/anxiety	94	(29.9)
Musculoskeletal pain excluding back pain	87	(27.7)
Colds/flu	54	(17.2)
Health maintenance	45	(14.3)
Weight control	37	(11.8)
Headache	25	(8.0)
OB/GYN problems	17	(5.4)
Digestive problems	14	(4.5)
Depression	9	(2.7)
Hypertension	6	(1.9)
Sleep problems	5	(1.6)
Diabetes	5	(1.6)
Cardiac problems	5	(1.6)
Allergy/sinus problems	4	(1.3)
Multiple sclerosis	4	(1.3)
Cancer	3	(1.0)
Skin problems	3	(1.0)
High cholesterol	2	(.6)
Asthma	2	(.6)
Memory enhancement	2	(.6)
Sexual abuse problem	2	(.6)
Addiction problem including alcohol abuse	2	(.6)
Smoking cessation	1	(.3)
Dizziness	1	(.3)
ADHD	1	(.3)
ITP	1	(.3)
Bladder problem	1	(.3)
Macular degeneration	1	(.3)

ADHD—attention deficit hyperactivity disorder
ITP—idiopathic thrombocytopenic purpura

5). Our survey differs from these others, however, in that our survey was conducted in a rural setting, while the other four family practice studies were conducted in urban or suburban settings. Of note, although we have not found surveys focusing on a rural population in the United States, a large telephone survey in South Carolina²³ found no difference in the use of alternative medicine between urban and rural counties of the state. In that study, the prevalence of alternative medicine use among people living in the rural counties was 43.4%, similar to our findings.

Our study queried subjects about the same types of alternative medicine that were included on the Eisenberg study,¹ while the other family practice surveys^{13,20-22} included slightly different types. We found that the most common types of alternative medicine used by our patients were similar to the ones in the 1997 national survey,³ but a wide variation was seen in the use of the major types of alternative medicine among different surveys^{3,13,20-22} (Table 5). The availability of alternative medicine practitioners within a particular area may partially explain the differences. In our rural area,

Table 4

Reasons Why 314 Patients Use Alternative Medicine to Treat Their Health Problems*

Reason	Patients Who Chose Reason	
	#	%
I have more control over my problems.	153	48.7
It is effective for my problem.	134	42.7
Alternative medicine promotes health rather than just focusing on my illness.	106	33.8
I believe alternative medicine complements traditional medicine for the treatment of my problem.	104	33.1
I experience little or no side effects from alternative medicine.	97	30.9
I prefer more natural forms of therapy.	90	28.7
I can better afford my alternative medicine treatments than the treatments given to me by a traditional physician.	59	18.8
I want to try something different.	56	17.8
Alternative medicine gives me some hope to solve my problem.	53	16.9
My alternative medicine practitioner listens to me.	52	16.6
I am not satisfied with traditional or conventional treatments for my problem.	52	16.6
My alternative medicine practitioner talks to me about my personal life as well as my medical problems.	44	14.0
I don't like going to doctors and/or hospitals so I choose to see an alternative medicine practitioner.	30	9.6
I don't trust doctors and hospitals, so I use them as little as possible.	29	9.2
Gave other reasons	4	1.3

* 55 out of 314 patients did not answer this question.

Table 5

Comparison of Current Study With Selected US Surveys on the Use of Alternative Medicine

First author:	Elder ¹³	Krastins ²¹	Drivdahl ²⁰	Eisenberg ³	Palinkas ²²	Current study
Year conducted:	1995	1995	1995	1997	1999	2000
Location:	Portland, Ore	Schenectady, NY	Tacoma, Wash	US national survey	San Diego	Sayre, Pa
Subjects:	113 patients in four family practice clinics	199 mostly low-income patients in a family practice clinic	177 patients in a military family practice clinic	2,055 from general population	542 patients in 16 family practice clinics	664 patients in a rural family practice clinic
Method:	Non-random questionnaire	Non-random questionnaire	Random postal questionnaire	Random telephone survey	Non-random questionnaire	Non-random questionnaire
Response rate (%)	87	90	71	60	89	88
% total use of alternative medicine*	50	29	28	42 ⁺	21 ⁺	47 ⁺
% use of chiropractor*	21	13	18	11	7	17
% use of relaxation techniques*	11 (meditation)	6 (meditation)	NR	16	NR	17
% use of herbal medicine*	15	3	9	12	6	17
% use of massage*	16	NR	10	11	4	14
% use of acupuncture*	10	<1	5	1	1	1

* As percentage of total respondents.

+ Use of alternative medicine within the past year only

NR—not reported.

chiropractors and massage therapists are relatively more available, compared with acupuncturists, herbalists, homeopaths, and other types of practitioners.

In our study, alternative medicine was used for a wide range of health conditions encompassing all organ systems. Of note, a number of these conditions were chronic problems such as pain, depression, stress, etc, for which conventional medicine is less effective. We found greater use of alternative medicine for stress, anxiety, and depression.

Fewer than half of alternative medicine users have actually consulted an alternative medicine practitioner, most have presumably obtained information about alternative medicine from some other source. Previous studies^{20,23} have found that only about one in five users received information from a physician or other traditional health care professional, while others received information from a family member, friend, the media, or books. Because physicians should be able to understand their patients' needs and because alternative medicine may interact with conventional treatments, communication between physicians and patients about the latter's use of alternative therapies should be encouraged.

Physicians can foster discussion of alternative medicine with their patients if they have a better understanding of why patients use alternative medicine. Some previous studies suggest that users of alternative medicine do so mainly because they are dissatisfied with the care they received from a traditional physician,^{15,22,24} while other studies suggest that users are no more dissatisfied with or distrustful of conventional care than non-users are.¹²⁻¹⁴ Our study seems to support the latter in that most patients surveyed used alternative medicine for its benefits rather than because of dissatisfaction with their traditional physician or hospitals. Four of 10 of our respondents believed that alternative medicine is effective for their problem, and almost half felt they had more control over their problems. Many users also believe that alternative medicine provides more holistic care.

Limitations

Our study did not use a random sample of our patients, so although we had a relatively large sample, there is a possibility of selection bias. In addition, the proportion of female patients surveyed was higher (74%) than the proportion of females in the clinic population (66%), again raising the possibility of a selection bias. Although our study found no significant difference in use of alternative medicine between males and females, previous studies^{3,22-24} have indicated that females tend to use more alternative medicine than males. This may explain why we found a greater percentage of use of alternative medicine among our patients. Studying an office sample compared to a sample

drawn from the general population may also have introduced bias, since our participants may be more likely to use conventional rather than alternative medicine. Future studies should involve random samples representative of the population.

Comparing our study with other surveys is difficult since there have been different interpretations of what qualifies as alternative medicine. This may have posed a problem with the participants in the survey who may have had different interpretations of what qualifies as alternative medicine even though we provided subjects with a definition. Since it is difficult to come up with a consistent definition of alternative medicine, research should focus on studying particular types of alternative medicine rather than the whole. Finally, different timelines have been studied (ie, 1-year use versus lifetime use) in different studies.

Conclusions

Our survey found that a significant number of patients in our rural family practice clinic use one or more forms of alternative medicine. Chiropractic, relaxation techniques, herbal medicine, and massage were the most commonly used types. People used alternative medicine for a wide variety of problems, but the predominant conditions were pain (back or musculoskeletal pain) and stress and anxiety. Since a substantial number of their patients may be using alternative medicine, primary care physicians in rural areas should routinely ask patients about alternative medicine use and be able to advise patients about it.

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Corresponding Author: Address correspondence to Dr del Mundo, Hull Medical Center, 180 George Washington Boulevard, Hull, MA 02045. 617-298-5851. wdelmundo@yahoo.com.

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